University of Wisconsin-Madison

# Institute for Research on Poverty

## Discussion Papers

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DP #547-79

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August 1979

Paper prepared for discussion at the 1979 annual meetings of the Midwest Political Science Association, Chicago, Illinois, April 19-21, 1979. This work was supported by the Institute for Research on Poverty at the University of Wisconsin-Madison under funds granted by the Department of Health, Education, and Welfare pursuant to the Economic Opportunity Act of 1964. I am indebted to Scott Milliman and Candice Hoke for research assistance.

ABSTRACT

Some utilitarian arguments concerning the optimal distribution of income are reviewed. It is suggested that utilitarian reasoning supports a high degree of income equality.

# Utilitarian Arguments for Equality

It may be too much to claim that we are all utilitarians. But the individualistic and rationalistic foundations of utilitarianism pervade Western economics, which relies heavily upon individual marketplace decisions and competition among self-interested rational actors. Similarly, Western politics depends upon competition for office and the adding up of individual votes. Normatively, we tend to reject organic values and to consider the good to depend exclusively on the aggregate welfare of individual men. We also tend to embrace subjectivism and to assume that individuals are, by and large, the best judges of their own interests.

Even those who explicitly argue against utilitarianism often accept many of its essential elements. Rawls (1971), in setting out his social contractarian views, postulates rational individuals pursuing self-interest in a hypothetical original position. Recent theorists of natural rights often cite the contributions of rights to the self-fulfillment or the collective happiness of individuals. Even Marxist arguments concerning the oppression of classes rest in the end upon the welfare of individual class members. And socialist man, if not the bourgeoisie's alienated worker, will know his own interests.

Given the pervasiveness of utilitarian ways of thinking, it may interest even those who profess other faiths to explore how modern utilitarians cope with questions of distributive justice and equality. My aim in this essay is not to recount the history of utilitarian thought on these topics, nor to examine in detail the work of particular utilitarian thinkers. Rather the purpose is to outline a series of arguments (many developed by economists rather than philosophers) in order to illuminate some ethical underpinnings of equality.

Utilitarians are sometimes accused of indifference to distributive justice. If one tries to maximize the aggregate happiness of individuals, it is said, he may find himself giving much to the rich man, who is capable of refined pleasures, while ignoring the miserable poor man, upon whom resources would be wasted. This characterization is not wholly without truth--it points out one of the major problems to be discussed--but neither does it close the subject. I will argue that in fact the main line of utilitarian thinking leads to a strong presumption in favor of a high degree of equality.

## A Utilitarian Argument for Complete Equality

Utilitarianism is based on the axioms of individualism and subjectivism. Only individuals matter; the collective good consists in some aggregation of individual welfares. And individuals are the best judges of their own welfare. I will not discuss or defend these tenets here except to note that subjectivism avoids the disturbing implication of objectivist criteria that someone--whether priest, philosopher, oracle, or political leader--is best able to tell others what is good for them. Individualism can attend to a broad range of values beyond material consumption. Individual welfares may well depend upon aesthetic enjoyment, friendship, a sense of community, national grandeur, acquisition of wisdom, and other nonmaterial or cooperative factors.

In addition to individualism and subjectivism, utilitarians have generally adopted a particular method for aggregating individual welfare, namely maximizing the arithmetic <u>sum</u> of individual welfares or utilities. While I see this as considerably less fundamental than the first two axioms, I will for the most part accept it as belonging to the utilitarian position, with some qualifications to be offered later. Alternative aggregation rules, such as Rawls's maximum principle, are merely variants (and generally misguided variants: Arrow, 1973; Barry, 1973; Harsanyi; 1975) of utilitarian thinking. The modern rationale for Bentham's (1789) felicific calculus--for maximizing the sum of individual utilities--notes that with a constant population it maximizes average utility, the expected utility of a randomly chosen individual. This comports with a view of fairness based upon impartiality (Sidgwick, 1907).

