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IRIS
7100 Baltimore Avenue, Suite 510
College Park, MD 20740
(301) 403-8153

CENTER FOR INSTITUTIONAL REFORM AND THE INFORMAL SECTOR

University of Maryland at College Park

Center Office: IRIS Center, 7100 Baltimore Avenue, Suite 510, College Park, MD 20740
Telephone (301) 403-8153 • Fax (301) 403-8163

AUTOCRACY, DEMOCRACY, AND PROSPERITY

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Mancur Olson

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Author: Mancur Olson, the University of Maryland at College Park
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Autocracy, Democracy, and Prosperity

Mancur Olson

I

What incentives explain the emergence of government? How do the incentives facing the leaders of dictatorial and democratic governments differ? Do the democratic nations of the world have higher per capita incomes, on average, than the nondemocratic countries because of—or in spite of—their democratic governments? In this chapter I shall develop an argument that answers these three questions. The main foundation on which my argument rests is an insight in Thomas Schelling's *Arms and Influence*. It was also because of Schelling that I became aware of Edward Banfield, and it was a quotation in a book by Banfield that happened to start me thinking, quite some time ago, about the questions this chapter addresses.

In *The Moral Basis of a Backward Society*, Banfield reported the results of interviews with the residents of a poor and remote village in southern Italy. One of the interviews was with a man who believed in monarchism—not in a figurehead monarch of the British or Scandinavian type, but absolute monarchy. The village monarchist suggested that “A monarchy is the best kind of government because the King is then owner of the country. Like the owner of a house, when the wiring is wrong, he fixes it.”¹

When I read this quotation in my graduate student days, I had never before come upon such an argument, and the idea jarred my democratic convictions. There was undoubtedly some truth in the monarchist's argument: the owner of a country would indeed have an incentive to make his property as productive and valuable as

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possible. The monarch's subjects would presumably also gain something from this. Yet I believed that democracy was probably the highest form of government and that absolute monarchy was a totally outdated idea. Thus it was natural to ask, "Can our belief that democracy is a much better form of government than absolute monarchy be reconciled with the obvious germ of truth in the village monarchist's argument?" Some may think this question is silly or trivial, but it bothered or intrigued me so much that I have been thinking about it, off and on, over most of my career. When, more recently, I came upon an answer to this question, it seemed worth developing into a systematic analysis or model of anarchy, autocracy, and democracy.

II

To develop an intellectual framework that does justice to the village monarchist's argument and to the visceral belief in democracy that most of us have, we need to go back to basic questions about why governments are needed and how they came to exist. Because governments are the main custodians of the power to employ violence in modern societies, we have to go back to the even more elemental question of why violence plays such a depressingly large role in human affairs.

This primeval question was best answered by Thomas Schelling:

One of the lamentable principles of human productivity is that it is easier to destroy than to create. A house that takes several man-years to build can be destroyed in an hour by any young delinquent who has the price of a box of matches. Poisoning dogs is cheaper than raising them. And a country can destroy more with twenty billion dollars of nuclear armament than it can create with twenty billion dollars of foreign investment. . . .

The power to hurt—to destroy things that somebody treasures, to inflict pain and grief—is a kind of bargaining power, not easy to use but used often. In the underworld it is the basis for blackmail, extortion, and kidnapping, in the commercial world for boycotts, strikes, and lockouts. . . . it underlies the humane as well as the corporal punishments that society uses to deter crime and delinquency. . . . It is often the basis for discipline, civilian and military; and gods use it to exact obedience.²

Thus there are often incentives to threaten the use of—and sometimes to employ—violence: violence, for the individual person or country, is sometimes rational. If violence were never rational, there would not be so much of it. Because violence normally brings great

costs to those on whom it is inflicted and also some risks and other costs to those who use it, but nonetheless produces nothing of value, the use of violence is virtually always inconsistent with social rationality: it is only in the bizarre case of consensual violence between a sadist and a masochist that violence could conceivably be rational from the point of view of society or the human race as a whole.

It is mainly because of the incentive individuals sometimes have to commit violence that anarchy is so terrible. Throughout history, people have fled from anarchic areas and moved even to areas with very bad governments; there have also been many cases of individuals opting for slavery to get protection from anarchy. Hobbes seems to have been right in saying that the life of man in anarchy is "solitary, poor, nasty, brutish, and short." The history books do not recount a single case of successful anarchy.

Since life in anarchy is appallingly inefficient, there are gains from making and carrying out an agreement to maintain peace and order. Indeed, these gains are so colossal that there is a vast variety of ways in which the gains from a peaceful order can be shared that will leave everyone in a society better off than under anarchy. Can we then conclude that, because everyone can gain from it, peaceful order emerges by voluntary agreement?

III

In very small groups whose members have reason to interact over an indefinitely long period, a generally peaceful order should indeed emerge by voluntary agreement. If there are, say, five similar people, each of them will tend to get about a fifth of the gains from the creation of a peaceful order. Though each individual will bear the full costs or risks of what he does to help establish such an order, the advantages of a peaceful order over anarchy are so large that one-fifth of the gains from a peaceful order could easily exceed the total sacrifice needed to establish such an order. Moreover, when there are only a few people in a group, it will be clear that the welfare of each person depends conspicuously on whether each other individual acts in a group-oriented or in an antisocial way. Thus each person, by making clear that cooperation by others will bring forth cooperation from him but that noncooperation will not, can increase the likeli-

hood that others match his behavior. This not only increases the probability of peaceful interaction, but even makes it easily possible that cooperation will reach an ideal or group-optimal extent.³

When the gain from peaceful interaction is just a one-time thing or is definitely coming to an end at a given date, there can be an incentive to cheat on agreements to cooperate; someone who steals the fruits of peaceful cooperation as the interaction ends may be better off than if he honored his agreement. Though this possibility does sometimes cause problems, human interaction normally provides benefits indefinitely. In addition to the gains from a continued peaceful order, there are normally also gains from trade and from producing goods in cooperation with others, not only in modern societies but also in the most primitive societies (in the hunting of big game, for example). There are also gains to virtually everyone from sociable companionship (in many societies, solitary confinement is the harshest legal punishment short of death). Because the gains from social cooperation go on through one's entire life, and the date of one's death is normally unknown, there is often no last period in which it pays to renege on an otherwise advantageous agreement to cooperate. In some conditions, an individual may betray one small group yet later enjoy the gains of social participation in another group, but in other conditions (such as sparsely settled primitive societies) this is not possible. Therefore, when the numbers of those involved are small and stable enough for a peaceful order to be established by voluntary cooperation, we know (by the so-called folk theorem of game theory) that this cooperation can be sustained over time. Thus the logic of rational individual behavior leads to the prediction that sufficiently small groups will be able to establish and maintain peaceful order by voluntary agreement.

