Piketty for dummies[1]

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Piketty in three sentences:

1.The economic logic of a capitalist market system with private wealth plus inheritance leads to a highly unequal, but stable, social order with a patrimonial rentier class at the top.
2. Whether this social order is compatible with democracy depends on what a democratic society is prepared to tolerate.
3. If the capitalist distributional equilibrium does not lie within the boundaries of democratic tolerance, one or other has to give.

The full story:

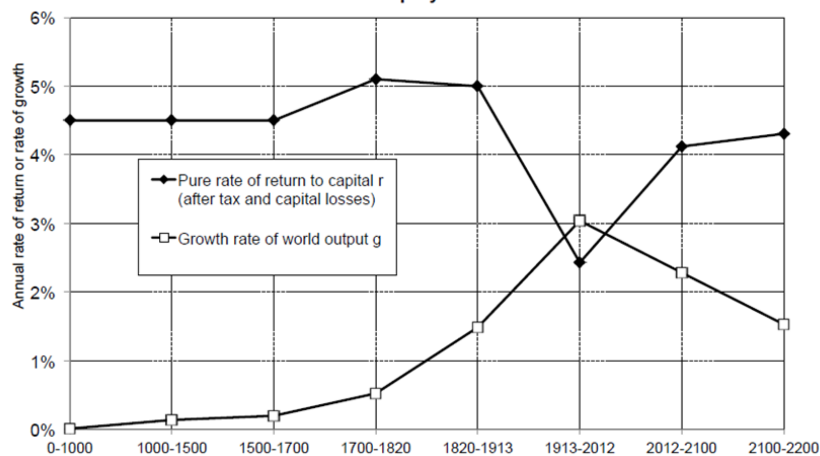
1. Wealth is accumulated from savings. Saving is done mostly by the rich. The more unequal the distribution of income and wealth, the greater the proportion of savings that are controlled and invested by the rich, and even more the super-rich.
2. The savings rate in modern rich economies, after subtracting depreciation, is in the range 8-15% of national income. 12% is a reasonable general order of magnitude. Assume this continues to hold good.
3. For the rich, large negative shocks to income tend to be absorbed as a fall in saving rather than consumption (that is, rich people's consumption has a lot of inertia). Hard times for the economy at large therefore translate into a fall in the rate of accumulation of wealth.
4. Savings are invested into the purchase of assets which may be considered to be either "productive" or "unproductive" in terms of their contribution to society's output of goods and services. But productiveness doesn't matter, because the essential point about wealth assets is that they share certain key properties, underpinned by the prevailing laws regarding property rights and inheritance:
    a. They command rents by virtue of the property rights embedded in them: that is, their owners have a presumptive claim to a slice of society's total annual income, and this claim can be exercised with the full backing of the forces of law and order, regardless of whether prosperity or depression prevails. Only when property rights break down does the right of the wealthy to appropriate their rent claims run into trouble.

[1] Thomas Piketty, *Capital in the twenty-first century*, trans. Arthur Goldhammer Harvard: Belknap Press 2014.

b. Assets can be traded and so have monetary market values, which adjust over time to keep individual asset values consistent with the economy-wide rate of return, 4-5%.
c. Assets can be inherited, so that the accumulation of a fortune can take place over several generations, with the inherited portion steadily increasing in weight relative to any 'earned' component.

5. Once accumulated, a fortune gives its owner the right to collect rents at a rate of return that tends to equalise across the economy (that is, holders of equal wealth get equal rates of return), but which tends to be higher the larger is the fortune (that is, there are "economies of scale" in getting income from wealth). The historical average rate of return ***r*** is 4-5 percent, and this seems to have long-term stability in the absence of shocks (war, revolution, earthquake, taxes, expropriation). The twentieth century was a rude shock, but one that has now passed:

Figure 10.11. After tax rate of return vs. growth rate at the world level, from Antiquity until 2200



The rate of return to capital (after tax and capital losses) fell below the growth rate during the 20th century, and might again surpass it in the 21st century. Sources and series: see piketty.pse.ens.fr/capital21c