This rationale helps answer a disconcerting question: Why does a utilitarian care about other people at all? There is a darker side to utilitarianism, espoused by some conservative economists, according to which individuals are advised to grab what they can in their own self-interest and devil take the hindmost. If markets work perfectly the results are supposed to have some nice efficiency properties, but few would claim they ensure justice. The felicific calculus, by contrast, is essentially altruistic and points toward deliberate action (presumably through government) to improve the welfare of others.

The expected utility rationale builds upon a logic by which a rational, selfish utility maximizer is led to favor certain forms of

Pareto optimal redistribution to spread risk, as a form of insurance. Selfish man is wise to help the unfortunate because there, if the fates should will it, may go he. Accident or disease may strike anyone and must be collectively insured against (private insurance won't do, because of market imperfections including adverse selection and moral hazard) so that homo economicus himself will be helped if stricken (Zeckhauser, 1974). (Similarly, rational man may want to equalize his income over the life cycle and, because of imperfect capital markets, favor doing so by progressive taxation and redistribution [Polinsky, 1974].)

Those with more imagination may go a step further and conclude that everything affecting worldly rewards, whether inherited wealth, learned skills, or even motivation, actually results from luck: the luck of choosing the right or wrong parents, getting good or bad training and genetic endowment, landing in a helpful or harmful environment. If so, rational man might accept a view of extended sympathy, writing the ultimate insurance policy, in which he cares about and cares for everyone else on the grounds that he might well have found himself in anyone's situation. Extended sympathy, closely akin to an argument from a Rawlsian original position, leads under certain appealing assumptions to acceptance of expected (average) utility maximization (Harsanyi, 1955; Vickrey, 1961).

If we accept normative individualism, subjectivism, and their embodiment in the felicific calculus, a few additional assumptions lead to advocacy of material equality. Consider the following assumptions.

1. There is a fixed population of individuals, with a fixed amount of resources. (Say a fixed national income expressible in money terms.)

2. Each individual has a cardinal, interpersonally comparable utility function expressing his happiness as a function of the amount of resources made available to him.
3. Each individual's utility is a positive but marginally declining function of his income. That is, as his income rises, the amount of utility gained from each added unit of income declines.
4. All individuals' utility functions are identical.

If we seek to maximize average utility (or the sum of utilities) subject to the budget constraint, we will find that the optimal solution is a <u>completely equal distribution of income</u>. The reason for this is intuitively clear; with identical utility functions and declining marginal utility, any departure from equal incomes would mean taking away more happiness from those left with lower-than-average incomes than could be gained by those receiving incomes higher than the average. If a dollar's worth of soup gives more pleasure to the starving than an equally expensive spoonful of caviar gives to the rich, the poor would get their bowls of soup.

Under these assumptions, therefore, utilitarianism calls for complete equality. Since private markets are quite unlikely to reach such a result, the implication is that there should be a radical redistribution of income by government. Of course each assumption can be questioned. We will deal with each in turn, and will find some support for a result falling short of complete egalitarianism.

Dependence of Utilities upon Material Resources

The argument as stated applies to the distribution of material resources, like money income, so that it yields actionable implications. The prescription of equal distribution of income follows if utilities depend directly upon, and exclusively upon, such income. But we know that this is false. Happiness depends also upon prestige, love, friendship, youth, health, and other factors that money cannot necessarily buy. Despite equal distribution of money, some people might be blessed with adoration and others cursed with loneliness or ignominy. This would not be real equality.

One may therefore wish to apply the same kind of reasoning to nonmaterial contributors to happiness that was applied to material ones. If they met assumptions similar to those postulated for money they too should be distributed equally. Alternatively, since measurement of such factors is difficult and the state is poorly equipped to redistribute admiration or affection, money might be used to compensate for their unequal distribution.

A different approach would be to work only with the distribution of material resources, acknowledging that a residue of inequality in interpersonal relations and other factors would likely remain. So long as nonmaterial and material factors do not interact in affecting overall happiness, the two realms could be treated separately. If, however, the satisfaction gained from income depends partly upon concurrent nonmaterial benefits (e.g., if money gives more pleasure when there are friends or family to spend it on) the prescription of equal distribution of material resources no longer necessarily follows. A classical utilitarian might be tempted to favor the popular over the friendless in order to maximize satisfaction. Or, as I will suggest below in discussing nonidentical utility functions, we may want to compensate the less fortunate.

