Social Welfare, State Intervention, and Value Judgments

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The state can promote efficiency—that is, the production of more goods and services; in a second stage, it can, if deemed necessary, redistribute the supplementary output made possible by its efficiency-enhancing interventions. Efficiency and distribution are two different issues, from both a conceptual and a public-policy viewpoint. If redistribution obviously requires value judgments, wealth creation does not because having more goods is always desirable.[1] As the conventional wisdom puts it, we have to bake the cake first and cut the slices later.

So thought many economists until the 1950s. By that time, however, the "new welfare economics" had all but destroyed these conclusions and shown that value judgments are also required for creating wealth—indeed, for even defining it. Although the bases of this conclusion is now unquestioned among scholars cognizant of neoclassical welfare economics, its implications seem to have escaped most people, including many economists.

These implications are monumental because if wealth creation by the state is not neutral, but requires values judgments as much as income redistribution, the justification for all economic interventions by the state is questionable. Interestingly, this conclusion is not what many, perhaps most, developers of welfare economics

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1. I use *wealth* in the informal sense of income. In a more formal sense, income is the return on wealth.

The Independent Review, v. XI, n. 1, Summer 2006, ISSN 1086–1653, Copyright © 2006, pp. 19–36.

thought they were proving: they thought they were demonstrating that the free market cannot maximize real income, and they were trying to establish the conditions under which the state can intervene to do so. As Melvin Reder has observed, "To a considerable extent, welfare (and related) theorizing in the 1930's and '40's was an attempt to show the variety and importance of the circumstances under which *laissez-faire* was inappropriate" (qtd. in Rothbard 1956, 249). Whatever their conclusions about market efficiency, the theorists of the new welfare economics quite clearly demonstrated that the state must necessarily fail in its efficiency-maximizing task unless it rules out failure by resorting to its own arbitrary value judgments. In other words, if the state promotes efficiency, it is only efficiency as the state arbitrarily defines it by taking from Peter and giving to Paul. To demonstrate this conclusion is my objective in this essay.

The New Welfare Economics

The new welfare economics, which is now orthodox welfare economics, was born in the late 1930s, with the work of theorists such as Nicholas Kaldor (1908–86), Tibor Skitovsky (1910–2002), and John Hicks (1904–89). Paul Samuelson (1915–), with his extraordinary analytical skills (whatever one thinks of his politics), was soon to join the demolition team of the new welfare theorists. The new welfare economics brought two major changes in the economic study of social welfare (Blaug 1968, 592–99; Mishan [1960] 1968).

First, this analysis abandoned any notion of measurable, cardinal "utility" (or satisfaction), relying instead on Hicks's (1939) reformulation of neoclassical economics in terms of purely ordinal utility and Vilfredo Pareto's definition of social welfare. Ordinal utility refers to a mere ranking of different bundles of goods and services in an individual's preferences. An individual's utility function gives this ranking by using an index in which the numbers have no meaning other than "more preferred" (for higher numbers), "less preferred" (for lower numbers), or "indifferent" (for equal numbers). We can say only that a given bundle of goods is preferred to another given bundle, or the other way around, or that the two bundles are indifferent, and the numbers used to express the relation do not matter, provided that higher numbers attach to more preferred bundles. Neoclassical economists express this condition by saying that an individual's utility function is "unique except for a monotonic transformation" (Henderson and Quandt 1971, 46). Because utility is only a ranking, interpersonal utility comparisons are meaningless.[2] When two individuals exchange an orange for an apple, we can say only that the one who parts with his apple to get an orange ranked the latter more highly than the former, whereas the ranking was the reverse for the other party. There is no way to know whether one gets more or less satisfaction than the other, whether one is made "better off" more

2. White (1995) provides a good review of why interpersonal comparisons of utility are impossible.

than the other: we know only that each benefited from the exchange according to his own preferences.

The impossibility of interpersonal comparisons of utility immediately raises a major problem: How can we talk of "social welfare" if we can't add the utility of the individuals who gain (from, say, new electronic calculators) and deduct the utility of those who lose (the previous manufacturers of slide-rules)? How can we calculate social welfare from the welfare or utility of the individuals who make up society? Because we can't compare or, a fortiori, add utilities, we can define society's welfare (also called "society's real income") only when there is unanimity: social welfare increases when at least one individual is better off and no one is worse off, a condition known as *Pareto improvement,* in recognition of Italian economist Vilfredo Pareto (1848-1923), who invented this approach. Alternatively, social welfare decreases when at least one individual is worse off and nobody is better off—a *Pareto deterioration.* When at least one individual gains and at least one other loses, we cannot make any welfare judgment in the Pareto sense. The Paretian concepts allow us, albeit in a restricted way, to make some individualistic sense of the concept of "society's welfare," an otherwise ascientific and troubling concept inasmuch as society is nothing apart from the individuals who compose it. The modern notion of economic efficiency is borrowed from Pareto (Blaug 1968, chap. 13): an action or a policy is efficient if it brings about a Pareto improvement; a situation is efficient if all possible Pareto improvements have been made so that nobody can be made better off without at least one individual being made worse off. An efficient situation is often called *Pareto optimal.* Thus, as a first approximation, a policy that benefits some individuals and harms others cannot be said to be a Pareto improvement, to be efficient.