This theoretical prediction fits the evidence very well. We have not only the general evidence that voluntary cooperation of small groups to achieve common purposes is commonplace,⁴ but also the anthropological observation of the most primitive societies. The most primitive food-gathering and hunting societies are normally made up of bands of only about 50, and almost never more than 100, people, including children. In other words, such a band will usually have only a few families that need to cooperate. As the theory predicts, such hunter-gatherer bands tend to maintain peace and order by voluntary agreement. Many readers may assume that primitive tribes

are at least as dictatorial and repressive as the monarchies of early modern Europe, but this is not so. Many such hunter-gatherer bands are acephalous and make all important collective decisions by consensus. Those that have chiefs are also fundamentally consensual. When a band gets larger and disagreement is intense, the band may split in two, but the new bands normally also make decisions by consensus. Thus it is voluntary agreement that normally explains the relatively peaceful order in the most primitive and smallest bands. For these small groups, the huge gains from peaceful order rather than anarchy motivate voluntary agreements to maintain the order of the band.

Many less primitive and larger societies are made up of small groups such as extended families, villages, and other communities small enough to maintain order through voluntary consent. Some are even federations of such small groups. Some of the peaceful order in these societies is also explained by the gains of voluntary agreement to keep the peace. It is obvious, however, that only a part of the order in large societies with many thousands or millions of people can be explained in this way. What mainly explains the law and order that normally characterizes larger societies?

IV

The fact that law and order is incomparably better for people than anarchy clearly does *not* explain the emergence of law and order in large societies. A typical individual in a society with a million people will get only about one-millionth of the gain from establishing law and order, but will bear the whole cost and risk of whatever he does to establish it. The typical individual in a population of a million will normally have no significant impact on the likelihood that any other individual will enjoy law and order, so there is also no strategic interaction; it pays an individual to make no voluntary contribution to providing the collective good of law and order, whether others contribute or not. The rewards and punishments of social interaction also do not motivate contributions to collective action when groups are too large for most individuals to interact socially with most of the others. So logic tells us that the collective good of law and order, like other collective goods, can never be obtained through voluntary collective action in really large groups.⁵

This theoretical prediction fits the facts. There have been lots of writings about the desirability of "social contracts" to obtain the

benefits of law and order, but no one has ever found a large society that obtained law and order through a voluntary social contract of the individuals in the society. There is no record of any large society that overcame an anarchic situation through any kind of voluntary agreement.

V

Why, then, do virtually all large societies no less than small ones have law and order rather than anarchy? The route to the answer came to me when by chance I was reading a book on a Chinese warlord. In the 1920s China was in large part under the control of various warlords. The warlords were men who had some armed band or small army with which they had conquered some province or set of villages and who then made themselves lords of the territory they had conquered. They usually taxed the population heavily and pocketed the proceeds of this taxation for their own purposes. One warlord, Feng Yuxiang, had a reputation for the exceptional extent to which he used his army for suppressing bandits and for his defeat of the relatively substantial army of the famous bandit leader White Wolf. There was evidence that considerable numbers of peasants, merchants, and intellectuals in his domain were sorry to lose him.

This seemed arbitrary to me: why should warlords who were simply stationary bandits be preferred to roving bandits? The warlords had no claim of any kind to legitimacy and were distinguished from leaders of roving bandit armies only because they took their theft in the form of regular taxation rather than episodic plunder. Others have also asked whether "'warlord' was not simply a euphemism for 'bandit'."6

I am now convinced that I was wrong and that the Chinese who preferred settled bandits to roving ones were right. If a roving bandit settles down and decides to steal through regular taxation, and at the same time insists that he has a monopoly on theft in his domain, then those from whom he exacts taxes will, in spite of his exactions, have an incentive to produce and accumulate wealth. The rational stationary bandit will take only a part of income in taxes, because he will be able to exact a larger total amount of income from his subjects if he leaves them with an incentive to have a high level of production.

If the stationary bandit successfully monopolizes the theft in his domain, his victims do not need to worry about theft by others. If he steals only through regular taxation, his subjects know that they can keep whatever proportion of their output is left after they have paid their taxes. Thus the rational monopolization of theft, as compared with an anarchic environment with ubiquitous theft, greatly increases the probability that an individual will be able to retain any capital he accumulates. Once an individual has paid the stipulated tax rates, he has reasonably good odds of hanging on to whatever wealth he has accumulated.⁷ This greatly increases the incentive to save and to invest. Since all of the settled bandit's victims are for him a source of tax income, he also has an incentive to prohibit others from killing or maiming his subjects. The monopolization of theft and the protection of tax-generating subjects eliminates anarchy. Since the warlord takes a significant part of total production in the form of tax theft, it will often also pay him to provide some irrigation works and other public goods, because the provision of these goods will normally increase taxable income.

Bandit rationality will also lead bandits who can conquer and hold an area for any considerable period of time to stop roving around and set themselves up as lords of a settled domain: with roving banditry there is little or no incentive for anyone to produce or accumulate anything that may be stolen, and thus little for roving bandits to steal. Thus we have what I call "the first blessing of the invisible hand." The leader of the roving band of bandits is led, as though by an invisible hand, to settle down and set himself up as head of a government; the colossal increase in output that arises from the creation of a peaceful order gives a stationary governing bandit a larger take than he could obtain if no government is provided. The provision of the public goods provided by government to groups that are larger than tribes results from "bandit entrepreneurship" or, more generally, the entrepreneurship of those with superior capacities to wreak violence. By taking Thomas Schelling's analysis of the incentives that account for violence a few steps further, we have accounted for the emergence of government in large as well as small groups.

