CAPITAL IN THE TWENTY-FIRST CENTURY

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The Belknap Press of Harvard University Press

CAMBRIDGE, MASSACHUSETTS
LONDON, ENGLAND
2014

Printed in the United States of America

First published as *Le capital au XXI siècle,*

Design by Dean Bornstein

Library of Congress Cataloging-in-Publication Data
Piketty, Thomas, 1971–
[Capital au XXIe siècle. English]
Capital in the twenty-first century / Thomas Piketty ; translated by Arthur Goldhammer.
pages cm
Translation of the author's Le capital au XXIe siècle.
Includes bibliographical references and index.
ISBN 978-0-674-43000-6 (alk. paper)
1. Capital. 2. Income distribution. 3. Wealth. 4. Labor economics.
I. Goldhammer, Arthur, translator. II. Title.
HB501.P43613 2014
332'.041—dc23
2013036024

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A Social State for the Twenty-First Century

In the first three parts of this book, I analyzed the evolution of the distribution of wealth and the structure of inequality since the eighteenth century. From this analysis I must now try to draw lessons for the future. One major lesson is already clear: it was the wars of the twentieth century that, to a large extent, wiped away the past and transformed the structure of inequality. Today, in the second decade of the twenty-first century, inequalities of wealth that had supposedly disappeared are close to regaining or even surpassing their historical highs. The new global economy has brought with it both immense hopes (such as the eradication of poverty) and equally immense inequities (some individuals are now as wealthy as entire countries). Can we imagine a twenty-first century in which capitalism will be transcended in a more peaceful and more lasting way, or must we simply await the next crisis or the next war (this time truly global)? On the basis of the history I have brought to light here, can we imagine political institutions that might regulate today's global patrimonial capitalism justly as well as efficiently?

As I have already noted, the ideal policy for avoiding an endless inegalitarian spiral and regaining control over the dynamics of accumulation would be a progressive global tax on capital. Such a tax would also have another virtue: it would expose wealth to democratic scrutiny, which is a necessary condition for effective regulation of the banking system and international capital flows. A tax on capital would promote the general interest over private interests while preserving economic openness and the forces of competition. The same cannot be said of various forms of retreat into national or other identities, which may well be the alternative to this ideal policy. But a truly global tax on capital is no doubt a utopian ideal. Short of that, a regional or continental tax might be tried, in particular in Europe, starting with countries willing to accept such a tax. Before I come to that, I must first reexamine in a much broader context the question of a tax on capital (which is of course only one component of an ideal social and fiscal system). What is the role of government in the production and distribution of wealth in the twenty-first century, and what kind of social state is most suitable for the age?

The Crisis of 2008 and the Return of the State

The global financial crisis that began in 2007–2008 is generally described as the most serious crisis of capitalism since the crash of 1929. The comparison is in some ways justified, but essential differences remain. The most obvious of these is that the recent crisis has not led to a depression as devastating as the Great Depression of the 1930s. Between 1929 and 1935, production in the developed countries fell by a quarter, unemployment rose by the same amount, and the world did not entirely recover from the Depression until the onset of World War II. Fortunately, the current crisis has been significantly less cataclysmic. That is why it has been given a less alarming name: the Great Recession. To be sure, the leading developed economies in 2013 are not quite back to the level of output they had achieved in 2007, government finances are in pitiful condition, and prospects for growth look gloomy for the foreseeable future, especially in Europe, which is mired in an endless sovereign debt crisis (which is ironic, since Europe is also the continent with the highest capital/income ratio in the world). Yet even in the depths of the recession, in 2009, production did not fall by more than five percentage points in the wealthiest countries. This was enough to make it the most serious global recession since the end of World War II, but it is still a very different thing from the dramatic collapse of output and waves of bankruptcies of the 1930s. Furthermore, growth in the emerging countries quickly bounced back and is buoying global growth today.

The main reason why the crisis of 2008 did not trigger a crash as serious as the Great Depression is that this time the governments and central banks of the wealthy countries did not allow the financial system to collapse and agreed to create the liquidity necessary to avoid the waves of bank failures that led the world to the brink of the abyss in the 1930s. This pragmatic monetary and financial policy, poles apart from the "liquidationist" orthodoxy that reigned nearly everywhere after the 1929 crash, managed to avoid the worst. (Herbert Hoover, the US president in 1929, thought that limping businesses had to be "liquidated," and until Franklin Roosevelt replaced Hoover in 1933, they were.) The pragmatic response to the crisis also reminded the world that central banks do not exist just to twiddle their thumbs and keep down inflation. In situations of total financial panic, they play an indispensable role as lender of last resort—indeed, they are the only public institution capable of averting a total collapse of the economy and society in an emergency. That said, central banks are not designed to solve all the world's problems. The pragmatic policies adopted after the crisis of 2008 no doubt avoided the worst, but they did not really provide a durable response to the structural problems that made the crisis possible, including the crying lack of financial transparency and the rise of inequality. The crisis of 2008 was the first crisis of the globalized patrimonial capitalism of the twenty-first century. It is unlikely to be the last.

Many observers deplore the absence of any real "return of the state" to managing the economy. They point out that the Great Depression, as terrible as it was, at least deserves credit for bringing about radical changes in tax policy and government spending. Indeed, within a few years of his inauguration, Roosevelt increased the top marginal rate of the federal income tax to more than 80 percent on extremely high incomes, whereas the top rate under Hoover had been only 25 percent. By contrast, at the time of this writing, Washington is still wondering whether the Obama administration will be able in its second term to raise the top rate left by Bush (of around 35 percent) above what it was under Clinton in the 1990s (around 40 percent).

In Chapter 14 I will look at the question of confiscatory tax rates on incomes deemed to be indecent (and economically useless), which was in fact an impressive US innovation of the interwar years. To my mind, it deserves to be reconceived and revived, especially in the country that first thought of it.

To be sure, good economic and social policy requires more than just a high marginal tax rate on extremely high incomes. By its very nature, such a tax brings in almost nothing. A progressive tax on capital is a more suitable instrument for responding to the challenges of the twenty-first century than a progressive income tax, which was designed for the twentieth century (although the two tools can play complementary roles in the future). For now, however, it is important to dispel a possible misunderstanding.

The possibility of greater state intervention in the economy raises very different issues today than it did in the 1930s, for a simple reason: the influence of the state is much greater now than it was then, indeed, in many ways greater than it has ever been. That is why today's crisis is both an indictment of the markets and a challenge to the role of government. Of course, the role of government has been constantly challenged since the 1970s, and the challenges will never end: once the government takes on the central role in economic and social life that it acquired in the decades after World War II, it is normal and legitimate for that role to be permanently questioned and debated. To some this may seem unjust, but it is inevitable and natural. Some people are baffled by the new role of government, and vehement if uncomprehending clashes between apparently irreconcilable positions are not uncommon. Some are outspoken in favor of an even greater role for the state, as if it no longer played any role at all, while still others call for the state to be dismantled at once, especially in the country where it is least present, the United States. There, groups affiliated with the Tea Party call for abolishing the Federal Reserve and returning to the gold standard. In Europe, the verbal clashes between "lazy Greeks" and "Nazi Germans" can be even more vitriolic. None of this helps to solve the real problems at hand. Both the antimarket and antistate camps are partly correct: new instruments are needed to regain control over a financial capitalism that has run amok, and at the same time the tax and transfer systems that are the heart of the modern social state are in constant need of reform and modernization, because they have achieved a level of complexity that makes them difficult to understand and threatens to undermine their social and economic efficacy.

This twofold task may seem insurmountable. It is in fact an enormous challenge, which our democratic societies will have to meet in the years ahead. But it will be impossible to convince a majority of citizens that our governing institutions (especially at the supranational level) need new tools unless the instruments already in place can be shown to be working properly. To clarify all this, I must first take a look backward and briefly discuss how taxation and government spending have evolved in the rich countries since the nineteenth century.

The Growth of the Social State in the Twentieth Century

The simplest way to measure the change in the government's role in the economy and society is to look at the total amount of taxes relative to national income. Figure 13.1 shows the historical trajectory of four countries (the United States, Britain, France, and Sweden) that are fairly representative of

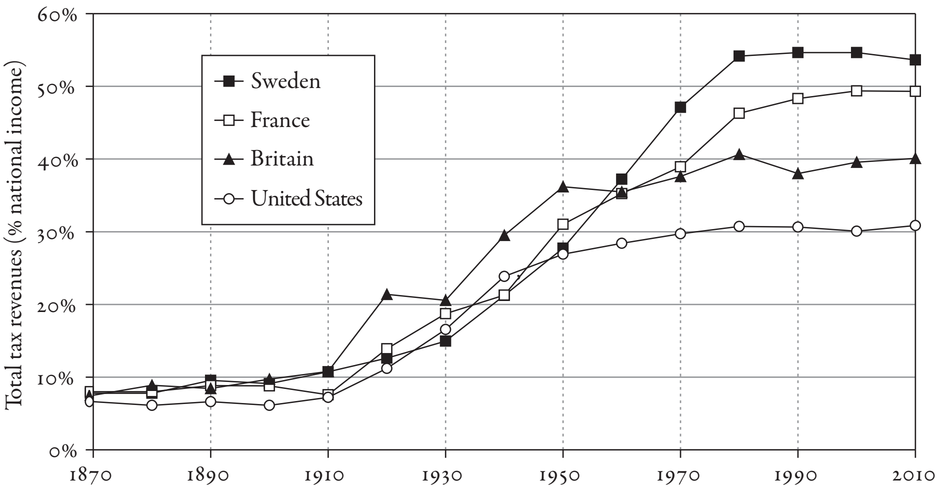

FIGURE 13.1. Tax revenues in rich countries, 1870–2010

Total tax revenues were less than 10 percent of national income in rich countries until 1900–1910; they represent between 30 percent and 55 percent of national income in 2000–2010.

Sources and series: see piketty.pse.ens.fr/capital21c.

what has happened in the rich countries.[1] There are both striking similarities and important differences in the observed evolutions.

The first similarity is that taxes consumed less than 10 percent of national income in all four countries during the nineteenth century and up to World War I. This reflects the fact that the state at that time had very little involvement in economic and social life. With 7–8 percent of national income, it is possible for a government to fulfill its central "regalian" functions (police, courts, army, foreign affairs, general administration, etc.) but not much more. After paying to maintain order, enforce property rights, and sustain the military (which often accounts for more than half of total expenditures), not much remained in the government's coffers.[2] States in this period also paid for some roads and other infrastructure, as well as schools, universities, and hospitals, but most people had access only to fairly rudimentary educational and health services.[3]

Between 1920 and 1980, the share of national income that the wealthy countries chose to devote to social spending increased considerably. In just

—-1
—0
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half a century, the share of taxes in national income increased by a factor of at least 3 or 4 (and in the Nordic countries more than 5). Between 1980 and 2010, however, the tax share stabilized everywhere. This stabilization took place at different levels in each country, however: just over 30 percent of national income in the United States, around 40 percent in Britain, and between 45 and 55 percent on the European continent (45 percent in Germany, 50 percent in France, and nearly 55 percent in Sweden).[4] The differences between countries are significant.[5] Nevertheless, the secular evolutions are closely matched, in particular the almost perfect stability observed in all four countries over the past three decades. Political changes and national peculiarities are also noticeable in Figure 13.1 (between Britain and France, for example).[6] But their importance is on the whole rather limited compared with this common stabilization.[7]

In other words, all the rich countries, without exception, went in the twentieth century from an equilibrium in which less than a tenth of their national income was consumed by taxes to a new equilibrium in which the figure rose to between a third and a half.[8] Several important points about this fundamental transformation call for further clarification.

First, it should be clear why the question of whether or not there has been a "return to the state" in the present crisis is misleading: the role of the government is greater than ever. In order to fully appreciate the state's role in economic and social life, other indicators of course need to be considered. The state also intervenes by setting rules, not just by collecting taxes to pay its expenses. For example, the financial markets were much less tightly regulated after 1980 than before. The state also produces and owns capital: privatization of formerly state-owned industrial and financial assets over the past three decades has also reduced the state's role in comparison with the three decades after World War II. Nevertheless, in terms of tax receipts and government outlays, the state has never played as important an economic role as it has in recent decades. No downward trend is evident, contrary to what is sometimes said. To be sure, in the face of an aging population, advances in medical technology, and constantly growing educational needs, the mere fact of having stabilized the tax bill as a percentage of national income is in itself no mean feat: cutting the government budget is always easier to promise in opposition than to achieve once in power. Nevertheless, the fact remains that taxes today claim nearly half of national income in most European countries, and no one seriously envisions an increase in the future comparable to that which occurred between 1930 and 1980. In the wake of the Depression, World War II, and postwar reconstruction, it was reasonable to think that the solution to the problems of capitalism was to expand the role of the state and increase social spending as much as necessary. Today's choices are necessarily more complex. The state's great leap forward has already taken place: there will be no second leap—not like the first one, in any event.

To gain a better understanding of what is at stake behind these figures, I want to describe in somewhat greater detail what this historic increase in government tax revenues was used for: the construction of a "social state."[9] In the nineteenth century, governments were content to fulfill their "regalian" missions. Today these same functions command a little less than one-tenth of national income. The growing tax bite enabled governments to take on ever broader social functions, which now consume between a quarter and a third of national income, depending on the country. This can be broken down initially into two roughly equal halves: one half goes to health and education, the other to replacement incomes and transfer payments.[10]

Spending on education and health consumes 10–15 percent of national income in all the developed countries today.[11] There are significant differences between countries, however. Primary and secondary education are almost entirely free for everyone in all the rich countries, but higher education can be quite expensive, especially in the United States and to a lesser extent in Britain. Public health insurance is universal (that is, open to the entire population) in most countries in Europe, including Britain.[12] In the United States, however, it is reserved for the poor and elderly (which does not prevent it from being very costly).[13] In all the developed countries, public spending covers much of the cost of education and health services: about three-quarters in Europe and half in the United States. The goal is to give equal access to these basic goods: every child should have access to education, regardless of his or her parents' income, and everyone should have access to health care, even, indeed especially, when circumstances are difficult.

Replacement incomes and transfer payments generally consume 10–15 (or even 20) percent of national income in most of the rich countries today. Unlike public spending on education and health, which may be regarded as transfers in kind, replacement income and transfer payments form part of household disposable income: the government takes in large sums in taxes and social insurance contributions and then pays them out to other households in the form of replacement income (pensions and unemployment compensation) and transfer payments (family allowances, guaranteed income, etc.), so that the total disposable income of all households in the aggregate remains unchanged.[14]

In practice, pensions account for the lion's share (two-thirds to three-quarters) of total replacement income and transfer payments. Here, too, there are significant differences between countries. In continental Europe, pensions alone often consume 12–13 percent of national income (with Italy and France at the top, ahead of Germany and Sweden). In the United States and Britain, the public pension system is much more drastically capped for those at the middle and top of the income hierarchy (the replacement rate, that is, the amount of the pension in proportion to the wage earned prior to retirement, falls rather quickly for those who earned above the average wage), and pensions consume only 6–7 percent of national income.[15] These are very large sums in all cases: in all the rich countries, public pensions are the main source of income for at least two-thirds of retirees (and generally three-quarters). Despite the defects of these public pensions systems and the challenges they now face, the fact is that without them it would have been impossible to eradicate poverty among the elderly, which was endemic as recently as the 1950s. Along with access to education and health, public pensions constitute the third social revolution that the fiscal revolution of the twentieth century made possible.

Compared with pension outlays, payments for unemployment insurance are much smaller (typically 1–2 percent of national income), reflecting the fact that people spend less time in unemployment than in retirement. The replacement income is nevertheless useful when needed. Finally, income support outlays are even smaller (less than 1 percent of national income), almost insignificant when measured against total government spending. Yet this type of spending is often the most vigorously challenged: beneficiaries are suspected of wanting to live their lives on the dole, even though the proportion of the population relying on welfare payments is generally far smaller than for other government programs, because the stigma attached to welfare (and in many cases the complexity of the process) dissuades many who are entitled to benefits from asking for them.[16] Welfare benefits are questioned not only in Europe but also in the United States (where the unemployed black single mother is often singled out for criticism by opponents of the US "welfare state").[17] In both cases, the sums involved are in fact only a very small part of state social spending.

All told, if we add up state spending on health and education (10–15 percent of national income) and replacement and transfer payments (another 10–15 or perhaps as high as 20 percent of national income), we come up with total social spending (broadly speaking) of 25–35 percent of national income, which accounts for nearly all of the increase in government revenues in the wealthy countries in the twentieth century. In other words, the growth of the fiscal state over the last century basically reflects the constitution of a social state.

Modern Redistribution: A Logic of Rights

To sum up: modern redistribution does not consist in transferring income from the rich to the poor, at least not in so explicit a way. It consists rather in financing public services and replacement incomes that are more or less equal for everyone, especially in the areas of health, education, and pensions. In the latter case, the principle of equality often takes the form of a quasi proportionality between replacement income and lifetime earnings.[18] For education and health, there is real equality of access for everyone regardless of income (or parents' income), at least in principle. Modern redistribution is built around a logic of rights and a principle of equal access to a certain number of goods deemed to be fundamental.

At a relatively abstract level, it is possible to find justifications for this rights-based approach in various national political and philosophical traditions. The US Declaration of Independence (1776) asserts that everyone has an equal right to the pursuit of happiness.[19] In a sense, our modern belief in fundamental rights to education and health can be linked to this assertion, even though it took quite a while to get there. Article 1 of the Declaration of the Rights of Man and the Citizen (1789) also proclaims that "men are born free and remain free and equal in rights." This is followed immediately, however, by the statement that "social distinctions can be based only on common utility." This is an important addition: the second sentence alludes to the existence of very real inequalities, even though the first asserts the principle of absolute equality. Indeed, this is the central tension of any rights-based approach: how far do equal rights extend? Do they simply guarantee the right to enter into free contract—the equality of the market, which at the time of the French Revolution actually seemed quite revolutionary? And if one includes equal rights to an education, to health care, and to a pension, as the twentieth-century social state proposed, should one also include rights to culture, housing, and travel?

The second sentence of article 1 of the Declaration of the Rights of Man of 1789 formulates a kind of answer to this question, since it in a sense reverses the burden of proof: equality is the norm, and inequality is acceptable only if based on "common utility." It remains to define the term "common utility." The drafters of the Declaration were thinking mainly of the abolition of the orders and privileges of the Ancien Régime, which were seen at the time as the very epitome of arbitrary, useless inequality, hence as not contributing to "common utility." One can interpret the phrase more broadly, however. One reasonable interpretation is that social inequalities are acceptable only if they are in the interest of all and in particular of the most disadvantaged social groups.[20] Hence basic rights and material advantages must be extended insofar as possible to everyone, as long as it is in the interest of those who have the fewest rights and opportunities to do so.[21] The "difference principle" introduced by the US philosopher John Rawls in his *Theory of Justice* is similar in intent.[22] And the "capabilities" approach favored by the Indian economist Amartya Sen is not very different in its basic logic.[23]

At a purely theoretical level, there is in fact a certain (partly artificial) consensus concerning the abstract principles of social justice. The disagreements become clearer when one tries to give a little substance to these social rights and inequalities and to anchor them in specific historical and economic contexts. In practice, the conflicts have to do mainly with the means of effecting real improvement in the living conditions of the least advantaged, the precise extent of the rights that can be granted to all (in view of economic and budgetary constraints and the many related uncertainties), and exactly what factors are within and beyond the control of individuals (where does luck end and where do effort and merit begin?). Such questions will never be answered by abstract principles or mathematical formulas. The only way to answer them is through democratic deliberation and political confrontation. The institutions and rules that govern democratic debate and decision-making therefore play a central role, as do the relative power and persuasive capabilities of different social groups. The US and French Revolutions both affirmed equality of rights as an absolute principle—a progressive stance at that time. But in practice, during the nineteenth century, the political systems that grew out of those revolutions concentrated mainly on the protection of property rights.

Modernizing Rather than Dismantling the Social State

Modern redistribution, as exemplified by the social states constructed by the wealthy countries in the twentieth century, is based on a set of fundamental social rights: to education, health, and retirement. Whatever limitations and challenges these systems of taxation and social spending face today, they nevertheless marked an immense step forward in historical terms. Partisan conflict aside, a broad consensus has formed around these social systems, particularly in Europe, which remains deeply attached to what is seen as a "European social model." No major movement or important political force seriously envisions a return to a world in which only 10 or 20 percent of national income would go to taxes and government would be pared down to its regalian functions.[24]

On the other hand, there is no significant support for continuing to expand the social state at its 1930–1980 growth rate (which would mean that by 2050–2060, 70–80 percent of national income would go to taxes). In theory, of course, there is no reason why a country cannot decide to devote two-thirds or three-quarters of its national income to taxes, assuming that taxes are collected in a transparent and efficient manner and used for purposes that everyone agrees are of high priority, such as education, health, culture, clean energy, and sustainable development. Taxation is neither good nor bad in itself. Everything depends on how taxes are collected and what they are used for. There are nevertheless two good reasons to believe that such a drastic increase in the size of the social state is neither realistic nor desirable, at least for the foreseeable future.

First, the very rapid expansion of the role of government in the three decades after World War II was greatly facilitated and accelerated by exceptionally rapid economic growth, at least in continental Europe.[25] When incomes are increasing 5 percent a year, it is not too difficult to get people to agree to devote an increasing share of that growth to social spending (which therefore increases more rapidly than the economy), especially when the need for better education, more health care, and more generous pensions is obvious (given the very limited funds allocated for these purposes from 1930 to 1950). The situation has been very different since the 1980s: with per capita income growth of just over 1 percent a year, no one wants large and steady tax increases, which would mean even slower if not negative income growth. Of course it is possible to imagine a redistribution of income via the tax system or more progressive tax rates applied to a more or less stable total income, but it is very difficult to imagine a general and durable increase in the average tax rate. The fact that tax revenues have stabilized in all the rich countries, notwithstanding national differences and changes of government, is no accident (see Figure 13.1). Furthermore, it is by no means certain that social needs justify ongoing tax increases. To be sure, there are objectively growing needs in the educational and health spheres, which may well justify slight tax increases in the future. But the citizens of the wealthy countries also have a legitimate need for enough income to purchase all sorts of goods and services produced by the private sector—for instance, to travel, buy clothing, obtain housing, avail themselves of new cultural services, purchase the latest tablet, and so on. In a world of low productivity growth, on the order of 1–1.5 percent (which is in fact a decent rate of growth over the long term), society has to choose among different types of needs, and there is no obvious reason to think that nearly all needs should by paid for through taxation.

Furthermore, no matter how the proceeds of growth are allocated among different needs, there remains the fact that once the public sector grows beyond a certain size, it must contend with serious problems of organization. Once again, it is hard to foresee what will happen in the very long run. It is perfectly possible to imagine that new decentralized and participatory forms of organization will be developed, along with innovative types of governance, so that a much larger public sector than exists today can be operated efficiently. The very notion of "public sector" is in any case reductive: the fact that a service is publicly financed does not mean that it is produced by people directly employed by the state or other public entities. In education and health, services are provided by many kinds of organizations, including foundations and associations, which are in fact intermediate forms between the state and private enterprise. All told, education and health account for 20 percent of employment and GDP in the developed economies, which is more than all sectors of industry combined. This way of organizing production is durable and universal. For example, no one has proposed transforming private US universities into publicly owned corporations. It is perfectly possible that such intermediary forms will become more common in the future, for example, in the cultural and media sectors, where profit-making corporations already face serious competition and raise concerns about potential conflicts of interest. As I showed earlier when discussing how capitalism is organized in Germany, the notion of private property can vary from country to country, even in the automobile business, one of the most traditional branches of industry. There is no single variety of capitalism or organization of production in the developed world today: we live in a mixed economy, different to be sure from the mixed economy that people envisioned after World War II but nonetheless quite real. This will continue to be true in the future, no doubt more than ever: new forms of organization and ownership remain to be invented.

