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Democracy and the Market

The robust condition of industry and commerce in the fledgling American democracy was not lost on its most perceptive visitor and ethnographer. Alexis de Tocqueville wrote:

The United States has only been emancipated for half a century from the state of colonial dependence in which it stood to Great Britain; the number of large fortunes there is small and capital is still scarce. Yet no people in the world have made such rapid progress in trade and manufactures as the Americans. ...

... [T]hey have already changed the whole order of nature for their own advantage.¹

For Tocqueville, the robust condition of private enterprise in America depended upon the abundance of land, the absence of hereditary aristocracy, and, significantly, the presence of democratic institutions and egalitarian values. But Tocqueville foresaw the possibility that the growth of commerce and manufacturing might create a new aristocracy, which might in turn undermine the very democratic values that initially stimulated American economic development. Today, as if to prove that free expression survives, some believe that Tocqueville's prediction has come true, that the market has subverted our democracy, while others believe that the free market is an essential safeguard against the erosion of democratic values.

How should we understand the relationship of the market economy and American democracy? Does a developed market economy encourage or discourage democratic values and institutions? And to the extent that an unfettered market economy creates forces inimical to democratic values, how can these forces be most effectively -- one might even say, economically -- countered?

These are the questions I hope to address in this lecture, which is divided into three parts. First, I will attempt to characterize the essential properties of the market economy. Then I will comment upon how the market economy both supports in part and undermines in part the central values of a democratic society. Finally, I will describe how collective action through democratic government can, in principle, temper the antidemocratic consequences of market forces. I will note that, in practice, political intervention in the market often promotes one democratic value, typically equality, over both economic efficiency and another democratic value, individual freedom. I will conclude by suggesting how public intervention in markets might be structured to achieve greater equality of opportunity or outcomes at minimal sacrifice of economic efficiency or freedom.

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I asked you to read four particular chapters of Adam Smith's *The Wealth of Nations* (Book I, chapters 1-3, and Book IV, chapter 2). Nowhere else will you find the essential features of a market economy so elegantly described.

Let's begin with the concept of voluntary exchange, or, in Smith's formulation: "the propensity to truck, barter, and exchange one thing for another."² Smith asserts

that this propensity is common to all humans possessed with the faculties of reason and speech. But we need not rely on Smith's anthropology to recognize that voluntary exchange is at the center, both logically and historically, of the development of the market economy. Voluntary exchange depends on the decisions of autonomous individuals. Each party to a transaction decides: I willingly surrender what I have for what you offer in exchange. Exchange improves the welfare of both parties; there are gains from trade.

Smith intuitively grasps the benign implications of this insight. We need not rely on the altruism of our trading partner. Each of us can pursue our independent self-interest and gain from trade. In Smith's famous formulation:

It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantage.³

The pursuit of self-interest has broader implications for the society as a whole. Consider this argument of Smith's concerning the allocation of capital, an argument that could be made equally well with regard to the allocation of labor:

Every individual is continually exerting himself to find out the most advantageous employment for whatever capital he can command. It is his own advantage, indeed, and not that of the society which he has in view. But the study of his own advantage naturally, or rather necessarily leads him to prefer that employment which is most advantageous to society.⁴

Smith continues:

... [I]t is only for the sake of profit that any man employs a capital in support of industry; and he will always, therefore, endeavor to employ

it in the support of that industry of which the produce is likely to be of the greatest value.⁵

By thus pursuing profit, in Smith's account:

... [E]very individual necessarily labours to render the annual revenue of society as great as he can. ... [H]e intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention.⁶

Smith's conclusion that an individual will allocate capital, or indeed his own labor, to the use that he values most highly follows directly from the assumption that the individual rationally pursues his self-interest. But the conclusion that total social benefit (in Smith's words "the annual revenue of society") will be thereby maximized requires more assumptions than are made explicit in the famous "invisible hand" passage.

Indeed, it was more than a century after publication of *The Wealth of Nations* that neo-classical economists worked out the precise conditions required for the social optimality of decentralized decisions by self-interested individuals. Most important of these additional assumptions is that every individual, in calculating the best use of his resources, faces a common set of prices for goods or services; in other words, we need market prices that signal a common social valuation. No person or business enterprise can have the power to influence these prices, and no good or service that creates utility for the individual or profit for the enterprise can be unpriced. These two assumptions rule out monopoly on the one hand and externalities (or missing markets) on the other. Finally, in the neo-classical analysis of Smith's "invisible hand" conjecture, the world is strictly static. That is, the resources available to each individual (labor, capital, and

land) are fixed, as is the technology of transforming those resources into useful products.

These conditions, along with a couple of technical ones, assure that the market economy allocates resources efficiently, in the sense first defined by the Vilfredo Pareto. That is to say, no individual can be made better off without making another worse off. This tendency to allocate a society's productive resources efficiently is one of the two most important advantages of a market economy.