However—and this is the second change the new welfare economics made—we might want to extend the concept of Pareto improvement to *potential* Pareto improvement. We then say, à la new welfare economics, that a public policy increases social welfare, even if some individuals have lost, provided that the ones who gained have gained enough to compensate the losers for their losses. If the users and makers of electronic calculators gain so much that they can buy off the unemployed makers of slide-rules, we have a potential Pareto improvement and thus an increase in social welfare, even if the compensation is not actually paid. This example suggests one reason for using potential Pareto improvement and thus potential compensation instead of the actual thing: in many cases, it is difficult or impossible to determine who has gained and who has lost following a change in social and economic configuration. For example, has a former employee of a slide-rule manufacturer lost if he has found a new job or if he hasn't found one because he knows that compensation is available?

Reflecting on the notion of "real income" provides another path to the heart of our topic. What is an individual's real income? The most general concept of real income is related to his utility: it moves up or down as he can consume more preferred or less preferred bundles of goods and services. In general, only an

individual knows whether his utility, or real income, has increased or decreased after his money income and the prices of the goods and services have changed. Utility is subjective. An individual's preferences can be fuzzy for the individual himself, but he certainly knows more about them than any external observer. In certain cases, though, an external observer can discover part of an individual's preferences by observing the bundles of goods chosen at different prices—that is, through revealed preference. If, following income and price changes, a given individual chooses a bundle that was not available to him before, even when he could still choose the bundle that he was consuming previously, an argument by revealed preference allows us to say that the individual's real income has increased. He has revealed that he prefers the actual bundle to the one he consumed previously. If, on the contrary, the individual now consumes a bundle that he could afford before but chose not to consume, while the former bundle is not affordable in the new income and price situation, his revealed preference tells us that his real income has decreased. If you bought a BMW when you could have afforded a Mercedes, your choice has revealed that the BMW (together with the other goods in the bundle you consume) is higher in your preference index than the latter; but if you bought a Mercedes when you could not afford a BMW, your choice reveals nothing about your preferences. An individual's preferences are revealed only with regard to what he chooses and what he could have chosen but declined to. In many cases, comparing two bundles of goods at different sets of prices does not reveal preferences because neither bundle could have been chosen at the prices under which the other was chosen. Think about the consumers who could afford a house but not a computer at the prevailing set of relative prices of thirty years ago and now cannot afford a house but can buy a computer at today's prices: their choices have revealed nothing about whether they prefer a house or a computer.

In the case of a society—that is, of a group of individuals—we cannot use revealed-preference arguments to determine if a change in nominal national income or gross domestic product (GDP) (which is to society what an individual's income is to him) represents an increase or decrease in social welfare (welfare being to society what utility is to the individual). The reason, at least if we adhere to methodological individualism, is that we cannot define social welfare except in terms of individual utilities, and we cannot add up these utilities to get a value for social welfare. Even if the sum of the individuals' incomes—that is, GDP—has increased, some individuals may have gained and others may have lost, and we cannot say anything about social welfare. This point is related to the index-number problem: there is no way to know how the distribution of income, hence society's welfare, has changed based on price and quantity data (that is, national accounts data) alone. We are beginning to see how efficiency and distribution are closely enmeshed. A state intervention that would increase the production of some goods, or even of all goods, cannot be said to increase social welfare as long as we are not sure that nobody loses, actually or

potentially. Welfare economics shows that any conclusion about changes in social welfare requires a judgment about distribution, which cannot be scientific and value free, but is essentially a moral, extraeconomic value judgment.

Efficiency: Getting on the Utility Frontier

The question is, "Can the state enhance economic efficiency—or, what is the same, increase society's income—without a value judgment that favors some and harms others?" Although the complete demonstration requires a deep knowledge of economic theory and the help of mathematical or graphical analysis, we can get a good intuitive idea of how it proceeds.

The First Theorem of (the new) welfare economics states that conditions of perfect competition with no externalities (no costs or benefits not accounted for by markets) and no interdependencies of consumer utilities will lead society to a Pareto optimal situation—that is, a situation wherein all possible Pareto improvements have been made and it is impossible to move resources or redistribute goods to increase one individual's utility without reducing another's.[3] In short, perfectly competitive markets with no externalities lead to total economic efficiency. Pareto optimality requires three levels of efficiency, all of which are brought about by competitive markets and prices (Bator [1957] 1968). This condition can be seen better if we imagine an economy with two factors of production K and L (capital and labor), two goods X and Y (apples and oranges), and two individuals A and B (Alice and Bob).

1. *Efficiency in production* means that there is no reallocation of K and L such that for a given quantity of X, more Y can be produced (or more X for any given quantity of Y). In other words, society is on its "production possibility frontier." A sufficient condition is that X and Y be produced with a combination of K and L such that the rate of substitution of these factors is equal in both production processes.[4] Suppose this condition is not realized—that, for example, substituting 1 unit of L for 2 units of K leaves the production of X constant, and substituting 1 unit of L for 1 unit of K leaves the production of Y constant; then, shifting 2 units of K from X to Y and 1 unit of L from Y to X would keep X constant while increasing the production of Y. Because under perfect competition the prices of both K and L are given, their ratio will be the same in the production of both goods, and profit-maximizing producers will bring the rate of substitution of the factors to equality with their price ratios.