That said, before we can learn to efficiently organize public financing equivalent to two-thirds to three-quarters of national income, it would be good to improve the organization and operation of the existing public sector, which represents only half of national income (including replacement and transfer payments)—no small affair. In Germany, France, Italy, Britain, and Sweden, debates about the social state in the decades to come will revolve mainly around issues of organization, modernization, and consolidation: if total taxes and social spending remain more or less unchanged in proportion to national income (or perhaps rise slightly in response to growing needs), how can we improve the operation of hospitals and day care centers, adjust doctors' fees and drug costs, reform universities and primary schools, and revise pension and unemployment benefits in response to changing life expectancies and youth unemployment rates? At a time when nearly half of national income goes to public spending, such debates are legitimate and even indispensable. If we do not constantly ask how to adapt our social services to the public's needs, the consensus supporting high levels of taxation and therefore the social state may not last forever.

Obviously, an analysis of the prospects for reform of all aspects of the social state would far exceed the scope of this book. I will therefore confine myself to a few issues of particular importance for the future and directly related to the themes of my work: first, the question of equal access to education, and especially higher education, and second, the future of pay-as-you-go retirement systems in a world of low growth.

Do Educational Institutions Foster Social Mobility?

In all countries, on all continents, one of the main objectives of public spending for education is to promote social mobility. The stated goal is to provide access to education for everyone, regardless of social origin. To what extent do existing institutions fulfill this objective?

In Part Three, I showed that even with the considerable increase in the average level of education over the course of the twentieth century, earned income inequality did not decrease. Qualification levels shifted upward: a high school diploma now represents what a grade school certificate used to mean, a college degree what a high school diploma used to stand for, and so on. As technologies and workplace needs changed, all wage levels increased at similar rates, so that inequality did not change. What about mobility? Did mass education lead to more rapid turnover of winners and losers for a given skill hierarchy? According to the available data, the answer seems to be no: the intergenerational correlation of education and earned incomes, which measures the reproduction of the skill hierarchy over time, shows no trend toward greater mobility over the long run, and in recent years mobility may even have decreased.[26] Note, however, that it is much more difficult to measure mobility across generations than it is to measure inequality at a given point in time, and the sources available for estimating the historical evolution of mobility are highly imperfect.[27] The most firmly established result in this area of research is that intergenerational reproduction is lowest in the Nordic countries and highest in the United States (with a correlation coefficient two-thirds higher than in Sweden). France, Germany, and Britain occupy a middle ground, less mobile than northern Europe but more mobile than the United States.[28]

These findings stand in sharp contrast to the belief in "American exceptionalism" that once dominated US sociology, according to which social mobility in the United States was exceptionally high compared with the class-bound societies of Europe. No doubt the settler society of the early nineteenth century was more mobile. As I have shown, moreover, inherited wealth played a smaller role in the United States than in Europe, and US wealth was for a long time less concentrated, at least up to World War I. Throughout most of the twentieth century, however, and still today, the available data suggest that social mobility has been and remains lower in the United States than in Europe.

One possible explanation for this is the fact that access to the most elite US universities requires the payment of extremely high tuition fees. Furthermore, these fees rose sharply in the period 1990–2010, following fairly closely the increase in top US incomes, which suggests that the reduced social mobility observed in the United States in the past will decline even more in the future.[29] The issue of unequal access to higher education is increasingly a subject of debate in the United States. Research has shown that the proportion of college degrees earned by children whose parents belong to the bottom two quartiles of the income hierarchy stagnated at 10–20 percent in 1970–2010, while it rose from 40 to 80 percent for children with parents in the top quartile.[30] In other words, parents' income has become an almost perfect predictor of university access.

This inequality of access also seems to exist at the top of the economic hierarchy, not only because of the high cost of attending the most prestigious private universities (high even in relation to the income of upper-middle-class parents) but also because admissions decisions clearly depend in significant ways on the parents' financial capacity to make donations to the universities. For example, one study has shown that gifts by graduates to their former universities are strangely concentrated in the period when the children are of college age.[31] By comparing various sources of data, moreover, it is possible to estimate that the average income of the parents of Harvard students is currently about $450,000, which corresponds to the average income of the top 2 percent of the US income hierarchy.[32] Such a finding does not seem entirely compatible with the idea of selection based solely on merit. The contrast between the official meritocratic discourse and the reality seems particularly extreme in this case. The total absence of transparency regarding selection procedures should also be noted.[33]

It would be wrong, however, to imagine that unequal access to higher education is a problem solely in the United States. It is one of the most important problems that social states everywhere must face in the twenty-first century. To date, no country has come up with a truly satisfactory response. To be sure, university tuitions fees are much lower in Europe if one leaves Britain aside.[34] In other countries, including Sweden and other Nordic countries, Germany, France, Italy, and Spain, tuition fees are relatively low (less than 500 euros). Although there are exceptions, such as business schools and Sciences Po in France, and although the situation is changing rapidly, this remains a very striking difference between continental Europe and the United

States: in Europe, most people believe that access to higher education should be free or nearly free, just as primary and secondary education are.[35] In Quebec, the decision to raise tuition gradually from $2,000 to nearly $4,000 was interpreted as an attempt to move toward an inegalitarian US-style system, which led to a student strike in the winter of 2012 and ultimately to a change of government and cancellation of the decision.

It would be naïve, however, to think that free higher education would resolve all problems. In 1964, Pierre Bourdieu and Jean-Claude Passeron analyzed, in *Les héritiers,* more subtle mechanisms of social and cultural selection, which often do the same work as financial selection. In practice, the French system of "grandes écoles" leads to spending more public money on students from more advantaged social backgrounds, while less money is spent on university students who come from more modest backgrounds. Again, the contrast between the official discourse of "republican meritocracy" and the reality (in which social spending amplifies inequalities of social origin) is extreme.[36] According to the available data, it seems that the average income of parents of students at Sciences Po is currently around 90,000 euros, which roughly corresponds to the top 10 percent of the French income hierarchy. Recruitment is thus 5 times broader than at Harvard but still relatively limited.[37] We lack the data to do a similar calculation for students at the other grandes écoles, but the results would likely be similar.

Make no mistake: there is no easy way to achieve real equality of opportunity in higher education. This will be a key issue for the social state in the twenty-first century, and the ideal system has yet to be invented. Tuition fees create an unacceptable inequality of access, but they foster the independence, prosperity, and energy that make US universities the envy of the world.[38] In the abstract, it should be possible to combine the advantages of decentralization with those of equal access by providing universities with substantial publicly financed incentives. In some respects this is what public health insurance systems do: producers (doctors and hospitals) are granted a certain independence, but the cost of care is a collective responsibility, thus ensuring that patients have equal access to the system. One could do the same thing with universities and students. The Nordic countries have adopted a strategy of this kind in higher education. This of course requires substantial public financing, which is not easy to come by in the current climate of consolidation of the social state.[39] Such a strategy is nevertheless far more satisfactory than other recent attempts, which range from charging tuition fees that vary with parents' income[40] to offering loans that are to be paid back by a surtax added to the recipient's income tax.[41]

If we are to make progress on these issues in the future, it would be good to begin by working toward greater transparency than exists today. In the United States, France, and most other countries, talk about the virtues of the national meritocratic model is seldom based on close examination of the facts. Often the purpose is to justify existing inequalities while ignoring the sometimes patent failures of the current system. In 1872, Emile Boutmy created Sciences Po with a clear mission in mind: "obliged to submit to the rule of the majority, the classes that call themselves the upper classes can preserve their political hegemony only by invoking the rights of the most capable. As traditional upper-class prerogatives crumble, the wave of democracy will encounter a second rampart, built on eminently useful talents, superiority that commands prestige, and abilities of which society cannot sanely deprive itself."[42] If we take this incredible statement seriously, what it clearly means is that the upper classes instinctively abandoned idleness and invented meritocracy lest universal suffrage deprive them of everything they owned. One can of course chalk this up to the political context: the Paris Commune had just been put down, and universal male suffrage had just been reestablished. Yet Boutmy's statement has the virtue of reminding us of an essential truth: defining the meaning of inequality and justifying the position of the winners is a matter of vital importance, and one can expect to see all sorts of misrepresentations of the facts in service of the cause.

The Future of Retirement: Pay-As-You-Go and Low Growth

Public pension systems are generally pay-as-you-go (PAYGO) systems: contributions deducted from the wages of active workers are directly paid out as benefits to retirees. In contrast to capitalized pension plans, in a PAYGO system nothing is invested, and incoming funds are immediately disbursed to current retirees. In PAYGO schemes, based on the principle of intergenerational solidarity (today's workers pay benefits to today's retirees in the hope that their children will pay their benefits tomorrow), the rate of return is by definition equal to the growth rate of the economy: the contributions available to pay tomorrow's retirees will rise as average wages rise. In theory, this also implies that today's active workers have an interest in ensuring that average wages rise as rapidly as possible. They should therefore invest in schools and universities for their children and promote a higher birth rate. In other words, there exists a bond among generations that in principle makes for a virtuous and harmonious society.[43]

When PAYGO systems were introduced in the middle of the twentieth century, conditions were in fact ideal for such a virtuous series of events to occur. Demographic growth was high and productivity growth higher still. The growth rate was close to 5 percent in the countries of continental Europe, so this was the rate of return on the PAYGO system. Concretely, workers who contributed to state retirement funds between the end of World War II and 1980 were repaid (or are still being repaid) out of much larger wage pools than those from which their contributions were drawn. The situation today is different. The falling growth rate (now around 1.5 percent in the rich countries and perhaps ultimately in all countries) reduces the return on the pool of shared contributions. All signs are that the rate of return on capital in the twenty-first century will be significantly higher than the growth rate of the economy (4–5 percent for the former, barely 1.5 percent for the latter).[44]

Under these conditions, it is tempting to conclude that the PAYGO system should be replaced as quickly as possible by a capitalized system, in which contributions by active workers are invested rather than paid out immediately to retirees. These investments can then grow at 4 percent a year in order to finance the pensions of today's workers when they retire several decades from now. There are several major flaws in this argument, however. First, even if we assume that a capitalized system is indeed preferable to a PAYGO system, the transition from PAYGO to capitalized benefits raises a fundamental problem: an entire generation of retirees is left with nothing. The generation that is about to retire, who paid for the pensions of the previous generation with their contributions, would take a rather dim view of the fact that the contributions of today's workers, which current retirees had expected to pay their rent and buy their food during the remaining years of their lives, would in fact be invested in assets around the world. There is no simple solution to this transition problem, and this alone makes such a reform totally unthinkable, at least in such an extreme form.

Second, in comparing the merits of the two pension systems, one must bear in mind that the return on capital is in practice extremely volatile. It would be quite risky to invest all retirement contributions in global financial markets. The fact that $r > g$ on average does not mean that it is true for each individual investment. For a person of sufficient means who can wait ten or twenty years before taking her profits, the return on capital is indeed quite attractive. But when it comes to paying for the basic necessities of an entire generation, it would be quite irrational to bet everything on a roll of the dice. The primary justification of the PAYGO system is that it is the best way to guarantee that pension benefits will be paid in a reliable and predictable manner: the rate of wage growth may be less than the rate of return on capital, but the former is 5–10 times less volatile than the latter.[45] This will continue to be true in the twenty-first century, and PAYGO pensions will therefore continue to be part of the ideal social state of the future everywhere.

That said, it remains true that the logic of $r > g$ cannot be entirely ignored, and some things may have to change in the existing pension systems of the developed countries. One challenge is obviously the aging of the population. In a world where people die between eighty and ninety, it is difficult to maintain parameters that were chosen when the life expectancy was between sixty and seventy. Furthermore, increasing the retirement age is not just a way of increasing the resources available to both workers and retirees (which is a good thing in an era of low growth). It is also a response to the need that many people feel for fulfillment through work. For them, to be forced to retire at sixty and to spend more time in retirement in some cases than in a career, is not an appetizing prospect. The problem is that individual situations vary widely. Some people have primarily intellectual occupations, and they may wish to remain on the job until they are seventy (and it is possible that the number of such people as a share of total employment will increase over time). There are many others, however, who began work early and whose work is arduous or not very rewarding and who legitimately aspire to retire relatively early (especially since their life expectancy is often lower than that of more highly qualified workers). Unfortunately, recent reforms in many developed countries fail to distinguish adequately between these different types of individual, and in some cases more is demanded of the latter than of the former, which is why these reforms sometimes provoke strong opposition.

One of the main difficulties of pension reform is that the systems one is trying to reform are extremely complex, with different rules for civil servants, private sector workers, and nonworkers. For a person who has worked in different types of jobs over the course of a lifetime, which is increasingly common in the younger generations, it is sometimes difficult to know which rules apply. That such complexity exists is not surprising: today's pension systems were in many cases built in stages, as existing schemes were extended to new social groups and occupations from the nineteenth century on. But this makes it difficult to obtain everyone's cooperation on reform efforts, because many people feel that they are being treated worse than others. The hodgepodge of existing rules and schemes frequently confuses the issue, and people underestimate the magnitude of the resources already devoted to public pensions and fail to realize that these amounts cannot be increased indefinitely. For example, the French system is so complex that many younger workers do not have a clear understanding of what they are entitled to. Some even think that they will get nothing even though they are paying a substantial amount into the system (something like 25 percent of gross pay). One of the most important reforms the twenty-first-century social state needs to make is to establish a unified retirement scheme based on individual accounts with equal rights for everyone, no matter how complex one's career path.[46] Such a system would allow each person to anticipate exactly what to expect from the PAYGO public plan, thus allowing for more intelligent decisions about private savings, which will inevitably play a more important supplementary role in a low-growth environment. One often hears that "a public pension is the patrimony of those without patrimony." This is true, but it does not mean that it would not be wise to encourage people of more modest means to accumulate nest eggs of their own.[47]

The Social State in Poor and Emerging Countries

Does the kind of social state that emerged in the developed countries in the twentieth century have a universal vocation? Will we see a similar development in the poor and emerging countries? Nothing could be less certain. To begin with, there are important differences among the rich countries: the countries of Western Europe seem to have stabilized government revenues at about 45–50 percent of national income, whereas the United States and Japan seem to be stuck at around the 30–35 percent level. Clearly, different choices are possible at equivalent levels of development.

If we look at the poorest countries around the world in 1970–1980, we find that governments generally took 10–15 percent of national income, both in Sub-Saharan Africa and in South Asia (especially India). Turning to countries at an intermediate level of development in Latin America, North Africa, and China, we find governments taking 15–20 percent of national income, lower than in the rich countries at comparable levels of development. The most striking fact is that the gap between the rich and the not-so-rich countries has continued to widen in recent years. Tax levels in the rich countries rose (from 30–35 percent of national income in the 1970s to 35–40 percent in the 1980s) before stabilizing at today's levels, whereas tax levels in the poor and intermediate countries decreased significantly. In Sub-Saharan Africa and South Asia, the average tax bite was slightly below 15 percent in the 1970s and early 1980s but fell to a little over 10 percent in the 1990s.

This evolution is a concern in that, in all the developed countries in the world today, building a fiscal and social state has been an essential part of the process of modernization and economic development. The historical evidence suggests that with only 10–15 percent of national income in tax receipts, it is impossible for a state to fulfill much more than its traditional regalian responsibilities: after paying for a proper police force and judicial system, there is not much left to pay for education and health. Another possible choice is to pay everyone—police, judges, teachers, and nurses—poorly, in which case it is unlikely that any of these public services will work well. This can lead to a vicious circle: poorly functioning public services undermine confidence in government, which makes it more difficult to raise taxes significantly. The development of a fiscal and social state is intimately related to the process of state-building as such. Hence the history of economic development is also a matter of political and cultural development, and each country must find its own distinctive path and cope with its own internal divisions.

In the present case, however, it seems that part of the blame lies with the rich countries and international organizations. The initial situation was not very promising. The process of decolonization was marked by a number of chaotic episodes in the period 1950–1970: wars of independence with the former colonial powers, somewhat arbitrary borders, military tensions linked to the Cold War, abortive experiments with socialism, and sometimes a little of all three. After 1980, moreover, the new ultraliberal wave emanating from the developed countries forced the poor countries to cut their public sectors and lower the priority of developing a tax system suitable to fostering economic development. Recent research has shown that the decline in government receipts in the poorest countries in 1980–1990 was due to a large extent to a decrease in customs duties, which had brought in revenues equivalent to about 5 percent of national income in the 1970s. Trade liberalization is not necessarily a bad thing, but only if it is not peremptorily imposed from without and only if the lost revenue can gradually be replaced by a strong tax authority capable of collecting new taxes and other substitute sources of revenue. Today's developed countries reduced their tariffs over the course of the nineteenth and twentieth centuries at a pace they judged to be reasonable and with clear alternatives in mind. They were fortunate enough not to have anyone tell them what they ought to be doing instead.[48] This illustrates a more general phenomenon: the tendency of the rich countries to use the less developed world as a field of experimentation, without really seeking to capitalize on the lessons of their own historical experience.[49] What we see in the poor and emerging countries today is a wide range of different tendencies. Some countries, like China, are fairly advanced in the modernization of their tax system: for instance, China has an income tax that is applicable to a large portion of the population and brings in substantial revenues. It is possibly in the process of developing a social state similar to those found in the developed countries of Europe, America, and Asia (albeit with specific Chinese features and of course great uncertainty as to its political and democratic underpinnings). Other countries, such as India, have had greater difficulty moving beyond an equilibrium based on a low level of taxation.[50] In any case, the question of what kind of fiscal and social state will emerge in the developing world is of the utmost importance for the future of the planet.

{ FOURTEEN }

Rethinking the Progressive Income Tax

In the previous chapter I examined the constitution and evolution of the social state, focusing on the nature of social needs and related social spending (education, health, retirement, etc.). I treated the overall level of taxes as a given and described its evolution. In this chapter and the next, I will examine more closely the structure of taxes and other government revenues, without which the social state could never have emerged, and attempt to draw lessons for the future. The major twentieth-century innovation in taxation was the creation and development of the progressive income tax. This institution, which played a key role in the reduction of inequality in the last century, is today seriously threatened by international tax competition. It may also be in jeopardy because its foundations were never clearly thought through, owing to the fact that it was instituted in an emergency that left little time for reflection. The same is true of the progressive tax on inheritances, which was the second major fiscal innovation of the twentieth century and has also been challenged in recent decades. Before I examine these two taxes more closely, however, I must first situate them in the context of progressive taxation in general and its role in modern redistribution.

The Question of Progressive Taxation

Taxation is not a technical matter. It is preeminently a political and philosophical issue, perhaps the most important of all political issues. Without taxes, society has no common destiny, and collective action is impossible. This has always been true. At the heart of every major political upheaval lies a fiscal revolution. The Ancien Régime was swept away when the revolutionary assemblies voted to abolish the fiscal privileges of the nobility and clergy and establish a modern system of universal taxation. The American Revolution was born when subjects of the British colonies decided to take their destiny in hand and set their own taxes. ("No taxation without representation"). Two centuries later the context is different, but the heart of the issue remains the same. How can sovereign citizens democratically decide how much of their resources they wish to devote to common goals such as education, health, retirement, inequality reduction, employment, sustainable development, and so on? Precisely what concrete form taxes take is therefore the crux of political conflict in any society. The goal is to reach agreement on who must pay what in the name of what principles—no mean feat, since people differ in many ways. In particular, they earn different incomes and own different amounts of capital. In every society there are some individuals who earn a lot from work but inherited little, and vice versa. Fortunately, the two sources of wealth are never perfectly correlated. Views about the ideal tax system are equally varied.

One usually distinguishes among taxes on income, taxes on capital, and taxes on consumption. Taxes of each type can be found in varying proportions in nearly all periods. These categories are not exempt from ambiguity, however, and the dividing lines are not always clear. For example, the income tax applies in principle to capital income as well as earned income and is therefore a tax on capital as well. Taxes on capital generally include any levy on the flow of income from capital (such as the corporate income tax), as well as any tax on the value of the capital stock (such as a real estate tax, an estate tax, or a wealth tax). In the modern era, consumption taxes include value-added taxes as well as taxes on imported goods, drink, gasoline, tobacco, and services. Such taxes have always existed and are often the most hated of all, as well as the heaviest burden on the lower class (one thinks of the salt tax under the Ancien Régime). They are often called "indirect" taxes because they do not depend directly on the income or capital of the individual taxpayer: they are paid indirectly, as part of the selling price of a purchased good. In the abstract, one might imagine a direct tax on consumption, which would depend on each taxpayer's total consumption, but no such tax has ever existed.[1]

In the twentieth century, a fourth category of tax appeared: contributions to government-sponsored social insurance programs. These are a special type of tax on income, usually only income from labor (wages and remuneration for nonwage labor). The proceeds go to social insurance funds intended to finance replacement income, whether pensions for retired workers or unemployment benefits for unemployed workers. This mode of collection ensures that the taxpayer will be aware of the purpose for which the tax is to be used.

Some countries, such as France, also use social contributions to pay for other social spending such as health insurance and family allowances, so that total social contributions account for nearly half of all government revenue. Rather than clarify the purpose of tax collection, a system of such complexity can actually obscure matters. By contrast, other states, such as Denmark, finance all social spending with an enormous income tax, the revenues from which are allocated to pensions, unemployment and health insurance, and many other purposes. In fact, these distinctions among different legal categories of taxation are partly arbitrary.[2]

Beyond these definitional quibbles, a more pertinent criterion for characterizing different types of tax is the degree to which each type is proportional or progressive. A tax is called "proportional" when its rate is the same for everyone (the term "flat tax" is also used). A tax is progressive when its rate is higher for some than for others, whether it be those who earn more, those who own more, or those who consume more. A tax can also be regressive, when its rate decreases for richer individuals, either because they are partially exempt (either legally, as a result of fiscal optimization, or illegally, through evasion) or because the law imposes a regressive rate, like the famous "poll tax" that cost Margaret Thatcher her post as prime minister in 1990.[3]

In the modern fiscal state, total tax payments are often close to proportional to individual income, especially in countries where the total is large. This is not surprising: it is impossible to tax half of national income to finance an ambitious program of social entitlements without asking everyone to make a substantial contribution. The logic of universal rights that governed the development of the modern fiscal and social state fits rather well, moreover, with the idea of a proportional or slightly progressive tax.

It would be wrong, however, to conclude that progressive taxation plays only a limited role in modern redistribution. First, even if taxation overall is fairly close to proportional for the majority of the population, the fact that the highest incomes and largest fortunes are taxed at significantly higher (or lower) rates can have a strong influence on the structure of inequality. In particular, the evidence suggests that progressive taxation of very high incomes and very large estates partly explains why the concentration of wealth never regained its astronomic Belle Époque levels after the shocks of 1914–1945. Conversely, the spectacular decrease in the progressivity of the income tax in the United States and Britain since 1980, even though both countries had

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been among the leaders in progressive taxation after World War II, probably explains much of the increase in the very highest earned incomes. At the same time, the recent rise of tax competition in a world of free-flowing capital has led many governments to exempt capital income from the progressive income tax. This is particularly true in Europe, whose relatively small states have thus far proved incapable of achieving a coordinated tax policy. The result is an endless race to the bottom, leading, for example, to cuts in corporate tax rates and to the exemption of interest, dividends, and other financial revenues from the taxes to which labor incomes are subject.