Curiously, although the neo-classical economists focused almost exclusively on making rigorous this insight of Adam Smith, efficient resource allocation was not the central concern of his great treatise. Instead Smith focused on a larger question: what explains the differences in economic progress and material well-being among nations? The answer to this question is given in the first three chapters of Book I of *The Wealth of Nations* and elaborated throughout the treatise. Progress in material well-being depends most significantly on the advantages derived from ever-increasing specialization in production, which Smith calls "the division of labor."

Smith observes that specialization depends on the possibility of exchange, which frees the individual from self-sufficiency. He identifies three types of advantages from specialization: increased skill at a specific trade or subdivision of that trade, savings from eliminating movement from one activity to another, and the possibility of vast increases in productivity through mechanization. Smith recognizes that these potential benefits from the division of labor provide an incentive to innovate for both the worker on the job and the "philosopher," which is Smith's quaintly dignified way of describing

what we today would call an inventor or entrepreneur. Workers and so-called “philosophers” alike thus have two powerful incentives arising from their self-interested pursuit of material well-being: first, to reallocate labor and capital from lower to higher valued uses (given the existing technology of production), and second, to seek out new and improved technologies that increase society’s productive capacity.

Differences in material well-being among nations, according to Smith, depend upon the extent to which they have taken advantage of the potential benefits of the division of labor. And the principal constraint on the realization of such benefits is the extent of the market. The logic of this observation is simple: the benefit to be derived from a new piece of textile machinery, for example, depends on the size of the market for textiles. Some nations enjoy natural advantages from large populations and proximity to water transport, both of which create large potential markets.

Smith focuses much of his treatise on the policies of governments that inhibit the scope of exchange and the size of the market, and thereby limit the potential gains from new technology and the progress of material well-being. Over the past 225 years others have added refinements to his arguments against protective tariffs and inefficient forms of taxation, but Smith got the essential points right.

Among twentieth century economists, who principally chose to work on problems of static resource allocation, Joseph Schumpeter stands out as the most spirited defender of the true Smithian tradition. He first articulates a view of capitalist development in his 1912 book, *The Theory of Economic Development*. But his most succinct argument for identifying dynamic rather than static efficiency as the central

advantage of a market economy is given in VII of *Capitalism, Socialism, and Democracy*, written during the Second World War. Here he rails against those who denounce capitalism on the grounds that monopolistic and oligopolistic firms distort the allocation of resources away from the competitive, statically efficient, outcome. Instead he observes that the market economy is dynamic and evolutionary in its nature – that the technology and organization of production, as well as the nature of products themselves is constantly changing. To evaluate an economy's performance simply with reference to static efficiency criteria is to miss the most important measure of economic performance – the rate at which material well-being is increasing.

To Schumpeter, the competition that matters is not competition to win customers within an existing market, but competition for “the new commodity, the new technology, the new source of supply, the new type of organization.”⁷ This process of “creative destruction” shapes the economy in far more profound ways than any competition within existing markets; it also produces advances in productivity and material well being far in excess of the benefits attributable to the efficient allocation of existing resources. For example, most credible empirical estimates, crude as they are, of the economic losses from inefficient resource allocation range from less than one to about two percent of a fixed national product.⁸ Yet the benefits from new technologies and new products might be conservatively reckoned to increase per capita national product by as much as one or two percent per year. Today, in the midst of an Internet Revolution, it seems impossible to deny that the dynamic benefits of the market economy far outweigh its static efficiency advantages.⁹

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We have just described the two principal advantages of a market economy – its tendency toward efficient resource allocation and its tendency to foster innovation. We are now prepared to ask whether the workings of the market economy are favorable or inimical to the existence and survival of democracy. But first let us pause to consider briefly what the market requires from the political order in which it is embedded.

The answer to this preliminary question is pretty simple. The market rests on a foundation of voluntary exchange among self-interested individuals and the incentives that the possibility of voluntary exchange creates. For such a system to function, property rights must be well defined (I can not trade what I do not own), and contracts, agreements among the parties to an exchange, must be enforceable. So the simple answer, as spelled out a century ago by Max Weber, is that markets require a rule of law – which entails both well-defined rules and a system to enforce those rules.¹⁰ As a logical proposition, markets do not require democratic governments, only a stable and predictable rule of law, which, in theory, can exist in an authoritarian regime. France under Napoleon comes to mind. But, as an empirical proposition, markets have performed best in democratic regimes.

Accepting the view that political order is good for the market, we now ask if the market is good for democracy. I want to address this question by focusing on the two central values of American democracy – freedom and equality. Because the connection is so manifestly self-evident, I pass quickly over the relationship between the market and one additional defining characteristic of American democracy noted by Tocqueville

and favored by Emerson and Whitman – self-reliance. This characteristic American virtue is intrinsic in Smith’s philosopher-entrepreneur – the rational actor who seizes every opportunity to maximize the value of his resources. There can be little doubt that the market, with the incentives it provides to the alert and reflective, promotes self-reliance. By the same logic, the market promotes self-invention, which Dean Kronman describes as the quintessential aspiration of the democratic soul.

Less obviously, I will argue that the relationship between the market economy and political freedom is entirely symbiotic; the health of one promotes the health of the other. In contrast, the relationship of the market economy and equality is much more problematic. On the one hand, the market provides for radical equality of opportunity, but on the other hand markets are indifferent to equality of outcomes. Depending on technology and other exogenous factors, markets can increase or decrease equality in the distribution of income and wealth.