3. I am not concerned here with the usefulness or relevance of the perfect competition model or with the debates on this point between different schools because I am showing that in the terms of neoclassical welfare economics—that is, even with perfect competition—state intervention cannot be scientific because it requires value judgments.

4. The rates of substitution I am referring to are marginal rates of substitution; that is, they apply to small changes that, except for the substitution, leave everything else constant. I omit the "marginal" only because it facilitates the nontechnical presentation here. The same remark applies to the next two paragraphs.

Suppose, however, this condition is not realized—that the ratio of prices of K to L is 3 to 2 or 1.5, and the producer of X uses the factors in such a proportion that 1 unit of K can be substituted for 2 units of L; then, the producer can use 2 fewer units of L, purchase 1 more unit of K, and have some money left to increase both K and L, and thus increase production. In summary, there exists a production possibility frontier, which is the locus of the maximum possible combinations of X and Y, and a perfectly competitive economy will bring society into that locus.

2. *Efficiency in consumption* means that there is no way A and B can trade X for Y (given their initial endowments) so that one individual gains utility and the other loses none. A sufficient condition for this efficient situation is that A and B trade until X and Y are distributed so that the rates of substitution of X and Y are equal for the two individuals. Assume that they are not equal—that, say, A can maintain his level of utility by substituting 2 units of Y for 1 unit of X, and B can substitute 1 unit of Y for 2 units of X; then there are possible gains from exchange: A will get higher utility if he gets X at a price lower than 2 units of Y, and B will get more utility if he sells X at a price higher than 0.5 unit of Y. As A and B pursue their exchanges, their rates of substitution move closer together because they gradually want more before parting with what they trade away, until their rates of substitution are equalized (say, at 1 unit of X for 1.5 unit of Y) and they have no further opportunity to gain from trading.[5] On a perfectly competitive market, the prices of X and Y are given and are the same for both A and B, so they will trade until their respective rates of substitution are equal to the relative prices of the goods and thus equal to one another. A utility-maximizing individual will equalize his rate of substitution between the goods to the ratio of their prices because, otherwise, he can gain utility by changing the allocation of his budget. Suppose, for example, that the price of X is equal to the price of Y, but an individual can keep his utility constant by substituting 1 unit of X for 1.25 units of Y; he can then substitute X for Y (sell Y to purchase X) and have money left to buy more X until his rate of substitution has fallen to 1. In short, for any combination of goods produced—that is, for any point on the production possibility frontier of X and Y—there is an efficient locus of consumption to which A and B will be led by trading. Where the two individuals will arrive on this locus (called a *contract curve*) and thus how each will increase his utility by trade depend on their initial endowments.

3. *Efficiency in production* and *consumption* is the last level in the attainment of Pareto optimality. Suppose that given the production functions of X and Y (that is, the physical conditions of production) and the quantity of K and L allocated to each output, society is at a point of the production possibility frontier where 1 unit of Y substitutes for 1 unit of X or, alternatively, that the cost of production of X in terms of Y is 1 (this is called the *rate of transformation* of Y to X). But suppose that the ratio

5. It is a standard assumption of demand theory that the marginal rate of substitution decreases along an "indifference curve"; that is, the consumer is willing to give less and less of one good to get additional units of the other, if utility is to be constant.

of market prices is such that the price of X is two times the price of Y, or 2Y. Then any producer can engage in the following arbitrage: reduce the production of Y by 1 unit and produce 1 more X; sell this X for 2 Ys; end up with one free Y. This arbitrage will reduce the production of Y, increase the production of X, and increase the cost of X in terms of Y, until relative costs equal relative prices, and there is no room left for arbitrage.[6] At this point, the relative cost of production of X in terms of Y is equal to the relative price of X in terms of Y. Thus, a competitive economy will bring about equality between relative market prices and relative costs, up to the point at which no "free" utility can be gained by arbitraging between consumption and production. At that point, there is no way to increase somebody's utility without decreasing at least one other individual's utility. We have total efficiency: Pareto optimality.

It is easier to understand what this condition means by transporting ourselves from the goods space, the geometric locus where the production of goods X and Y can be read on two Cartesian axes, to the corresponding utility space, where we can conceptually follow the utility attained by A and B as we move in goods space. This step, which will allow us to push our analysis much further, requires a new construct: the *utility frontier.*[7]