The emergence of the kings, pharaohs, and emperors who have played such a large role in human history can be better explained in terms of the incentives to replace roving banditry with tax theft than by any other model of similar parsimony. Dictatorial peace also

allows the development of some civilization. To a degree, the civilization that emerged, say, in France of the Old Regime—a civilization that produced a Voltaire—was due to the superior incentive to produce and create under rational tax theft than under anarchic types of theft. The peace of a rational self-interested dictator is better than anarchy.

VI

The main tool of thought that drives my analysis of autocracy, and that will also drive my account of democracies, is the concept of the "encompassing interest" from my book *The Rise and Decline of Nations*.⁸ This is the idea that the extent of the concern of an interest group, office holder, political party, monarch, or any other partial or total "owner" of the society will vary with the size of the stake in the society. Other things being equal, the larger or more encompassing the stake an organization or individual has in a society, the greater the incentive the organization or individual has to take action to increase the productivity or efficiency of that society, and the greater the incentive to avoid actions that would damage the society.

In the case of our stationary bandit or king, we can see the extent of his encompassing interest most simply by temporarily assuming that the marginal tax rate is the same as the average tax rate, so that the autocrat always gets a constant fraction, F , of any increase in the national income in tax revenues. If F is one-third, the monarch gets a third of any increase in the national income in tax collections, and he will then get a third of the benefit of the provision of a public good that increases taxable income. Obviously, in this case an optimizing monarch will provide public goods up to the point at which the marginal cost of the public good to the monarch is equal to one-third of the increase in the national income that results from this provision. Under the assumption that the monarch gets a specified percentage of the national income in taxes, he will not spend a socially efficient amount on public goods, but the benefits of law and order and of minimal amounts of some other public goods are so extraordinary that a less-than-Pareto-optimal supply is still of profound value. The consumer surplus from a minimal level of government is so gigantic that the provision of these minimal amounts can be of great significance in human history.⁹

VII

All that has been said so far shows the importance of the germ of truth in the argument of Banfield's quaint monarchist. Can the monarchist's insight and the foregoing argument be reconciled with the convictions most of us have in favor of democracy? When, if ever, do democracies benefit from a similarly encompassing incentive structure?

Though this paper will avoid any genuinely technical matters, we will need to be slightly less casual if we are properly to compare the incentives facing dictators and the leaders of democratic governments. Initially, we will need to develop a clear conception of the level of spending on public goods that an ideal and fully efficient government would have. Once this ideal is clear, it will be possible to understand how government by a self-interested optimizing autocrat, on the one hand, and government by a similarly self-interested democratic politician seeking reelection, on the other, would deviate from this ideal.

To get a model in which we can readily compare autocracies and democracies with an ideal government, we must define the society's income carefully and then go on to define the costs of the public goods that governments must provide. We must define the society's income to include nonmoney or "psychic" income and also properly distinguish between "gross" and "net" social income.

In general, official national income statistics do not capture changes in the quality of life or psychic income, but because these things depend partly on public expenditures, we need to include them. Obviously, socially desirable expenditures on public goods are worth more to the society than they cost; conversely, excessive or socially useless expenditures reduce the true income of the society. But the measures of national income defined in the national income statistics do not properly capture this. The national accounts treat all expenditures on final goods and services, whether by the government or the private sector, as contributing identically to national income, irrespective of whether government expenditures are at a socially efficient level or not. Thus conceptually we need to consider the increase in true (money + psychic) income that results from a given public expenditure, evaluated in terms of the consumers' willingness to pay for it when they honestly reveal their preferences.

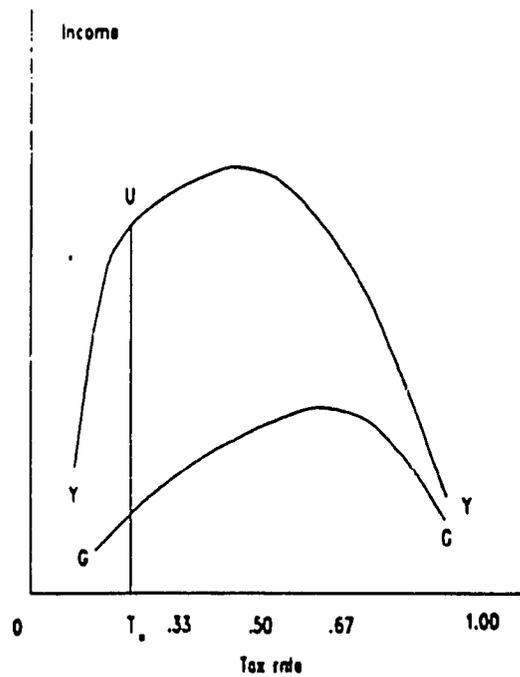


Figure 6.1

This increase in "true gross income" must be compared with the cost of the public expenditure that generated it. "True net income" is then obtained by *subtracting* public expenditure from true gross income, which is essentially income as defined in the national accounts plus or minus psychic income. We shall make the further simplifying assumption that there are no government surpluses or deficits, so tax revenue equals public expenditures. The true gross income for a society is then analogous to an individual's true pre-tax income, and the true net income for the society then is equivalent to true post-tax income for the individual. For the society as well as the individual, it is post-tax income that is relevant for welfare.

To make everything clear with simple pictures, let us look at a utopian situation with the aid of figure 6.1. Curve Y in this figure is true gross income as defined above. The percentage of national income taken in taxes is measured on the horizontal axis. Because I assume that tax collections are equal to expenditures on public goods, both income and expenditures on public goods are functions of the tax

rate. When the level of public goods provision is inefficiently low (for example, in quasi-anarchy), devoting a larger percentage of national income to public goods necessarily increases gross income. To the right of the peak of the Y function, the damage to incentives from the high taxes needed to fund the public goods reduces income more than enough to offset any increase in productivity brought about by the additional public goods.