I have already noted that voluntary exchange is logically and historically at the center of the market economy. In theory, individuals have complete freedom – to offer labor services where they choose, to employ capital in a preferred use, to invest in education and training, to purchase food, shelter, clothing, and other consumption goods as they wish. In practice, freedom of action is constrained by the resources available to the individual; it is in this sense that prosperity expands our freedom. Still, within the limits of their resources, individuals are free agents in the market economy. They alone choose where to live, where to work, and what to eat. One need only look at the experience of the Soviet Union from the 1920s through the mid-1980s – where

residences and occupations were assigned and food was frequently rationed – to recognize that such freedom has not been universal, even in modern times.

The freedom of action inherent in market activity supports and reinforces freedom in other spheres of life. If we can choose our occupation by selling labor services in the market, should we not be free to choose, subject to appropriate entry standards, the course of study we pursue in publicly supported educational institutions? If we are free to purchase books, magazines, newspapers, and cable television programming as we wish, should sellers not be free to publish opinions of any kind? Indeed, should we not be free to express our own opinions? My point is simply this: our freedom in the market place accustoms us to expect freedom in the political and social realm.

Milton Friedman offers another reason why economic freedom is conducive to political freedom.¹¹ In the market economy, the decentralization of decision-making tends to distribute power widely; there are more than two hundred billionaires, several million millionaires, and hundreds of very large, powerful corporations in America. In the political realm, however, power is more concentrated. Potentially, the leader of the state, even if democratically elected, has immense coercive power that is unavailable to economic agents who must compete in the market place. Thus, Friedman claims that the dispersed sources of power created by the market economy act as a check and balance against excessive exercise of the state's power to coerce. No doubt Friedman exaggerates the state's power to coerce by failing to acknowledge, on the one hand, that political power in our democracy is not in fact concentrated in a single leader and, on

the other, that actions of the state can be enabling instead of coercive. Still, there is something to the argument that having a nonpolitical mechanism, the market, distribute power may help to preserve freedom, relative to a regime in which all power is created and distributed through political processes.

The relationship of the market to equality, the other principal democratic value, is less felicitous. On the one hand, just as the market promotes freedom, it creates a radical equality of opportunity. In principle, any individual with a good idea and access to capital can reap rewards in Schumpeterian competition. Historically, access to capital may have been limited on grounds of race and gender, but capital (especially in the form of credit) has always been widely available to American farmers and small businesses, whether start-ups or family firms of longstanding. Although in the aggregate there has been no systematic tendency toward income equality in the last century, individual mobility, from one income level to another, from one social class to another, has been persistently high throughout American history. Extensive empirical work supports this conclusion,¹² although much of it is, in my view, conceptually flawed. The typical studies of mobility look at an individual's movement from one income class to another. But it is well known that income tends to rise and then fall over the life cycle of most individuals. We need studies that control for these life cycle effects or, better still, finesse them entirely by looking at intergenerational mobility, rather than an individual's progress from year to year or decade to decade. One interesting piece of evidence: of the 400 wealthiest Americans identified annually by

Forbes magazine, only one-third inherited their wealth or built their fortunes on a nucleus of inherited wealth.¹³

Now we come to the most disconcerting consequence of the market economy. In the process of economic growth through “creative destruction,” the market creates losers as well as winners. In dynamic competition, the race goes to the swift, and many are left behind.

The data yield three robust conclusions. First, there is significant inequality in income and wealth among Americans. Second, during the course of the twentieth century the extent of inequality has fluctuated; there has been no systematic tendency toward either increased or decreased inequality. Third, inequality has increased significantly since the early 1980s. Let me review the data and offer some interpretations.

Let’s begin with the current extent of inequality. In the mid-1990s, the top 5% of families received just over 20% of all pre-tax family income;¹⁴ the top 0.5% of families received just under 10% of all such income.¹⁵ To give these figures some life, consider a random sample of 200 American families. By making a few simple calculations we can infer that, on average, the ten highest income families (that is, the top 5% of the sample) would earn average incomes of \$172,000, almost five times larger than that of the average income of the other 190 families (roughly \$36,000). The top family alone, in any random sample of 200, would, on average, have an income equal to \$860,000, nine times the average income of the next nine families (\$96,000), or twenty-four times the \$36,000

average income of the bottom 190 families. Household wealth is even more unequally distributed. In 1995, the top 1% held 38% of all wealth; the top 5% held 60%.¹⁶