## Cardinal Utilities

In order to consider how much more or less an individual would benefit from one income distribution than from another, it is necessary at least to conceive of (if not actually measure) utility levels as quantifiable in terms of cardinal numbers. Since the time of Pareto, many economists have doubted the need for or possibility of such measurement. They argue that all human behavior (under conditions of certainty, at any rate) is explicable in terms of ordinal preferences. No behavior can cast any light upon cardinal utilities which, even if they exist subjectively, are unknowable and irrelevant.

The irrelevance objection does not apply to welfare analysis, where we have seen that cardinality is quite important. Knowability is more difficult. Some early suggestions for cardinal measurement of utilities, including Bentham's (1789) reliance upon just noticeable differences in pleasure, do not work well. There is widespread but perhaps excessive suspicion of the most obvious measurement technique of all, simply asking individuals themselves to assign numbers to their subjective states. True, under some circumstances people have incentives to misrepresent their feelings. But it is not impossible that a method might be devised for inducing people to tell the truth.

Von Neumann and Morgenstern's (1947) treatment of decision making under risk offers at once an example of behavior apparently best accounted for in terms of cardinal utility, and a means for measuring it. Bernoulli's (1738) expected utility (EU) model postulates that reactions to risky choices, say between lotteries involving different probabilities of obtaining different sums of money, depend not upon the mathematically expected value of money, but upon the expected utility of getting various amounts. One might not view 1/10 chance of getting $10 as exactly equivalent to 1/1000 chance of getting $1,000. Von Neumann and Morgenstern show how, if the EU model is correct, preferences among lotteries can be used to infer the cardinal utilities of the sums of money in question.

Arrow (1973), who once scorned von Neumann-Morgenstern utilities as reflecting "tastes for gambling" and as irrelevant to welfare analyses, now accepts Harsanyi's (1955) and Vickrey's (1961) claims that they are precisely the utility measures relevant to the decisions of a man in the original position facing equiprobable futures. That is, they are just what we need for the analysis of distributive justice. But this view depends upon the EU model being both descriptively accurate (so that consistent measurements of utility emerge) and normatively authoritative. Its descriptive accuracy is poor, probably because people tend to derive pleasure or pain from risk itself as well as from payoffs, and/or because of errors in subjective probability estimates

(Edwards and Tversky, 1967; B. Page, 1976). Normatively, it is not entirely clear why people shouldn't take separate account of risk. The utilities relevant to welfare might in any case differ from those emerging from von Neumann-Morgenstern measurements (Ellsburg, 1954; Pattanaik, 1968; Sen, 1976).

The chief point is that measurement difficulties, severe though they may be, do not establish that one cannot or should not try to take account of cardinal utilities in maximizing social welfare. They may, however, have implications for how this should be done, as I will argue.

Declining Marginal Utility of Income

The egalitarian implications of utilitarianism depend crucially upon the assumption of declining marginal utility (DMU) of income. Certainly this is a very plausible notion, related to the idea of satiation. We are quick to believe that a man appreciates a dollar more when he is poor than when he is rich; that the third helping of saffron or plovers' eggs gives less pleasure than the first.

For particular goods, the DMU property is useful in deriving downwardly sloping demand curves and other sensible results of economic theory. DMU for total income, too, appears to make sense in that it provides an explanation for the buying of insurance even when the expected value of claims is less than the premiums that must be paid: in a region of steeply declining utility the certainty of a small loss from current income is less painful than the possibility of a large one.

(On the other hand, it leaves gambling a mystery, unless risk or gaming has utility in itself, or unless marginal utilities increase over some range before declining--as suggested by Friedman and Savage, 1948.)

As noted above, efforts to measure the utility of money have not been very successful. There is no hard evidence about the shape of utility functions for income; no way to be certain whether they marginally decline or not. Since the time of Daniel Bernoulli (1738) the assumption of DMU (though not Bernoulli's particular logarithmic utility function) has been widely accepted. I find it a reasonable assumption pending evidence to the contrary.