To look at changes in the level of *net* income or welfare, we must subtract the cost of public goods. This is not quite as simple as it seems, as the cost depends on how the tax burden is allocated among taxpayers. To make this allocation a precise one that will yield an unambiguous social optimum, I shall assume that there are Lindahl tax *shares* at *all* levels of taxes and public goods expenditures. That is, everyone shares the marginal (which here is, by assumption, also the average) tax burden in exactly the same proportion in which they share the benefits of public goods. Thus each individual's tax bill divided by total tax revenues equals his willingness-to-pay for the public good supply divided by the total willingness-to-pay of the society. With Lindahl tax shares, at lower-than-Pareto-optimal level of public expenditure there is *unanimous* support for more public expenditure, and at the higher-than-Pareto-optimal levels of public good provision, everyone wants less public spending. At every level of public good provision, however far from optimal it may be, all tax collections are by assumption efficiently directed to the provision of public goods.

We can now compare the welfare of citizens at each tax rate. The direct or cash cost of each level of public expenditure can be read off the G or "government" function in figure 6.1. The true gross or pre-tax income, Y , is shown at each weighted *average* tax rate for the society.¹⁰ The vertical distance between the G function and the Y function gives the true net social income.

If the initial allocation of endowments is perfectly just, net welfare is necessarily maximized when Y exceeds tax collections by the largest amount. This is where tangents to the Y curve and the G function are parallel and where the marginal social benefit of public goods just equals their marginal cost. There is then a Pareto-efficient outcome at tax-spending level U , for utopia, in figure 6.1.

VIII

With the aid of the ideal conception just set out, we can examine the outcomes generated by autocratic and by democratic governments. Obviously, it would be easy to favor any type of government by assuming benevolent behavior of leaders of governments of that type whenever this led to better outcomes for the people at issue, and by assuming malicious behavior of the leaders of other kinds of governments. To be impartial, I will assume the same self-interested behavior at all times by all types of political leaders (and also by voters). Democratic political leaders will be assumed to care about nothing but maximizing their chances of election, and autocrats will similarly be assumed to exploit their domains entirely for their own purposes. Admittedly, I have, like many others, presented evidence elsewhere that unalloyed self-interest does not characterize most human beings.¹¹ Nonetheless, if a model is to be of any use, it must sacrifice descriptive accuracy to obtain manageable abstractions. The assumption of self-interest is much more realistic than any other assumption of comparable simplicity and impartiality. In the same spirit, I also abstract from "income effects" so that the willingness-to-pay for public goods does not change with changes in the distribution of income.

So, just as we used the rational self-interest of leaders of marauding bands to explain the establishment of peaceful order for large groups, we must in the same way ask what tax rate, and what disposition of tax revenues, will be most advantageous for the bandit-leader, once he has decided to be a king.

The rational self-interested autocrat will, of course, choose the tax rate that gives him the maximum attainable resources for his own purposes—for his palaces and other personal consumption, and most notably for the military power and war that will largely determine his status in relation to other autocrats and national leaders. As the Italian monarchist pointed out, a king will have the same incentive to care for his domain that a landlord has to fix the wiring in his property. But just as a landlord who owned all housing would have an incentive to charge monopoly rents, so the autocrat has an incentive to use his monopoly of violence in his domain to extract the maximum possible surplus for himself! Thus he will raise tax rates up to the point where any further increases would reduce tax collections.

It might seem that this would lead the autocrat to choose the highest point on the G function that is depicted in figure 6.1, but this is *not*

correct. The autocrat will not (except in certain special cases) spend as much on public goods as the utopian government would have, and this entails that at any given tax rate social income and tax collections will be lower under autocracy than under an ideal government. For any given level of income of the society, every dollar the autocrat spends on public goods for the society is a dollar less that he can spend for his own purposes. It is in his interest to spend on public goods only so far as this expenditure increases the income of the society to such an extent that he gets his expenditures back in increased tax collections. Though an autocrat has an encompassing interest in his country, and this encompassing interest leads him to provide a peaceful order and other public goods of extraordinary value to his subjects, the very fact that his subjects inevitably get part of the society's income means that the autocrat will normally spend less on public goods than would a utopian government.

Suppose the revenue-maximizing tax rate for the dictator is 50 percent. Then the dictator will get 50 percent of the increase in social income that is generated by the provision of additional public goods. It follows that his interests are best served if he curtails his spending on public goods when the marginal dollar spent on public goods increases the society's income by two dollars, since at this point the last dollar spent on public goods will obviously bring him back just one extra dollar of tax revenue. If the revenue-maximizing tax rate for the monarch goes up, he will gain from providing more public goods.

In general, the rational autocrat will determine his profit-maximizing level of provision of public goods by calculating how "encompassing" his interest in the marginal social income is, and equating the marginal cost of public goods with the value of his share of the resulting increase in social income. It is expected that a fuller and more formal account of the determinants of the autocrat's level of provision, and an analysis of some interesting special cases, will be provided in a separate publication.¹²

In part because of the foregoing argument, we must go to figure 6.2 to find the optimal allocation for a self-interested autocrat. This figure not only presupposes a lower level of public good provision and corresponding reductions in the level of social income and tax receipts at each tax rate, but also examines the impact of using part of the proceeds of taxes for the autocrat's personal purposes on social income. In figure 6.1, gross income was higher to the right of the optimum U because there was more spending on public goods. This spending did

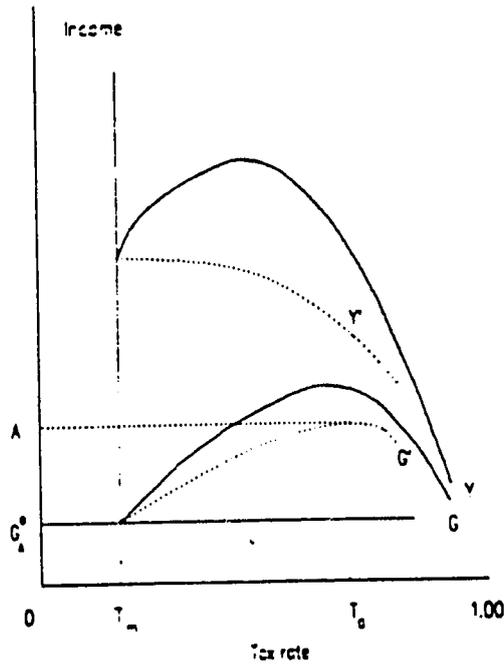


Figure 6.2

not increase gross income by as much as it increased expenditures on public goods, so the society's net income was reduced. But gross income and the amount of taxes that can be collected at any given tax rate were greater immediately to the right of T_m than at T_m . The tax receipts at the maximum of the tax receipts or G function in figure 6.1 could be attained only if all the money obtained from the tax receipts were devoted to the provision of public goods. When the autocrat uses much of the tax receipts for his own purposes, there will be a lower social income and a lower level of tax collections at each tax rate than would have occurred under ideal government.