Over the course of the century, there has been no sustained trend in inequality, but rather fluctuations. Curiously, these fluctuations display no consistent correlation with the overall growth in incomes. To summarize, the share of family income going to the top five percent of families was 23% just after the First World War. It rose during the prosperity of the 1920s to a peak of 26% (1928-32) then fell during the Depression years to reach 23% again on the eve of the World War II (1939-40).¹⁷ In contrast to the boom of the 1920s, the boom induced by the Second World War led to reduced inequality. By 1947, the top five percent of families had only 17.5% of family income. The share of the richest families fell gradually throughout the entire era of postwar growth, to about 15%, and it did not increase during the slump of the 1970s. As the stock market recovered in the 1980s preceding the acceleration of overall economic growth in the 1990s, income inequality began to rise again, with the share of the top five percent of families reaching 18% by 1989 and topping 20% by 1996.¹⁸ It is particularly alarming that the share of income going to the very richest families has risen dramatically in recent years. The share going to the top 0.5% fluctuated between 5 and 6% of total family income from 1960 to 1982. Thereafter, it rose precipitously to between 9 and 10% in every year since 1988.¹⁹

Many factors have contributed to fluctuations in the extent of inequality. At the risk of oversimplification, I would suggest that the steady gradual reduction in inequality between 1945 and 1970 was probably most significantly influenced by the

movement of lower income farmers and farm workers to higher paying urban jobs. Underlying this change in the distribution of jobs, however, were steady increases in agricultural productivity and rapid growth in the production of automobiles, which created a derived demand for materials used in the production of automobiles, such as steel, as well as demand for complementary products such as gasoline. It is sometimes asserted that the Interstate Highway Act of 1956 was the most important piece of post-World War II social legislation, because it suburbanized our cities, altered the relationship of home and workplace, and restructured the use of leisure time. It may also have reduced inequality in the distribution of income.

By contrast to this somewhat speculative inference, the factors contributing to increasing inequality over the past two decades have been intensively studied. It is widely agreed that the most important source of rising inequality is technological change that has significantly increased the premium paid for highly educated, skilled workers. In fact, the wage premium earned by those with a college degree rose from 31% to 53% between 1979 and 1993, even as the proportion of workers with a college degree increased from 22 % to 29%.²⁰ It should not be surprising that the rise in the relative pay of educated workers began just as the personal computer was introduced. Empirical investigation confirms that the premium paid for educated workers is highest in precisely those industries making the most intensive use of computers.²¹

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We have now examined, on the positive side, the market's reinforcement of democratic freedoms and its tendency to create opportunity for upward mobility. On

the negative side, we find that market forces have caused increases in the inequality of income and wealth over the past two decades. Excessive inequality threatens the philosophical basis of democracy, which counts each individual as an autonomous agent, capable of self-invention.

Our American democracy appears willing to tolerate a substantial degree of inequality, but we have nonetheless used political means, acts of government, to temper the tendency to inequality that market forces produce. I will shortly discuss efforts to equalize incomes through progressive taxation and various welfare programs. But first we should note that inequality of income and wealth is only one of many consequences of market activity that might be viewed as adverse by a majority of citizens. Excessive air and water pollution, insufficient workplace and product safety, and the use of child labor come to mind as additional examples.

Therefore, I want to turn next to how politically undesirable aspects and outcomes of market activity are controlled. In practice, many adverse consequences of market activity are prevented or meliorated by systems of industrial self-regulation. The financial and cost accounting standards used by corporations and even non-profit organizations are a notable example of self-regulation, as are various codes of conduct adopted by industry associations. But I set this subject aside to focus instead upon the action of government to ban, regulate, discourage, or otherwise constrain politically undesirable market processes and outcomes.

Here's the argument. First, in our democracy, governmental intervention in markets is not rare; we do it all the time, with many different political objectives in

mind. We intervene by prohibiting market activity in some cases, by taxing and subsidizing, and by promulgating and enforcing vast numbers of regulations regarding health, safety, environmental quality, information disclosure, employment conditions, and workers' rights – to give a very incomplete summary. Our interventions are not usually structured to insure the best possible economic performance; efficiency is usually sacrificed in favor of political objectives. Our interventions are sometimes corrosive of important democratic values as well, such as personal freedom and self-reliance. Still, it is possible in principle to design, though not always possible in practice to achieve, interventions in the service of democratically determined political objectives that rely strongly on economic incentives to achieve their goals. Such interventions, if well conceived, can both minimize inefficiency and preserve a significant degree of freedom and self-reliance.

Let's start with the most drastic form of government intervention in the market – the prohibition of trade. Such intervention is often the simplest way to prevent individuals from selling entitlements, or rights, that we distribute universally as a matter of deliberate political choice. Among such universally distributed entitlements are the right to vote, the right to trial by jury, the right to marry one and only one spouse, and the right to public education as well as police and fire protection services.

Prohibiting the trading of rights inhibits the personal freedom of both buyer and seller, and it is economically inefficient. We do not allow an individual to sell her right to vote to another person, even if the second person's willingness to pay far exceeds the minimum price the seller would accept. Under such circumstances, both parties would

be better off by trading. The seller presumably would not sell unless she valued the cash more highly than her right to vote, and the buyer would not buy unless she valued having a second vote more highly than the dollars paid for it.

Presumably, we bar the trading of votes because in the political domain we collectively assign absolute primacy to equality. Although we tolerate what many believe to be excessive expenditures to influence voting, we hold sacrosanct the principle that each citizen's right and responsibility to participate in collective decision-making is inalienable. We insist upon one person, one vote even at the cost of reduced freedom and economic inefficiency.