6. This rate of return accrues to all wealth regardless of its origins. Some part of wealth has been the result of saving by high-income-earning people engaged in productive activity, and some will simply have been inherited or acquired by lucky windfalls. The origins of wealth make no difference to its status under the prevailing law regarding property and inheritance: once accumulated, its ownership and enjoyment are protected in perpetuity so long as its owners want to hold it. Moral arguments about whether the rich are "deserving" or not are beside the point, and erode with time – successful entrepreneurs morph into rentiers as they age, and the heirs receive their wealth without having to undertake productive effort.
7. One might expect ***r*** to fall over time because of a diminishing marginal product of capital in production (as in Ricardo's falling rate of profit and stationary state; Marx's law of the falling tendency of the rate of profit; neoclassical economists' reliance upon diminishing marginal product to deliver stability in their mathematical models). Intuitively there is a grain of truth in there: "too much capital kills capital", Piketty concedes, and excess accumulation can certainly, in principle, force ***r*** down. But ***r*** is

not determined in the productive process: it is a socially- and psychologically-driven expectation of a secure income flow that is attached to wealth, and which confers the property right to appropriate a corresponding share of society's total income (=output). Whether the rentiers' demands on society's income are compatible with the available output will depend upon the extent to which output - and hence income - increase as wealth accumulates; there is no necessary reason why wealth should outrun income. [Obviously, though, the lower is the growth of output and income the greater is the possibility of over-accumulation.]

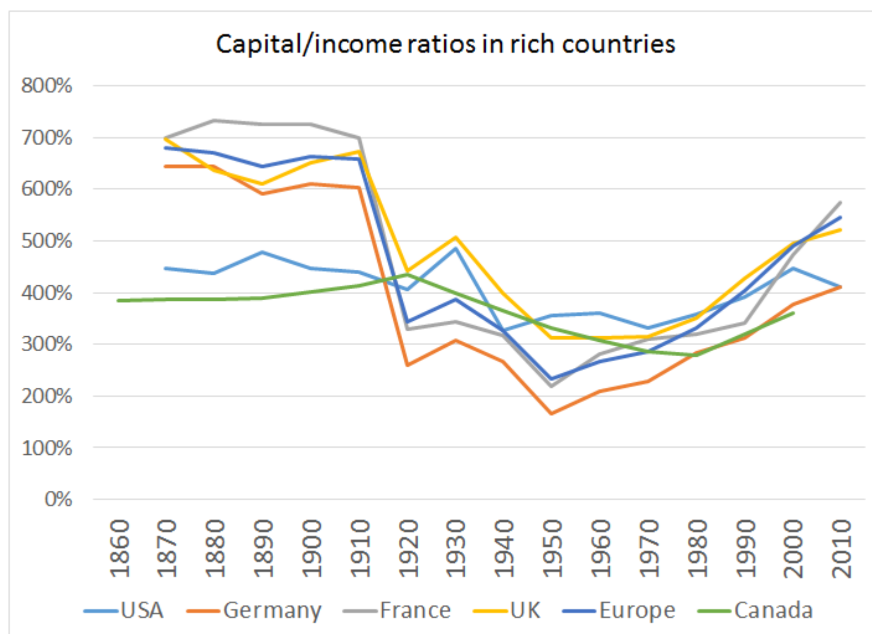
8. Piketty argues that wealth accumulation will not kill itself by driving down the profit rate in production, and hence ***r*** in general, for three crucial reasons:
    a. Output in a modern economy grows over time at a structural rate that has nothing to do with inputs of "labour" and "capital". This long-run rate of growth is known as the "Solow residual" because it is not explained by Solow's basic neoclassical growth model. Often called "the rate of technical progress", it represents the steadily growing productive power of all inputs as technology advances. The combination of technical progress and population growth gives capitalist economies a steady long-run growth rate that delivers a growing stream of income out of which wealth-holders can extract a growing part of their rent claims. As an empirical observation, this long-run growth rate ***g*** since the Industrial Revolution has been of the order of 2%, though the technical-change component is somewhat lower than this; 1-2% is the order of magnitude to keep in mind. [Note that this is lower than the standard normal rate of return on wealth, ***r***. Piketty asserts as a long-run economic "law" that ***r > g*** – but points out that the law may be broken, as happened for a while between 1914 and 1970 – the era of wars and Depression, which opened the way for the twentieth century's social-democratic golden age of income and wealth equality, now rapidly coming to an end.]
    b. As more productive capital is pushed into the productive process, its return at the margin does not fall as fast as might have been expected, because the "elasticity of substitution of capital for labour" is substantially above the widely-expected numerical value of one. This means that machines (part of the total stock of assets in the economy) can push labour and its wage claims aside and claim an increasing share of output as due reward, since the marginal product of capital falls only slightly as it does so.
    c. The accumulation of wealth relative to society's annual income will not, as a matter of economic logic, proceed until rents soak up all of that income. Instead, there is a long-run equilibrium ratio between wealth and income which remains stable once established.
9. The identification of that equilibrium is Piketty's central theoretical achievement in terms of mainstream economic theory. It turns out to have been sitting in plain sight in neoclassical growth economics for more than half a century, since the so-called