Thus in figure 6.2 we depict a profit-maximizing expenditure on public goods by the autocrat, G_A^* , irrespective of the tax rate. If tax rates were not high enough to obtain G_A^* , there would be an inconsistency, so income is undefined to the left of T_m . The autocrat obviously chooses tax rates higher than T_m in order to obtain resources for his personal purposes. The excess burden of taxes tends to lower income, just as it did under ideal arrangements, but there is now no offsetting effect from a higher provision of public goods.

14

Thus the solid Y and G curves, analogous to those in figure 6.1, do not apply, and income decreases steadily as tax rates rise beyond the level needed to finance G_0^* of public good provision, as indicated by the dotted line Y' . This also reduces the level of tax receipts at any given tax rate,¹³ so the optimum for the autocrat is found on the G' function. At the peak of this function, the difference between tax collections and expenditures on public goods is as great as it can be, and the autocrat has maximized the return from his domain. The surplus that the autocrat can use in whatever way best suits his ego is OA minus OG_0^* .

Obviously, this leaves the autocrat's subjects with very much higher taxes than is in their interest, and these high taxes cost the subjects more than the amount they pay to the autocrat because they damage the incentive structure of the society and thus reduce income as well. As the peak of the G' function is approached from the left, a tiny increase in tax collections can be obtained only at the cost of a much larger drop in aggregate gross income, and the taxpayer's net income must fall by an even larger percentage than gross income. The autocrat nonetheless has an incentive to press all the way to the peak of the G' function. All taxes beyond those that would have been collected at tax rate T_m , moreover, are devoted to the ruler's wants rather than those of his subjects. Of course, the autocrat will not push tax rates above T_n , because this will reduce his tax collections.

The idea that it is irrational to raise tax rates beyond the level that maximizes tax collections is an old one. Joseph Schumpeter pointed this out in his article on "The Crisis of the Tax State," written in highly taxed Austria-Hungary not long before its defeat in World War I; there is even the germ of this idea in the fourteenth century in Ibn Kaldun's *Mugaddimah*.¹⁴ Schumpeter's and Ibn Kaldun's important insight has been grossly misapplied and advertised as the "Laffer curve" in the United States in recent times, but this misapplication does not call the argument here into question.

The foregoing analysis should make it clear that, while the peaceful order a rational autocrat provides is vastly superior to violent anarchy, the rational autocrat's services are very expensive indeed. The rational autocrat uses his monopoly of power to take a huge part of the total gain from the social order for his own purposes. The distribution of income under autocracy gives much of the total taxable output to the autocrat, and the taxes or other exactions that he must

impose to exploit his monopoly of the government introduce colossal inefficiency as well.

IX

With an ideal allocation and a self-interested autocrat's optimum as benchmarks, we can now explore how well democratic systems would work in relation to each. The democratic systems to be considered here are so simple that they have no close counterpart in reality. They nonetheless illustrate an advantage that relatively effective democratic systems have over autocracies and also reveal ways in which they systematically diverge from the utopian ideal depicted earlier. One model also illuminates a pathological problem in many democracies.

One prominent and simple possibility is to model the situation with a median-voter model in which it is assumed that all voters have single-peaked preferences. If at all sizes of the government everyone always pays a Lindahl *share* of the tax burden, the median voter who determines the outcome will also pay a Lindahl share, and we are back at the ideal allocation U in figure 6.1. Realistically, we assume that there are significant departures from a Lindahl tax structure, then the outcome will depend on the tax share of the median voter.

To be specific, suppose the only tax is an income tax. The level of public expenditures would then be that sought by the voter of median income. If the median voter paid more than his Lindahl tax share, the level of provision of public goods would be somewhat too low; if he paid less than his Lindahl tax share, it would be somewhat too high. Since it is highly improbable that the median voter's tax rate is exactly his Lindahl share, the democratic outcome will almost never be Pareto-optimal. On the other hand, there is normally a positive income elasticity of demand for most public goods and usually also higher taxes for those with higher incomes, so there is no reason to believe that median-voter outcomes diverge dramatically from optimal allocations.

They certainly would tend to be vastly better than the autocratic outcome. Since the median voter certainly places a positive valuation on private goods, he would never vote for a tax rate at the maximum of the G function. If the allocation is anywhere close to this maximum, a reduction in tax rates generates a large increase in post-tax income at the cost of a tiny reduction in the provision of public goods. Ac-

cordingly, the median voter, even if his actual tax share were surprisingly far below his Lindahl share, would tend to vote for such a tax reduction, so tax rates would normally be much lower in a median-voter democracy than in an autocracy. The median voter, moreover, would have an incentive to vote only for those public expenditures that were of some benefit to him, so a median-voter democracy would not generate huge expenditures for the personal consumption of the government's leader akin to those at the autocratic optimum. In short, whatever plausible assumptions one chooses for a self-interested median-voter model of democracy, the outcomes appear to be vastly better for the citizenry than those that result from the self-interested autocrat.

One of the well-known problems of median-voter models with single-peaked preferences is that they do not capture the most serious distributional conflicts, which can bring on endless Arrowian cycles. The redistributive struggles and the policies to which they give rise will in general also mean that there are additional deadweight losses from the taxes and other policies that grow out of the distributional struggle. What, if anything, may be said about how a democracy will work when a governing party or president can for electoral advantage change the tax and subsidy structure, and thus redistribute income to "buy" the votes of a prospective majority?

X

To analyze this democratic difficulty most simply, I assume that proportional representation is excluded and there is instead a winner-take-all voting rule, such as applies to the presidencies in France and the United States and to seats in the House of Commons in Britain. With a winner-take-all voting rule, there is almost no purpose in having a small party, because no power can be attained without a majority. Similarly, it cannot be rational for a presidential candidate to seek less than a majority of the electorate. Thus, under a winner-take-all voting rule there will be a tendency toward two-party or two-candidate elections. I assume that no distributional coalitions or special interest groups play any role, so the outcomes depend entirely on the policies of the two parties or candidates, each of which maximizes the likelihood of victory. Because presidents or party leaders are by assumption self-interested, they have no inhibitions about using the tax and subsidy system to buy the support of a majority.