I digress briefly to note that most other prohibitions of trade are not so easily explained by reference to consensus on a clearly implied hierarchy of values. These prohibitions reflect instead the will of a political majority. We typically recognize that there are competing values involved, and we differ on how heavily we weigh the loss of personal freedom and economic efficiency that prohibition entails. Consider the current prohibitions on the sale of tobacco to minors, on the sale of marijuana, on the sale of pharmaceuticals approved and marketed in Europe but not yet cleared by the U.S. Food and Drug Administration, and on the sale of alcoholic beverages to individuals between the ages of 18 and 21. In each of these cases prohibition has costs and benefits. I would conjecture that most of you favor one or more of these prohibitions and oppose one or more. On the other hand, I would be surprised if any of you believed that we should permit the buying and selling of votes.

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Declaring certain entitlements universal and banning market transactions in them is only one of the approaches available to a democratic government seeking to compensate for the market's disregard for equality. We can also reduce inequality by levying taxes and awarding subsidies at rates that depend on income. We call a tax "progressive" when the ratio of tax payments to before-tax income rises with income. A progressive tax tends to equalize the distribution of income. We likewise call a subsidy progressive when the ratio of benefits to before-tax income falls as income rises. This, too, tends, to render the distribution of income more equal.

Were the U.S. tax code designed simply to reduce inequality while raising revenue for the government, it would be a relatively efficient instrument for the purpose. In theory, high marginal tax rates reduce the incentive to work and thus reduce national output. In practice, however, changes in marginal tax rates in the range of recent U.S. experience have not had a substantial impact on labor supply, except in the case of those on welfare -- an issue to which I will return. In fact, the major inefficiencies in the tax code arise from provisions that serve political objectives other than reducing inequality -- such as encouraging home ownership and favoring certain types of investments and holding periods over others.

How well, then, do Federal taxes serve the objective of reducing inequality? The answer has two parts. First, the Federal income tax is highly progressive, and taken alone its effects would have a significant effect on inequality. The average taxpayer with less than \$20,000 pays no taxes and receives a net subsidy. Taxpayers in the \$20,000 to \$30,000 income range pay only 2% on average, while those with incomes

between \$75,000 and \$100,000 pay 11% and those with incomes above \$200,000 pay 24%. Second, there are several other important Federal taxes on individuals. These include payroll taxes for Social Security and Medicare paid by every wage earner and employer, unemployment insurance for the self-employed, and excise taxes on various consumption goods such as cigarettes and gasoline. These taxes are less progressive than the income tax; some are even regressive. For example, there is no social security tax on income above \$76,200. When all federal taxes are taken into account, the equalizing effects of the income tax are significantly attenuated. Average tax rates rise to 13% for incomes between \$20,000 and \$30,000, 23% for incomes between \$75,000 and \$100,000, and 28% for incomes above \$200,000 – still progressive, but much less progressive than the income tax alone.²² This modest degree of overall progressivity in Federal taxes reduces inequality, but not dramatically.²³

In recent years, efforts to reduce inequality have focused on subsidizing those at the lower end of the income distribution rather than on taxing the rich. These subsidies take many forms –Medicaid, food stamps, housing allowances, job training programs and cash payments. The long and complicated evolution of the many Federal and state programs to assist the poor has reflected shifting views of both the causes and appropriate remedies for poverty. Some of the programs that were established or expanded in the 1960s, especially when taken in combination, created massive inefficiencies and horrendously perverse incentives for welfare recipients. In this lecture I can't possibly summarize the entire history of these deficiencies and the efforts at reform culminating in the passage of major Federal legislation in 1996.²⁴ Let me just

make and illustrate one observation: Although the recent reforms have been far from perfect, they have gone some distance toward providing constructive and efficiency-enhancing incentives for welfare recipients.

Setting aside the elderly who are in poverty, and whose Social Security benefits are augmented by cash grants from the Supplemental Security Income program, the majority of welfare recipients are female heads of households, many of whom have children. Prior to the numerous reforms instituted by individual states in the 1980s, many of these single mothers received food stamps, subsidized housing, and cash grants from the Aid to Families with Dependent Children (AFDC) program. Eligibility for each of these programs was means-tested, and each used separate and distinct formulas to phase out benefits as the earned income of recipients increased. In many situations, the combined benefits lost when recipients entered employment exceeded the after-tax income from earnings. In other words, welfare recipients often faced marginal tax rates in excess of 100%. In other circumstances, the tax rate was below 100% but still very high, in excess of the marginal tax rates facing the very highest income individuals in the nation. In fairness, not all welfare recipients faced such perverse incentives, but many did. And to the extent that those who did remained on welfare for protracted periods, their dependency might be more fairly represented as the pursuit of self-interest than as a moral failing. Intended to protect one democratic value – equality - our poorly designed welfare programs severely undermined another – self-reliance - while assessing an additional toll on economic efficiency.