One consequence of this is that in most countries taxes have (or will soon) become regressive at the top of the income hierarchy. For example, a detailed study of French taxes in 2010, which looked at all forms of taxation, found that the overall rate of taxation (47 percent of national income on average) broke down as follows. The bottom 50 percent of the income distribution pay a rate of 40–45 percent; the next 40 percent pay 45–50 percent; but the top 5 percent and even more the top 1 percent pay lower rates, with the top 0.1 percent paying only 35 percent. The high tax rates on the poor reflect the importance of consumption taxes and social contributions (which together account for three-quarters of French tax revenues). The slight progressivity observed in the middle class is due to the growing importance of the income tax. Conversely, the clear regressivity in the top centiles reflects the importance at this level of capital income, which is largely exempt from progressive taxation. The effect of this outweighs the effect of taxes on the capital stock (which are the most progressive of all).[4] All signs are that taxes elsewhere in Europe (and probably also in the United States) follow a similar bell curve, which is probably even more pronounced than this imperfect estimate indicates.[5]

If taxation at the top of the social hierarchy were to become more regressive in the future, the impact on the dynamics of wealth inequality would likely be significant, leading to a very high concentration of capital. Clearly, such a fiscal secession of the wealthiest citizens could potentially do great damage to fiscal consent in general. Consensus support for the fiscal and social state, which is already fragile in a period of low growth, would be further reduced, especially among the middle class, who would naturally find it difficult to accept that they should pay more than the upper class. Individualism and selfishness would flourish: since the system as a whole would be unjust, why continue to pay for others? If the modern social state is to continue to exist, it is therefore essential that the underlying tax system retain a minimum of progressivity, or at any rate that it not become overtly regressive at the top.

Furthermore, looking at the progressivity of the tax system by examining how heavily top incomes are taxed obviously fails to weigh inherited wealth, whose importance has been increasing.[6] In practice, estates are much less heavily taxed than income.[7] This exacerbates what I have called "Rastignac's dilemma." If individuals were classified by centile of total resources accrued over a lifetime (including both earned income and capitalized inheritance), which is a more satisfactory criterion for progressive taxation, the bell curve would be even more markedly regressive at the top of the hierarchy than it is when only labor incomes are considered.[8]

One final point bears emphasizing: to the extent that globalization weighs particularly heavily on the least skilled workers in the wealthy countries, a more progressive tax system might in principle be justified, adding yet another layer of complexity to the overall picture. To be sure, if one wants to maintain total taxes at about 50 percent of national income, it is inevitable that everyone must pay a substantial amount. But instead of a slightly progressive tax system (leaving aside the very top of the hierarchy), one can easily imagine a more steeply progressive one.[9] This would not solve all the problems, but it would be enough to improve the situation of the least skilled significantly.[10] If the tax system is not made more progressive, it should come as no surprise that those who derive the least benefit from free trade may well turn against it. The progressive tax is indispensable for making sure that everyone benefits from globalization, and the increasingly glaring absence of progressive taxation may ultimately undermine support for a globalized economy.

For all of these reasons, a progressive tax is a crucial component of the social state: it played a central role in its development and in the transformation of the structure of inequality in the twentieth century, and it remains important for ensuring the viability of the social state in the future. But progressive taxation is today under serious threat, both intellectually (because its various functions have never been fully debated) and politically (because tax competition is allowing entire categories of income to gain exemption from the common rules).

The Progressive Tax in the Twentieth Century: An Ephemeral Product of Chaos

To gaze backward for a moment: how did we get to this point? First, it is important to realize that progressive taxation was as much a product of two world wars as it was of democracy. It was adopted in a chaotic climate that called for improvisation, which is part of the reason why its various purposes were not sufficiently thought through and why it is being challenged today.

To be sure, a number of countries adopted a progressive income tax before the outbreak of World War I. In France, the law creating a "general tax on income" was passed on July 15, 1914, in direct response to the anticipated financial needs of the impending conflict (after being buried in the Senate for several years); the law would not have passed had a declaration of war not been imminent.[11] Aside from this exception, most countries adopted a progressive income tax after due deliberation in the normal course of parliamentary proceedings. Such a tax was adopted in Britain, for example, in 1909 and in the United States in 1913. Several countries in northern Europe, a number of German states, and Japan adopted a progressive income tax even earlier: Denmark in 1870, Japan in 1887, Prussia in 1891, and Sweden in1903. Even though not all the developed countries had adopted a progressive tax by 1910, an international consensus was emerging around the principle of progressivity and its application to overall income (that is, to the sum of income from labor, including both wage and nonwage labor, and capital income of all kinds, including rent, interest, dividends, profits, and in some cases capital gains).[12] To many people, such a system appeared to be both a more just and a more efficient way of apportioning taxes. Overall income measured each person's ability to contribute, and progressive taxation offered a way of limiting the inequalities produced by industrial capitalism while maintaining respect for private property and the forces of competition. Many books and reports published at the time helped popularize the idea and win over some political leaders and liberal economists, although many would remain hostile to the very principle of progressivity, especially in France.[13]

Is the progressive income tax therefore the natural offspring of democracy and universal suffrage? Things are actually more complicated. Indeed, tax rates, even on the most astronomical incomes, remained extremely low prior to World War I. This was true everywhere, without exception. The magnitude

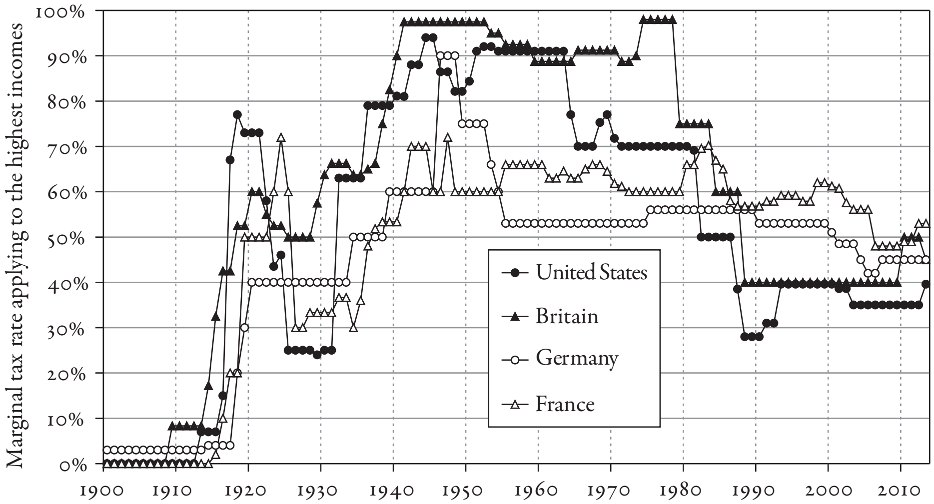

FIGURE 14.1. Top income tax rates, 1900–2013

The top marginal tax rate of the income tax (applying to the highest incomes) in the United States dropped from 70 percent in 1980 to 28 percent in 1988.
Sources and series: see piketty.pse.ens.fr/capital21c.

of the political shock due to the war is quite clear in Figure 14.1, which shows the evolution of the top rate (that is, the tax rate on the highest income bracket) in the United States, Britain, Germany, and France from 1900 to 2013. The top rate stagnated at insignificant levels until 1914 and then skyrocketed after the war. These curves are typical of those seen in other wealthy countries.[14]

In France, the 1914 income tax law provided for a top rate of just 2 percent, which applied to only a tiny minority of taxpayers. It was only after the war, in a radically different political and financial context, that the top rate was raised to "modern" levels: 50 percent in 1920, then 60 percent in 1924, and even 72 percent in 1925. Particularly striking is the fact that the crucial law of June 25, 1920, which raised the top rate to 50 percent and can actually be seen as a second coming of the income tax, was adopted by the so-called blue-sky Chamber (one of the most right-wing Chambers of Deputies in the history of the French Republic) with its "National Bloc" majority, made up largely of the very delegations who had most vehemently opposed the creation of an income tax with a top rate of 2 percent before the war. This complete reversal of the right-wing position on progressive taxation was of course due to the disastrous financial situation created by the war. During the conflict the government had run up considerable debts, and despite the ritual speeches in which politician after politician declared that "Germany will pay," everyone knew that new fiscal resources would have to be found. Postwar shortages and the recourse to the printing press had driven inflation to previously unknown heights, so that the purchasing power of workers remained below 1914 levels, and several waves of strikes in May and June of 1919 threatened the country with paralysis. In such circumstances, political proclivities hardly mattered: new sources of revenue were essential, and no one believed that those with the highest incomes ought to be spared. The Bolshevik Revolution of 1917 was fresh in everyone's mind. It was in this chaotic and explosive situation that the modern progressive income tax was born.[15]

The German case is particularly interesting, because Germany had had a progressive income tax for more than twenty years before the war. Throughout that period of peace, tax rates were never raised significantly. In Prussia, the top rate remained stable at 3 percent from 1891 to 1914 and then rose to 4 percent from 1915 to 1918, before ultimately shooting up to 40 percent in 1919–1920, in a radically changed political climate. In the United States, which was intellectually and politically more prepared than any other country to accept a steeply progressive income tax and would lead the movement in the interwar period, it was again not until 1918–1919 that the top rate was abruptly increased, first to 67 and then to 77 percent. In Britain, the top rate was set at 8 percent in 1909, a fairly high level for the time, but again it was not until after the war that it was suddenly raised to more than 40 percent.

Of course it is impossible to say what would have happened had it not been for the shock of 1914–1918. A movement had clearly been launched. Nevertheless, it seems certain that had that shock not occurred, the move toward a more progressive tax system would at the very least have been much slower, and top rates might never have risen as high as they did. The rates in force before 1914, which were always below 10 percent (and generally below 5), including the top rates, were not very different from tax rates in the eighteenth and nineteenth centuries. Even though the progressive tax on total income was a creation of the late nineteenth and early twentieth centuries, there were much earlier forms of income tax, generally with different rules for different types of income, and usually with flat or nearly flat rates (for example, a flat rate after allowing for a certain fixed deduction). In most cases the rates were 5–10 percent (at most). For example, this was true of the categorical or schedular tax, which applied separate rates to each category (or schedule) of income (land rents, interest, profits, wages, etc.). Britain adopted such a categorical tax in 1842, and it remained the British version of the income tax until the creation in 1909 of a "supertax" (a progressive tax on total income).[16]

In Ancien Régime France, there were also various forms of direct taxation of incomes, such as the *taille,* the *dixième,* and the *vingtième,* with typical rates of 5 or 10 percent (as the names indicate) applied to some but not all sources of income, with numerous exemptions. In 1707, Vauban proposed a "dixième royal," which was intended to be a 10 percent tax on all incomes (including rents paid to aristocratic and ecclesiastical landlords), but it was never fully implemented. Various improvements to the tax system were nevertheless attempted over the course of the eighteenth century.[17] Revolutionary lawmakers, hostile to the inquisitorial methods of the fallen monarchy and probably keen as well to protect the emerging industrial bourgeoisie from bearing too heavy a tax burden, chose to institute an "indicial" tax system: taxes were calculated on the basis of indices that were supposed to reflect the taxpayer's ability to pay rather than actual income, which did not have to be declared. For instance, the "door and window tax" was based on the number of doors and windows in the taxpayer's primary residence, which was taken to be an index of wealth. Taxpayers liked this system because the authorities could determine how much tax they owed without having to enter their homes, much less examine their account books. The most important tax under the new system created in 1792, the property tax, was based on the rental value of all real estate owned by the taxpayer.[18] The income tax was based on estimates of average rental value, which were revised once a decade when the tax authorities inventoried all property in France; taxpayers were not required to declare their actual income. Since inflation was slow, this made little difference. In practice, this real estate tax amounted to a flat tax on rents and was not very different from the British categorical tax. (The effective rate varied from time to time and *département* to *département* but never exceeded 10 percent.)

To round out the system, the nascent Third Republic decided in 1872 to impose a tax on income from financial assets. This was a flat tax on interest, dividends, and other financial revenues, which were rapidly proliferating in France at the time but almost totally exempt from taxation, even though similar revenues were taxed in Britain. Once again, however, the tax rate was set quite low (3 percent from 1872 to 1890 and then 4 percent from 1890 to 1914), at any rate in comparison with the rates assessed after 1920. Until World War I, it seems to have been the case in all the developed countries that a tax on income was not considered "reasonable" unless the rate was under 10 percent, no matter how high the taxable income.

The Progressive Tax in the Third Republic

Interestingly, this was also true of the progressive inheritance or estate tax, which, along with the progressive income tax, was the second important fiscal innovation of the early twentieth century. Estate tax rates also remained quite low until 1914 (see Figure 14.2). Once again, the case of France under the Third Republic is emblematic: here was a country that was supposed to nurse a veritable passion for the ideal of equality, in which universal male suffrage was reestablished in 1871, and which nevertheless stubbornly refused for nearly half a century to fully embrace the principle of progressive taxation. Attitudes did not really change until World War I made change inevitable. To be sure, the estate tax instituted by the French Revolution, which remained strictly proportional from 1791 to 1901, was made progressive by the law of February 25, 1901. In reality, however, not much changed: the highest rate was set at 5 percent from 1902 to 1910 and then at 6.5 percent from 1911 to 1914 and applied to only a few dozen fortunes every year. In the eyes of wealthy taxpayers, such rates seemed exorbitant. Many felt that it was a "sacred duty" to ensure that "a son would succeed his father," thereby perpetuating the family property, and that such straightforward perpetuation should not incur a tax of any kind.[19] In reality, however, the low inheritance tax did not prevent estates from being passed on largely intact from one generation to the next. The effective average rate on the top centile of inheritances was no more than 3 percent after the reform of 1901 (compared to 1 percent under the proportional regime in force in the nineteenth century). In hindsight, it is clear that the reform had scarcely any impact on the process of accumulation and hyperconcentration of wealth that was under way at the time, regardless of what contemporaries may have believed.

It is striking, moreover, how frequently opponents of progressive taxation, who were clearly in the majority among the economic and financial elite of

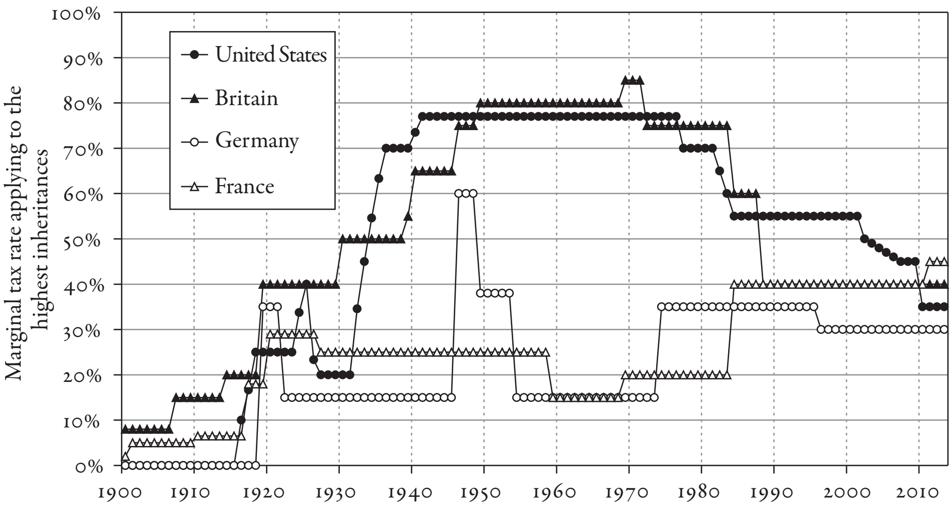

FIGURE 14.2. Top inheritance tax rates, 1900–2013

The top marginal tax rate of the inheritance tax (applying to the highest inheritances) in the United States dropped from 70 percent in 1980 to 35 percent in 2013.
Sources and series: see piketty.pse.ens.fr/capital21c.

Belle Époque France, rather hypocritically relied on the argument that France, being a naturally egalitarian country, had no need of progressive taxes. A typical and particularly instructive example is that of Paul Leroy-Beaulieu, one of the most influential economists of the day, who in 1881 published his famous *Essai sur la répartition des richesses et sur la tendance à une moindre inégalité des conditions* (Essay on the Distribution of Wealth and the Tendency toward Reduced Inequality of Conditions), a work that went through numerous editions up to the eve of World War I.[20] Leroy-Beaulieu actually had no data of any kind to justify his belief in a "tendency toward a reduced inequality of conditions." But never mind that: he managed to come up with dubious and not very convincing arguments based on totally irrelevant statistics to show that income inequality was decreasing.[21] At times he seemed to notice that his argument was flawed, and he then simply stated that reduced inequality was just around the corner and that in any case nothing of any kind must be done to interfere with the miraculous process of commercial and financial globalization, which allowed French savers to invest in the Panama and Suez canals and would soon extend to czarist Russia. Clearly, Leroy-Beaulieu was fascinated by the globalization of his day and scared stiff by the thought that a sudden revolution might put it all in jeopardy.[22] There is of course nothing inherently reprehensible about such a fascination as long as it does not stand in the way of sober analysis. The great issue in France in 1900–1910 was not the imminence of a Bolshevik revolution (which was no more likely than a revolution is today) but the advent of progressive taxation. For Leroy-Beaulieu and his colleagues of the "center right" (in contrast to the monarchist right), there was one unanswerable argument to progressivity, which right-thinking people should oppose tooth and nail: France, he maintained, became an egalitarian country thanks to the French Revolution, which redistributed the land (up to a point) and above all established equality before the law with the Civil Code, which instituted equal property rights and the right of free contract. Hence there was no need for a progressive and confiscatory tax. Of course, he added, such a tax might well be useful in a class-ridden aristocratic society like that of Britain, across the English Channel, but not in France.[23]

As it happens, if Leroy-Beaulieu had bothered to consult the probate records published by the tax authorities shortly after the reform of 1901, he would have discovered that wealth was nearly as concentrated in republican France during the Belle Époque as it was in monarchical Britain. In parliamentary debate in 1907 and 1908, proponents of the income tax frequently referred to these statistics.[24] This interesting example shows that even a tax with low rates can be a source of knowledge and a force for democratic transparency.

In other countries the estate tax was also transformed after World War I. In Germany, the idea of imposing a small tax on the very largest estates was extensively discussed in parliamentary debate at the end of the nineteenth century and beginning of the twentieth. Leaders of the Social Democratic Party, starting with August Bebel and Eduard Bernstein, pointed out that an estate tax would make it possible to decrease the heavy burden of indirect taxes on workers, who would then be able to improve their lot. But the Reichstag could not agree on a new tax: the reforms of 1906 and 1909 did institute a very small estate tax, but bequests to a spouse or children (that is, the vast majority of estates) were entirely exempt, no matter how large. It was not until 1919 that the German estate tax was extend to family bequests, and the top rate (on the largest estates) was abruptly increased from 0 to 35 percent.[25] The role of the war and of the political changes it induced seems to have been absolutely crucial: it is hard to see how the stalemate of 1906–1909 would have been overcome otherwise.[26]

Figure 14.2 shows a slight upward tick in Britain around the turn of the century, somewhat greater for the estate tax than for the income tax. The rate on the largest estates, which had been 8 percent since the reform of 1896, rose to 15 percent in 1908—a fairly substantial amount. In the United States, a federal tax on estates and gifts was not instituted until 1916, but its rate very quickly rose to levels higher than those found in France and Germany.

Confiscatory Taxation of Excessive Incomes: An American Invention

When we look at the history of progressive taxation in the twentieth century, it is striking to see how far out in front Britain and the United States were, especially the latter, which invented the confiscatory tax on "excessive" incomes and fortunes. Figures 14.1 and 14.2 are particularly clear in this regard. This finding stands in such stark contrast to the way most people both inside and outside the United States and Britain have seen those two countries since 1980 that it is worth pausing a moment to consider the point further.

Between the two world wars, all the developed countries began to experiment with very high top rates, frequently in a rather erratic fashion. But it was the United States that was the first country to try rates above 70 percent, first on income in 1919–1922 and then on estates in 1937–1939. When a government taxes a certain level of income or inheritance at a rate of 70 or 80 percent, the primary goal is obviously not to raise additional revenue (because these very high brackets never yield much). It is rather to put an end to such incomes and large estates, which lawmakers have for one reason or another come to regard as socially unacceptable and economically unproductive—or if not to end them, then at least to make it extremely costly to sustain them and strongly discourage their perpetuation. Yet there is no absolute prohibition or expropriation. The progressive tax is thus a relatively liberal method for reducing inequality, in the sense that free competition and private property are respected while private incentives are modified in potentially radical ways, but always according to rules thrashed out in democratic debate. The progressive tax thus represents an ideal compromise between social justice and individual freedom. It is no accident that the United States and Britain, which throughout their histories have shown themselves to value individual liberty highly, adopted more progressive tax systems than many other countries. Note, however, that the countries of continental Europe, especially France and Germany, explored other avenues after World War II, such as taking public ownership of firms and directly setting executive salaries. These measures, which also emerged from democratic deliberation, in some ways served as substitutes for progressive taxes.[27]

Other, more specific factors also mattered. During the Gilded Age, many observers in the United States worried that the country was becoming increasingly inegalitarian and moving farther and farther away from its original pioneering ideal. In Willford King's 1915 book on the distribution of wealth in the United States, he worried that the nation was becoming more like what he saw as the hyperinegalitarian societies of Europe.[28] In 1919, Irving Fisher, then president of the *American Economic Association,* went even further. He chose to devote his presidential address to the question of US inequality and in no uncertain terms told his colleagues that the increasing concentration of wealth was the nation's foremost economic problem. Fisher found King's estimates alarming. The fact that "2 percent of the population owns more than 50 percent of the wealth" and that "two-thirds of the population owns almost nothing" struck him as "an undemocratic distribution of wealth," which threatened the very foundations of US society. Rather than restrict the share of profits or the return on capital arbitrarily—possibilities Fisher mentioned only to reject them—he argued that the best solution was to impose a heavy tax on the largest estates (he mentioned a tax rate of two-thirds the size of the estate, rising to 100 percent if the estate was more than three generations old).[29] It is striking to see how much more Fisher worried about inequality than Leroy-Beaulieu did, even though Leroy-Beaulieu lived in a far more inegalitarian society. The fear of coming to resemble Old Europe was no doubt part of the reason for the American interest in progressive taxes.

Furthermore, the Great Depression of the 1930s struck the United States with extreme force, and many people blamed the economic and financial elites for having enriched themselves while leading the country to ruin. (Bear in mind that the share of top incomes in US national income peaked in the late 1920s, largely due to enormous capital gains on stocks.) Roosevelt came to power in 1933, when the crisis was already three years old and one-quarter of the country was unemployed. He immediately decided on a sharp increase in the top income tax rate, which had been decreased to 25 percent in the late 1920s and again under Hoover's disastrous presidency. The top rate rose to 63 percent in 1933 and then to 79 percent in 1937, surpassing the previous record of 1919. In 1942 the Victory Tax Act raised the top rate to 88 percent, and in 1944 it went up again to 94 percent, due to various surtaxes. The top rate then stabilized at around 90 percent until the mid-1960s, but then it fell to 70 percent in the early 1980s. All told, over the period 1932–1980, nearly half a century, the top federal income tax rate in the United States averaged 81 percent.[30]

It is important to emphasize that no continental European country has ever imposed such high rates (except in exceptional circumstances, for a few years at most, and never for as long as half a century). In particular, France and Germany had top rates between 50 and 70 percent from the late 1940s until the 1980s, but never as high as 80–90 percent. The only exception was Germany in 1947–1949, when the rate was 90 percent. But this was a time when the tax schedule was fixed by the occupying powers (in practice, the US authorities). As soon as Germany regained fiscal sovereignty in 1950, the country quickly returned to rates more in keeping with its traditions, and the top rate fell within a few years to just over 50 percent (see Figure 14.1). We see exactly the same phenomenon in Japan.[31]

The Anglo-Saxon attraction to progressive taxation becomes even clearer when we look at the estate tax. In the United States, the top estate tax rate remained between 70 and 80 percent from the 1930s to the 1980s, while in France and Germany the top rate never exceeded 30–40 percent except for the years 1946–1949 in Germany (see Figure 14.2).[32]

The only country to match or surpass peak US estate tax rates was Britain. The rates applicable to the highest British incomes as well as estates in the 1940s was 98 percent, a peak attained again in the 1970s—an absolute historical record.[33] Note, too, that both countries distinguished between "earned income," that is, income from labor (including both wages and nonwage compensation) and "unearned income," meaning capital income (rent, interests, dividends, etc.). The top rates indicated in Figure 14.1 for the United States and Britain applied to unearned income. At times, the top rate on earned income was slightly lower, especially in the 1970s.[34] This distinction is interesting, because it is a translation into fiscal terms of the suspicion that surrounded very high incomes: all excessively high incomes were suspect, but unearned incomes were more suspect than earned incomes. The contrast between attitudes then and now, with capital income treated more favorably today than labor income in many countries, especially in Europe, is striking. Note, too, that although the threshold for application of the top rates has varied over time, it has always been extremely high: expressed in terms of average income in the decade 2000–2010, the threshold has generally ranged between 500,000 and 1 million euros. In terms of today's income distribution, the top rate would therefore apply to less than 1 percent of the population (generally somewhere between 0.1 and 0.5 percent).