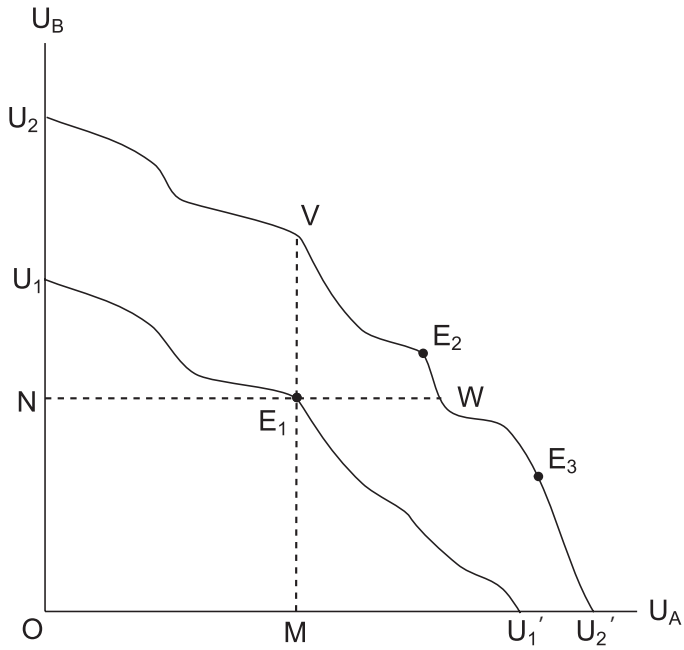
Consider figure 1, where the horizontal axis measures the utility of individual A, and the vertical axis measures the utility of individual B. The utility frontier is U_1U_1', corresponding to different distributions of a given quantity of goods and services—X and Y, if we are considering only two goods. The utility frontier gives the maximum utility one individual can enjoy given another individual's utility (in the simple two-person case). At E_1, for example, A's utility index is OM, and B's is ON. Real income is maximized on the utility frontier because no individual can have more unless somebody else has less. Moving up the U_1U_1' toward U_1, more of X and Y is redistributed to B and less goes to A, but always in an efficient way—that is, in a way that A can get the maximum (reduced) utility possible given that he gets less of X and Y. If A obtains nothing (0 unit of X and 0 unit of Y) and B gets everything, society would be at U_1; alternatively, if B gets nothing and A gets everything, society would be at U_1'.

It is important to realize that either individual's utility is calculated simply as an index, indicating which bundles are preferred. The index can be any set of numbers, provided that a bundle preferred under one index remains preferred under another: the utility index is, as noted earlier, unique up to a monotonic transformation. This statement is equivalent to saying that each individual's utility

6. I make the standard assumption of a diminishing rate of transformation or increasing marginal cost of production.

7. In fact, we should first construct a "utility possibility curve," which corresponds to one point in goods space—that is, to one bundle of goods X and Y as they are efficiently (with trade) distributed between A and B. Then, in a second stage, we should learn how to derive the "utility frontier," which is the envelope of all utility possibility curves and corresponds to total Pareto efficiency as we move on the production possibility frontier with all ratios equalized in production, in consumption, and between consumption and production. However, in order to simplify an already complex argument, I conflate the two cases and talk about a utility possibility curve as if it were a utility frontier.

Figure 1
Utility Frontiers When the Production of All Goods Increases or Decreases



index is ordinal. Graphically, we can imagine that each axis is stretchable like a rubber band, but always in the same direction as the axis, according to which index is used. For example, at E_1, B's utility function, given the number of units of X and Y he gets, might indicate 100, his utility increasing as we move toward U_1 on U_1U_1' and decreasing as we move down toward U_1' on U_1U_1'. Instead of 100, however, we can assign a utility index of 200 to B at E_1, provided that all utility numbers from E_1 to U_1 increase in a monotonic fashion from 200 up. Utility is ordinal; only the ranks count. Thus, U_1U_1' might be higher, lower, or closer to the origin on either axis. Moreover, nothing requires that a utility frontier be smoothly decreasing when we move from U_1 to U_1'—hence, the bumpy shape I have given to the curve in figure 1. Yet one individual's utility necessarily decreases when the other's utility increases because, otherwise, the preceding situation would not have been Pareto optimal. Of course, once we have chosen each individual's index, we cannot change it in the course of the analysis.

Now, go back to goods space for a moment, and consider a public policy that shifts the whole production possibility frontier—that is, allows more of X to be produced for any quantity of Y, and vice versa. This policy might be anything that the state can do to "increase prosperity": more police protection, solution of an externality problem such

as air pollution, subsidization of research or education, or cure of acne. The result of the postulated overall increase in productivity will be shown as an outward shift of the whole utility frontier from U_1U_1' to U_2U_2'. If society was at E_1 on its starting utility frontier (U_1U_1'), it would end up at some point on U_2U_2', the new utility frontier. Because, by hypothesis, we are talking about an increase of all goods and services available, it is possible, starting from any point such as E_1 on U_1U_1', to arrive at a point E_2 (on segment VW) that constitutes a Pareto improvement or, equivalently, an increase in real income. However, any other point on U_2U_2' corresponds to a distribution of goods and utility that is unfavorable to one individual and is therefore not a Pareto improvement, compared to E_1. The outward shift in the utility frontier allows, however, for at least potential compensation: if the policy puts society at E_3, a redistribution of income might, in a second stage, bring society to E_2, where everybody benefits, compared to the starting point E_1.

By giving a clear explanation of actual and potential Pareto improvements, the utility possibility frontiers represented in figure 1 allow us to support rigorously the intuitive conclusion suggested in the first section of this essay: having more of all goods and services does not necessarily imply an actual increase in real income in the strict sense of more utility for at least one person and no less utility for anybody else (that is, in the sense of an actual Pareto improvement). If there is more of all goods and services, as when the utility frontier shifts from U_1U_1', to U_2U_2', society's real income has potentially increased in the Pareto sense, but the increase is only *potential* because some individuals might get less in the new situation, as at E_3. Until we know what the distribution is on the new utility frontier, we can talk only of a potential Pareto improvement. Even in this extreme case of having more of all goods and thus an outward shift of the utility frontier, the only conclusion we can draw for sure without knowing anything about distribution is limited and negative: from U_1U_1', to U_2U_2' social welfare cannot diminish because it is impossible that everybody has less if there is more. Similarly, if we consider the inverse move from U_2U_2' to U_1U_1', which means less of all goods and services, we can only say that the shift cannot translate into an increase in real income because somebody must lose if there is less to share. The possibility that some individuals gain while others lose forbids any efficiency conclusions in many, if not most, cases.