Harrod-Domar growth model was first developed in the 1940s. Harrod assumed that economic growth was due only to the accumulation of productive capital, which meant that the higher the saving rate the faster the growth rate. This would be true so long as the productivity of capital (the output-capital ratio) stayed constant. Neoclassical economists objected that this was inconsistent with economic stability (as Harrod himself had pointed out), and that the ability of firms in the economy to change their capital-labour ratios in response to price signals necessarily meant that the capital-output ratio would be varying.

10. The overall relationship amongst income, capital, savings and the growth rate in Harrod's equation is still valid, but Piketty gives it a totally new twist: he reinterprets Harrod's equation as a capital accumulation equation. If we start from a historically-given level of income growing at a steady given long run growth rate, and if the savings rate out of that income is a given ratio determined by the psychological propensity of savers to save, then these three combined will determine how far capital accumulation relative to income can go. If the capital/income ratio is below a critical threshold, then Piketty's "capital" (i.e., total wealth embodied in rent-yielding assets) will grow faster than income until it reaches a level at which capital (wealth) is growing at the same rate as income, at which point the capita/income ratio stabilises. If capital (wealth) accumulates so as to drive the capital/income ratio above this equilibrium level, then the rate of accumulation will fall until the capital/income ratio is back at equilibrium. [Piketty points out in passing that this is very like Marx's model of accumulation except that Marx didn't take account of the structural growth rate and failed to spot the equilibrium; hence Marx saw only an unlimited process of accumulation putting an unrestrained squeeze on wages, which could be resolved ultimately only by a revolutionary breakdown of capitalism itself. Piketty's model explains why social democracy might be possible even under normal capital accumulation, essentially providing a theoretical underpinning for Eduard Bernstein's position in the great socialist debates of the 1880s and 1890s.]
11. The detailed intuition of the accumulation equilibrium runs as follows. If capital is expanding at a faster rate than income is growing, then the capital/income ratio will be rising. If capital grows at less than the income growth rate, the ratio will be falling. When capital and income grow at the same rate, the ratio will be stable, which will mean that wealth-holders' share of society's income (at a 4-5% rate of return) will also be stable through time. Consider now how the basic calculation works out if income is growing at the rate g = 2% and savings (the annual addition to wealth) are at the rate s = 12% of income. If wealth is worth 6 times current income, then the rate at which wealth is growing will be 12% of income divided by 6 times income = 2%. Voila: an equilibrium.
12. To check that this is a stable equilibrium to which the economy drives itself, suppose that wealth is worth less than 6 times income – say 5 times. Wealth will be growing at the rate 12% (savings rate) divided by 5 (times income, the value of existing wealth)