Here an important constraint on vote-buying redistribution arises from the "encompassing" character of the constituency each party must have in a two-party or two-candidate system. Because each party or president must get a majority to win anything, each must strive to please a constituency that will obtain a large fraction of the total income of the society—the fraction F for a party in a two-party system will not be far from one-half. If the income in the society rises or falls, the income of its constituents will on average rise or fall by FdY .

This encompassing interest gives the party or president an important stake in the well-being of the society. Incumbent parties and presidents want to run for reelection in circumstances in which they can credibly tell the voters, "you never had it so good," so they have a strong incentive to achieve good outcomes for the citizenry. Everyday observation confirms that presidents and leaders of encompassing political parties do indeed strive to be able to claim that there is "peace and prosperity" when they run for reelection. However, even a party or candidate with an encompassing constituency may still provide the best outcome of all for a given majority of the electorate by having some redistribution from the minority toward this majority. This can be true even though the deadweight loss from such a redistribution entails making national income lower than it would be otherwise.

The extent to which redistributive vote buying is expedient is limited by the difficulty of targeting the redistribution as well as by the encompassing interest of any majority coalition. The difficulties of targeting arise because the regions, occupations, income levels, or other identifiable attributes of voters that are used to determine whether they get a subsidy are not in general a perfect guide to what party they can be induced to support. A policy to subsidize persons in given categories will probably aid some individuals who prefer the alternative party. A subsidy may even induce the movement of voters who prefer the alternative party to the regions, occupations, or other categories that are subsidized. Thus much of the redistribution intended for the prospective majority will be "wasted" on those who support the other party. If the incumbent party attempts to tax those in the minority to subsidize the prospective majority, it will in practice tax some of those in the prospective majority and subsidize some of those in the minority. In general, only a proportion, P , of the re-

distribution targeted toward a prospective majority will be a net redistribution to it. An examination of plausible examples indicates that P could often easily be as low as .5.¹⁵

With the conceptual framework developed here, we can see both the social losses from democratic redistributions and the constraints on such redistributions when there are encompassing coalitions. Simply for convenience, let us suppose we start at the point in figure 6.2 depicting the optimum level of provision of public goods for the autocrat. The encompassing political leader with the strategy of using vote-buying redistribution to help obtain a majority will increase taxes and try to target the proceeds to his prospective majority. This redistribution, like the redistribution of the autocrat toward himself, will not increase gross income as the provision of more public goods would have; the taxes and subsidies will bring about deadweight losses. Thus gross as well as net income will decline to the right of T_m as they did as a result of the policy of the optimizing autocrat.

Nonetheless, the democracy with encompassing interests works incomparably better for the citizenry, even with uninhibited vote buying, than an optimizing autocrat. Suppose that the majority coalition earns exactly half of the national income and the difficulties of targeting dictate that P is also one-half. When the deadweight losses from redistributive vote buying become as large as the amount of the subsidy, the majority will gain from stopping the redistribution toward itself. Given the targeting difficulties, the net redistribution to the majority is only half of the subsidy, but the majority bears half of the reduction in national income that results from the *total* subsidy. Even if there were somehow costless and perfect targeting of subsidies, the redistribution would cease when the national income fell by double the amount of the subsidy.

To put the point generally, when the excess burden of the subsidy at the margin reaches P/F , it no longer pays the beneficiaries of the redistribution to carry it any further. At this point their share of the social loss from the redistribution just equals the net redistribution to them, and the upper bound on politically rational redistribution has been reached. Thus, when there are encompassing political parties or offices that determine democratic outcomes, the electoral gains from redistribution are limited, and these limits are more confining the greater the difficulty of targeting redistribution to a prospective majority.

Those who have not studied deadweight losses in the presence of *narrow* distributional coalitions may think that the foregoing constraints on vote-buying redistribution are not confining. A limit on redistribution that becomes effective only when the deadweight loss becomes (say) as large as the redistribution may not seem to be a binding constraint to those who have been brought up to believe that "all Harberger triangles are small." In fact, even in the richest democracies, narrow distributional coalitions often lead to deadweight losses that are substantial multiples of the amount redistributed to the members of the coalition, and in many underdeveloped nations the social losses from poor public policies account for most of the gap in per capita income between these countries and the developed world.¹⁶

To see the importance of the constraint on the losses from vote-buying redistribution with encompassing parties, consider the size of the excess burden that occurs when there is redistribution with tiny political parties (or with narrow special interest groups). Suppose that a political party or a special interest group represents a constituency that earns 5 percent of the national income. If there were no difficulties in targeting redistribution, it would pay this narrow interest to continue seeking redistributions to itself until the deadweight losses become twenty times as large as the redistribution. Thus democratic societies suffer colossal losses when their public policies become collections of measures won by special interest groups, whether the special interests take the form of lobbies or small political parties.

Though a democracy without *any* encompassing interest does suffer some losses that an autocrat with his encompassing interest would avoid, even a democracy of this kind has an important advantage for its citizens over an autocracy. Consider the situation at the autocrat's optimum at the peak of the G' function in figure 6.2. The autocrat has an incentive to choose this high tax rate and to keep all of the proceeds for himself (beyond the level T_w spent on public goods) because his gain comes exclusively from tax collections and other exactions: the post-tax income of his subjects has no direct impact on his welfare or choice of tax rate.

In a democracy with competitive political parties, even a political party that represented only 5 percent of the society would have *some* direct concern with the amount of net earned social income, because its members would get a little of this income. They would not, in other words, be quite at the peak of their G' function.¹⁷ The vote-

buying redistributions of a democracy with narrow parties would also differ from the autocrat's exactions in that they would be returned to the citizenry, or more precisely to various subsets of it. As governing coalitions changed over time, different subsets of the citizenry would gain from the changing redistributions. Thus for many citizens the distributional gains and losses would in the long run come close to balancing off, so that the only big losses would be the excess burdens. These are serious losses, but there are also large losses of efficiency in an autocracy from the "redistribution" to the autocrat, and the citizenry does not get any of this back.