However, the new welfare economists argued that a public policy is justifiable, without any value judgment, if a potential Pareto improvement is generated—that is, if it brings society to a new utility frontier, such as U_2U_2', where a redistribution, whether or not it is feasible or desirable, can potentially make everybody not worse off. In their opinion, we can separate value-free efficiency (the move from E_1 to U_2U_2') and distribution issues (the exact point on U_2U_2' to which redistribution brings society, whether or not that point is on segment VW). In other words, they deemed getting on the utility frontier (from E_1 to somewhere on U_2U_2') to be a purely efficiency matter, which can be separated from value-laden distributive issues.

The Implied Value Judgments

Is it true that the potential-compensation criterion is value free and therefore that efficiency can be separated from distribution issues? Is the potential-compensation criterion as easily usable when, contrary to what we have just seen, we do not have more of all goods, but more of some and less of others (as when we move along society's production possibility frontier)? For that matter, is the actual-compensation criterion (everybody gains) itself value free? These three crucial questions now occupy us in turn.

Potential Compensation and Value Judgments

First, it is clear that the potential-compensation criterion does involve a value judgment every time one individual is favored over another. To move society from E_1 to anywhere on U_2U_2' other than on the segment VW involves this sort of discrimination. Suppose that the state intervention moves society from E_1 to E_3, with no compensation to B. This move means a value judgment against B and in favor of A. For example, if B likes to own guns (perhaps for protection against bears) and if we assume (contrary to much evidence) that a gun ban pushes up the utility frontier through increased security, then a gun ban without compensation will favor A and harm B, as in a movement from E_1 to E_3.[8] Or perhaps B does not like technology, but he is forced to pay taxes to subsidize airplane manufacturers. In both cases, a value judgment is made to justify favoring an individual at the expense of another. Any redistributive policy, direct or indirect, whether it is a move on a given utility frontier or a move toward a higher utility frontier, that makes one individual worse off is based on a value or ethical judgment.

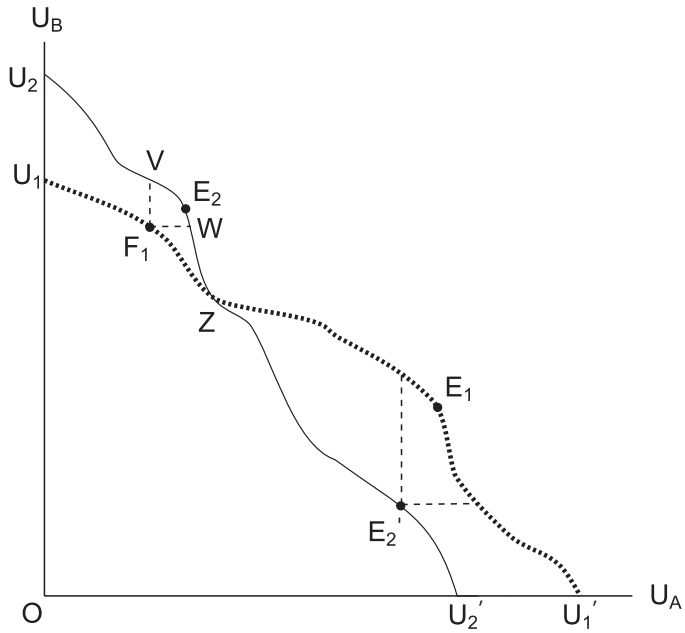
The General Uselessness of the Potential-Compensation Criterion

Moreover, the potential-compensation criterion is in most cases simply unusable. The demonstration of this proposition, shown originally by Samuelson ([1950] 1966a), can be done with the utility-frontier apparatus.

First, note that the shape and position of a utility frontier depend on the individuals' utility functions and that nothing prevents two utility frontiers from crossing, as U_1U_1' and U_2U_2' do in figure 2. Such crossing will happen simply if the individuals' preferences are skewed toward different goods, and the two situations represented by the different utility frontiers imply more of some goods and less of others. For example, if A likes tobacco (good Y) very much and alcohol (good X) only a little, and B prefers the opposite, and if U_1U_1' represents a situation where much tobacco is

8. Of course, compensation means making the harmed individual no worse off than he was, according to his own evaluation. Compensating a gun owner for the market value of his confiscated guns is only partial compensation because he might have sold his guns previously and chose not to do so. Moreover, in the case of a gun ban, there is no way to compensate individuals who in the future would have liked to have guns.

Figure 2
Utility Frontiers in the General Case



produced and only a little alcohol, whereas the situation represented by U_2U_2' is the other way around, the utility frontiers can cross as shown in the chart. The two utility frontiers in figure 2 can result from a shift—in fact, a twist—in production possibilities, except in the case we have seen where more of all goods are produced. Figure 2 represents the general case where there is not more of all goods.