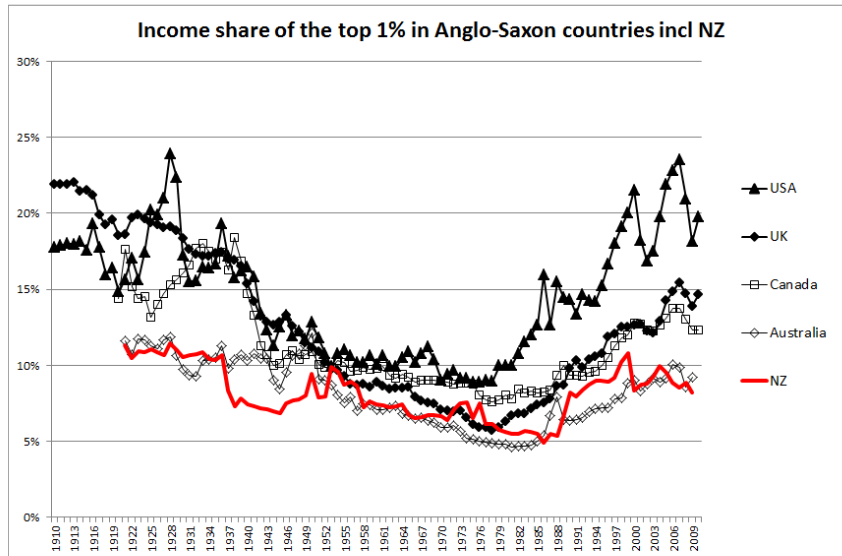
= 2.4%, which means that wealth is growing faster than income and so the wealth/income ratio is rising. Suppose instead that wealth is more than 6 times income – say 7 times. Then wealth will be growing at 12% divided by 7 = 1.7%, which is slower than the growth rate of income, so the wealth/income ratio will be falling. In the long run, a capitalist economy with 2% growth and a 12% saving rate will accumulate wealth up to, but not beyond, the level at which the wealth/income ratio is 6. Here is Piketty's claim to a Nobel prize in economics.

13. Now we need to check the actual real-world numbers: how has the wealth/income ratio looked over the past century and a half in rich countries? Well, here is Piketty's data:



There are various ways you could look at this, but Piketty's suggestion is that up to 1910 there was a capital-accumulation equilibrium of 4-7 times income depending on country-by-country detail. The two world wars and the Great Depression knocked the ratio down to between 2 and 4 times income, well below the equilibrium when ***g*** is around 2% and ***s*** is around 12%. Since the Second World War the ratio has been pushing its way back up to equilibrium, a process which can go only as fast as savings can occur and be accumulated – and that rough equilibrium of around 5 which would restore the nineteenth-century equilibrium is just coming into view as of 2010.

14. As accumulation rolls on, the share of income claimed by "capital"(=wealth) obviously goes up as well, since the rising wealth stock commands a 4-5% rate of return as first call on society's income, leaving the mass of the population (who do not own wealth) to share out the remainder amongst themselves. So how has broadly-defined "capital"'s share of income been looking? That's not easy to get a handle on from the available data but for a first approximation one can look at the share of the top end of the income distribution – the 1%:



That looks consistent with Piketty's model, combined with his observation that the distribution of wealth between the super-rich and the middle class tends to become more concentrated over time, because the super-rich save more and get a higher rate of return. There's a noticeable contrast with the data for continental Europe, where the redistributive welfare state hung on harder – but even there the trend looks to be turning up (and the aftermath of the Global Financial Crisis has almost certainly given it a further kick since 2010):

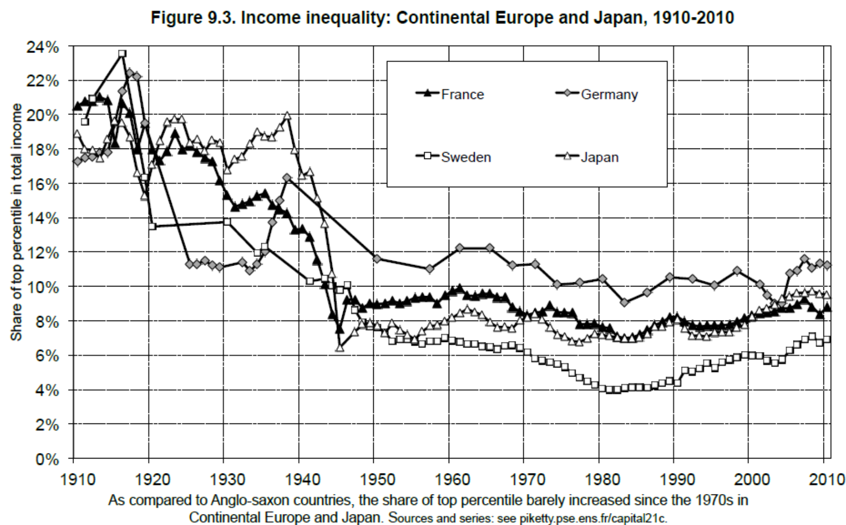


Figure 9.3. Income inequality: Continental Europe and Japan, 1910-2010

As compared to Anglo-saxon countries, the share of top percentile barely increased since the 1970s in Continental Europe and Japan. Sources and series: see piketty.pse.ens.fr/capital21c.