## Interpersonally Comparable Utilities

The addition of individuals' utilities into welfare aggregates requires not only cardinality but also interpersonal comparability of the utility units. On this point ordinalist economists redouble the objections raised against cardinality. Interpersonal comparison is said to be entirely speculative, not necessary for behavioral prediction, and impossible to carry out. Moreover, efforts to take account of differing intensities of preference reward the misrepresentation of feelings; they encourage people to throw bricks through windows to show the strength of their convictions.

The short answer is that if we are to talk about distributive justice at all there is no alternative. We must compare how well off different individuals are in various situations in order to judge the equity of those situations. To play thoroughgoing agnostic on such matters is merely to deny ethical responsibility and, in effect, to go along with the status quo.

Common sense indicates that interpersonal comparisons are not infeasible. We make them every day. A mother decides which child more badly needs the next ten minutes of her attention; we argue that our preference for a particular restaurant is "stronger" than someone else's opposition; a conscientious legislator ponders which groups in society feel most discontented.

As Harsanyi (1955) points out, the essence of interpersonal comparison is <u>intra</u>personal, involving the exercise of imagination and sympathy. We needn't seriously question whether the poor are less happy than we. We are convinced the poor are unhappy, because we know we would be miserable in their circumstances. If psychological laws are constant (that is, if reactions to identical circumstances are identical) there is no problem: we can know how others feel simply by putting ourselves in their place. If tastes vary we might, as Vickrey (1961) suggests, engage in extended sympathy and consider how we would feel if we were they and had all their preferences--although what it means to be oneself with another's preferences is far from obvious.

The issue should not be posed as whether or not interpersonal comparisons are always feasible under all circumstances. Rather the question is, first, whether we must try to take account of the feelings of others; and, second, whether we have some reasonable techniques for doing so. To the first question my answer is a definite yes. To the second it is a more qualified affirmative. The difficulty of making comparisons in particular cases, like that of measuring cardinal utilities, underscores the wisdom of relying upon some general (but rebuttable) rules presuming interpersonal similarity.

## Identical Utility Functions for Income

An assumption of identical utility functions seems outrageous on the face of it. We know that people seek pleasure in diverse ways. Some, but not all, enjoy smoking, or symphony going, or stamp collecting, or do-it-yourself construction. Some like escargots while others prefer grits. It is important to note, therefore, that the argument for equality requires identical utility functions for total income, not for the particular goods and services upon which it may be spent.

Even with respect to total income, however, our intuition says that individuals may differ in their capacity to enjoy. The badly crippled, or the deaf, mute, and blind, may get less satisfaction from a dollar than do those in perfect health. If so, the classical utilitarian (e.g., Edgeworth, 1879; see also Arrow, 1971) would argue that the money ought to go to those who can enjoy it most. This implication, which Rae (1975) condemns as "predatory utilitarianism," appears to pose a real conflict between utilitarianism and the egalitarian impulse.

If we admit the possible existence of differing utilities of income but are appalled at the idea of depriving cripples in order to enrich playboys, we may be forced to adopt value pluralism (Barry and Rae) and grant independent ethical standing to equality itself as well as to maximizing average utility. I believe it is possible, though unusual, to reach this position within a utilitarian framework, by reexamining the rationale of expected utility maximization in the original position, and by revising the treatment of risk.

Why should rational man behind the veil of ignorance (or engaged in extended sympathy) maximize his expectation only, ignoring the degree of risk, the dispersion of possible outcomes? It seems plausible that he would instead want to reduce the risk of being utterly miserable, even if he had to give up some greater probability of being ecstatic. He might seek some risk reduction at the cost of losing a bit of expected utility.