Now, the main argument. Starting from F_1 on utility frontier U_1U_1' in figure 2 and using the potential-compensation criterion, a state intervention that moves society to utility frontier U_2U_2' would meet the potential-compensation criterion because redistribution can then bring society to E_2. The gainers gain more than the losers lose, and compensation can be paid to the losers, in which case A and B would accept the move unanimously. But here is the problem with intersecting utility curves. Suppose the move from F_1 leads society to E_2', which is a potential Pareto improvement because, as we just saw, compensation can then bring society to E_2. However, we can see that moving back from E_2' to U_1U_1' would also meet the potential-compensation criterion because E_1 is Pareto superior to E_2'. A move can be potentially Pareto optimal given a certain distribution of income, but, at the new distribution of income after the move, a return to the first situation my also be potentially Pareto optimal. Thus, the potential-compensation criterion has to be a double criterion (the so-called Scitovsky double criterion): potential compensation must be possible one way, but not the other. Otherwise, potential compensation

cannot be used as a criterion. Because there is no way to know when utility possibility curves intersect, the potential-compensation criterion is unusable, even disregarding information problems (except in the special case in which the production of all goods increases).

The double criterion (checking Pareto optimality before and after the state intervention and the change) is related to what we saw in the first section of this article: the necessity of checking with both starting and ending prices whether an individual's real income has increased or not. However, in the case of society, because the distribution of income has also changed, we must use potential, not actual, compensation. The theoretical argument we have reviewed says that in the general case potential compensation will be possible both before and after, and thus the criterion is useless. To rephrase in a simple (and thus potentially misleading) way, any state intervention that changes the distribution of income cannot be evaluated in terms of potential compensation because under the new distribution (without compensation), the losers may be willing and able to compensate the gainers to undo the intervention.

Cost-benefit analysis attempts to measure real income changes with potential-compensation types of calculations by estimating changes in consumer and producer surpluses (what consumers and producers would be willing to pay to get the benefits or avoid the costs) of different projects (state interventions). What we have seen implies that these estimations of consumer and producer surpluses, even assuming that they can be made reliably, are generally useless (Mishan [1960] 1968, 198–202). Look at the simple case where the state considers financing the production of a new good (say, four-finger gloves or regional jets): a positive (consumer and producer) surplus means (at best) that there is a potential Pareto improvement. However, going from a partial-equilibrium analysis to a general-equilibrium analysis, this project may not be "distribution independent"—that is, the new distribution of income may also imply, if utility frontiers intersect, a potential improvement in going back to the first situation. This situation can arise because the losers (B on figure 2) have lost so much in taxes (by moving from F_1 to E_2', even though they don't use four-finger gloves or don't travel by air) that they are willing to give a great deal (say, to continue paying 75 percent of the taxes they now pay for the project) in order to stop the project, even if the redistribution is not as favorable to them as it was originally. That cost-benefit analysis is as shaky as its theoretical basis seems to be admitted by many of its practitioners (at least those familiar with welfare economics): "The modern consensus," writes Ted Bergstrom, "is that the case for distribution-independent project evaluation is much weaker than was originally hoped" (n.d., 5).

Potential Compensation and Value Judgments

If potential compensation is unusable as a criterion to determine social-welfare change, why not base state intervention on actual compensation, returning to Pareto's original

idea? The first reason for not doing so is that it is often impractical. Public policies have complex, long-run, and often unpredictable consequences on a large number of unknown individuals. Each policy interacts with other public policies, and as a whole the policies have tangled joint effects. Who exactly gains and loses from public-health policies such as the regulation or ban of tobacco or drugs? Who bears the aesthetic loss from pictures of ugly, diseased organs that some governments require cigarette manufacturers to display? We cannot ask the losers to come out to be compensated because many people who have not in fact been harmed will come.

Not only is actual compensation impractical, but it often appears undesirable. For example, assume that moving from protectionism to free trade may be like going from E_1 to E_3 on figure 1: consumer A gains, but domestic producer B loses. Do we have to insist that protected producers be compensated if consumers are given back their freedom? A similar but more dramatic issue was raised when slavery was abolished. Should slave owners (the Bs) be compensated for the expropriation of their capital—the slaves (the As)—so that the ending point is E_2 instead of E_3? Aren't the slaves the ones who should be compensated for their past slavery, so that we end up even lower than E_3 on U_2U_2'?[9] If the status quo is considered unacceptable, compensation would be also, and change should proceed even if it is only potentially Pareto optimal. In other words, the Pareto criterion with actual compensation embodies a value judgment in favor of the status quo, just as the potential-compensation criterion embodies one against it.

Finally, exactly where compensation should put the individuals on the VW segment of the utility frontier is itself a matter of value judgment. One cannot talk about compensation or the absence thereof without ipso facto making a value judgment.

We are led to conclude that efficiency cannot be treated separately from the distribution of real income because efficiency (Pareto improvement) depends on how income is distributed as a direct consequence of the efficiency move.[10] If we choose instead to define efficiency in the sense of potential Pareto improvement, distribution again rears its ugly head: depending on the distribution of income, a potential Pareto improvement may simultaneously be a potential Pareto deterioration. The very notion of efficiency depends on the distribution of income, which itself responds to value judgments that are outside the field of scientific economics. Any intervention to move society in utility space requires a value judgment.