15. This leaves us with the big question: if capitalism's long-run equilibrium is a society with most wealth concentrated in the hands of a super-rich patrimonial elite, who hold that wealth increasingly by virtue of inheritance rather than any productive contribution, will that be politically sustainable? Recall that Piketty's model does not predict actual impoverishment of the mass of the population – only widening inequality until the equilibrium is reached. If the mass of the population do not object, then an oligarchic order with a patrimonial rentier elite will consolidate itself and that will be the future. No logically necessary crisis is entailed by the disequalising logic of

capitalism – just a future of permanent self-reproducing inequality with falling social mobility as the rentier ruling class consolidate their hold on wealth.

16. Now we need a theory of what is "tolerable" in a democratic society. Piketty does not venture to offer any such theory – all that he says is that there may well be some level of equilibrium inequality that is not "tolerated". What determines democratic tolerance for inequality is not known, but there are some philosophical guidelines available. One common neoliberal justification for inequality in a market economy is that income distribution merely reflects productive contributions and so is based on natural justice; this is often accompanied by the argument that competition in and of itself will be a force making for greater equality. Neither of these arguments survives Piketty's work, but without them some other ideological justification for capitalism would presumably be needed to sustain tolerance of inequality. The rentier elite might turn out to be platonic philosopher kings using their wealth for the social good to such an extent that criticism falls away, but there is no obvious reason to anticipate this.
17. If, Piketty mildly suggests, capitalism's equilibrium free-market level of inequality is not "tolerable" under democracy, then either democracy or capitalism will have to give way. If tolerance is not overstretched, the two may coexist. If tolerance is overstretched, and if we assume that democracy does not yield, then two outcomes can be envisaged. One is the overthrow of private capitalism, in the sense of an ending of the property rights and inheritance rights on which the position of the rentier class depend: in other words, expropriation of capital and "euthanasia of the rentier". The other is a moderate set of policy adjustments that reduce the purity of the free-market version of capitalism in the name of saving its essence.
18. This brings us to Piketty's specific policy proposals. A progressive tax on wealth, starting at 0.1-0.5% on fortunes < €1 million and rising progressively to 5% or 10% on really big fortunes would bring the after-tax rate of return down below the raw 4-5%, to a level at which the savings rate out of rents, and hence the rate of increase in the stock of wealth, would fall, bringing the equilibrium wealth/income ratio down and holding it down so long as the tax was enforceable and enforced. (The aim here is to replace the inequality $r > g$ with an equality.) A progressive income tax with a top rate of 80% on incomes in the millions of dollars would limit the ability of corporate CEOs to inflate their salaries and bonuses as a means of rapidly accumulating large fortunes – and would reinforce the effect of the wealth tax in lowering the equilibrium capital/income ratio. And a tax on inheritance might be handy also, though not essential. Indeed, once as democratic debate over inheritance and property rights got underway, a variety of creative ideas might surface.
19. To conclude. The three essential pillars of patrimonial capitalism are a set of social institutions designed by and for the rich: the right of wealth holders to hold and enjoy their wealth free from expropriation; the right of wealth holders to collect an annual flow of rent on their property; and the right to pass on wealth by inheritance, thus

making possible the accumulation of dynastic fortunes. For the mass of the population in a democratic order, the big opportunities to limit inequality of income and wealth lie in the possibility of encroaching to some extent on one or more of these property rights. Fiscal measures such as wealth tax, progressive income tax and inheritance tax should be thought of not as revenue earners, nor as punitive anti-rich measures, but simply as the policy tools with which a more "just" social order can be constructed and sustained without throwing away the positive aspects of market capitalism. As such, these policy proposals are not vulnerable to criticism on grounds of their impact on short-run "economic efficiency", nor of breaching any well-established social contract. They are to be evaluated really only relative to the alternatives, if Piketty is right: tolerance for a permanent oligarchic society, or resort to more radical surgery in order to save democracy. If Piketty is wrong, of course, other prospects open up. Testing Piketty has abruptly become a central issue for economic research.