The urge to tax unearned income more heavily than earned income reflects an attitude that is also consistent with a steeply progressive inheritance tax. The British case is particularly interesting in a long-run perspective. Britain was the country with the highest concentration of wealth in the nineteenth and early twentieth centuries. The shocks (destruction, expropriation) endured by large fortunes fell less heavily there than on the continent, yet Britain chose to impose its own fiscal shock—less violent than war but nonetheless significant: the top rate ranged from 70 to 80 percent or more throughout the period 1940–1980. No other country devoted more thought to the taxation of inheritances in the twentieth century, especially between the two world wars.[35] In November 1938, Josiah Wedgwood, in the preface to a new edition of his classic 1929 book on inheritance, agreed with his compatriot Bertrand Russell that the "plutodemocracies" and their hereditary elites had failed to stem the rise of fascism. He was convinced that "political democracies that do not democratize their economic systems are inherently unstable." In his eyes, a steeply progressive inheritance tax was the main tool for achieving the economic democratization that he believed to be necessary.[36]

The Explosion of Executive Salaries: The Role of Taxation

After experiencing a great passion for equality from the 1930s through the 1970s, the United States and Britain veered off with equal enthusiasm in the opposite direction. Over the past three decades, their top marginal income tax rates, which had been significantly higher than the top rates in France and Germany, fell well below French and German levels. While the latter remained stable at 50–60 percent from 1930 to 2010 (with a slight decrease toward the end of the period), British and US rates fell from 80–90 percent in 1930–1980 to 30–40 percent in 1980–2010 (with a low point of 28 percent after the Reagan tax reform of 1986) (see Figure 14.1).[37] The Anglo-Saxon countries have played yo-yo with the wealthy since the 1930s. By contrast, attitudes toward top incomes in both continental Europe (of which Germany and France are fairly typical) and Japan have held steady. I showed in Part One that part of the explanation for this difference might be that the United States and Britain came to feel that they were being overtaken by other countries in the 1970s. This sense that other countries were catching up contributed to the rise of Thatcherism and Reaganism. To be sure, the catch-up that occurred between 1950 and 1980 was largely a mechanical consequence of the shocks endured by continental Europe and Japan between 1914 and 1945. The people of Britain and the United States nevertheless found it hard to accept: for countries as well as individuals, the wealth hierarchy is not just about money; it is also a matter of honor and moral values. What were the consequences of this great shift in attitudes in the United States and Britain?

If we look at all the developed countries, we find that the size of the decrease in the top marginal income tax rate between 1980 and the present is closely related to the size of the increase in the top centile's share of national income over the same period. Concretely, the two phenomena are perfectly correlated: the countries with the largest decreases in their top tax rates are also the countries where the top earners' share of national income has increased the most (especially when it comes to the remuneration of executives of large firms). Conversely, the countries that did not reduce their top tax rates very much saw much more moderate increases in the top earners' share of national income.[38] If one believes the classic economic models based on the theory of marginal productivity and the labor supply, one might try to explain this by arguing that the decrease in top tax rates spurred top executive talent to increase their labor supply and productivity. Since their marginal productivity increased, their salaries increased commensurately and therefore rose well above executive salaries in other countries. This explanation is not very plausible, however. As I showed in Chapter 9, the theory of marginal productivity runs into serious conceptual and economic difficulties (in addition to suffering from a certain naïveté) when it comes to explaining how pay is determined at the top of the income hierarchy.

A more realistic explanation is that lower top income tax rates, especially in the United States and Britain, where top rates fell dramatically, totally transformed the way executive salaries are determined. It is always difficult for an executive to convince other parties involved in the firm (direct subordinates, workers lower down in the hierarchy, stockholders, and members of the compensation committee) that a large pay raise—say of a million dollars—is truly justified. In the 1950s and 1960s, executives in British and US firms had little reason to fight for such raises, and other interested parties were less inclined to accept them, because 80–90 percent of the increase would in any case go directly to the government. After 1980, the game was utterly transformed, however, and the evidence suggests that executives went to considerable lengths to persuade other interested parties to grant them substantial raises. Because it is objectively difficult to measure individual contributions to a firm's output, top managers found it relatively easy to persuade boards and stockholders that they were worth the money, especially since the members of compensation committees were often chosen in a rather incestuous manner.

Furthermore, this "bargaining power" explanation is consistent with the fact that there is no statistically significant relationship between the decrease in top marginal tax rates and the rate of productivity growth in the developed countries since 1980. Concretely, the crucial fact is that the rate of per capita GDP growth has been almost exactly the same in all the rich countries since 1980. In contrast to what many people in Britain and the United States believe, the true figures on growth (as best one can judge from official national accounts data) show that Britain and the United States have not grown any more rapidly since 1980 than Germany, France, Japan, Denmark, or Sweden.[39] In other words, the reduction of top marginal income tax rates and the rise of top incomes do not seem to have stimulated productivity (contrary to the predictions of supply-side theory) or at any rate did not stimulate productivity enough to be statistically detectable at the macro level.[40]

Considerable confusion exists around these issues because comparisons are often made over periods of just a few years (a procedure that can be used to justify virtually any conclusion).[41] Or one forgets to correct for population growth (which is the primary reason for the structural difference in GDP growth between the United States and Europe). Sometimes the level of per capita output (which has always been about 20 percent higher in the United States, in 1970–1980 as well as 2000–2010) is confused with the growth rate (which has been about the same on both continents over the past three decades).[42] But the principal source of confusion is probably the catch-up phenom-

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enon mentioned above. There can be no doubt that British and US decline ended in the 1970s, in the sense that growth rates in Britain and the United States, which had been lower than growth rates in Germany, France, Scandinavia, and Japan, ceased to be so. But it is also incontestable that the reason for this convergence is quite simple: Europe and Japan had caught up with the United States and Britain. Clearly, this had little to do with the conservative revolution in the latter two countries in the 1980s, at least to a first approximation.[43]

No doubt these issues are too strongly charged with emotion and too closely bound up with national identities and pride to allow for calm examination. Did Maggie Thatcher save Britain? Would Bill Gates's innovations have existed without Ronald Reagan? Will Rhenish capitalism devour the French social model? In the face of such powerful existential anxieties, reason is often at a loss, especially since it is objectively quite difficult to draw perfectly precise and absolutely unassailable conclusions on the basis of growth rate comparisons that reveal differences of a few tenths of a percent. As for Bill Gates and Ronald Reagan, each with his own cult of personality (Did Bill invent the computer or just the mouse? Did Ronnie destroy the USSR single-handedly or with the help of the pope?), it may be useful to recall that the US economy was much more innovative in 1950–1970 than in 1990–2010, to judge by the fact that productivity growth was nearly twice as high in the former period as in the latter, and since the United States was in both periods at the world technology frontier, this difference must be related to the pace of innovation.[44] A new argument has recently been advanced: it is possible that the US economy has become more innovative in recent years but that this innovation does not show up in the productivity figures because it spilled over into the other wealthy countries, which have thrived on US inventions. It would nevertheless be quite astonishing if the United States, which has not always been hailed for international altruism (Europeans regularly complain about US carbon emissions, while the poor countries complain about American stinginess) were proven not to have retained some of this enhanced productivity for itself. In theory, that is the purpose of patents. Clearly, the debate is nowhere close to over.[45]

In an attempt to make some progress on these issues, Emmanuel Saez, Stefanie Stantcheva, and I have tried to go beyond international comparisons and to make use of a new database containing information about executive compensation in listed companies throughout the developed world. Our findings suggest that skyrocketing executive pay is fairly well explained by the bargaining model (lower marginal tax rates encourage executives to negotiate harder for higher pay) and does not have much to do with a hypothetical increase in managerial productivity.[46] We again found that the elasticity of executive pay is greater with respect to "luck" (that is, variations in earnings that cannot have been due to executive talent, because, for instance, other firms in the same sector did equally well) than with respect to "talent" (variations not explained by sector variables). As I explained in Chapter 9, this finding poses serious problems for the view that high executive pay is a reward for good performance. Furthermore, we found that elasticity with respect to luck—broadly speaking, the ability of executives to obtain raises not clearly justified by economic performance—was higher in countries where the top marginal tax rate was lower. Finally, we found that variations in the marginal tax rate can explain why executive pay rose sharply in some countries and not in others. In particular, variations in company size and in the importance of the financial sector definitely cannot explain the observed facts.[47] Similarly, the idea that skyrocketing executive pay is due to lack of competition, and that more competitive markets and better corporate governance and control would put an end to it, seems unrealistic.[48] Our findings suggest that only dissuasive taxation of the sort applied in the United States and Britain before 1980 can do the job.[49] In regard to such a complex and comprehensive question (which involves political, social, and cultural as well as economic factors), it is obviously impossible to be totally certain: that is the beauty of the social sciences. It is likely, for instance, that social norms concerning executive pay directly influence the levels of compensation we observe in different countries, independent of the influence of tax rates. Nevertheless, the available evidence suggests that our explanatory model gives the best explanation of the observed facts.

Rethinking the Question of the Top Marginal Rate

These findings have important implications for the desirable degree of fiscal progressivity. Indeed, they indicate that levying confiscatory rates on top incomes is not only possible but also the only way to stem the observed increase in very high salaries. According to our estimates, the optimal top tax rate in the developed countries is probably above 80 percent.[50] Do not be misled by the apparent precision of this estimate: no mathematical formula or econometric estimate can tell us exactly what tax rate ought to be applied to what level of income. Only collective deliberation and democratic experimentation can do that. What is certain, however, is that our estimates pertain to extremely high levels of income, those observed in the top 1 percent or 0.5 percent of the income hierarchy. The evidence suggests that a rate on the order of 80 percent on incomes over $500,000 or $1 million a year not only would not reduce the growth of the US economy but would in fact distribute the fruits of growth more widely while imposing reasonable limits on economically useless (or even harmful) behavior. Obviously it would be easier to apply such a policy in a country the size of the United States than in a small European country where close fiscal coordination with neighboring countries is lacking. I say more about international coordination in the next chapter; here I will simply note that the United States is big enough to apply this type of fiscal policy effectively. The idea that all US executives would immediately flee to Canada and Mexico and no one with the competence or motivation to run the economy would remain is not only contradicted by historical experience and by all the firm-level data at our disposal; it is also devoid of common sense. A rate of 80 percent applied to incomes above $500,000 or $1 million a year would not bring the government much in the way of revenue, because it would quickly fulfill its objective: to drastically reduce remuneration at this level but without reducing the productivity of the US economy, so that pay would rise at lower levels. In order for the government to obtain the revenues it sorely needs to develop the meager US social state and invest more in health and education (while reducing the federal deficit), taxes would also have to be raised on incomes lower in the distribution (for example, by imposing rates of 50 or 60 percent on incomes above $200,000).[51] Such a social and fiscal policy is well within the reach of the United States.

Nevertheless, it seems quite unlikely that any such policy will be adopted anytime soon. It is not even certain that the top marginal income tax rate in the United States will be raised as high as 40 percent in Obama's second term. Has the US political process been captured by the 1 percent? This idea has become increasingly popular among observers of the Washington political scene.[52] For reasons of natural optimism as well as professional predilection, I am inclined to grant more influence to ideas and intellectual debate. Careful examination of various hypotheses and bodies of evidence, and access to better data, can influence political debate and perhaps push the process in a direction more favorable to the general interest. For example, as I noted in Part Three, US economists often underestimate the increase in top incomes because they rely on inadequate data (especially survey data that fails to capture the very highest incomes). As a result, they pay too much attention to wage gaps between workers with different skill levels (a crucial question for the long run but not very relevant to understanding why the 1 percent have pulled so far ahead—the dominant phenomenon from a macroeconomic point of view).[53] The use of better data (in particular, tax data) may therefore ultimately focus attention on the right questions.

That said, the history of the progressive tax over the course of the twentieth century suggests that the risk of a drift toward oligarchy is real and gives little reason for optimism about where the United States is headed. It was war that gave rise to progressive taxation, not the natural consequences of universal suffrage. The experience of France in the Belle Époque proves, if proof were needed, that no hypocrisy is too great when economic and financial elites are obliged to defend their interests—and that includes economists, who currently occupy an enviable place in the US income hierarchy.[54] Some economists have an unfortunate tendency to defend their private interest while implausibly claiming to champion the general interest.[55] Although data on this are sparse, it also seems that US politicians of both parties are much wealthier than their European counterparts and in a totally different category from the average American, which might explain why they tend to confuse their own private interest with the general interest. Without a radical shock, it seems fairly likely that the current equilibrium will persist for quite some time. The egalitarian pioneer ideal has faded into oblivion, and the New World may be on the verge of becoming the Old Europe of the twenty-first century's globalized economy.

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A Global Tax on Capital

To regulate the globalized patrimonial capitalism of the twenty-first century, rethinking the twentieth-century fiscal and social model and adapting it to today's world will not be enough. To be sure, appropriate updating of the last century's social-democratic and fiscal-liberal program is essential, as I tried to show in the previous two chapters, which focused on two fundamental institutions that were invented in the twentieth century and must continue to play a central role in the future: the social state and the progressive income tax. But if democracy is to regain control over the globalized financial capitalism of this century, it must also invent new tools, adapted to today's challenges. The ideal tool would be a progressive global tax on capital, coupled with a very high level of international financial transparency. Such a tax would provide a way to avoid an endless inegalitarian spiral and to control the worrisome dynamics of global capital concentration. Whatever tools and regulations are actually decided on need to be measured against this ideal. I will begin by analyzing practical aspects of such a tax and then proceed to more general reflections about the regulation of capitalism from the prohibition of usury to Chinese capital controls.

A Global Tax on Capital: A Useful Utopia

A global tax on capital is a utopian idea. It is hard to imagine the nations of the world agreeing on any such thing anytime soon. To achieve this goal, they would have to establish a tax schedule applicable to all wealth around the world and then decide how to apportion the revenues. But if the idea is utopian, it is nevertheless useful, for several reasons. First, even if nothing resembling this ideal is put into practice in the foreseeable future, it can serve as a worthwhile reference point, a standard against which alternative proposals can be measured. Admittedly, a global tax on capital would require a very high and no doubt unrealistic level of international cooperation. But countries wishing to move in this direction could very well do so incrementally, starting at the regional level (in Europe, for instance). Unless something like this happens, a defensive reaction of a nationalist stripe would very likely occur. For example, one might see a return to various forms of protectionism coupled with imposition of capital controls. Because such policies are seldom effective, however, they would very likely lead to frustration and increase international tensions. Protectionism and capital controls are actually unsatisfactory substitutes for the ideal form of regulation, which is a global tax on capital—a solution that has the merit of preserving economic openness while effectively regulating the global economy and justly distributing the benefits among and within nations. Many people will reject the global tax on capital as a dangerous illusion, just as the income tax was rejected in its time, a little more than a century ago. When looked at closely, however, this solution turns out to be far less dangerous than the alternatives.

To reject the global tax on capital out of hand would be all the more regrettable because it is perfectly possible to move toward this ideal solution step by step, first at the continental or regional level and then by arranging for closer cooperation among regions. One can see a model for this sort of approach in the recent discussions on automatic sharing of bank data between the United States and the European Union. Furthermore, various forms of capital taxation already exist in most countries, especially in North America and Europe, and these could obviously serve as starting points. The capital controls that exist in China and other emerging countries also hold useful lessons for all. There are nevertheless important differences between these existing measures and the ideal tax on capital.

First, the proposals for automatic sharing of banking information currently under discussion are far from comprehensive. Not all asset types are included, and the penalties envisioned are clearly insufficient to achieve the desired results (despite new US banking regulations that are more ambitious than any that exist in Europe). The debate is only beginning, and it is unlikely to produce tangible results unless relatively heavy sanctions are imposed on banks and, even more, on countries that thrive on financial opacity.

The issue of financial transparency and information sharing is closely related to the ideal tax on capital. Without a clear idea of what all the information is to be used for, current data-sharing proposals are unlikely to achieve the desired result. To my mind, the objective ought to be a progressive annual tax on individual wealth—that is, on the net value of assets each person controls.

For the wealthiest people on the planet, the tax would thus be based on individual net worth—the kinds of numbers published by *Forbes* and other magazines. (And collecting such a tax would tell us whether the numbers published in the magazines are anywhere near correct.) For the rest of us, taxable wealth would be determined by the market value of all financial assets (including bank deposits, stocks, bonds, partnerships, and other forms of participation in listed and unlisted firms) and nonfinancial assets (especially real estate), net of debt. So much for the basis of the tax. At what rate would it be levied? One might imagine a rate of 0 percent for net assets below 1 million euros, 1 percent between 1 and 5 million, and 2 percent above 5 million. Or one might prefer a much more steeply progressive tax on the largest fortunes (for example, a rate of 5 or 10 percent on assets above 1 billion euros). There might also be advantages to having a minimal rate on modest-to-average wealth (for example, 0.1 percent below 200,000 euros and 0.5 percent between 200,000 and 1 million).

I discuss these issues later on. Here, the important point to keep in mind is that the capital tax I am proposing is a progressive annual tax on global wealth. The largest fortunes are to be taxed more heavily, and all types of assets are to be included: real estate, financial assets, and business assets—no exceptions. This is one clear difference between my proposed capital tax and the taxes on capital that currently exist in one country or another, even though important aspects of those existing taxes should be retained. To begin with, nearly every country taxes real estate: the English-speaking countries have "property taxes," while France has a *taxe foncière*. One drawback of these taxes is that they are based solely on real property. (Financial assets are ignored, and property is taxed at its market value regardless of debt, so that a heavily indebted person is taxed in the same way as a person with no debt.) Furthermore, real estate is generally taxed at a flat rate, or close to it. Still, such taxes exist and generate significant revenue in most developed countries, especially in the English-speaking world (typically 1–2 percent of national income). Furthermore, property taxes in some countries (such as the United States) rely on fairly sophisticated assessment procedures with automatic adjustment to changing market values, procedures that ought to be generalized and extended to other asset classes. In some European countries (including France, Switzerland, Spain, and until recently Germany and Sweden), there are also progressive taxes on total wealth. Superficially, these taxes are closer in spirit to the ideal capital tax I am proposing. In practice, however, they are often riddled with exemptions. Many asset classes are left out, while others are assessed at arbitrary values having nothing to do with their market value. That is why several countries have moved to eliminate such taxes. it is important to heed the lessons of these various experiences in order to design an appropriate capital tax for the century ahead.

Democratic and Financial Transparency

What tax schedule is ideal for my proposed capital tax, and what revenues should we expect such a tax to produce? Before I attempt to answer these questions, note that the proposed tax is in no way intended to replace all existing taxes. It would never be more than a fairly modest supplement to the other revenue streams on which the modern social state depends: a few points of national income (three or four at most—still nothing to sneeze at).[1] The primary purpose of the capital tax is not to finance the social state but to regulate capitalism. The goal is first to stop the indefinite increase of inequality of wealth, and second to impose effective regulation on the financial and banking system in order to avoid crises. To achieve these two ends, the capital tax must first promote democratic and financial transparency: there should be clarity about who owns what assets around the world.

Why is the goal of transparency so important? Imagine a very low global tax on capital, say a flat rate of 0.1 percent a year on all assets. The revenue from such a tax would of course be limited, by design: if the global stock of private capital is about five years of global income, the tax would generate revenue equal to 0.5 percent of global income, with minor variations from country to country according to their capital/income ratio (assuming that the tax is collected in the country where the owner of the asset resides and not where the asset itself is located—an assumption that can by no means be taken for granted). Even so, such a limited tax would already play a very useful role.

First, it would generate information about the distribution of wealth. National governments, international organizations, and statistical offices around the world would at last be able to produce reliable data about the evolution of global wealth. Citizens would no longer be forced to rely on *Forbes,* glossy financial reports from global wealth managers, and other unofficial sources to fill the official statistical void. (Recall that I explored the deficiencies of those unofficial sources in Part Three.) Instead, they would have access to public data based on clearly prescribed methods and information provided under penalty of law. The benefit to democracy would be considerable: it is very difficult to have a rational debate about the great challenges facing the world today—the future of the social state, the cost of the transition to new sources of energy, state-building in the developing world, and so on—because the global distribution of wealth remains so opaque. Some people think that the world's billionaires have so much money that it would be enough to tax them at a low rate to solve all the world's problems. Others believe that there are so few billionaires that nothing much would come of taxing them more heavily. As we saw in Part Three, the truth lies somewhere between these two extremes. In macroeconomic terms, one probably has to descend a bit in the wealth hierarchy (to fortunes of 10–100 million euros rather than 1 billion) to obtain a tax basis large enough to make a difference. I have also discovered some objectively disturbing trends: without a global tax on capital or some similar policy, there is a substantial risk that the top centile's share of global wealth will continue to grow indefinitely—and this should worry everyone. In any case, truly democratic debate cannot proceed without reliable statistics.

The stakes for financial regulation are also considerable. The international organizations currently responsible for overseeing and regulating the global financial system, starting with the IMF, have only a very rough idea of the global distribution of financial assets, and in particular of the amount of assets hidden in tax havens. As I have shown, the planet's financial accounts are not in balance. (Earth seems to be perpetually indebted to Mars.) Navigating our way through a global financial crisis blanketed in such a thick statistical fog is fraught with peril. Take, for example, the Cypriot banking crisis of 2013. Neither the European authorities nor the IMF had much information about who exactly owned the financial assets deposited in Cyprus or what amounts they owned, hence their proposed solutions proved crude and ineffective. As we will see in the next chapter, greater financial transparency would not only lay the groundwork for a permanent annual tax on capital; it would also pave the way to a more just and efficient management of banking crises like the one in Cyprus, possibly by way of carefully calibrated and progressive special levies on capital.

An 0.1 percent tax on capital would be more in the nature of a compulsory reporting law than a true tax. Everyone would be required to report ownership of capital assets to the world's financial authorities in order to be recognized as the legal owner, with all the advantages and disadvantages thereof.