The 1996 reform legislation sought to reduce dependency with both carrots and sticks.²⁵ Congress provided to the states two bloc grants to replace the AFDC cash grants to individuals and certain other child support programs. The first bloc of funds was for distribution to eligible recipients subject to two new requirements. First, to remain eligible for payments, able-bodied recipients must work at least part-time after two years on welfare. Second, recipients lose eligibility for payments after five years, although states can exempt up to 20% of their caseload from this provision. The other bloc grant represented a substantial increase in funds to subsidize the child care expenses of low income working parents.

Enacted separately and often overlooked in the public discussion of welfare reform was a major improvement in the terms of the Earned Income Credit, a feature of the tax code first enacted in 1975.²⁶ The Earned Income Credit allows refunds against Federal income taxes, calculated as a percentage of a taxpayer's first dollars of earned income. As income rises, the credit reaches a maximum at a certain threshold income. The credit then remains constant up to a second, higher income threshold. Then the credit is phased out, diminishing gradually to zero at a third, higher level of income. The size of the credit was very small in the early years, not nearly large enough to adequately counter the perverse incentives faced by welfare recipients who sought work. But successive improvements in 1987, 1990, 1993, and 1996 changed the incentives substantially.

To illustrate, a single mother with two children is now allowed a 40% credit against the first \$9,540 she earns each year, which is roughly the equivalent of working

at the minimum wage for 35 hours a week. In such a situation, the wage earner would receive not only the \$9,540 she earned but an additional \$3,816 for a total of \$13,356. Needless to say, this provides a substantial incentive for welfare recipients to take employment when it is available. Last year over 18 million families were expected to receive credits totaling \$30 billion. Expenditures under this program now exceed cash payments under the AFDC and successor state programs, and they nearly equal the subsidy provided by food stamps.

The expansion of the Earned Income Credit to its current level was an important step toward making welfare reform efficient rather than punitive. But the program still has a major design flaw; the credit is phased out at a rate that is much too high. To continue with our hypothetical mother of two, for every dollar of earned income in excess of \$12,460, she would lose 21 cents of earned income credit, until no benefit remains. This phase out provision, in combination with normal income and payroll taxes, creates an effective tax rate of 42.2% on earned income between \$12,460 and \$30,000. Eliminating the phase out or spreading it over a much wider range of income could alter this perverse incentive.

Permit me a brief historical digression. If the Earned Income Credit were reformed as I just suggested, the program would resemble even more closely the negative income tax proposals advanced in the 1960s by both James Tobin on the left and Milton Friedman on the right.²⁷ The idea, when earnestly put forward by George McGovern in his 1972 presidential campaign, was ridiculed by his opponents as a “\$1,000 giveaway” and contributed to his crushing defeat. It is a lovely irony that the

Earned Income Credit was first enacted, below the radar screen of the national media, only three years later.

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We have thus far explored two types of government intervention in the market economy. Prohibition of trading, we concluded, is sometimes an expression of the absolute priority of one democratic value, such as equality in the case of voting rights, or public health in the case of cigarette sales to minors. In these cases, we deliberately subordinate both economic efficiency and conflicting democratic values, such as personal liberty. Taxes and subsidies, by contrast, often embody what Arthur Okun called “uneasy compromises”²⁸ between political objectives and economic efficiency. In fact, the compromises are often multi-sided, reflecting more than one political objective. The U.S. tax code, for example, displays, on the one hand, a desire of the Congress to reduce inequality through the progressive income tax, which is compromised, on the other hand, by a desire to insure “fairness” in sharing the burden of payroll taxes. In the context of welfare reform, we have also seen that, without compromising the primary political objective of reducing poverty, it is possible in principle (though only imperfectly in practice) to improve economic efficiency and even achieve a secondary political objectives – greater self-reliance.

I would like to explore a third type of government intervention that holds great promise for correcting, at minimal cost, one of the major deficiencies of the market economy – its inability to economize on resources that are owned in common, such as

the earth's atmosphere, oceans, and inland waters. I refer to the possibility of using the properties of markets to reduce pollution as efficiently as possible.

Most pollution control policies implemented since the enactment of the Clean Air Act in 1970 mandate one of two approaches. The first is to require the use of specific pollution control equipment, such as catalytic converters in automobiles in the early 1970s. The second is to set specific limits on the rate of emissions from a particular source, such as pollution per unit of fuel burned by electric utility plant or an automobile. Both approaches have serious disadvantages. Requiring specific equipment can be a needlessly expensive way to achieve a desired result. For example, catalytic converters proved to be more expensive and less technically effective than making cars out of lighter materials and improving the efficiency of the combustion process itself. Setting limits on the rate of emissions from a particular source fails to take account of the wide disparities in the cost of reducing emissions from source to source. This is especially problematic for electric power plants, where pollution can be reduced by several means, including switching to cleaner fuels and adding filtering equipment (called "scrubbers") to the smokestack. For plants close to the source of low sulfur coal, for example, the cost of meeting emissions standards can be much lower than for others who must add a scrubber. In consequence, it has long been believed that the cost of complying with source-specific emissions limits is much higher than would be necessary to achieve any given regional or national target for aggregate reductions in emissions. In fact, the conventional practice of specifying an allowed *rate* of emissions

per unit of fuel used rather than a total annual allowance prevents the achievement with certainty of national goals for aggregate emissions reductions.