We are diverted from this possibility only by the expected utility model of decision making under risk, which identifies risk aversion exclusively with declining marginal utility. It does not seem to admit any calculation of the declining marginal utility of possible future utilities. But the EU model is not fundamental to utilitarianism and has not stood up very well under experimental test. I see no strong a priori reason why rational man could not be averse to risk over and above the effect of declining marginal utilities. In the original position rational man might want to restrict the range of possible happiness and unhappiness he could be subjected to. He might well choose to organize the world so that if he turned out to be crippled, society would compensate him with extra income--even if that income could have added more pleasure to the life of someone else.

Such a treatment of risk bears a resemblance to Rawls's (1971) maximin criterion. But maximin postulates the ultimate extreme in risk aversion: paying attention only to the worst that might happen, ignoring everything else. I would see as more plausible a degree of risk aversion short of the extreme that merely tempers the predatory aspects of utilitarianism. The full structure of such a system remains to be worked out.

At the same time, I would urge great skepticism toward any proposal to organize distributive justice around widely differing utilities for income. The classical utilitarians provide a cautionary example. Some of them let the notion of differential capacities for enjoyment wholly overcome the egalitarian thrust of utilitarian reasoning, without having much evidence to back up their position. They may have fallen prey to conservative instincts, which shrank from the conclusion that income ought to be redistributed from rich to poor. How comforting to believe that only the refined tastes of the wealthy could appreciate an elegant old sherry; when in fact any man, given time and opportunity, might well learn to enjoy what money can buy. The doctrine of rewarding sensitivity also provides incentives for men fraudulently to claim superior capacities in order to justify superior riches.

Given the difficulty of measuring cardinal utilities and making interpersonal comparisons, and the danger of rationalization or misrepresentation, prudence suggests refuge in a principle of insufficient reason. Absent strong evidence to the contrary, a theory of distributive justice ought to presume that utility functions are identical, and carry through with the egalitarian implications of that fact. Only in the case of such compelling circumstances as physical handicaps should we provide for compensatory distribution.

Fixed Population

A relatively minor problem concerns the assumption of fixed population. Of course populations actually grow or shrink over time, partly as an intended or unintended result of social decisions. Our focus upon maximizing average rather than total utility avoids the absurdity of counting a future world teeming with the impoverished (whose small bits of happiness might cumulate to an imposing total) as higher in welfare than a world with a few very wealthy and contented people. The average utility criterion offers some help in making decisions about future population, insofar as overcrowding or insufficient population for a cooperative division of labor would affect average happiness. Only if population were expected to change as a side effect of redistribution (e.g., if the formerly poor would have more children than before) might distributional decisions be altered. Evidence on this point is unclear. Higher incomes for the poor may in fact slow down population growth.

More serious is the related question of intergenerational equity, which is ignored by the perspective of a one-time distribution to a fixed population. The maximin criterion seems to say carpe diem: consume everything now, saving just enough to leave future generations exactly as well off as present. (Any savings beyond this, for economic growth, would not maximize the welfare of the worst off present generation.) On the other hand, maximization of average utility over generations seems to dictate extreme present sacrifice in order to pile up future wealth. An answer in terms of discount rates for devaluing future utility begs the question of where such discounts come from. I would suggest once again a consideration involving risk. In the original position rational man arranging income distribution over generations would not know which generation he might find himself in, and would--if at all risk averse--decide against consigning early generations to a deprived life of drudgery and thrift, even if such sacrifice could amass untold riches for their progeny. Once again some compromise is indicated between the extreme aversion to risk inherent in maximin, and the cavalier dismissal of risk implied by maximizing the mathematical expectation of future utility.

Only if savings rates are affected by redistribution need intergenerational equity affect the shape (as opposed to the amount) of present distribution. Otherwise what is not saved can be distributed according to whatever pattern distributive justice prescribes for a fixed population.

## Fixed Resources

The most troubling assumption in the initial utilitarian argument for equality is that there exists a fixed amount of resources to be distributed among individuals. This assumption obviously fails, and its failure compels the utilitarian to retreat somewhat from complete egalitarianism. Only the extent of retreat is in question.

Resources are generated over time. If material incentives are used to encourage work, and redistribution is carried out through taxation of earnings (taxation of ability would be preferable but is infeasible), the prospect of redistribution may affect how much is produced. It is often assumed that when highly productive people expect their earnings to be taxed away they will work less, thus decreasing the resources available for distribution and conceivably reducing average utility below what it would have been with no redistribution at all.