As noted, this was what the French Revolution accomplished with its compulsory reporting and cadastral surveys. The capital tax would be a sort of cadastral financial survey of the entire world, and nothing like it currently exists.[2] It is important to understand that a tax is always more than just a tax: it is also a way of defining norms and categories and imposing a legal framework on economic activity. This has always been the case, especially in regard to land ownership.[3] In the modern era, the imposition of new taxes around the time of World War I required precise definitions of income, wages, and profits. This fiscal innovation in turn fostered the development of accounting standards, which had not previously existed. One of the main goals of a tax on capital would thus be to refine the definitions of various asset types and set rules for valuing assets, liabilities, and net wealth. Under the private accounting standards now in force, prescribed procedures are imperfect and often vague. These flaws have contributed to the many financial scandals the world has seen since 2000.[4]

Last but not least, a capital tax would force governments to clarify and broaden international agreements concerning the automatic sharing of banking data. The principle is quite simple: national tax authorities should receive all the information they need to calculate the net wealth of every citizen. Indeed, the capital tax should work in the same way as the income tax currently does in many countries, where data on income are provided to the tax authorities by employers (via the W-2 and 1099 forms in the United States, for example). There should be similar reporting on capital assets (indeed, income and capital reporting could be combined into one form). All taxpayers would receive a form listing their assets and liabilities as reported to the tax authorities. Many US states use this method to administer the property tax: taxpayers receive an annual form indicating the current market value of any real estate they own, as calculated by the government on the basis of observed prices in transactions involving comparable properties. Taxpayers can of course challenge these valuations with appropriate evidence. In practice, corrections are rare, because data on real estate transactions are readily available and hard to contest: nearly everyone is aware of changing real estate values in the local market, and the authorities have comprehensive databases at their disposal.[5] Note, in passing, that this reporting method has two advantages: it makes the taxpayer's life simple and eliminates the inevitable temptation to slightly underestimate the value of one's own property.[6]

It is essential—and perfectly feasible—to extend this reporting system to all types of financial assets (and debts). For assets and liabilities associated with financial institutions within national borders, this could be done immediately, since banks, insurance companies, and other financial intermediaries in most developed countries are already required to inform the tax authorities about bank accounts and other assets they administer. In France, for example, the government knows that Monsieur X owns an apartment worth 400,000 euros and a stock portfolio worth 200,000 euros and has 100,000 euros in outstanding debts. It could thus send him a form indicating these various amounts (along with his net worth of 500,000 euros) with a request for corrections and additions if appropriate. This type of automated system, applied to the entire population, is far better adapted to the twenty-first century than the archaic method of asking all persons to declare honestly how much they own.[7]

A Simple Solution: Automatic Transmission of Banking Information

The first step toward a global tax on capital should be to extend to the international level this type of automatic transmission of banking data in order to include information on assets held in foreign banks in the precomputed asset statements issued to each taxpayer. It is important to recognize that there is no technical obstacle to doing so. Banking data are already automatically shared with the tax authorities in a country with 300 million people like the United States, as well as in countries like France and Germany with populations of 60 and 80 million, respectively, so there is obviously no reason why including the banks in the Cayman Islands and Switzerland would radically increase the volume of data to be processed. Of course the tax havens regularly invoke other excuses for maintaining bank secrecy. One of these is the alleged worry that governments will misuse the information. This is not a very convincing argument: it is hard to see why it would not also apply to information about the bank accounts of those incautious enough to keep their money in the country where they pay taxes. The most plausible reason why tax havens defend bank secrecy is that it allows their clients to evade their fiscal obligations, thereby allowing the tax havens to share in the gains. Obviously this has nothing whatsoever to do with the principles of the market economy.

No one has the right to set his own tax rates. It is not right for individuals to grow wealthy from free trade and economic integration only to rake off the profits at the expense of their neighbors. That is outright theft.

To date, the most thoroughgoing attempt to end these practices is the Foreign Account Tax Compliance Act (FATCA) adopted in the United States in 2010 and scheduled to be phased in by stages in 2014 and 2015. It requires all foreign banks to inform the Treasury Department about bank accounts and investments held abroad by US taxpayers, along with any other sources of revenue from which they might benefit. This is a far more ambitious law than the 2003 EU directive on foreign savings, which concerns only interest-bearing deposit accounts (equity portfolios are not covered, which is unfortunate, since large fortunes are held primarily in the form of stocks, which are fully covered by FATCA) and applies only to European banks and not worldwide (again unlike FATCA). Even though the European directive is timid and almost meaningless, it is not enforced, since, despite numerous discussions and proposed amendments since 2008, Luxembourg and Austria managed to win from other EU member states an agreement to extend their exemption from automatic data reporting and retain their right to share information only on formal request. This system, which also applies to Switzerland and other territories outside the European Union,[8] means that a government must already possess something close to proof of fraud in order to obtain information about the foreign bank accounts of one of its citizens. This obviously limits drastically the ability to detect and control fraud. In 2013, after Luxembourg and Switzerland announced their intention to abide by the provisions of FATCA, discussions in Europe resumed with the intention of incorporating some or all of these in a new EU directive. It is impossible to know when these discussions will conclude or whether they will lead to a legally binding agreement.

Note, moreover, that in this realm there is often a chasm between the triumphant declarations of political leaders and the reality of what they accomplish. This is extremely worrisome for the future equilibrium of our democratic societies. It is particularly striking to discover that the countries that are most dependent on substantial tax revenues to pay for their social programs, namely the European countries, are also the ones that have accomplished the least, even though the technical challenges are quite simple. This is a good example of the difficult situation that smaller countries face in dealing with globalization. Nation-states built over centuries find that they are too small to impose and enforce rules on today's globalized patrimonial capitalism. The countries of Europe were able to unite around a single currency (to be discussed more extensively in the next chapter), but they have accomplished almost nothing in the area of taxation. The leaders of the largest countries in the European Union, who naturally bear primary responsibility for this failure and for the gaping chasm between their words and their actions, nevertheless continue to blame other countries and the institutions of the European Union itself. There is no reason to think that things will change anytime soon.

Furthermore, although FATCA is far more ambitious than any EU directive in this realm, it, too, is insufficient. For one thing, its language is not sufficiently precise or comprehensive, so that there is good reason to believe that certain trust funds and foundations can legally avoid any obligation to report their assets. For another, the sanction envisioned by the law (a 30 percent surtax on income that noncompliant banks derive from their US operations) is insufficient. It may be enough to persuade certain banks (such as the big Swiss and Luxembourgian institutions that need to do business in the United States) to abide by the law, but there may well be a resurgence of smaller banks that specialize in managing overseas portfolios and do not operate on US soil. Such institutions, whether located in Switzerland, Luxembourg, London, or more exotic locales, can continue to manage the assets of US (or European) taxpayers without conveying any information to the authorities, with complete impunity.

Very likely the only way to obtain tangible results is to impose automatic sanctions not only on banks but also on countries that refuse to require their financial institutions to provide the required information. One might contemplate, for example, a tariff of 30 percent or more on the exports of offending states. To be clear, the goal is not to impose a general embargo on tax havens or engage in an endless trade war with Switzerland or Luxembourg. Protectionism does not produce wealth, and free trade and economic openness are ultimately in everyone's interest, provided that some countries do not take advantage of their neighbors by siphoning off their tax base. The requirement to provide comprehensive banking data automatically should have been part of the free trade and capital liberalization agreements negotiated since 1980. It was not, but that is not a good reason to stick with the status quo forever. Countries that have thrived on financial opacity may find it difficult to accept reform, especially since a legitimate financial services industry often develops alongside illicit (or questionable) banking activities. The financial services industry responds to genuine needs of the real international economy and will obviously continue to exist no matter what regulations are adopted. Nevertheless, the tax havens will undoubtedly suffer significant losses if financial transparency becomes the norm.[9] Such countries would be unlikely to agree to reform without sanctions, especially since other countries, and in particular the largest countries in the European Union, have not for the moment shown much determination to deal with the problem. Note, moreover, that the construction of the European Union has thus far rested on the idea that each country could have a single market and free capital flows without paying any price (or much of one). Reform is necessary, even indispensable, but it would be naïve to think that it will happen without a fight. Because it moves the debate away from the realm of abstractions and high-flown rhetoric and toward concrete sanctions, which are important, especially in Europe, FATCA is useful.

Finally, note that neither FATCA nor the EU directives were intended to support a progressive tax on global wealth. Their purpose was primarily to provide the tax authorities with information about taxpayer assets to be used for internal purposes such as identifying omissions in income tax returns. The information can also be used to identify possible evasion of the estate tax or wealth tax (in countries that have one), but the primary emphasis is on enforcement of the income tax. Clearly, these various issues are closely related, and international financial transparency is a crucial matter for the modern fiscal state across the board.

What Is the Purpose of a Tax on Capital?

Suppose next that the tax authorities are fully informed about the net asset position of each citizen. Should they be content to tax wealth at a very low rate (of, say, 0.1 percent, in keeping with the logic of compulsory reporting), or should a more substantial tax be assessed, and if so, why? The key question can be reformulated as follows. Since a progressive income tax exists and, in most countries, a progressive estate tax as well, what is the purpose of a progressive tax on capital? In fact, these three progressive taxes play distinct and complementary roles. Each is an essential pillar of an ideal tax system.[10] There are two distinct justifications of a capital tax: a contributive justification and an incentive justification.

The contributive logic is quite simple: income is often not a well-defined concept for very wealthy individuals, and only a direct tax on capital can correctly gauge the contributive capacity of the wealthy. Concretely, imagine a person with a fortune of 10 billion euros. As we saw in our examination of the *Forbes* rankings, fortunes of this magnitude have increased very rapidly over the past three decades, with real growth rates of 6–7 percent a year or even higher for the wealthiest individuals (such as Liliane Bettencourt and Bill Gates).[11] By definition, this means that income in the economic sense, including dividends, capital gains, and all other new resources capable of financing consumption and increasing the capital stock, amounted to at least 6–7 percent of the individual's capital (assuming that virtually none of this is consumed).[12] To simplify things, imagine that the individual in question enjoys an economic income of 5 percent of her fortune of 10 billion euros, which would be 500 million a year. Now, it is unlikely that such an individual would declare an income of 500 million euros on her income tax return. In France, the United States, and all other countries we have studied, the largest incomes declared on income tax returns are generally no more than a few tens of millions of euros or dollars. Take Liliane Bettencourt, the *L'Oréal* heiress and the wealthiest person in France. According to information published in the press and revealed by Bettencourt herself, her declared income was never more than 5 million a year, or little more than one ten-thousandth of her wealth (which is currently more than 30 billion euros). Uncertainties about individual cases aside (they are of little importance), the income declared for tax purposes in a case like this is less than a hundredth of the taxpayer's economic income.[13]

The crucial point here is that no tax evasion or undeclared Swiss bank account is involved (as far as we know). Even a person of the most refined taste and elegance cannot easily spend 500 million euros a year on current expenses. It is generally enough to take a few million a year in dividends (or some other type of payout) while leaving the remainder of the return on one's capital to accumulate in a family trust or other ad hoc legal entity created for the sole purpose of managing a fortune of this magnitude, just as university endowments are managed.

This is perfectly legal and not inherently problematic.[14] Nevertheless, it does present a challenge to the tax system. If some people are taxed on the basis of declared incomes that are only 1 percent of their economic incomes, or even 10 percent, then nothing is accomplished by taxing that income at a rate of

50 percent or even 98 percent. The problem is that this is how the tax system works in practice in the developed countries. Effective tax rates (expressed as a percentage of economic income) are extremely low at the top of the wealth hierarchy, which is problematic, since it accentuates the explosive dynamic of wealth inequality, especially when larger fortunes are able to garner larger returns. In fact, the tax system ought to attenuate this dynamic, not accentuate it.

There are several ways to deal with this problem. One would be to tax all of a person's income, including the part that accumulates in trusts, holding companies, and partnerships. A simpler solution is to compute the tax due on the basis of wealth rather than income. One could then assume a flat yield (of, say, 5 percent a year) to estimate the income on the capital and include that amount in the income subject to a progressive income tax. Some countries, such as the Netherlands, have tried this but have run into a number of difficulties having to do with the range of assets covered and the choice of a return on capital.[15] Another solution is to apply a progressive tax directly to an individual's total wealth. The important advantage of this approach is that one can vary the tax rate with the size of the fortune, since we know that in practice larger fortunes earn larger returns.

In view of the finding that fortunes at the top of the wealth hierarchy are earning very high returns, this contributive argument is the most important justification of a progressive tax on capital. According to this reasoning, capital is a better indicator of the contributive capacity of very wealthy individuals than is income, which is often difficult to measure. A tax on capital is thus needed in addition to the income tax for those individuals whose taxable income is clearly too low in light of their wealth.[16]

Nevertheless, another classic argument in favor of a capital tax should not be neglected. It relies on a logic of incentives. The basic idea is that a tax on capital is an incentive to seek the best possible return on one's capital stock. Concretely, a tax of 1 or 2 percent on wealth is relatively light for an entrepreneur who manages to earn 10 percent a year on her capital. By contrast, it is quite heavy for a person who is content to park her wealth in investments returning at most 2 or 3 percent a year. According to this logic, the purpose of the tax on capital is thus to force people who use their wealth inefficiently to sell assets in order to pay their taxes, thus ensuring that those assets wind up in the hands of more dynamic investors.

There is some validity to this argument, but it should not be overstated.[17] In practice, the return on capital does not depend solely on the talent and effort supplied by the capitalist. For one thing, the average return varies systematically with the size of the initial fortune. For another, individual returns are largely unpredictable and chaotic and are affected by all sorts of economic shocks. For example, there are many reasons why a firm might be losing money at any given point in time. A tax system based solely on the capital stock (and not on realized profits) would put disproportionate pressure on companies in the red, because their taxes would be as high when they were losing money as when they were earning high profits, and this could plunge them into bankruptcy.[18] The ideal tax system is therefore a compromise between the incentive logic (which favors a tax on the capital stock) and an insurance logic (which favors a tax on the revenue stream stemming from capital).[19] The unpredictability of the return on capital explains, moreover, why it is more efficient to tax heirs not once and for all, at the moment of inheritance (by way of the estate tax), but throughout their lives, via taxes based on both capital income and the value of the capital stock.[20] In other words, all three types of tax—on inheritance, income, and capital—play useful and complementary roles (even if income is perfectly observable for all taxpayers, no matter how wealthy).[21]

A Blueprint for a European Wealth Tax

Taking all these factors into account, what is the ideal schedule for a tax on capital, and how much would such a tax bring in? To be clear, I am speaking here of a permanent annual tax on capital at a rate that must therefore be fairly moderate. A tax collected only once a generation, such as an inheritance tax, can be assessed at a very high rate: a third, a half, or even two-thirds, as was the case for the largest estates in Britain and the United States from 1930 to 1980.[22] The same is true of exceptional one-time taxes on capital levied in unusual circumstances, such as the tax levied on capital in France in 1945 at rates as high as 25 percent, indeed 100 percent for additions to capital during the Occupation (1940–1945). Clearly, such taxes cannot be applied for very long: if the government takes a quarter of the nation's wealth every year, there will be nothing left to tax after a few years. That is why the rates of an annual tax on capital must be much lower, on the order of a few percent. To some this may seem surprising, but it is actually quite a substantial tax, since it is levied every year on the total stock of capital. For example, the property tax rate is frequently just 0.5–1 percent of the value of real estate, or a tenth to a quarter of the rental value of the property (assuming an average rental return of 4 percent a year).[23]

The next point is important, and I want to insist on it: given the very high level of private wealth in Europe today, a progressive annual tax on wealth at modest rates could bring in significant revenue. Take, for example, a wealth tax of 0 percent on fortunes below 1 million euros, 1 percent between 1 and 5 million euros, and 2 percent above 5 million euros. If applied to all member states of the European Union, such a tax would affect about 2.5 percent of the population and bring in revenues equivalent to 2 percent of Europe's GDP.[24] The high return should come as no surprise: it is due simply to the fact that private wealth in Europe today is worth more than five years of GDP, and much of that wealth is concentrated in the upper centiles of the distribution.[25] Although a tax on capital would not by itself bring in enough to finance the social state, the additional revenues it would generate are nevertheless significant.

In principle, each member state of the European Union could generate similar revenues by applying such a tax on its own. But without automatic sharing of bank information both inside and outside EU territory (starting with Switzerland among nonmember states) the risks of evasion would be very high. This partly explains why countries that have adopted a wealth tax (such as France, which employs a tax schedule similar to the one I am proposing) generally allow numerous exemptions, especially for "business assets" and, in practice, for nearly all large stakes in listed and unlisted companies. To do this is to drain much of the content from the progressive tax on capital, and that is why existing taxes have generated revenues so much smaller than the ones described above.[26] An extreme example of the difficulties European countries face when they try to impose a capital tax on their own can be seen in Italy. In 2012, the Italian government, faced with one of the largest public debts in Europe and also with an exceptionally high level of private wealth (also one of the highest in Europe, along with Spain),[27] decided to introduce a new tax on wealth. But for fear that financial assets would flee the country in search of refuge in Swiss, Austrian, and French banks, the rate was set at 0.8 percent on real estate and only 0.1 percent on bank deposits and other financial assets (except stocks, which were totally exempt), with no progressivity.

Not only is it hard to think of an economic principle that would explain why some assets should be taxed at one-eighth the rate of others; the system also had the unfortunate consequence of imposing a regressive tax on wealth, since the largest fortunes consist mainly of financial assets and especially stocks. This design probably did little to earn social acceptance for the new tax, which became a major issue in the 2013 Italian elections; the candidate who had proposed the tax—with the compliments of European and international authorities—was roundly defeated at the polls. The crux of the problem is this: without automatic sharing of bank information among European countries, which would allow the tax authorities to obtain reliable information about the net assets of all taxpayers, no matter where those assets are located, it is very difficult for a country acting on its own to impose a progressive tax on capital. This is especially unfortunate, because such a tax is a tool particularly well suited to Europe's current economic predicament.

Suppose that bank information is automatically shared and the tax authorities have accurate assessments of who owns what, which may happen some day. What would then be the ideal tax schedule? As usual, there is no mathematical formula for answering this question, which is a matter for democratic deliberation. It would make sense to tax net wealth below 200,000 euros at 0.1 percent and net wealth between 200,000 and 1 million euros at 0.5 percent. This would replace the property tax, which in most countries is tantamount to a wealth tax on the propertied middle class. The new system would be both more just and more efficient, because it targets all assets (not only real estate) and relies on transparent data and market values net of mortgage debt.[28] To a large extent a tax of this sort could be readily implemented by individual countries acting alone.

Note that there is no reason why the tax rate on fortunes above 5 million euros should be limited to 2 percent. Since the real returns on the largest fortunes in Europe and around the world are 6 to 7 percent or more, it would not be excessive to tax fortunes above 100 million or 1 billion euros at rates well above 2 percent. The simplest and fairest procedure would be to set rates on the basis of observed returns in each wealth bracket over several prior years. In that way, the degree of progressivity can be adjusted to match the evolution of returns to capital and the desired level of wealth concentration. To avoid divergence of the wealth distribution (that is, a steadily increasing share belonging to the top centiles and thousandths), which on its face seems to be a minimal desirable objective, it would probably be necessary to levy rates of about 5 percent on the largest fortunes. If a more ambitious goal is preferred—say, to reduce wealth inequality to more moderate levels than exist today (and which history shows are not necessary for growth)—one might envision rates of 10 percent or higher on billionaires. This is not the place to resolve the issue. What is certain is that it makes little sense to take the yield on public debt as a reference, as is often done in political debate.[29] The largest fortunes are clearly not invested in government bonds.

Is a European wealth tax realistic? There is no technical reason why not. It is the tool best suited to meet the economic challenges of the twenty-first century, especially in Europe, where private wealth is thriving to a degree not seen since the Belle Époque. But if the countries of the Old Continent are to cooperate more closely, European political institutions will have to change. The only strong European institution at the moment is the ECB, which is important but notoriously insufficient. I come back to this in the next chapter, when I turn to the question of the public debt crisis. Before that, it will be useful to look at the proposed tax on capital in a broader historical perspective.

Capital Taxation in Historical Perspective

In all civilizations, the fact that the owners of capital claim a substantial share of national income without working and that the rate of return on capital is generally 4–5 percent a year has provoked vehement, often indignant, reactions as well as a variety of political responses. One of the most common of the latter has been the prohibition of usury, which we find in one form or another in most religious traditions, including those of Christianity and Islam. The Greek philosophers were of two minds about interest, which, since time never ceases to flow, can in principle increase wealth without limit. It was the danger of limitless wealth that Aristotle singled out when he observed that the word "interest" in Greek (*tocos*) means "child." In his view, money ought not to "give birth" to more money.[30] In a world of low or even near-zero growth, where both population and output remained more or less the same generation after generation, "limitlessness" seemed particularly dangerous.

Unfortunately, the attempts to prohibit interest were often illogical. The effect of outlawing loans at interest was generally to restrict certain types of investment and certain categories of commercial or financial activity that the political or religious authorities deemed less legitimate or worthy than others. They did not, however, question the legitimacy of returns to capital in general. In the agrarian societies of Europe, the Christian authorities never questioned the legitimacy of land rents, from which they themselves benefited, as did the social groups on which they depended to maintain the social order. The prohibition of usury in the society of that time is best thought of as a form of social control: some types of capital were more difficult to control than others and therefore more worrisome. The general principle according to which capital can provide income for its owner, who need not work to justify it, went unquestioned. The idea was rather to be wary of infinite accumulation. Income from capital was supposed to be used in healthy ways, to pay for good works, for example, and certainly not to launch into commercial or financial adventures that might lead to estrangement from the true faith. Landed capital was in this respect very reassuring, since it could do nothing but reproduce itself year after year and century after century.[31] Consequently, the whole social and spiritual order also seemed immutable. Land rent, before it became the sworn enemy of democracy, was long seen as the wellspring of social harmony, at least by those to whom it accrued.

The solution to the problem of capital suggested by Karl Marx and many other socialist writers in the nineteenth century and put into practice in the Soviet Union and elsewhere in the twentieth century was far more radical and, if nothing else, more logically consistent. By abolishing private ownership of the means of production, including land and buildings as well as industrial, financial, and business capital (other than a few individual plots of land and small cooperatives), the Soviet experiment simultaneously eliminated all private returns on capital. The prohibition of usury thus became general: the rate of exploitation, which for Marx represented the share of output appropriated by the capitalist, thus fell to zero, and with it the rate of private return. With zero return on capital, man (or the worker) finally threw off his chains along with the yoke of accumulated wealth. The present reasserted its rights over the past. The inequality $r > g$ was nothing but a bad memory, especially since communism vaunted its affection for growth and technological progress. Unfortunately for the people caught up in these totalitarian experiments, the problem was that private property and the market economy do not serve solely to ensure the domination of capital over those who have nothing to sell but their labor power. They also play a useful role in coordinating the actions of millions of individuals, and it is not so easy to do without them. The human disasters caused by Soviet-style centralized planning illustrate this quite clearly.