Similarly, the conventional wisdom that "wealth must be created before being distributed" is questionable. In a simple chronological sense, it seems obvious that

9. In early-nineteenth-century debates on the abolition of slavery by the British government, some argued that the slave owners should be compensated. Writes Rothbard : "At which point, Benjamin Pearson, a member of the libertarian Manchester School, declared that he 'had thought that it was the slaves who should have been compensated'" (1982, 204).

10. "Distribution of income" means distribution of real income—that is, of utility. If some restaurant owners are forbidden to admit smokers even if they want to do so, there is no redistribution of money income between smokers and nonsmokers, but a redistribution of utility: the former lose utility, the latter (or, at least, among them, the antismokers or the ones who mind being close to smokers) gain.

before one can slice a cake, it has to be cooked. Yet note that distribution of the claims to wealth can occur and usually does occur before wealth is created: if you intend to produce widgets and borrow money or sell shares in your undertaking, you are thereby distributing claims to wealth (financial wealth) before the "real" thing is created. And claims to wealth are not easy to distinguish from "real" wealth. Another reason why the two stages (wealth creation and wealth distribution) are not independent is that the expected distribution of wealth will influence its creation: if the creators of wealth expect it to be completely redistributed away from them once it is created, they will not create it in the first place; they will have no incentive to do so. Adding *re-* to *distribution* hampers the creation of wealth. More fundamentally, real income is not real income in a Pareto social sense if it is not distributed in such a way as to leave nobody worse-off in an actual or potential sense. Wealth creation virtually always generates gainers and losers: if a firm creating wealth pushes its competitors out of business, we can call it wealth only if, at the minimum, the gainers can potentially compensate the losers. At the social level, as opposed to the individual level, the very definition of wealth (in an individualistic, Pareto sense) depends on the validity of the value judgments that preside over its distribution. A slave owner certainly creates wealth for himself, but, in the net, he destroys social wealth according to most individualistic value judgments. The cake analogy, therefore, is misleading: you cannot bake this sort of cake without simultaneously slicing it. We cannot determine whether there is increased wealth if we don't know how it is distributed. In a very real sense, wealth is thus simultaneously created and distributed.

The Social Welfare Function: Mother of All Value Judgments

There is a way to solve all the problems we have raised—and other problems, too. By "other problems," I mean to determine which point on the utility frontier is socially optimal or, equivalently, what is the optimal redistribution of utility among individuals. The solution is to postulate a "social welfare function" indicating the preferences of "society" among all possible bundles of goods and their distribution among individuals or, what amounts to the same thing, among all possible points in utility space. If individuals have utility functions ranking all possible bundles of goods, why would society not have one too?

Half a century ago, in another seminal article, Samuelson ([1956] 1966b) provided a splendid demonstration that if society is considered as the set of its individual members, it cannot have a welfare function that is derived from and similar to its members' utility functions in goods space.[11] The reason is related to what we have seen thus far: the value attached by "society" to points in goods space (that is, to a given quantity of X and Y) must depend in some way on how the goods are distributed

11. In technical terms, there cannot be well-behaved social indifference curves in goods space. A short but very clear explanation is given in Mishan [1960] 1968, 178–79.

among individuals, on how individuals gain or lose. This dependence must be the case if social welfare is built from individual utilities; as a science, economics cannot consider society in a holist manner, as a superindividual with its own preferences distinct from those of its members.

However, if a social welfare function cannot be conceived in goods space (where every point is consistent with many different distributions), it can be imagined in utility space. This sort of social welfare function, called a "*Bergson-Samuelson social welfare function,*" can unambiguously rank all the points in utility space. If we draw such a social welfare function in figure 1 or figure 2, we will be able to find the single point on the utility frontier that maximizes social welfare (Bator [1957] 1968). For distributive reasons, some points below the utility frontier may be preferred to some points on the frontier.

The problem—a major one—is that there is no way to derive a noncontradictory social welfare function based on the preferences of all individuals who constitute society (at least, if we do not limit the characteristics of those preferences). The hope that some democratic political process might specify such a function was dashed by Kenneth Arrow in his famous 1951 book *Social Choice and Individual Values.* Arrow concluded: "[I]f no prior assumptions are made about the nature of individual orderings, there is no method of voting which will remove the paradox of voting. . . . *If we exclude the possibility of interpersonal comparisons of utility, then the only methods of passing from individual tastes to social preferences which will be satisfactory and which will be defined for a wide range of sets of individual orderings are either imposed or dictatorial*"([1951] 1963, 59, emphasis in original). In other words, a social welfare function is necessarily arbitrary. Either the social welfare function embodies inconsistent preferences that will give rise to the paradox of voting (political alternative I preferred to II, II preferred to III, but III preferred to I) and is thus unusable to evaluate public policy, or it merely represents the preferences that some individuals impose on the other individuals. A consistent social welfare function is the ne plus ultra of value judgments: a global value judgment on distribution that is imposed on some by others.

The conclusion of the previous section is thus reinforced here: there is no value-free concept of social welfare, and the values implicit in public policies are the values of certain individuals (the ones who rule the state). In truth, the very idea that the state should try to maximize social welfare is itself a value judgment and nothing more.