This problem was recognized even in the early literature on optimal taxation (Edgeworth, 1897; Sidgwick, 1907); it was taken to modify recommendations of complete equality to some unknown extent. Recent formal theory indicates that it may destroy the prescription of increased equality together. Mirrlees (1971), for example, postulating a simple model of the economy in which skills differ and people choose between work and leisure, found that optimal tax rates depended upon skill distributions in such a complex way that it was not possible to say in general whether marginal tax rates should be higher for high-income, low-income, or intermediate groups. Under the assumption of normally distributed skills and a particular logarithmic utility function for net income and leisure, the optimal tax structure would be approximately linear (proportional), with marginal rates tending to fall rather than rise with income. That is, little or no redistribution might be called for. Sadka (1976) similarly found (siding with John Stuart Mill) that the case for progressive taxation is too disputable altogether," since the optimal rate structure varies with the nature of the work-leisure tradeoff, degrees of risk aversion, and even third-order derivatives of utility functions.

Antiegalitarian conclusions, however, depend heavily upon the extent to which high-income earners work less when they are taxed at high rates, and the facts are not yet known with any precision. Results of the New Jersey-Pennsylvania and the Seattle-Denver income maintenance experiments indicate that elasticities of work with respect to income are not very high (Kelley et al., 1978; Watts and Rees, 1977; Masters and Garfinkel, 1977; U.S., HEW, 1978). People work for reasons of self-fulfillment, sense of duty, and prestige as well as for money. Even purely economic considerations can cut both ways: it may be as likely for a person to work harder to make up for income that is taxed away (the income effect) as to choose more leisure rather than heavily taxed work (the substitution effect). Some fragmentary evidence (Break, 1957) on the behavior of high-income earners suggests that they keep working hard even when tax rates are high. More research is needed on this crucial matter.

Moreover, any disincentive effects found in the contemporary United States need not be a permanent obstacle to redistribution. In order to get both equality and productivity, it might be desirable to reorganize the economy and rely more heavily on nonmaterial incentives like patriotism, sense of community, self-fulfillment, and social approval, as is the case in China. Economic and social transformation may be required in order to maximize human well-being. (Granted, nonmaterial incentives are less finely grained, less rich in information, and less self-executing, so they tend to operate less efficiently than financial ones.) On the other hand, Scandinavian examples suggest that even within a competitive capitalist setting, considerable increases in equality are possible without retarding productivity.

The "productivity principle" of reward for work is deeply ingrained in Western thinking. It has Lockean connotations of a natural right to property with which one has mixed one's labor. But few utilitarians, even conservative believers in perfect markets, would claim that distribution according to marginal product--which depends upon the luck of product demand and factor supply--is just. Friedman (1962), for example, does not. The obstacle to redistribution is possible production loss, not any right to unequal incomes.

Savings and investment need not pose serious problems. It might be argued that redistribution takes money away from precisely those (the rich) most likely to save and invest and promote economic growth. Thus again redistribution might reduce the pie to be distributed. But most savings are corporate rather than individual; individual savings disincentives could be avoided by taxing consumption rather than income (taking care to prevent illicit consumption or the exercise of power based on wealth); and if necessary the state could play a larger role in investment.

The facts about disincentive effects of redistribution in actual or possible economies are as yet so imperfectly known that no very precise conclusions about the optimal degree of equality can be drawn. But the antiegalitarian implications have probably been exaggerated. According to the utilitarian arguments outlined here, welfare would likely be maximized at some point short of total uniformity of incomes, but with considerably more equality than is found in the United States today.

## Conclusion

It is apparent that utilitarian arguments can be pursued in several directions, entailing greater or lesser egalitarianism, depending upon what assumptions are made about the world. I have contended that the mainstream of utilitarian reasoning, based upon the most reasonable assumptions, implies that a high degree of material equality is desirable. Substantial inequalities would be admitted only insofar as needed to encourage production or to compensate the most deprived.

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