A tax on capital would be a less violent and more efficient response to the eternal problem of private capital and its return. A progressive levy on individual wealth would reassert control over capitalism in the name of the general interest while relying on the forces of private property and competition. Each type of capital would be taxed in the same way, with no discrimination a priori, in keeping with the principle that investors are generally in a better position than the government to decide what to invest in.[32] If necessary, the tax can be quite steeply progressive on very large fortunes, but this is a matter for democratic debate under a government of laws. A capital tax is the most appropriate response to the inequality $r > g$ as well as to the inequality of returns to capital as a function of the size of the initial stake.[33]

In this form, the tax on capital is a new idea, designed explicitly for the globalized patrimonial capitalism of the twenty-first century. To be sure, capital in the form of land has been taxed since time immemorial. But property is generally taxed at a low flat rate. The main purpose of the property tax is to guarantee property rights by requiring registration of titles; it is certainly not to redistribute wealth. The English, American, and French revolutions all conformed to this logic: the tax systems they put in place were in no way intended to reduce inequalities of wealth. During the French Revolution the idea of progressive taxation was the subject of lively debate, but in the end the principle of progressivity was rejected. What is more, the boldest tax proposals of that time seem quite moderate today in the sense that the proposed tax rates were quite low.[34]

The progressive tax revolution had to await the twentieth century and the period between the two world wars. It occurred in the midst of chaos and came primarily in the form of progressive taxes on income and inheritances. To be sure, some countries (most notably Germany and Sweden) established an annual progressive tax on capital as early as the late nineteenth century or early twentieth. But the United States, Britain, and France (until the 1980s) did not move in this direction.[35] Furthermore, in the countries that did tax capital, the rates were relatively low, no doubt because these taxes were designed in a context very different from that which exists today. These taxes also suffered from a fundamental technical flaw: they were based not on the market value of the assets subject to taxation, to be revised annually, but on infrequently revised assessments of their value by the tax authorities. These assessed valuations eventually lost all connection with market values, which quickly rendered the taxes useless. The same flaw undermined the property tax in France and many other countries subsequent to the inflationary shock of the period 1914–1945.[36] Such a design flaw can be fatal to a progressive tax on capital: the threshold for each tax bracket depends on more or less arbitrary factors such as the date of the last property assessment in a given town or neighborhood. Challenges to such arbitrary taxation became increasingly common after 1960, in a period of rapidly rising real estate and stock prices. Often the courts became involved (to rule on violations of the principle of equal taxation). Germany and Sweden abolished their annual taxes on capital in 1990–2010. This had more to do with the archaic design of these taxes (which went back to the nineteenth century) than with any response to tax competition.[37]

The current wealth tax in France (the impôt de solidarité sur la fortune, or ISF) is in some ways more modern: it is based on the market value of various types of assets, reevaluated annually. This is because the tax was created relatively recently: it was introduced in the 1980s, at a time when inflation, especially in asset prices, could not be ignored. There are perhaps advantages to being at odds with the rest of the developed world in regard to economic policy: in some cases it allows a country to be ahead of its time.[38] Although the French ISF is based on market values, in which respect it resembles the ideal capital tax, it is nevertheless quite different from the ideal in other respects. As noted earlier, it is riddled with exemptions and based on self-declared asset holdings. In 2012, Italy introduced a rather strange wealth tax, which illustrates the limits of what a single country can do on its own in the current climate. The Spanish case is also interesting. The Spanish wealth tax, like the now defunct Swedish and German ones, is based on more or less arbitrary assessments of real estate and other assets. Collection of the tax was suspended in 2008–2010, then restored in 2011–2012 in the midst of an acute budget crisis, but without modifications to its structure.[39] Similar tensions exist almost everywhere: although a capital tax seems logical in view of growing government needs (as large private fortunes increase and incomes stagnate, a government would have to be blind to pass up such a tempting source of revenue, no matter what party is in power), it is difficult to design such a tax properly within a single country.

To sum up: the capital tax is a new idea, which needs to be adapted to the globalized patrimonial capitalism of the twenty-first century. The designers of the tax must consider what tax schedule is appropriate, how the value of taxable assets should be assessed, and how information about asset ownership should be supplied automatically by banks and shared internationally so that the tax authorities need not rely on taxpayers to declare their own asset holdings.

Alternative Forms of Regulation: Protectionism and Capital Controls

Is there no alternative to the capital tax? No: there are other ways to regulate patrimonial capitalism in the twenty-first century, and some of these are already being tried in various parts of the world. Nevertheless, these alternative forms of regulation are less satisfactory than the capital tax and sometimes create more problems than they solve. As noted, the simplest way for a government to reclaim a measure of economic and financial sovereignty is to resort to protectionism and controls on capital. Protectionism is at times a useful way of sheltering relatively undeveloped sectors of a country's economy (until domestic firms are ready to face international competition).[40] It is also a valuable weapon against countries that do not respect the rules (of financial transparency, health norms, human rights, etc.), and it would be foolish for a country to rule out its potential use. Nevertheless, protectionism, when deployed on a large scale over a long period of time, is not in itself a source of prosperity or a creator of wealth. Historical experience suggests that a country that chooses this road while promising its people a robust improvement in their standard of living is likely to meet with serious disappointment. Furthermore, protectionism does nothing to counter the inequality $r > g$ or the tendency for wealth to accumulate in fewer and fewer hands.

The question of capital controls is another matter. Since the 1980s, governments in most wealthy countries have advocated complete and absolute liberalization of capital flows, with no controls and no sharing of information about asset ownership among nations. International organizations such as the OECD, the World Bank, and the IMF promoted the same set of measures in the name of the latest in economic science.[41] But the movement was propelled essentially by democratically elected governments, reflecting the dominant ideas of a particular historical moment marked by the fall of the Soviet Union and unlimited faith in capitalism and self-regulating markets. Since the financial crisis of 2008, serious doubts about the wisdom of this approach have arisen, and it is quite likely that the rich countries will have increasing recourse to capital controls in the decades ahead. The emerging world has shown the way, starting in the aftermath of the Asian financial crisis of 1998, which convinced many countries, including Indonesia, Brazil, and Russia, that the policies and "shock therapies" dictated by the international community were not always well advised and the time had come to set their own courses. The crisis also encouraged some countries to amass excessive reserves of foreign exchange. This may not be the optimal response to global economic instability, but it has the virtue of allowing single countries to cope with economic shocks without forfeiting their sovereignty.

The Mystery of Chinese Capital Regulation

It is important to recognize that some countries have always enforced capital controls and remained untouched by the stampede toward complete deregulation of financial flows and current accounts. A notable example of such a country is China, whose currency has never been convertible (though it may be someday, when China is convinced that it has accumulated sufficient reserves to bury any speculator who bets against the renminbi). China has also imposed strict controls on both incoming capital (no one can invest in or purchase a large Chinese firm without authorization from the government, which is generally granted only if the foreign investor is content to take a minority stake) and outgoing capital (no assets can be removed from China without government approval). The issue of outgoing capital is currently quite a sensitive one in China and is at the heart of the Chinese model of capital regulation. This raises a very simple question: Are China's millionaires and billionaires, whose names are increasingly prevalent in global wealth rankings, truly the owners of their wealth? Can they, for example, take their money out of China if they wish? Although the answers to these questions are shrouded in mystery, there is no doubt that the Chinese notion of property rights is different from the European or American notions. It depends on a complex and evolving set of rights and duties. To take one example, a Chinese billionaire who acquired a 20 percent stake in Telecom China and who wished to move to Switzerland with his family while holding on to his shares and collecting millions of euros in dividends would very likely have a much harder time doing so than, say, a Russian oligarch, to judge by the fact that vast sums commonly leave Russia for suspect destinations. One never sees this in China, at least for now. In Russia, to be sure, an oligarch must take care not to tangle with the president, which can land him in prison. But if he can avoid such trouble, he can apparently live quite well on wealth derived from exploitation of Russia's natural resources. In China things seem to be controlled more tightly. That is one of many reasons why the kinds of comparisons that one reads frequently in the Western press between the fortunes of wealthy Chinese political leaders and their US counterparts, who are said to be far less wealthy, probably cannot withstand close scrutiny.[42]

It is not my intention to defend China's system of capital regulation, which is extremely opaque and probably unstable. Nevertheless, capital controls are one way of regulating and containing the dynamics of wealth inequality. Furthermore, China has a more progressive income tax than Russia (which adopted a flat tax in the 1990s, like most countries in the former Soviet bloc), though it is still not progressive enough. The revenues it brings in are invested in education, health, and infrastructure on a far larger scale than in other emerging countries such as India, which China has clearly outdistanced.[43] If China wishes, and above all if its elites agree to allow the kind of democratic transparency and government of laws that go hand in hand with a modern tax system (by no means a certainty), then China is clearly large enough to impose the kind of progressive tax on income and capital that I have been discussing. In some respects, it is better equipped to meet these challenges than Europe is, because Europe must contend with political fragmentation and with a particularly intense form of tax competition, which may be with us for some time to come.[44]

In any case, if the European countries do not join together to regulate capital cooperatively and effectively, individual countries are highly likely to impose their own controls and national preferences. (Indeed, this has already begun, with a sometimes irrational promotion of national champions and domestic stockholders, on the frequently illusory premise that they can be more easily controlled than foreign stockholders.) In this respect, China has a clear advantage and will be difficult to beat. The capital tax is the liberal form of capital control and is better suited to Europe's comparative advantage.

The Redistribution of Petroleum Rents

When it comes to regulating global capitalism and the inequalities it generates, the geographic distribution of natural resources and especially of "petroleum rents" constitutes a special problem. International inequalities of wealth—and national destinies—are determined by the way borders were drawn, in many cases quite arbitrarily. If the world were a single global democratic community, an ideal capital tax would redistribute petroleum rents in an equitable manner. National laws sometimes do this by declaring natural resources to be common property. Such laws of course vary from country to country. It is to be hoped that democratic deliberation will point in the right direction. For example, if, tomorrow, someone were to find in her backyard a treasure greater than all of her country's existing wealth combined, it is likely that a way would be found to amend the law to share that wealth in a reasonable manner (or so one hopes).

Since the world is not a single democratic community, however, the redistribution of natural resources is often decided in far less peaceful ways. In 1990–1991, just after the collapse of the Soviet Union, another fateful event took place. Iraq, a country of 35 million people, decided to invade its tiny neighbor, Kuwait, with barely 1 million people but in possession of petroleum reserves virtually equal to those of Iraq. This was in part a geographical accident, of course, but it was also the result of a stroke of the postcolonial pen: Western oil companies and their governments in some cases found it easier to do business with countries without too many people living in them (although the long-term wisdom of such a choice may be doubted). In any case, the Western powers and their allies immediately sent some 900,000 troops to restore the Kuwaitis as the sole legitimate owners of their oilfields (proof, if proof were needed, that governments can mobilize impressive resources to enforce their decisions when they choose to do so). This happened in 1991. The first Gulf war was followed by a second in 2003, in Iraq, with a somewhat sparser coalition of Western powers. The consequences of these events are still with us today.

It is not up to me to calculate the optimal schedule for the tax on petroleum capital that would ideally exist in a global political community based on social justice and utility, or even in a Middle Eastern political community. I observe simply that the unequal distribution of wealth in this region has attained unprecedented levels of injustice, which would surely have ceased to exist long ago were it not for foreign military protection. In 2012, the total budget of the Egyptian ministry of education for all primary, middle, and secondary schools and universities in a country of 85 million was less than $5 billion.[45] A few hundred kilometers to the east, Saudi Arabia and its 20 million citizens enjoyed oil revenues of $300 billion, while Qatar and its 300,000 Qataris take in more than $100 billion annually. Meanwhile, the international community wonders if it ought to extend a loan of a few billion dollars to Egypt or wait until the country increases, as promised, its tax on carbonated drinks and cigarettes. Surely the international norm should be to prevent redistribution of wealth by force of arms insofar as it is possible to do so (particularly when the intention of the invader is to buy more arms, not to build schools, as was the case with the Iraqi invader in 1991). But such a norm should carry with it the obligation to find other ways to achieve a more just distribution of petroleum rents, be it by way of sanctions, taxes, or foreign aid, in order to give countries without oil the opportunity to develop.

Redistribution through Immigration

A seemingly more peaceful form of redistribution and regulation of global wealth inequality is immigration. Rather than move capital, which poses all sorts of difficulties, it is sometimes simpler to allow labor to move to places where wages are higher. This was of course the great contribution of the United States to global redistribution: the country grew from a population of barely 3 million at the time of the Revolutionary War to more than 300 million today, largely thanks to successive waves of immigration. That is why the United States is still a long way from becoming the new Old Europe, as I speculated it might in Chapter 14. Immigration is the mortar that holds the United States together, the stabilizing force that prevents accumulated capital from acquiring the importance it has in Europe; it is also the force that makes the increasingly large inequalities of labor income in the United States politically and socially bearable. For a fair proportion of Americans in the bottom 50 percent of the income distribution, these inequalities are of secondary importance for the very simple reason that they were born in a less wealthy country and see themselves as being on an upward trajectory. Note, moreover, that the mechanism of redistribution through immigration, which enables individuals born in poor countries to improve their lot by moving to a rich country, has lately been an important factor in Europe as well as the United States. In this respect, the distinction between the Old World and the New may be less salient than in the past.[46]

It bears emphasizing, however, that redistribution through immigration, as desirable as it may be, resolves only part of the problem of inequality. Even after average per capita output and income are equalized between countries by way of immigration and, even more, by poor countries catching up with rich ones in terms of productivity, the problem of inequality—and in particular the dynamics of global wealth concentration—remains. Redistribution through immigration postpones the problem but does not dispense with the need for a new type of regulation: a social state with progressive taxes on income and capital. One might hope, moreover, that immigration will be more readily accepted by the less advantaged members of the wealthier societies if such institutions are in place to ensure that the economic benefits of globalization are shared by everyone. If you have free trade and free circulation of capital and people but destroy the social state and all forms of progressive taxation, the temptations of defensive nationalism and identity politics will very likely grow stronger than ever in both Europe and the United States.

Note, finally, that the less developed countries will be among the primary beneficiaries of a more just and transparent international tax system. In Africa, the outflow of capital has always exceeded the inflow of foreign aid by a wide margin. It is no doubt a good thing that several wealthy countries have launched judicial proceedings against former African leaders who fled their countries with ill-gotten gains. But it would be even more useful to establish international fiscal cooperation and data sharing to enable countries in Africa and elsewhere to root out such pillage in a more systematic and methodical fashion, especially since foreign companies and stockholders of all nationalities are at least as guilty as unscrupulous African elites. Once again, financial transparency and a progressive global tax on capital are the right answers.

{ SIXTEEN }

The Question of the Public Debt

There are two main ways for a government to finance its expenses: taxes and debt. In general, taxation is by far preferable to debt in terms of justice and efficiency. The problem with debt is that it usually has to be repaid, so that debt financing is in the interest of those who have the means to lend to the government. From the standpoint of the general interest, it is normally preferable to tax the wealthy rather than borrow from them. There are nevertheless many reasons, both good and bad, why governments sometimes resort to borrowing and to accumulating debt (if they do not inherit it from previous governments). At the moment, the rich countries of the world are enmeshed in a seemingly interminable debt crisis. To be sure, history offers examples of even higher public debt levels, as we saw in Part Two: in Britain in particular, public debt twice exceeded two years of national income, first at the end of the Napoleonic wars and again after World War II. Still, with public debt in the rich countries now averaging about one year of national income (or 90 percent of GDP), the developed world is currently indebted at a level not seen since 1945. Although the emerging economies are poorer than the rich ones in both income and capital, their public debt is much lower (around 30 percent of GDP on average). This shows that the question of public debt is a question of the distribution of wealth, between public and private actors in particular, and not a question of absolute wealth. The rich world is rich, but the governments of the rich world are poor. Europe is the most extreme case: it has both the highest level of private wealth in the world and the greatest difficulty in resolving its public debt crisis—a strange paradox.

I begin by examining various ways of dealing with high public debt levels. This will lead to an analysis of how central banks regulate and redistribute capital and why European unification, overly focused as it was on the issue of currency while neglecting taxation and debt, has led to an impasse. Finally, I will explore the optimal accumulation of public capital and its relation to private capital in the probable twenty-first-century context of low growth and potential degradation of natural capital.

Reducing Public Debt: Tax on Capital, Inflation, and Austerity

How can a public debt as large as today's European debt be significantly reduced? There are three main methods, which can be combined in various proportions: taxes on capital, inflation, and austerity. An exceptional tax on private capital is the most just and efficient solution. Failing that, inflation can play a useful role: historically, that is how most large public debts have been dealt with. The worst solution in terms of both justice and efficiency is a prolonged dose of austerity—yet that is the course Europe is currently following.

I begin by recalling the structure of national wealth in Europe today. As I showed in Part Two, national wealth in most European countries is close to six years of national income, and most of it is owned by private agents (households). The total value of public assets is approximately equal to the total public debt (about one year of national income), so net public wealth is close to zero.[1] Private wealth (net of debt) can be divided into two roughly equal halves: real estate and financial assets. Europe's average net asset position vis-à-vis the rest of the world is close to equilibrium, which means that European firms and sovereign debt are owned by European households (or, more precisely, what the rest of the world owns of Europe is compensated by what Europeans own of the rest of the world). This reality is obscured by the complexity of the system of financial intermediation: people deposit their savings in a bank or invest in a financial product, and the bank then invests the money elsewhere. There is also considerable cross-ownership between countries, which makes things even more opaque. Yet the fact remains that European households (or at any rate those that own anything at all: bear in mind that wealth is still very concentrated, with 60 percent of the total owned by the wealthiest 10 percent) own the equivalent of all that there is to own in Europe, including its public debt.[2]

Under such conditions, how can public debt be reduced to zero? One solution would be to privatize all public assets. According to the national accounts of the various European countries, the proceeds from selling all public buildings, schools, universities, hospitals, police stations, infrastructure, and so on would be roughly sufficient to pay off all outstanding public debt.[3] Instead of holding public debt via their financial investments, the wealthiest European households would become the direct owners of schools, hospitals, police stations, and so on. Everyone else would then have to pay rent to use these assets and continue to produce the associated public services. This solution, which some very serious people actually advocate, should to my mind be dismissed out of hand. If the European social state is to fulfill its mission adequately and durably, especially in the areas of education, health, and security, it must continue to own the related public assets. It is nevertheless important to understand that as things now stand, governments must pay heavy interest (rather than rent) on their outstanding public debt, so the situation is not all that different from paying rent to use the same assets, since these interest payments weigh just as heavily on the public exchequer.

A much more satisfactory way of reducing the public debt is to levy an exceptional tax on private capital. For example, a flat tax of 15 percent on private wealth would yield nearly a year's worth of national income and thus allow for immediate reimbursement of all outstanding public debt. The state would continue to own its public assets, but its debt would be reduced to zero after five years and it would therefore have no interest to pay.[4] This solution is equivalent to a total repudiation of the public debt, except for two essential differences.[5]

First, it is always very difficult to predict the ultimate incidence of a debt repudiation, even a partial one—that is, it is difficult to know who will actually bear the cost. Complete or partial default on the public debt is sometimes tried in situations of extreme overindebtedness, as in Greece in 2011–2012. Bondholders are forced to accept a "haircut" (as the jargon has it): the value of government bonds held by banks and other creditors is reduced by 10–20 percent or perhaps even more. The problem is that if one applies a measure of this sort on a large scale—for example, all of Europe and not just Greece (which accounts for just 2 percent of European GDP)—it is likely to trigger a banking panic and a wave of bankruptcies. Depending on which banks are holding various types of bonds, as well as on the structure of their balance sheets, the identity of their creditors, the households that have invested their savings in these various institutions, the nature of those investments, and so on, one can end up with quite different final incidences, which cannot be accurately predicted in advance. Furthermore, it is quite possible that the people with the largest portfolios will be able to restructure their investments in time to avoid the haircut almost entirely. People sometimes think that imposing a haircut is a way of penalizing those investors who have taken the largest risks. Nothing could be further from the truth: financial assets are constantly being traded, and there is no guarantee that the people who would be penalized in the end are the ones who ought to be. The advantage of an exceptional tax on capital, which is similar to a haircut, is precisely that it would arrange things in a more civilized manner. Everyone would be required to contribute, and, equally important, bank failures would be avoided, since it is the ultimate owners of wealth (physical individuals) who would have to pay, not financial institutions. If such a tax were to be levied, however, the tax authorities would of course need to be permanently and automatically apprised of any bank accounts, stocks, bonds, and other financial assets held by the citizens under their jurisdiction. Without such a financial cadaster, every policy choice would be risky.

But the main advantage of a fiscal solution is that the contribution demanded of each individual can be adjusted to the size of his fortune. It would not make much sense to levy an exceptional tax of 15 percent on all private wealth in Europe. It would be better to apply a progressive tax designed to spare the more modest fortunes and require more of the largest ones. In some respects, this is what European banking law already does, since it generally guarantees deposits up to 100,000 euros in case of bank failure. The progressive capital tax is a generalization of this logic, since it allows much finer gradations of required levies. One can imagine a number of different brackets: full deposit guarantee up to 100,000 euros, partial guarantee between 100,000 and 500,000 euros, and so on, with as many brackets as seem useful. The progressive tax would also apply to all assets (including listed and unlisted shares), not just bank deposits. This is essential if one really wants to reach the wealthiest individuals, who rarely keep their money in checking accounts.

In any event, it would no doubt be too much to try to reduce public debt to zero in one fell swoop. To take a more realistic example, assume that we want to reduce European government debt by around 20 percent of GDP, which would bring debt levels down from the current 90 percent of GDP to 70 percent, not far from the maximum of 60 percent set by current European treaties.[6] As noted in the previous chapter, a progressive tax on capital at a rate of 0 percent on fortunes up to 1 million euros, 1 percent on fortunes between

1 and 5 million euros, and 2 percent on fortunes larger than 5 million euros would bring in the equivalent of about 2 percent of European GDP. To obtain one-time receipts of 20 percent of GDP, it would therefore suffice to apply a special levy with rates 10 times as high: 0 percent up to 1 million, 10 percent between 1 and 5 million, and 20 percent above 5 million.[7] It is interesting to note that the exceptional tax on capital that France applied in 1945 in order to substantially reduce its public debt had progressive rates that ranged from 0 to 25 percent.[8]

One could obtain the same result by applying a progressive tax with rates of 0, 1, and 2 percent for a period of ten years and earmarking the receipts for debt reduction. For example, one could set up a "redemption fund" similar to the one proposed in 2011 by a council of economists appointed by the German government. This proposal, which was intended to mutualize all Eurozone public debt above 60 percent of GDP (and especially the debt of Germany, France, Italy, and Spain) and then to reduce the fund gradually to zero, is far from perfect. In particular, it lacks the democratic governance without which the mutualization of European debt is not feasible. But it is a concrete plan that could easily be combined with an exceptional one-time or special ten-year tax on capital.[9]

Does Inflation Redistribute Wealth?

To recapitulate the argument thus far: I observed that an exceptional tax on capital is the best way to reduce a large public debt. This is by far the most transparent, just, and efficient method. Inflation is another possible option, however. Concretely, since a government bond is a nominal asset (that is, an asset whose price is set in advance and does not depend on inflation) rather than a real asset (whose price evolves in response to the economic situation, generally increasing at least as fast as inflation, as in the case of real estate and shares of stock), a small increase in the inflation rate is enough to significantly reduce the real value of the public debt. With an inflation rate of 5 percent a year rather than 2 percent, the real value of the public debt, expressed as a percentage of GDP, would be reduced by more than 15 percent (all other things equal)—a considerable amount.

Such a solution is extremely tempting. Historically, this is how most large public debts were reduced, particularly in Europe in the twentieth century. For example, inflation in France and Germany averaged 13 and 17 percent a year, respectively, from 1913 to 1950. It was inflation that allowed both countries to embark on reconstruction efforts in the 1950s with a very small burden of public debt. Germany, in particular, is by far the country that has used inflation most freely (along with outright debt repudiation) to eliminate public debt throughout its history.[10] Apart from the ECB, which is by far the most averse to this solution, it is no accident that all the other major central banks—the US Federal Reserve, the Bank of Japan, and the Bank of England—are currently trying to raise their inflation targets more or less explicitly and are also experimenting with various so-called unconventional monetary policies. If they succeed—say, by increasing inflation from 2 to 5 percent a year (which is by no means assured)—these countries will emerge from the debt crisis much more rapidly than the countries of the Eurozone, whose economic prospects are clouded by the absence of any obvious way out, as well as by their lack of clarity concerning the long-term future of budgetary and fiscal union in Europe.

Indeed, it is important to understand that without an exceptional tax on capital and without additional inflation, it may take several decades to get out from under a burden of public debt as large as that which currently exists in Europe. To take an extreme case: suppose that inflation is zero and GDP grows at 2 percent a year (which is by no means assured in Europe today because of the obvious contractionary effect of budgetary rigor, at least in the short term), with a budget deficit limited to 1 percent of GDP (which in practice implies a substantial primary surplus, given the interest on the debt). Then by definition it would take 20 years to reduce the debt-to-GDP ratio by twenty points.[11] If growth were to fall below 2 percent in some years and debt were to rise above 1 percent, it could easily take thirty or forty years. It takes decades to accumulate capital; it can also take a very long time to reduce a debt.