Xi

It is time to sum up and to call attention to the many important factors left out of the argument. We know from Schelling's argument in *Arms and Influence* that it is often rational for individuals to threaten or to employ violence. Because violence generates great losses without producing anything of value, there are phenomenal gains when anarchy is replaced by a peaceful order. Very small groups, such as the hunter-gatherer bands in environments that have not discovered settled agriculture, normally realize these gains through agreement and voluntary collective action. But the large populations that emerge after the development of crop production cannot, because of the logic of collective action, obtain law and order or other collective goods through voluntary cooperation.

Luckily, when populations are sizable, the invisible hand guides roving bandits to settle down and provide law and order and other public goods because this gives them more receipts in the form of tax revenues than they can obtain by roving banditry. The conqueror of a well-defined territory has an encompassing interest in that domain given by the share of any increase in the territorial income that he collects in taxes. This encompassing interest gives him an incentive to maintain law and order and to encourage creativity and production in his domain. Much of the economic progress and the development of civilization that has occurred in post-tribal times is explained by this incentive.

But the same rational self-interest that makes a roving bandit into an established monarch also makes him maximize his tax revenue and devote much of it to his purely personal purposes. This leads to a

huge waste of resources and a considerable impairment of incentives due to high taxes.

In a democracy with encompassing and coherent political parties or with encompassing elective offices such as the presidencies in the United States and France, the invisible hand gives the highest political leaders an incentive to take account of the interests of the electorate. This shows up notably in the obvious desire of incumbent national leaders to be able to run for reelection on a record of peace and prosperity. Because a prospective majority may sometimes be made better off by a policy that includes some redistribution to them, democratic political leaders also have an incentive to generate some deadweight losses. But with encompassing parties or offices, the incentive for such redistribution is very limited. The incentives facing the self-interested leaders of encompassing political parties in a competitive democracy are accordingly more nearly consistent with those of the citizens than are the incentives of an autocrat.

The simple paradigm just described obviously leaves out many extraordinarily important factors, such as the role of the "rational ignorance" of the typical citizen in a democracy, the importance of distributional coalitions,¹⁸ and so on. Some of the factors that have been left out often make democracies work badly, even when they have encompassing offices or parties. It would be a pity if the foregoing argument generates complacency (or even great optimism) about modern democracies.

XII

At the same time, our simple paradigm leaves out many factors that make autocracies work worse than the argument here would lead one to expect, and it also ignores many neglected advantages of democratic institutions. When an autocratic government is insecure, or for any other reason has a short time horizon, it no longer has an incentive to encourage the long-run investment that will increase the output of the domain in the long run—if the autocrat's time horizon is much shorter than the life of a capital good, he will gain more from expropriating that capital good than from protecting property rights in it. Thus insecure autocrats have often seized accumulations of property and imposed capital levies so high that they reduced tax collections in the long run. Of course, the short time horizons of elected politicians also cause severe problems.

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The subset of democracies that have been viable in the long run are, however, almost the only governments that have been able regularly to arrange for a continuing orderly succession of leaders. When the autocrat dies or is deposed, there are no institutions that can be relied upon to select or install a new dictator peacefully. If institutions like the police and the judiciary derived their power from sources other than the former dictator, then the society would not really have been an autocracy: it would have been pluralistic and, if not democratic, at least an "institutionalized oligarchy," which I define as a semidemocracy. When a real dictator dies or is deposed, all institutions lose their authority, and there is no reliable means by which the society can ensure that it will get a new leader in an orderly way. Thus virtually the only societies in the world today in which there can be much confidence about what the government will be like a decade or two into the future are democracies. Thus to a great degree it is only in these societies that there is a predictable environment for long-run investment in capital goods, in research and development, and in enduring works of art.

The autocrat also has the problem that he cannot easily and straightforwardly make credible commitments. If he runs the society, there is no one who can force him to keep his commitments. Thus he is in a position roughly like that of minors in the United States, who cannot get credit cards because the law will not force them to repay their debts. The autocrat who looks forward to a long reign will obtain the greatest tax collections in the long run if his subjects believe that there will be no unscheduled new taxes or confiscations of wealth, for this will give them the greatest incentive to accumulate capital and to produce. The autocrat can promise that he will not impose any future taxes or confiscations that would make current investments unprofitable, but given his incentive to make that promise even if he intends to break it, the promise may not be credible.

This problem is far less serious in a pluralistic democracy. The independent judiciary systems of such societies make property rights much more predictable, and the pluralistic dispersion of power means that there are many powerful interests that have a stake in opposing any violations of property rights or failures to enforce contracts. The people who would have to pay any confiscatory taxes also have a right to vote, and that makes future tax rates and policies more predictable than they would be otherwise. All this makes an economy work better.

Thus it is probably not an accident that the richest countries in the world are mainly democracies. The undeniable correlation between democracy and high income is sometimes alleged to be due to a taste for democracy in high-income societies: democracy is a luxury. Though the demand for democracy may well rise with income, the causal sequence implied by the foregoing argument does not fit the facts. Though there are of course examples of dictatorships with very successful economies, relatively pluralistic and democratic countries generated the industrial revolution and were the first to copy it. After World War II, economic development and technological advance spread mainly from democracies to other countries, rather than the reverse. West Germany, Japan, and Italy grew with miraculous rapidity after their conversion to democracy, as did most of the democracies of continental Europe. The totalitarian societies of Eastern Europe grew rapidly for a time, but were unable to sustain this growth or even to ensure their viability.¹⁹

Some dictatorships have grown for a time at very rapid rates (I have calculated the *variance* of growth rates among dictatorships in recent decades and found it higher than that among democracies). But no society with a continuing absolute monarchy²⁰ or any other kind of dictatorship has ever reached a high level of development. Even areas with episodic dictatorships,²¹ such as most of Latin America, have not been able to reach high levels of development. There is not much debate about how democracies fare in cultural and scientific competition, but they are sometimes thought to be at a disadvantage in war or military competition. David Lake has, however, carefully gathered all of the historical evidence on wars between democracies and dictatorships and discovered that democracies have been almost twice as likely to win their wars as have dictatorships.²² It is not clear whether this is because of greater capabilities in fighting wars or to fewer mistakes in starting unsuccessful wars, but the result is favorable to democracy under either assumption.