Economists solved these problems, conceptually, decades ago. By specifying a national limit on total annual emissions of a particular substance, let's say sulfur dioxide, and issuing tradable permits, a market will emerge that sets a price on the right to emit one ton of sulfur dioxide. Let's assume that the total amount of rights issued is less than the total amount of pollution that would be emitted without some remedial action. Every public utility can then ask itself the question: am I better off using the rights I am issued or selling them at the market price?

The answer is: I will sell my right to emit one ton of SO₂ if its market price exceeds what I can earn by producing as much electricity as I can generate while emitting one more ton of SO₂. But notice this: the calculation changes if I can produce more electricity for every ton of SO₂ emitted. So I have an incentive to look for the lowest cost means of reducing my pollution per unit output. Without getting technical, let me simply assert that what happens is this: those who find it very costly to control pollution will sell their rights to those who find it less costly. With tradable rights, the utilities will minimize the total expenditure on reducing emissions to whatever level is established as the national target.

Now here is the big surprise: in 1990 Congress amended the Clean Air Act to establish just such a scheme for trading the rights to emit sulfur dioxide. The market for rights was established in 1993 and limits on aggregate emissions were established for every year beginning in 1995. The rights to pollute, called allowances, are dated by

year. Unused rights can be banked for future use, but no borrowing from future allocations is permitted.

The operation and effects of this market have been thoroughly studied and documented in a recently published study by Paul Joskow and his colleagues at MIT.²⁹ Without overwhelming you with details, suffice it to say that the market is working smoothly. The annual emissions targets, which called for a one-third reduction from 1990 levels by 1997, were met in the aggregate, and every participating utility was in compliance. Nearly two-thirds of the reductions were achieved by switching fuels and just over one-third by installing control equipment. The MIT study estimates that, based on the evidence to date, the total cost of achieving the targeted reductions by the year 2007 will be approximately \$16 billion. This is \$20 billion less than it would have cost to achieve the same aggregate target by simply imposing quotas on each individual plant and not permitting the trading of rights.

One puzzle remains. How did such a rational and efficient means of achieving a political objective emerge from the legislative process? The MIT study suggests a serendipitous convergence of interests in 1989-90. The particular problem created by sulfur dioxide emissions was acid rain that threatened destruction of lakes, forests, and associated species in the northeastern United States. Several attempts to impose stringent conventional regulations on SO₂ emissions had failed in Congress during the 1980s. But President Bush had campaigned on a platform of “looking to the market” for environmental solutions. He also had a summer residence in Maine, and his chief of staff, John Sununu, had been governor of New Hampshire. In the Senate, the majority

leadership passed from Robert Byrd, from the coal producing state of West Virginia, to George Mitchell of Maine. Presumably, the coalition of those with a regional interest in eliminating acid rain, many of whom were liberal Democrats, and Republicans predisposed to a market-oriented approach was sufficient to defeat legislators representing coal producing regions and midwestern states with coal-burning power plants.

* * * * *

Perhaps I am guilty of excessive enthusiasm for rationalizing public policy. A partial welfare reform and one successful pollution-trading scheme do not necessarily foreshadow a revolution. Everyone knows, so the familiar argument goes, that public policy is not the product of rational design, but the outcome of struggle between powerful interest groups. Those with interests to protect and money to spend will manage to subvert attempts at reform, and use them to reinforce and strengthen their power.

I can only respond that skepticism about the efficacy of democratic governance has long had a place in American life. But so, too, has optimism about the power of ideas to improve human welfare. I refer not only to the optimism of the founders. I refer also to the optimism of the freedom riders – black and white -- who rode buses and led marches to integrate the South forty years ago. I refer to the optimism of the small and dedicated band of writers, naturalists, and lawyers who put environmental quality on the national agenda thirty years ago. On a smaller and more local scale, I

refer to the optimism that has impelled this university to reorient and reorganize itself to contribute substantially to the betterment of the community that surrounds it.

The market is the most powerful instrument for improving material well-being yet devised by humanity. But it is an imperfect instrument that rewards individuals unequally and fails to economize on unpriced goods such as clean air and water and the health of future generations. There is a role for democratic government to remedy the deficiencies of market outcomes, and there is also good reason to design remedies that achieve their objectives without compromising the incentives for socially productive activity that the market provides. That we've not done such a great job of this in the past should not deter us. There will be abundant opportunities for creative policy design as America confronts the challenges of the new century.

To reinforce this last point, I leave you with the words of Walt Whitman. I quote from the essay that we commemorate in the title of this Tercentennial DeVane Lecture series – *Democratic Vistas*:

America, filling the present with greatest deeds and problems,
cheerfully accepting the past, ... counts ... for her justification and success
... almost entirely on the future. Nor is that hope unwarranted. ... For our
New World I consider far less important for what it has done, or what it
is, than for results to come.

¹ Alexis de Tocqueville, *Democracy in America*. New York: Vintage Books, 1945, Volume II, pp. 165-66.

² Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*. Chicago: University of Chicago Press, 1976, p. 17.

³ *Ibid.*, p.18.