The most interesting historical example of a prolonged austerity cure can be found in nineteenth-century Britain. As noted in Chapter 3, it would have taken a century of primary surpluses (of 2–3 points of GDP from 1815 to 1914) to rid the country of the enormous public debt left over from the Napoleonic wars. Over the course of this period, British taxpayers spent more on interest on the debt than on education. The choice to do so was no doubt in the interest of government bondholders but unlikely to have been in the general interest of the British people. It may be that the setback to British education was responsible for the country's decline in the decades that followed. To be sure, the debt was then above 200 percent of GDP (and not barely 100 percent, as is the case today), and inflation in the nineteenth century was close to zero (whereas an inflation target of 2 percent is generally accepted nowadays). Hence there is hope that European austerity might last only ten or twenty years (at a minimum) rather than a century. Still, that would be quite a long time. It is reasonable to think that Europe might find better ways to prepare for the economic challenges of the twenty-first century than to spend several points of GDP a year servicing its debt, at a time when most European countries spend less than one point of GDP a year on their universities.[12]

That said, I want to insist on the fact that inflation is at best a very imperfect substitute for a progressive tax on capital and can have some undesirable secondary effects. The first problem is that inflation is hard to control: once it gets started, there is no guarantee that it can be stopped at 5 percent a year. In an inflationary spiral, everyone wants to make sure that the wages he receives and the prices he must pay evolve in a way that suits him. Such a spiral can be hard to stop. In France, the inflation rate exceeded 50 percent for four consecutive years, from 1945 to 1948. This reduced the public debt to virtually nothing in a far more radical way than the exceptional tax on capital that was collected in 1945. But millions of small savers were wiped out, and this aggravated the persistent problem of poverty among the elderly in the 1950s.[13] In Germany, prices were multiplied by a factor of 100 million between the beginning of 1923 and the end. Germany's society and economy were permanently traumatized by this episode, which undoubtedly continues to influence German perceptions of inflation. The second difficulty with inflation is that much of the desired effect disappears once it becomes permanent and embedded in expectations (in particular, anyone willing to lend to the government will demand a higher rate of interest).

To be sure, one argument in favor of inflation remains: compared with a capital tax, which, like any other tax, inevitably deprives people of resources they would have spent usefully (for consumption or investment), inflation (at least in its idealized form) primarily penalizes people who do not know what to do with their money, namely, those who have kept too much cash in their bank account or stuffed into their mattress. It spares those who have already spent everything or invested everything in real economic assets (real estate or business capital), and, better still, it spares those who are in debt (inflation reduces nominal debt, which enables the indebted to get back on their feet more quickly and make new investments). In this idealized version, inflation is in a way a tax on idle capital and an encouragement to dynamic capital. There is some truth to this view, and it should not be dismissed out of hand.[14] But as I showed in examining unequal returns on capital as a function of the initial stake, inflation in no way prevents large and well-diversified portfolios from earning a good return simply by virtue of their size (and without any personal effort by the owner).[15]

In the end, the truth is that inflation is a relatively crude and imprecise tool. Sometimes it redistributes wealth in the right direction, sometimes not. To be sure, if the choice is between a little more inflation and a little more austerity, inflation is no doubt preferable. But in France one sometimes hears the view that inflation is a nearly ideal tool for redistributing wealth (a way of taking money from "German rentiers" and forcing the aging population on the other side of the Rhine to show more solidarity with the rest of Europe). This is naïve and preposterous. In practice, a great wave of inflation in Europe would have all sorts of unintended consequences for the redistribution of wealth and would be particularly harmful to people of modest means in France, Germany, and elsewhere. Conversely, those with fortunes in real estate and the stock market would largely be spared on both sides of the Rhine and everywhere else as well.[16] When it comes to decreasing inequalities of wealth for good or reducing unusually high levels of public debt, a progressive tax on capital is generally a better tool than inflation.

What Do Central Banks Do?

In order to gain a better understanding of the role of inflation and, more generally, of central banks in the regulation and redistribution of capital, it is useful to take a step back from the current crisis and to examine these issues in broader historical perspective. Back when the gold standard was the norm everywhere, before World War I, central banks played a much smaller role than they do today. In particular, their power to create money was severely limited by the existing stock of gold and silver. One obvious problem with the gold standard was that the evolution of the overall price level depended primarily on the hazards of gold and silver discoveries. If the global stock of gold was static but global output increased, the price level had to fall (since the same money stock now had to support a larger volume of commercial exchange). In practice this was a source of considerable difficulty.[17] If large deposits of gold or silver were suddenly discovered, as in Spanish America in the sixteenth and seventeenth centuries or California in the mid-nineteenth century, prices could skyrocket, which created other kinds of problems and brought undeserved windfalls to some.[18] These drawbacks make it highly unlikely that the world will ever return to the gold standard. (Keynes referred to gold as a "barbarous relic.")

Once currency ceases to be convertible into precious metals, however, the power of central banks to create money is potentially unlimited and must therefore be strictly regulated. This is the crux of the debate about central bank independence as well as the source of numerous misunderstandings. Let me quickly retrace the stages of this debate. At the beginning of the Great Depression, the central banks of the industrialized countries adopted an extremely conservative policy: having only recently abandoned the gold standard, they refused to create the liquidity necessary to save troubled banks, which led to a wave of bankruptcies that seriously aggravated the crisis and pushed the world to the brink of the abyss. It is important to understand the trauma occasioned by this tragic historical experience. Since then, everyone agrees that the primary function of central banking is to ensure the stability of the financial system, which requires central banks to assume the role of "lenders of last resort": in case of absolute panic, they must create the liquidity necessary to avoid a broad collapse of the financial system. It is essential to realize that this view has been shared by all observers of the system since the 1930s, regardless of their position on the New Deal or the various forms of social state created in the United States and Europe at the end of World War II. Indeed, faith in the stabilizing role of central banking at times seems inversely proportional to faith in the social and fiscal policies that grew out of the same period.

This is particularly clear in the monumental *Monetary History of the United States* published in 1963 by Milton Friedman and Anna Schwartz. In this fundamental work, the leading figure in monetary economics follows in minute detail the changes in United States monetary policy from 1857 to 1960, based on voluminous archival records.[19] Unsurprisingly, the focal point of the book is the Great Depression. For Friedman, no doubt is possible: it was the unduly restrictive policy of the Federal Reserve that transformed the stock market crash into a credit crisis and plunged the economy into a deflationary spiral and a depression of unprecedented magnitude. The crisis was primarily monetary, and therefore its solution was also monetary. From this analysis, Friedman drew a clear political conclusion: in order to ensure regular, undisrupted growth in a capitalist economy, it is necessary and sufficient to make sure that monetary policy is designed to ensure steady growth of the money supply. Accordingly, monetarist doctrine held that the New Deal, which created a large number of government jobs and social transfer programs, was a costly and useless sham. Saving capitalism did not require a welfare state or a tentacular government: the only thing necessary was a well-run Federal Reserve. In the 1960s–1970s, although many Democrats in the United States still dreamed of completing the New Deal, the US public had begun to worry about their country's decline relative to Europe, which was then still in a phase of rapid growth. In this political climate, Friedman's simple but powerful political message had the effect of a bombshell. The work of Friedman and other Chicago School economists fostered suspicion of the ever-expanding state and created the intellectual climate in which the conservative revolution of 1979–1980 became possible.

One can obviously reinterpret these events in a different light: there is no reason why a properly functioning Federal Reserve cannot function as a complement to a properly functioning social state and a well-designed progressive tax policy. These institutions are clearly complements rather than substitutes. Contrary to monetarist doctrine, the fact that the Fed followed an unduly restrictive monetary policy in the early 1930s (as did the central banks of the other rich countries) says nothing about the virtues and limitations of other institutions. That is not the point that interests me here, however. The fact is that all economists—monetarists, Keynesians, and neoclassicals—together with all other observers, regardless of their political stripe, have agreed that central banks ought to act as lenders of last resort and do whatever is necessary to avoid financial collapse and a deflationary spiral.

This broad consensus explains why all of the world's central banks—in Japan and Europe as well as the United States—reacted to the financial crisis of 2007–2008 by taking on the role of lenders of last resort and stabilizers of the financial system. Apart from the collapse of Lehman Brothers in September 2008, bank failures in the crisis have been fairly limited in scope. There is, however, no consensus as to the exact nature of the "unconventional" monetary policies that should be followed in situations like this.

What in fact do central banks do? For present purposes, it is important to realize that central banks do not create wealth as such; they redistribute it. More precisely, when the Fed or the ECB decides to create a billion additional dollars or euros, US or European capital is not augmented by that amount. In fact, national capital does not change by a single dollar or euro, because the operations in which central banks engage are always loans. They therefore result in the creation of financial assets and liabilities, which, at the moment they are created, exactly balance each other. For example, the Fed might lend $1 billion to Lehman Brothers or General Motors (or the US government), and these entities contract an equivalent debt. The net wealth of the Fed and Lehman Brothers (or General Motors) does not change at all, nor, a fortiori, does that of the United States or the planet. Indeed, it would be astonishing if central banks could simply by the stroke of a pen increase the capital of their nation or the world.

What happens next depends on how this monetary policy influences the real economy. If the loan initiated by the central bank enables the recipient to escape from a bad pass and avoid a final collapse (which might decrease the national wealth), then, when the situation has been stabilized and the loan repaid, it makes sense to think that the loan from the Fed increased the national wealth (or at any rate prevented national wealth from decreasing). On the other hand, if the loan from the Fed merely postpones the recipient's inevitable collapse and even prevents the emergence of a viable competitor (which can happen), one can argue that the Fed's policy ultimately decreased the nation's wealth. Both outcomes are possible, and every monetary policy raises both possibilities to one degree or another. To the extent that the world's central banks limited the damage from the recession of 2008–2009, they helped to increase GDP and investment and therefore augmented the capital of the wealthy countries and of the world. Obviously, however, a dynamic evaluation of this kind is always uncertain and open to challenge. What is certain is that when central banks increase the money supply by lending to a financial or nonfinancial corporation or a government, there is no immediate impact on national capital (both public and private).[20]

What "unconventional" monetary policies have been tried since the crisis of 2007–2008? In calm periods, central banks are content to ensure that the money supply grows at the same pace as economic activity in order to guarantee a low inflation rate of 1 or 2 percent a year. Specifically, they create new money by lending to banks for very short periods, often no more than a few days. These loans guarantee the solvency of the entire financial system. Households and firms deposit and withdraw vast sums of money every day, and these deposits and withdrawals are never perfectly balanced for any particular bank. The major innovation since 2008 has been in the duration of loans to private banks. Instead of lending for a few days, the Fed and ECB began lending for three to six months: the volume of loans of these durations increased dramatically in the last quarter of 2008 and the first quarter of 2009. They also began lending at similar durations to nonfinancial corporations. In the United States especially, the Fed also made loans of nine to twelve months to the banking sector and purchased long-dated bonds outright. In 2011–2012, the central banks again expanded the range of their interventions. The Fed, the Bank of Japan, and the Bank of England had been buying sovereign debt since the beginning of the crisis, but as the debt crisis worsened in southern Europe the ECB decided to follow suit.

These policies call for several clarifications. First, the central banks have the power to prevent a bank or nonfinancial corporation from failing by lending it the money needed to pay its workers and suppliers, but they cannot oblige companies to invest or households to consume, and they cannot compel the economy to resume its growth. Nor do they have the power to set the rate of inflation. The liquidity created by the central banks probably warded off deflation and depression, but the economic outlook in the wealthy countries remains gloomy, especially in Europe, where the crisis of the euro has undermined confidence. The fact that governments in the wealthiest countries (United States, Japan, Germany, France, and Britain) could borrow at exceptionally low rates (just over 1 percent) in 2012–2013 attests to the importance of central bank stabilization policies, but it also shows that private investors have no clear idea of what to do with the money lent by the monetary authorities at rates close to zero. Hence they prefer to lend their cash back to the governments deemed the most solid at ridiculously low interest rates. The fact that rates are very low in some countries and much higher in others is the sign of an abnormal economic situation.[21]

Central banks are powerful because they can redistribute wealth very quickly and, in theory, as extensively as they wish. If necessary, a central bank can create as many billions as it wants in seconds and credit all that cash to the account of a company or government in need. In an emergency (such as a financial panic, war, or natural disaster), this ability to create money immediately in unlimited amounts is an invaluable attribute. No tax authority can move that quickly to levy a tax: it is necessary first to establish a taxable base, set rates, pass a law, collect the tax, forestall possible challenges, and so on. If this were the only way to resolve a financial crisis, all the banks in the world would already be bankrupt. Rapid execution is the principal strength of the monetary authorities.

The weakness of central banks is clearly their limited ability to decide who should receive loans in what amount and for what duration, as well as the difficulty of managing the resulting financial portfolio. One consequence of this is that the size of a central bank's balance sheet should not exceed certain limits. With all the new types of loans and financial market interventions that have been introduced since 2008, central bank balance sheets have roughly doubled in size. The sum of the Federal Reserve's assets and liabilities has gone from 10 to more than 20 percent of GDP; the same is true of the Bank of England; and the ECB's balance sheet has expanded from 15 to 30 percent of GDP. These are striking developments, but these sums are still fairly modest compared with total net private wealth, which is 500 to 600 percent of GDP in most of the rich countries.[22]

It is of course possible in the abstract to imagine much larger central bank balance sheets. The central banks could decide to buy up all of a country's firms and real estate, finance the transition to renewable energy, invest in universities, and take control of the entire economy. Clearly, the problem is that central banks are not well suited to such activities and lack the democratic legitimacy to try them. They can redistribute wealth quickly and massively, but they can also be very wrong in their choice of targets (just as the effects of inflation on inequality can be quite perverse). Hence it is preferable to limit the size of central bank balance sheets. That is why they operate under strict mandates focused largely on maintaining the stability of the financial system. In practice, when a government decides to aid a particular branch of industry, as the United States did with General Motors in 2009–2010, it was the federal government and not the Federal Reserve that took charge of making loans, acquiring shares, and setting conditions and performance objectives. The same is true in Europe: industrial and educational policy are matters for states to decide, not central banks. The problem is not one of technical impossibility but of democratic governance. The fact that it takes time to pass tax and spending legislation is not an accident: when significant shares of national wealth are shifted about, it is best not to make mistakes.

Among the many controversies concerning limiting the role of central banks, two issues are of particular interest here. One has to do with the complementary nature of bank regulation and taxation of capital (as the recent crisis in Cyprus made quite clear). The other has to do with the increasingly apparent deficiencies of Europe's current institutional architecture: the European Union is engaged in a historically unprecedented experiment: attempting to create a currency on a very large scale without a state.

The Cyprus Crisis: When the Capital Tax and Banking Regulation Come Together

The primary and indispensable role of central banking is to ensure the stability of the financial system. Central banks are uniquely equipped to evaluate the position of the various banks that make up the system and can refinance them if necessary in order to ensure that the payment system functions normally. They are sometimes assisted by other authorities specifically charged with regulating the banks: for example, by issuing banking licenses and ensuring that certain financial ratios are maintained (in order to make sure that the banks keep sufficient reserves of cash and "safe" assets relative to loans and other assets deemed to be higher risk). In all countries, the central banks and bank regulators (who are often affiliated with the central banks) work together. In current discussions concerning the creation of a European banking union, the ECB is supposed to play the central role. In particularly severe banking crises, central banks also work in concert with international organizations such as the IMF. Since 2009–2010, a "Troika" consisting of the European Commission, the ECB, and the IMF has been working to resolve the financial crisis in Europe, which involves both a public debt crisis and a banking crisis, especially in southern Europe. The recession of 2008–2009 caused a sharp rise in the public debt of many countries that were already heavily indebted before the crisis (especially Greece and Italy) and also led to a rapid deterioration of bank balance sheets, especially in countries affected by a collapsing real estate bubble (most notably Spain). In the end, the two crises are inextricably linked. The banks are holding government bonds whose precise value is unknown. (Greek bonds were subjected to a substantial "haircut," and although the authorities have promised not to repeat this strategy elsewhere, the fact remains that future actions are unpredictable in such circumstances.) State finances can only continue to get worse as long as the economic outlook continues to be bleak, as it probably will as long as the financial and credit system remains largely blocked.

One problem is that neither the Troika nor the various member state governments have automatic access to international banking data or what I have called a "financial cadaster," which would allow them to distribute the burdens of adjustment in an efficient and transparent manner. I have already discussed the difficulties that Italy and Spain faced in attempting to impose a progressive tax on capital on their own in order to restore their public finances to a sound footing. The Greek case is even more extreme. Everyone is insisting that Greece collect more taxes from its wealthier citizens. This is no doubt an excellent idea. The problem is that in the absence of adequate international cooperation, Greece obviously has no way to levy a just and efficient tax on its own, since the wealthiest Greeks can easily move their money abroad, often to other European countries. The European and international authorities have never taken steps to implement the necessary laws and regulations, however.[23] Lacking tax revenues, Greece has therefore been obliged to sell public assets, often at fire-sale prices, to buyers of Greek or other European nationalities, who evidently would rather take advantage of such an opportunity than pay taxes to the Greek government.

The March 2013 crisis in Cyprus is a particularly interesting case to examine. Cyprus is an island with a million inhabitants, which joined the European Union in 2004 and the Eurozone in 2008. It has a hypertrophied banking sector, apparently due to very large foreign deposits, most notably from Russia. This money was drawn to Cyprus by low taxes and indulgent local authorities. According to statements by officials of the Troika, these Russian deposits include a number of very large individual accounts. Many people therefore imagine that the depositors are oligarchs with fortunes in the tens of millions or even billions of euros—people of the sort one reads about in the magazine rankings. The problem is that neither the European authorities nor the IMF have published any statistics, not even the crudest estimate. Very likely they do not have much information themselves, for the simple reason that they have never equipped themselves with the tools they need to move forward on this issue, even though it is absolutely central. Such opacity is not conducive to a considered and rational resolution of this sort of conflict. The problem is that the Cypriot banks no longer have the money that appears on their balance sheets. Apparently, they invested it in Greek bonds that were since written down and in real estate that is now worthless. Naturally, European authorities are hesitant to use the money of European taxpayers to keep the Cypriot banks afloat without some kind of guarantees in return, especially since in the end what they will really be keeping afloat is Russian millionaires.

After months of deliberation, the members of the Troika came up with the disastrous idea of proposing an exceptional tax on all bank deposits with rates of 6.75 percent on deposits up to 100,000 euros and 9.9 percent above that limit. To the extent that this proposal resembles a progressive tax on capital, it might seem intriguing, but there are two important caveats. First, the very limited progressivity of the tax is illusory: in effect, almost the same tax rate is being imposed on small Cypriot savers with accounts of 10,000 euros and on Russian oligarchs with accounts of 10 million euros. Second, the tax base was never precisely defined by the European and international authorities handling the matter. The tax seems to apply only to bank deposits as such, so that a depositor could escape it by shifting his or her funds to a brokerage account holding stocks or bonds or by investing in real estate or other financial assets. Had this tax been applied, in other words, it would very likely have been extremely regressive, given the composition of the largest portfolios and the opportunities for reallocating investments. After the tax was unanimously approved by the members of the Troika and the seventeen finance ministers of the Eurozone in March 2013, it was vigorously rejected by the people of Cyprus. In the end, a different solution was adopted: deposits under 100,000 euros were exempted from the tax (this being the ceiling of the deposit guarantee envisioned under the terms of the proposed European banking union). The exact terms of the new tax remain relatively obscure, however. A bank-by-bank approach seems to have been adopted, although the precise tax rates and bases have not been spelled out explicitly.

This episode is interesting because it illustrates the limits of the central banks and financial authorities. Their strength is that they can act quickly; their weakness is their limited capacity to correctly target the redistributions they cause to occur. The conclusion is that a progressive tax on capital is not only useful as a permanent tax but can also function well as an exceptional levy (with potentially high rates) in the resolution of major banking crises. In the Cypriot case, it is not necessarily shocking that savers were asked to help resolve the crisis, since the country as a whole bears responsibility for the development strategy chosen by its government. What is deeply shocking, on the other hand, is that the authorities did not even seek to equip themselves with the tools needed to apportion the burden of adjustment in a just, transparent, and progressive manner. The good news is that this episode may lead international authorities to recognize the limits of the tools currently at their disposal. If one asks the officials involved why the tax proposed for Cyprus had such little progressivity built into it and was imposed on such a limited base, their immediate response is that the banking data needed to apply a more steeply progressive schedule were not available.[24] The bad news is that the authorities seem in no great hurry to resolve the problem, even though the technical solution is within reach. It may be that a progressive tax on capital faces purely ideological obstacles that will take some time to overcome.

The Euro: A Stateless Currency for the Twenty-First Century?

The various crises that have afflicted southern European banks since 2009 raise a more general question, which has to do with the overall architecture of the European Union. How did Europe come to create—for the first time in human history on such a vast scale—a currency without a state? Since Europe's GDP accounted for nearly one-quarter of global GDP in 2013, the question is of interest not just to inhabitants of the Eurozone but to the entire world.

The usual answer to this question is that the creation of the euro—agreed on in the 1992 Maastricht Treaty in the wake of the fall of the Berlin Wall and the reunification of Germany and made a reality on January 1, 2002, when automatic teller machines across the Eurozone first began to dispense euro notes—is but one step in a lengthy process. Monetary union is supposed to lead naturally to political, fiscal, and budgetary union, to ever closer cooperation among the member states. Patience is essential, and union must proceed step by step. No doubt this is true to some extent. In my view, however, the unwillingness to lay out a precise path to the desired end—the repeated postponement of any discussion of the itinerary to be followed, the stages along the way, or the ultimate endpoint—may well derail the entire process. If Europe created a stateless currency in 1992, it did so for reasons that were not simply pragmatic. It settled on this institutional arrangement in the late 1980s and early 1990s, at a time when many people believed that the only function of central banking was to control inflation. The "stagflation" of the 1970s had convinced governments and people that central banks ought to be independent of political control and target low inflation as their only objective. That is why Europe created a currency without a state and a central bank without a government. The crisis of 2008 shattered this static vision of central banking, as it became apparent that in a serious economic crisis central banks have a crucial role to play and that the existing European institutions were wholly unsuited to the task at hand.

Make no mistake. Given the power of central banks to create money in unlimited amounts, it is perfectly legitimate to subject them to rigid constraints and clear restrictions. No one wants to empower a head of state to replace university presidents and professors at will, much less to define the content of their teaching. By the same token, there is nothing shocking about imposing tight restrictions on the relations between governments and monetary authorities. But the limits of central bank independence should also be precise. In the current crisis, no one, to my knowledge, has proposed that central banks be returned to the private status they enjoyed in many countries prior to World War I (and in some places as recently as 1945).[25] Concretely, the fact that central banks are public institutions means that their leaders are appointed by governments (and in some cases by parliaments). In many cases these leaders cannot be removed for the length of their mandate (usually five or six years) but can be replaced at the end of that term if their policies are deemed inadequate, which provides a measure of political control. In practice, the leaders of the Federal Reserve, the Bank of Japan, and the Bank of England are expected to work hand in hand with the legitimate, democratically elected governments of their countries. In each of these countries, the central bank has in the past played an important role in stabilizing interest rates and public debt at low and predictable levels.