So I conclude that the quaint Italian monarchist had a valid point, which helped us explain how the hidden hand leads to the emergence of government and thus helps to account for a large proportion of the history of civilization. But if the monarchist had carried the logic of his argument further, he would also have discovered a powerful case for democratic governments with encompassing institutions.

Notes

1. *The Moral Basis of a Backward Society* (Glencoe, IL: The Free Press/Research Center in Economic Development and Cultural Change, University of Chicago, 1958), p. 26. Charmingly, the monarchist who is quoted joined the Communist party a few weeks after making the statement, and then a few weeks later became a monarchist again.
2. *Arms and Influence* (New Haven, CT: Yale University Press, 1966), p. v.
3. See my *Logic of Collective Action* (Cambridge, MA: Harvard University Press, 1965).
4. *Ibid.*
5. *Ibid.*
6. James E. Sheridan, *Chinese Warlord: The Career of Feng Yu-hsiang* (Stanford: Stanford University Press, 1966), pp. 19 and 51–119. Feng is alleged to have been a better administrator of his domains than many other warlords. He was also exceptional among the warlords in being a Christian, and this may have added to his reputation among Western observers in China.
7. There is an earlier and, in some ways, analogous account of a king's incentive to improve property rights in Douglass North's valuable historical discussions, especially in his *Structure and Change in Economic History* (New York: W. W. Norton, 1981) and his book with Robert Thomas on *The Rise of the Western World* (Cambridge: Cambridge University Press, 1973).
8. Yale University Press, 1982.
9. Douglass North has previously emphasized the magnitude of the consumer's surplus from the provision of basic government.
10. Each person's tax rate must have a weight given by the percentage of the total revenue his Lindahl tax share would yield.
11. "The Role of Morals and Incentives in Societies," presented at a celebration of the 200th anniversary of Georgetown University.
12. This prospective publication grows out of the work of my colleague Martin McGuire and is being done jointly with him.
13. Another assumption is that the mix and level of public goods for the society are not altered by the fact that the autocrat takes a substantial share of social output through high taxation for his own purposes. This in turn requires the earlier assumption that there are no income effects. It also requires that all public expenditures affect taxable and nontaxable income impartially, so the autocrat does not have an incentive to emphasize those that raise taxable income.
14. Schumpeter's essay is reprinted, among other places, in *Joseph A. Schumpeter: the Economics and Sociology of Capitalism*, edited by Richard Swedberg (Princeton, N.J.: Princeton University Press, 1991), pp. 99–140. For *Ibn*

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Khaldun's insight on this point see *The Muqaddimah, An Introduction to History*, translated from the Arabic by Franz Rosenthal (Princeton, N.J.: Princeton University Press, 1967), pp. 230–231.

15. Suppose that the incumbent party increases taxes on everyone to subsidize a majority, but that to make sure that it reaches the targeted majority it must make transfers to three-fourths of the electorate. One-third of the subsidy is then "wasted," and the prospective majority must bear its share, F , of the wasted subsidy (as well as of the deadweight loss on all of the subsidy). If three-fourths of the electorate is then subsidized and the prospective majority bears half of the cost of the misdirected third of the subsidy, its members' net gain is only half, or four-sixths minus one-sixth, of the subsidy. Thus their net gain from the subsidy is equal to half of the amount redistributed.

16. This is shown in my paper, "Why are international differences in per capita incomes so large and persistent?" (typescript, University of Maryland, 1990).

17. Though the excess burden of a given tax rate would be the same for a redistributive democracy and an autocracy, the excess burden of a given level of subsidies from democratic redistribution would not necessarily be the same as the same amount of autocratic spending. The subsidies from democratic redistribution might have a larger adverse effect on the incentives to work, or the autocratic spending might be more likely to be on socially costly wars, etc. Thus the G' function in figure 6.2 need not be the same for an autocracy and a redistributive democracy.

18. *The Rise and Decline of Nations*.

19. Given the nature of totalitarian societies, it is not straightforwardly possible to isolate what proportion of the social surplus has been used to serve the objectives of the conquerors or rulers of these societies and what proportion has been used to serve the interests of their subjects. The exceptionally high rates of forced saving, the high proportion of the GDP devoted to military expenditures, and the low standards of living in the Soviet-type societies indicate that an extraordinarily high proportion of output has been devoted to the purposes of the rulers, but the Soviet societies would have had some investment and military spending and some economic problems even under democratic governments, so the exact allocation of the social output between the rulers and the subjects can only be estimated. In the case of Hitler's Germany, ultimately about half of the GDP was used in the effort to augment and protect Hitler's domain.

20. It is unfortunately not possible directly to test the theory offered here by comparing the proportions of the national income used by governments in absolute monarchies and in democracies. Because absolute monarchies have usually existed only in historic and pre-industrial societies, one cannot meaningfully compare the proportions of the national income that the monarchs took in taxes with the proportions of the national income used by democratic governments in developed societies. This is partly because so

many of the activities of modern governments in the democracies are to transfer income or provide services to the citizenry (or to subsets of it). Because in the long run the electorate loses only the deadweight losses from this redistribution, its costs can not appropriately be compared with the autocrat's taxation for his personal purposes. In addition, in pre-industrial societies the total per capita output is not usually far above the subsistence level, so a conqueror can extract only a tiny proportion of total output, at least over the long run. Finally, the lack of the technological and cultural requirements for efficient large-scale administration also greatly limits the amount of surplus that a bandit-conqueror can feasibly extract (on the administrative difficulties, see my "Diseconomies of Scale and Development," in *The Cato Journal*, vol. 7, no. 1, Spring/Summer, 1987, pp. 77-97).

21. In those modern environments where democracies are familiar and often feasible alternatives, dictatorships frequently have to strive to be popular with the population as a whole or at least with large segments of it. It is therefore difficult empirically to distinguish modern popularity-dependent dictatorships from democracies; in some cases their actions are very similar. Thus the theory here makes no unambiguous predictions about the proportion of the GDP used by governments in such dictatorships and in democracies. It does, however, predict that future policies are more predictable in the stable democracies and that this is favorable to their growth.

22. David A. Lake, "Why Democracies Win Wars" (mimeo, University of California at Los Angeles).