⁴ *Ibid.*, p. 475.

⁵ *Ibid.*, p. 477.

⁶ *Ibid.*

⁷ Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy*. New York: Harper, 3rd ed., 1950, p. 84.

⁸ For a review of these estimates, see F.M. Scherer and David Ross, *Industrial Market Structure and Economic Performance*. Boston: Houghton Mifflin, 3rd ed., 1990, pp. 661-67.

⁹ Still, in a context where Schumpeterian arguments would be most relevant – the recently decided *U.S. v. Microsoft* case – the defendants, not to mention the judge, gave too much deference to static efficiency arguments and failed to seize the opportunity to redefine antitrust law in Schumpeterian terms. But this is another story.

¹⁰ See especially Max Weber, *Economy and Society*. New York: Bedminster Press, 1968, Volume I, pp. 311-338.

¹¹ Milton Friedman, *Capitalism and Freedom*. Chicago: University of Chicago Press, 2nd ed., 1982, pp. 15-19.

¹² Peter Gottschalk and Sheldon Danzinger, "Family Income Mobility – How Much Is There and Has It Changed," Boston College, Department of Economics Working Paper #398, December 1997.

¹³ *Forbes*, October 9, 2000, p. 362.

¹⁴ The calculation is based on pre-tax income, excluding capital gains. Non-monetary income – such as employer provided health benefits, Medicare, Medicaid, and food stamps -- is also excluded. Frank Levy, *The New Dollars and Dreams*. New York: The Russell Sage Foundation, 1998, pp. 199, 203.

¹⁵ This calculation is based on standardized pre-tax adjusted gross income, excluding capital gains. See Daniel R. Feenberg and James M. Poterba, "The Income and Tax Share of Very-High Income Households, 1960-1995," *American Economic Review*, 90(2), May 2000, pp. 264-70.

¹⁶ Edward N. Wolff, "Recent Trends in the Distribution of Household Wealth," *Journal of Economic Perspectives*, 12(3), Summer 1998, p.136.

¹⁷ Simon Kuznets, *Shares of Upper Income Groups in Income and Savings*. New York: National Bureau of Economic Research, 1953, p. 585.

¹⁸ The data covering 1947 through 1995 are drawn from Levy, *op. cit.*, p. 199. Levy and Kuznets use different methods for calculating and ranking family incomes. Thus, the direction of movement in the pre-war and post-war data is accurately portrayed, but the pre-war income shares of the top 5% should not be directly compared to the post-war shares. Where the data overlap, however, in 1947, the share calculated by Kuznets is only 0.1% lower than Levy's.

¹⁹ Feenberg and Poterba, *op. cit.*

²⁰ Peter Gottschalk, "Inequality, Income Growth, and Mobility: The Basic Facts," *Journal of Economic Perspectives*, 11(2), Spring 1997, pp. 29-31.

²¹ See David H. Autor, Lawrence F. Katz, and Alan B. Krueger, "Computing Inequality: Have Computers Changed the Labor Market?" *Quarterly Journal of Economics*, 113(4), November 1998, pp. 1169-1213.

²² Joint Committee on Taxation, U.S. Congress, *Distribution of Certain Federal Tax Liabilities by Income Class for Calendar Year 2000* (JCX-45-00), April 11, 2000.

²³ See Levy, *op. cit.*, pp. 205-208. Changes in the tax code in the 1980s and early 1990s have had contained both progressive and regressive elements and have neither mitigated nor accentuated the trend toward greater inequality over the period. See Peter Gottschalk and Timothy Smeeding, "Cross-National Comparisons of Earnings and Income Inequality," *Journal of Economic Literature*, 35(2), June 1997, p. 670.

²⁴ The Personal Responsibility and Work Opportunity Reconciliation Act (Public Law 104-193).

²⁵ For details on the recent reforms, see Committee on Ways and Means, U.S. House of Representatives, *Summary of Welfare Reforms Made by Public Law 104-193: The Personal Responsibility and Work Opportunity Reconciliation Act and Associated Legislation*. Washington: U.S. Government Printing Office, November 6, 1996.

²⁶ For details, see Committee on Ways and Means, U.S. House of Representatives, *Green Book, 2000*. Washington: U.S. Government Printing Office, 2000, pp. 808-813.

²⁷ James Tobin, "The Case for an Income Guarantee," *Public Interest*, No. 4, Summer 1966, pp. 31-41, and Milton Friedman, *op. cit.*, pp. 190-95. The proposal was given serious consideration by the first Nixon administration. The difference between the earned income credit and the negative income tax is that the former provides a stronger incentive to work at the very lowest levels of income, while the latter gives a lump sum credit to all and imposes a flat tax on all earned income.

²⁸ Arthur M. Okun, *Equality and Efficiency: The Big Tradeoff*. Washington: The Brookings Institution, 1975, p. 1.

²⁹ A. Denny Ellerman, Paul L. Joskow, Richard Schmalensee, Juan-Pablo Montero, and Elizabeth M. Bailey, *Markets for Clean Air: The U.S. Acid Rain Program*. New York: Cambridge University Press, 2000.