The ECB faces a unique set of problems. First, the ECB's statutes are more restrictive than those of other central banks: the objective of keeping inflation low has absolute priority over the objectives of maintaining growth and full employment. This reflects the ideological context in which the ECB was conceived. Furthermore, the ECB is not allowed to purchase newly issued government debt: it must first allow private banks to lend to the member states of the

Eurozone (possibly at a higher rate of interest than that which the ECB charges the private banks) and then purchase the bonds on the secondary market, as it did ultimately, after much hesitation, for the sovereign debt of governments in southern Europe.[26] More generally, it is obvious that the ECB's main difficulty is that it must deal with seventeen separate national debts and seventeen separate national governments. It is not easy for the bank to play its stabilizing role in such a context. If the Federal Reserve had to choose every morning whether to concentrate on the debt of Wyoming, California, or New York and set its rates and quantities in view of its judgment of the tensions in each particular market and under pressure from each region of the country, it would have a very hard time maintaining a consistent monetary policy.

From the introduction of the euro in 2002 to the onset of the crisis in 2007–2008, interest rates were more or less identical across Europe. No one anticipated the possibility of an exit from the euro, so everything seemed to work well. When the global financial crisis began, however, interest rates began to diverge rapidly. The impact on government budgets was severe. When a government runs a debt close to one year of GDP, a difference of a few points of interest can have considerable consequences. In the face of such uncertainty, it is almost impossible to have a calm democratic debate about the burdens of adjustment or the indispensable reforms of the social state. For the countries of southern Europe, the options were truly impossible. Before joining the euro, they could have devalued their currency, which would at least have restored competitiveness and spurred economic activity. Speculation on national interest rates was in some ways more destabilizing than the previous speculation on exchange rates among European currencies, particularly since crossborder bank lending had meanwhile grown to such proportions that panic on the part of a handful of market actors was enough to trigger capital flows large enough to seriously affect countries such as Greece, Portugal, and Ireland, and even larger countries such as Spain and Italy. Logically, such a loss of monetary sovereignty should have been compensated by guaranteeing that countries could borrow if need be at low and predictable rates.

The Question of European Unification

The only way to overcome these contradictions is for the countries of the Eurozone (or at any rate those who are willing) to pool their public debts. The

German proposal to create a "redemption fund," which I touched on earlier, is a good starting point, but it lacks a political component.[27] Concretely, it is impossible to decide twenty years in advance what the exact pace of "redemption" will be—that is, how quickly the stock of pooled debt will be reduced to the target level. Many parameters will affect the outcome, starting with the state of the economy. To decide how quickly to pay down the pooled debt, or, in other words, to decide how much public debt the Eurozone should carry, one would need to empower a European "budgetary parliament" to decide on a European budget. The best way to do this would be to draw the members of this parliament from the ranks of the national parliaments, so that European parliamentary sovereignty would rest on the legitimacy of democratically elected national assemblies.[28] Like any other parliament, this body would decide issues by majority vote after open public debate. Coalitions would form, based partly on political affiliation and partly on national affiliation. The decisions of such a body will never be ideal, but at least we would know what had been decided and why, which is important. It is preferable, I think, to create such a new body rather than rely on the current European Parliament, which is composed of members from twenty-seven states (many of which do not belong to the Eurozone and do not wish to pursue further European integration at this time). To rely on the existing European Parliament would also conflict too overtly with the sovereignty of national parliaments, which would be problematic in regard to decisions affecting national budget deficits. That is probably the reason why transfers of power to the European Parliament have always been quite limited in the past and will likely remain so for quite some time. It is time to accept this fact and to create a new parliamentary body to reflect the desire for unification that exists within the Eurozone countries (as indicated most clearly by their agreement to relinquish monetary sovereignty with due regard for the consequences).

Several institutional arrangements are possible. In the spring of 2013, the new Italian government pledged to support a proposal made a few years earlier by German authorities concerning the election by universal suffrage of a president of the European Union—a proposal that logically ought to be accompanied by a broadening of the president's powers. If a budgetary parliament decides what the Eurozone's debt ought to be, then there clearly needs to be a European finance minister responsible to that body and charged with proposing a Eurozone budget and annual deficit. What is certain is that the Eurozone cannot do without a genuine parliamentary chamber in which to set its budgetary strategy in a public, democratic, and sovereign manner, and more generally to discuss ways to overcome the financial and banking crisis in which Europe currently finds itself mired. The existing European councils of heads of state and finance ministers cannot do the work of this budgetary body. They meet in secret, do not engage in open public debate, and regularly end their meetings with triumphal midnight communiqués announcing that Europe has been saved, even though the participants themselves do not always seem to be sure about what they have decided. The decision on the Cypriot tax is typical in this regard: although it was approved unanimously, no one wanted to accept responsibility in public.[29] This type of proceeding is worthy of the Congress of Vienna (1815) but has no place in the Europe of the twenty-first century. The German and Italian proposals alluded to above show that progress is possible. It is nevertheless striking to note that France has been mostly absent from this debate through two presidencies,[30] even though the country is prompt to lecture others about European solidarity and the need for debt mutualization (at least at the rhetorical level).[31]

Unless things change in the direction I have indicated, it is very difficult to imagine a lasting solution to the crisis of the Eurozone. In addition to pooling debts and deficits, there are of course other fiscal and budgetary tools that no country can use on its own, so that it would make sense to think about using them jointly. The first example that comes to mind is of course the progressive tax on capital.

An even more obvious example is a tax on corporate profits. Tax competition among European states has been fierce in this respect since the early 1990s. In particular, several small countries, with Ireland leading the way, followed by several Eastern European countries, made low corporate taxes a key element of their economic development strategies. In an ideal tax system, based on shared and reliable bank data, the corporate tax would play a limited role. It would simply be a form of withholding on the income tax (or capital tax) due from individual shareholders and bondholders.[32] In practice, the problem is that this "withholding" tax is often the only tax paid, since much of what corporations declare as profit does not figure in the taxable income of individual shareholders, which is why it is important to collect a significant amount of tax at the source through the corporate tax.

The right approach would be to require corporations to make a single declaration of their profits at the European level and then tax that profit in a way that is less subject to manipulation than is the current system of taxing the profits of each subsidiary individually. The problem with the current system is that multinational corporations often end up paying ridiculously small amounts because they can assign all their profits artificially to a subsidiary located in a place where taxes are very low; such a practice is not illegal, and in the minds of many corporate managers it is not even unethical.[33] It makes more sense to give up the idea that profits can be pinned down to a particular state or territory; instead, one can apportion the revenues of the corporate tax on the basis of sales or wages paid within each country.

A related problem arises in connection with the tax on individual capital. The general principle on which most tax systems are based is the principle of residence: each country taxes the income and wealth of individuals who reside within its borders for more than six months a year. This principle is increasingly difficult to apply in Europe, especially in border areas (for example, along the Franco-Belgian border). What is more, wealth has always been taxed partly as a function of the location of the asset rather than of its owner. For example, the owner of a Paris apartment must pay property tax to the city of Paris, even if he lives halfway around the world and regardless of his nationality. The same principle applies to the wealth tax, but only in regard to real estate. There is no reason why it could not also be applied to financial assets, based on the location of the corresponding business activity or company. The same is true for government bonds. Extending the principle of "residence of the capital asset" (rather than of its owner) to financial assets would obviously require automatic sharing of bank data to allow the tax authorities to assess complex ownership structures. Such a tax would also raise the issue of multinationality.[34] Adequate answers to all these questions can clearly be found only at the European (or global) level. The right approach is therefore to create a Eurozone budgetary parliament to deal with them.

Are all these proposals utopian? No more so than attempting to create a stateless currency. When countries relinquish monetary sovereignty, it is essential to restore their fiscal sovereignty over matters no longer within the purview of the nation-state, such as the interest rate on public debt, the progressive tax on capital, or the taxation of multinational corporations. For the countries of Europe, the priority now should be to construct a continental political authority capable of reasserting control over patrimonial capitalism and private interests and of advancing the European social model in the twenty-first century. The minor disparities between national social models are of secondary importance in view of the challenges to the very survival of the common European model.[35]

Another point to bear in mind is that without such a European political union, it is highly likely that tax competition will continue to wreak havoc. The race to the bottom continues in regard to corporate taxes, as recently proposed "allowances for corporate equity" show.[36] It is important to realize that tax competition regularly leads to a reliance on consumption taxes, that is, to the kind of tax system that existed in the nineteenth century, where no progressivity is possible. In practice, this favors individuals who are able to save, to change their country of residence, or both.[37] Note, however, that progress toward some forms of fiscal cooperation has been more rapid than one might imagine at first glance: consider, for example, the proposed financial transactions tax, which could become one of the first truly European taxes. Although such a tax is far less significant than a tax on capital or corporate profits (in terms of both revenues and distributive impact), recent progress on this tax shows that nothing is foreordained.[38] Political and fiscal history always blaze their own trails.

Government and Capital Accumulation in the Twenty-First Century

Let me now take a step back from the immediate issues of European construction and raise the following question: In an ideal society, what level of public debt is desirable? Let me say at once that there is no certainty about the answer, and only democratic deliberation can decide, in keeping with the goals each society sets for itself and the particular challenges each country faces. What is certain is that no sensible answer is possible unless a broader question is also raised: What level of public capital is desirable, and what is the ideal level of total national capital?

In this book, I have looked in considerable detail at the evolution of the capital/income ratio β across space and time. I have also examined how β is determined in the long run by the savings and growth rates of each country, according to the law $\beta = s/g$. But I have not yet asked what β is desirable. In an ideal society, should the capital stock be equal to five years of national income, or ten years, or twenty? How should we think about this question? It is impossible to give a precise answer. Under certain hypotheses, however, one can establish a ceiling on the quantity of capital that one can envision accumulating a priori. The maximal level of capital is attained when so much has been accumulated that the return on capital, r, supposed to be equal to its marginal productivity, falls to be equal to the growth rate g. In 1961 Edmund Phelps baptized the equality $r = g$ the "golden rule of capital accumulation." If one takes it literally, the golden rule implies much higher capital/income ratios than have been observed historically, since, as I have shown, the return on capital has always been significantly higher than the growth rate. Indeed, r was much greater than g before the nineteenth century (with a return on capital of 4–5 percent and a growth rate below 1 percent), and it will probably be so again in the twenty-first century (with a return of 4–5 percent once again and long-term growth not much above 1.5 percent).[39] It is very difficult to say what quantity of capital would have to be accumulated for the rate of return to fall to 1 or 1.5 percent. It is surely far more than the six to seven years of national income currently observed in the most capital-intensive countries. Perhaps it would take ten to fifteen years of national income, maybe even more. It is even harder to imagine what it would take for the return on capital to fall to the low growth levels observed before the eighteenth century (less than 0.2 percent). One might need to accumulate capital equivalent to twenty to thirty years of national income: everyone would then own so much real estate, machinery, tools, and so on that an additional unit of capital would add less than 0.2 percent to each year's output.

The truth is that to pose the question in this way is to approach it too abstractly. The answer given by the golden rule is not very useful in practice. It is unlikely that any human society will ever accumulate that much capital. Nevertheless, the logic that underlies the golden rule is not without interest. Let me summarize the argument briefly.[40] If the golden rule is satisfied, so $r = g$, then by definition capital's long-run share of national income is exactly equal to the savings rate: $\alpha = s$. Conversely, as long as $r > g$, capital's long-run share is greater than the savings rate: $\alpha > s$.[41] In other words, in order for the golden rule to be satisfied, one has to have accumulated so much capital that capital no longer yields anything. Or, more precisely, one has to have accumulated so much capital that merely maintaining the capital stock at the same level (in proportion to national income) requires reinvesting all of the return to capital every year. That is what $\alpha = s$ means: all of the return to capital must be saved and added back to the capital stock. Conversely, if $r > g$, than capital returns something in the long run, in the sense that it is no longer necessary to reinvest all of the return on capital to maintain the same capital/income ratio.

Clearly, then, the golden rule is related to a "capital saturation" strategy. So much capital is accumulated that rentiers have nothing left to consume, since they must reinvest all of their return if they want their capital to grow at the same rate as the economy, thereby preserving their social status relative to the average for the society. Conversely, if $r > g$, it suffices to reinvest a fraction of the return on capital equal to the growth rate (g) and to consume the rest ($r - g$). The inequality $r > \mathrm{g}$ is the basis of a society of rentiers. Accumulating enough capital to reduce the return to the growth rate can therefore end the reign of the rentier.

But is it the best way to achieve that end? Why would the owners of capital, or society as a whole, choose to accumulate that much capital? Bear in mind that the argument that leads to the golden rule simply sets an upper limit but in no way justifies reaching it.[42] In practice, there are much simpler and more effective ways to deal with rentiers, namely, by taxing them: no need to accumulate capital worth dozens of years of national income, which might require several generations to forgo consumption.[43] At a purely theoretical level, everything depends in principle on the origins of growth. If there is no productivity growth, so that the only source of growth is demographic, then accumulating capital to the level required by the golden rule might make sense. For example, if one assumes that the population will grow forever at 1 percent a year and that people are infinitely patient and altruistic toward future generations, then the right way to maximize per capita consumption in the long run is to accumulate so much capital that the rate of return falls to 1 percent. But the limits of this argument are obvious. In the first place, it is rather odd to assume that demographic growth is eternal, since it depends on the reproductive choices of future generations, for which the present generation is not responsible (unless we imagine a world with a particularly underdeveloped contraceptive technology). Furthermore, if demographic growth is also zero, one would have to accumulate an infinite quantity of capital: as long as the return on capital is even slightly positive, it will be in the interest of future generations for the present generation to consume nothing and accumulate as much as possible. According to Marx, who implicitly assumes zero demographic and productivity growth, this is the ultimate consequence of the capitalist's unlimited desire to accumulate more and more capital, and in the end it leads to the downfall of capitalism and the collective appropriation of the means of production. Indeed, in the Soviet Union, the state claimed to serve the common good by accumulating unlimited industrial capital and ever-increasing numbers of machines: no one really knew where the planners thought accumulation should end.[44]

If productivity growth is even slightly positive, the process of capital accumulation is described by the law $\beta = s/g$. The question of the social optimum then becomes more difficult to resolve. If one knows in advance that productivity will increase forever by 1 percent a year, it follows that future generations will be more productive and prosperous than present ones. That being the case, is it reasonable to sacrifice present consumption to the accumulation of vast amounts of capital? Depending on how one chooses to compare and weigh the well-being of different generations, one can reach any desired conclusion: that it is wiser to leave nothing at all for future generations (except perhaps our pollution), or to abide by the golden rule, or any other split between present and future consumption between those two extremes. Clearly, the golden rule is of limited practical utility.[45]

In truth, simple common sense should have been enough to conclude that no mathematical formula will enable us to resolve the complex issue of deciding how much to leave for future generations. Why, then, did I feel it necessary to present these conceptual debates around the golden rule? Because they have had a certain impact on public debate in recent years in regard first to European deficits and second to controversies around the issue of climate change.

Law and Politics

First, a rather different idea of "the golden rule" has figured in the European debate about public deficits.[46] In 1992, when the Treaty of Maastricht created the euro, it was stipulated that member states should ensure that their budget deficits would be less than 3 percent of GDP and that total public debt would remain below 60 percent of GDP.[47] The precise economic logic behind these choices has never been completely explained.[48] Indeed, if one does not include public assets and total national capital, it is difficult to justify any particular level of public debt on rational grounds. I have already mentioned the real reason for these strict budgetary constraints, which are historically unprecedented. (The United States, Britain, and Japan have never imposed such rules on themselves.) It is an almost inevitable consequence of the decision to create a common currency without a state, and in particular without pooling the debt of member states or coordinating deficits. Presumably, the Maastricht criteria would become unnecessary if the Eurozone were to equip itself with a budgetary parliament empowered to decide and coordinate deficit levels for the various member states. The decision would then be a sovereign and democratic one. There is no convincing reason to impose a priori constraints, much less to enshrine limits on debts and deficits in state constitutions. Since the construction of a budgetary union has only just begun, of course, special rules may be necessary to build confidence: for example, one can imagine requiring a parliamentary supermajority in order to exceed a certain level of debt. But there is no justification for engraving untouchable debt and deficit limits in stone in order to thwart future political majorities.

Make no mistake: I have no particular liking for public debt. As I noted earlier, debt often becomes a backhanded form of redistribution of wealth from the poor to the rich, from people with modest savings to those with the means to lend to the government (who as a general rule ought to be paying taxes rather than lending). Since the middle of the twentieth century and the large-scale public debt repudiations (and debt shrinkage through inflation) after World War II, many dangerous illusions have arisen in regard to government debt and its relation to social redistribution. These illusions urgently need to be dispelled.

There are nevertheless a number of reasons why it is not very judicious to enshrine budgetary restrictions in statutory or constitutional stone. For one thing, historical experience suggests that in a serious crisis it is often necessary to make emergency budget decisions on a scale that would have been unimaginable before the crisis. To leave it to a constitutional judge (or committee of experts) to judge such decisions case by case is to take a step back from democracy. In any case, turning the power to decide over to the courts is not without risk. Indeed, history shows that constitutional judges have an unfortunate tendency to interpret fiscal and budgetary laws in very conservative ways.[49] Such judicial conservatism is particularly dangerous in Europe, where there has been a tendency to see the free circulation of people, goods, and capital as fundamental rights with priority over the right of member states to promote the general interest of their people, if need be by levying taxes.

Finally, it is impossible to judge the appropriate level of debts and deficits without taking into account numerous other factors affecting national wealth. When we look at all the available data today, what is most striking is that national wealth in Europe has never been so high. To be sure, net public wealth is virtually zero, given the size of the public debt, but net private wealth is so high that the sum of the two is as great as it has been in a century. Hence the idea that we are about to bequeath a shameful burden of debt to our children and grandchildren and that we ought to wear sackcloth and ashes and beg for forgiveness simply makes no sense. The nations of Europe have never been so rich. What is true and shameful, on the other hand, is that this vast national wealth is very unequally distributed. Private wealth rests on public poverty, and one particularly unfortunate consequence of this is that we currently spend far more in interest on the debt than we invest in higher education. This has been true, moreover, for a very long time: because growth has been fairly slow since 1970, we are in a period of history in which debt weighs very heavily on our public finances.[50] This is the main reason why the debt must be reduced as quickly as possible, ideally by means of a progressive one-time tax on private capital or, failing that, by inflation. In any event, the decision should be made by a sovereign parliament after democratic debate.[51]

Climate Change and Public Capital

The second important issue on which these golden rule–related questions have a major impact is climate change and, more generally, the possibility of deterioration of humanity's natural capital in the century ahead. If we take a global view, then this is clearly the world's principal long-term worry. The Stern Report, published in 2006, calculated that the potential damage to the environment by the end of the century could amount, in some scenarios, to dozens of points of global GDP per year. Among economists, the controversy surrounding the report hinged mainly on the question of the rate at which future damage to the environment should be discounted. Nicholas Stern, who is British, argued for a relatively low discount rate, approximately the same as the growth rate (1–1.5 percent a year). With that assumption, present generations weigh future damage very heavily in their own calculations. William Nordhaus, an American, argued that one ought to choose a discount rate closer to the average return on capital (4–4.5 percent a year), a choice that makes future disasters seem much less worrisome. In other words, even if everyone agrees about the cost of future disasters (despite the obvious uncertainties), they can reach different conclusions. For Stern, the loss of global well-being is so great that it justifies spending at least 5 points of global GDP a year right now to attempt to mitigate climate change in the future. For Nordhaus, such a large expenditure would be entirely unreasonable, because future generations will be richer and more productive than we are. They will find a way to cope, even if it means consuming less, which will in any case be less costly from the standpoint of universal well-being than making the kind of effort Stern envisions. So in the end, all of these expert calculations come down to a stark difference of opinion.

Stern's opinion seems more reasonable to me than Nordhaus's, whose optimism is attractive, to be sure, as well as opportunely consistent with the US strategy of unrestricted carbon emissions, but ultimately not very convincing.[52] In any case, this relatively abstract debate about discount rates largely sidesteps what seems to me the central issue. Public debate, especially in Europe but also in China and the United States, has taken an increasingly pragmatic turn, with discussion of the need for major investment in the search for new nonpolluting technologies and forms of renewable energy sufficiently abundant to enable the world to do without hydrocarbons. Discussion of "ecological stimulus" is especially prevalent in Europe, where many people see it as a possible way out of today's dismal economic climate. This strategy is particularly tempting because many governments are currently able to borrow at very low interest rates. If private investors are unwilling to spend and invest, then why shouldn't governments invest in the future to avoid a likely degradation of natural capital?[53]

This is a very important debate for the decades ahead. The public debt (which is much smaller than total private wealth and perhaps not really that difficult to eliminate) is not our major worry. The more urgent need is to increase our educational capital and prevent the degradation of our natural capital. This is a far more serious and difficult challenge, because climate change cannot be eliminated at the stroke of a pen (or with a tax on capital, which comes to the same thing). The key practical issue is the following. Suppose that Stern is approximately correct that there is good reason to spend the equivalent of 5 percent of global GDP annually to ward off an environmental catastrophe. Do we really know what we ought to invest in and how we should organize our effort? If we are talking about public investments of this magnitude, it is important to realize that this would represent public spending on a vast scale, far vaster than any previous public spending by the rich countries.[54] If we are talking about private investment, we need to be clear about the manner of public financing and who will own the resulting technologies and patents. Should we count on advanced research to make rapid progress in developing renewable energy sources, or should we immediately subject ourselves to strict limits on hydrocarbon consumption? It would probably be wise to choose a balanced strategy that would make use of all available tools.[55] So much for common sense. But the fact remains that no one knows for now how these challenges will be met or what role governments will play in preventing the degradation of our natural capital in the years ahead.

Economic Transparency and Democratic Control of Capital

More generally, it is important, I think, to insist that one of the most important issues in coming years will be the development of new forms of property and democratic control of capital. The dividing line between public capital and private capital is by no means as clear as some have believed since the fall of the Berlin Wall. As noted, there are already many areas, such as education, health, culture, and the media, in which the dominant forms of organization and ownership have little to do with the polar paradigms of purely private capital (modeled on the joint-stock company entirely owned by its shareholders) and purely public capital (based on a similar top-down logic in which the sovereign government decides on all investments). There are obviously many intermediate forms of organization capable of mobilizing the talent of different individuals and the information at their disposal. When it comes to organizing collective decisions, the market and the ballot box are merely two polar extremes. New forms of participation and governance remain to be invented.[56]

The essential point is that these various forms of democratic control of capital depend in large part on the availability of economic information to each of the involved parties. Economic and financial transparency are important for tax purposes, to be sure, but also for much more general reasons. They are essential for democratic governance and participation. In this respect, what matters is not transparency regarding individual income and wealth, which is of no intrinsic interest (except perhaps in the case of political officials or in situations where there is no other way to establish trust).[57] For collective action, what would matter most would be the publication of detailed accounts of private corporations (as well as government agencies). The accounting data that companies are currently required to publish are entirely inadequate for allowing workers or ordinary citizens to form an opinion about corporate decisions, much less to intervene in them. For example, to take a concrete case mentioned at the very beginning of this book, the published accounts of Lonmin, Inc., the owner of the Marikana platinum mine where thirty-four strikers were shot dead in August 2012, do not tell us precisely how the wealth produced by the mine is divided between profits and wages. This is generally true of published corporate accounts around the world: the data are grouped in very broad statistical categories that reveal as little as possible about what is actually at stake, while more detailed information is reserved for investors.[58] It is then easy to say that workers and their representatives are insufficiently informed about the economic realities facing the firm to participate in investment decisions. Without real accounting and financial transparency and sharing of information, there can be no economic democracy. Conversely, without a real right to intervene in corporate decision-making (including seats for workers on the company's board of directors), transparency is of little use. Information must support democratic institutions; it is not an end in itself. If democracy is someday to regain control of capitalism, it must start by recognizing that the concrete institutions in which democracy and capitalism are embodied need to be reinvented again and again.[59]

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