The Discriminating State

If the state cannot meddle with social welfare without imposing arbitrary value judgments, without simply deciding what social welfare is, what does it do in practice? The answer is that the state maximizes the welfare of some groups of individuals, which, of course, it can very well do through money-income redistribution or regulation. When the state moves society from, say, F_1 to E_1 on figure 2, it favors some individuals (A in the simple two-individual case) and harms others (B). This result is true even if

the state does increase general prosperity in the sense of pushing the utility frontier outward or moving society to it, as from E_1 to U_2U_2' in figure 1, because it still needs to make implicit or explicit distribution decisions on the basis of its value judgments. The state is in the business of making value judgments and imposing them on its subjects or citizens who don't share them. Welfare economics has turned from an indictment of markets to a condemnation of the state.

"*Gouverner, c'est choisir,*" to govern is to choose, goes the French proverb. It might as well have been "to govern is to discriminate." If welfare economics—or, at least, my interpretation of it—is correct, the proverb means not only substituting political and bureaucratic choices for individual choices, but also engaging in the state's essential activity: favoring some individuals and harming others. "At the end of the day," writes Anthony de Jasay, "it is the intuition of the person making the comparison which decides, or there is no comparison. . . . In an analogous manner, the two statements 'the state found that increasing group *P*'s utility and decreasing that of group *R* would result in a net increase of utility' and 'the state chose to favor group *P* over group *R*' are *descriptions of the same reality*" ([1985] 1998, 111–12, emphasis in original). As mentioned previously, these conclusions doom cost-benefit analysis.

Which Value Judgments?

I have argued that the state cannot intervene to "create" wealth without making value judgments in favor of some individual preferences and against others. The very idea that the state should try to increase social welfare is itself a value judgment. Nothing a priori indicates that these value judgments are less arbitrary than the value judgment against any state meddling with social welfare.

On the contrary, if we want to economize on value judgments or ethics, the rule against the state's meddling with social welfare seems more natural and more acceptable. De Jasay's thesis that there should be a general presumption against state intervention is consistent with this view:

> If consequentialism is circular, depending in all cases involving harm or interpersonal comparisons on a value judgment about its own validity, the standard argument for letting the state do all the good we can find for it to do, and accordingly allowing politics to have unrestricted scope, falls to the ground. Its collapse releases and activates the basic presumption against coercion, a presumption that can be derived either from an axiom about the practice of choice, or from a social convention of "live and let live," of letting each do what he will if doing so involves, roughly speaking, no harm to others. Accepting, and acting on, this presumption also presupposes a value judgment, but it is one that demands far less of

> our moral credulity that any consequentialist alternative I can think of. (1997, 152)

When the chips are down, welfare economics has little to say about welfare—a conclusion that now seems more or less accepted by contemporary welfare economists. The only thing we can be sure of is that more GDP is better for those individuals who get it. This negative conclusion is not useless. It suggests that that the social problem and the possible role of the state in society should be viewed in terms of social coordination (Sugden 1986) or perhaps in the Hayekian terms of increasing opportunities for an individual taken at random (Hayek 1976, 132), not in terms of maximizing welfare. In any event, the negative conclusion suggests that the state should not try to maximize welfare. It is interesting that both Sugden's emphasis on coordination and de Jasay's focus on minimal value judgments rely on rules of first possession and finder-keeper, which have probably been hard-wired in our brains by evolution and are, in this sense, natural value judgments.

Even if the state is a benevolent and perfectly altruistic institution and wants to improve social welfare as much as possible, and even if political and bureaucratic processes do not impede its reaching this goal,[12] it cannot try to increase social welfare without imposing value judgments via utility distribution. Extraeconomic criteria enter into the concepts of efficiency and wealth. The very idea that the state should try to increase social welfare is itself a value judgment. Nothing a priori indicates that this value judgment and the state's value judgments are less arbitrary than the rule against the state's meddling with social welfare.

One challenge to these conclusions comes from the Marshallian, as opposed to Paretian, methodology. David Friedman ([1986] 1990) argues that, in practice, maximizing ordinary money income is equivalent, or nearly equivalent, to aiming for Pareto optimality. His argument is interesting, and it may converge with the Hayekian principle because the more goods (assuming that *more goods* is not too ambiguous a term) there are around, the more opportunities there may be for an individual taken at random. Friedman's argument that the state is not efficient at creating income anyway is another reason why this Marshallian line of approach does not challenge (too much) my conclusions in this essay.

Any activity, process, or institution will create gainers and losers and ultimately requires extraeconomic criteria for its evaluation. The problem with the state, especially the monstrous "welfare-maximizing" variety that we have today, is that arbitrary redistribution, the creation of gainers and losers, is its main, if not its only, business.

12. In other words, we assume that none of the problems identified by the public-choice school of economic analysis (Lemieux 2004) is operative.

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Acknowledgments: I thank the participants in the weekly seminar of the Départment des sciences administratives, Université du Québec en Outaouais, to whom I presented an earlier version of this article and whose comments helped me to refine and reformulate many of my claims.

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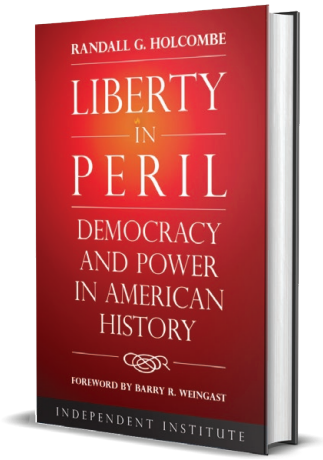

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