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EFFICIENCY, DISTRIBUTION, AND THE ROLE OF GOVERNMENT IN A MARKET ECONOMY

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"I'm a liberal but not a libertarian because I cannot agree that the free distribution of dollar votes in the market place represents any kind of ethical optimum according to any ethical doctrine known to me."

--Eminent Economist

"They're not entitled to a goddamn thing, goddamn them."

--Eminent Philanthropist

(Revised: December 10, 1970)

ABSTRACT

To evaluate government programs, it is necessary to say what individuals are "entitled" to in regard to wealth distribution. This paper explores the normative implications for government action of the presumption that factors are "entitled" to their marginal product. The conclusions are that imperfections in knowledge, mobility, and competition should be removed by court action as a matter of distributive justice, and that collective goods, including income redistribution should be paid for by those who demand the goods. Compensation is appropriate when government changes the rules it has itself imposed, or when it recognizes new property rights where they did not formerly exist.

I. INTRODUCTION

One of the most remarkable failure stories of all time must be that of economists trying to influence government by demonstrating the efficiency gains or losses arising from its programs. What makes the story remarkable is not that government has generally failed to act on the evidence produced, but that in the face of that persistent failure, economists continue to produce the same kind of evidence, hoping against hope that the politicians will eventually act "rationally" and raise efficiency to the normative status it deserves. One point of this paper is that it is those economists who think that efficiency is a normative concept who must change their perspective, not the politicans. That economists _should_ change is important, for the economic discipline has much to offer to politicians in helping deal with the great question of how the state should command and allocate resources. But economists cannot command politicians to accept their advice; they must rely for success upon the force of their arguments and the forceful argument in government deals not with efficiency but with distributive justice.

The issue of distributive justice is not new in economics. It is at the heart of the traditional argument dating back to the 17th Century over whether the ability-to-pay principle (an aggregative principle based upon interpersonal comparisons of cardinal utility) or the benefit principle (a disaggregative principle based on the assumption of non-comparable ordinal utility) should regulate the extent and distribution of taxes and benefits by government. More recently it has been the bone of contention in the great confused controversy over compensation, which has involved some of the best known economists of modern times.[1] A recurrent theme throughout the argument, the one factor which consistently has led economists to reject the benefit principle, is the idea that by dint of membership in human society, everyone is entitled to some minimal income. Once it is accepted that people are independently entitled to some degree of wealth, it is a simple logical extention to say that no one is entitled to whatever wealth he produces or may have accumulated. The benefit principle which would lead to satisfaction of individual desires for collective expenditures is therefore inapplicable, for if people are not entitled to their wealth in the first place, their desires concerning how that wealth should be used need not be honored. Thus we find Musgrave saying the benefit approach ". . . cannot be adapted to meet the problem of merit wants, where interference with consumer sovereignty is the crux of the matter, nor can it be adapted to meet the problem of adjustments in income distribution."[2] Such adjustments seem to hinge on definition of what he calls a "'proper' state of distribution," which in turn must be determined in a social welfare function. Whose welfare function and how it is to be determined is not specified.[3]

The economist's historic concern with distribution should not be confused with a concern for distributive justice as perceived by the non-economist. It seems almost universal that individuals view their honestly earned income and accumulated property as their own and they object to the idea that others have a claim on it. When the economist looks for a "proper" state of distribution, he denies that there is such a thing as honestly earned wealth. To focus on the macro measure "the distribution of income (or wealth)" is to avoid the question of whether or not any individual is entitled to what he has. But this is the very question of concern to the individual voter, and hence, the question of interest to the politician. If the economist is to help arrive at informed political decisions, he must inform both the voter and the politician about how political decisions relate to this issue.

To deal with distributive justice, it is necessary first to know what should be, i.e., what is a just way to distribute income and wealth. In this paper, I propose to show what government actions are indicated if a simple distributive rule is adopted and adhered to by both private citizens and government. Rather than defining a "'proper' state of distribution," I state a rule for distributing the flow of income. Some (though probably not all) of the implications of the rule will be both obvious and satisfying to most economists and I beg indulgence for the rather lengthy exposition of what may be obvious to many. My experience has been that more is lost by misunderstandings arising from a failure to present the obvious than is gained in directing attention only to the less obvious.

II. A RULE FOR WEALTH DISTRIBUTION

A rule controlling wealth distribution must deal with both accumulated wealth and wealth to be produced in the future. In the analysis which follows, the distribution rule adopted recognizes accumulated wealth to be the property of its current owner[4] while newly produced wealth or national income is to be distributed to the factors which produce it. In other words, factors of production receive their marginal product, and their rights to use and disposal without interference are defined for the future. Security in property and distribution according to marginal product are found in principle in the writings of Locke and other early western social philosophers, and both are generally consistent with basic precepts of the Constitution of the United States.

Distribution according to marginal product, while stated here as a normative rule, is, of course, the expected outcome of the working of well-functioning markets. Thus, if the norm is achieved, efficiency will also be achieved. As a normative rule, however, it is often rejected as both unrealistic and undesirable because the concomitant requirement to maintain the resulting distribution of wealth seems to deny the possibility of redistribution from the rich to the poor. This paper will show that application of the most rigid interpretation of this rule of property distribution not only does not preclude transfers, but it leads to an explicit role of government in making transfers.

Such transfers can be prescribed without the use of interpersonal comparisons of utility and within the bounds of a strict Paretian social welfare function.[5] In fact, it will be demonstrated that government action to transfer wealth may be necessary in order to arrive at a Paretian optimum.

III. GOVERNMENT IN A WORLD OF PERFECT MARKETS

Consider first a simple world in which wealth is distributed equally among individuals at some initial time. All markets operate perfectly in terms of knowledge, mobility, and competition, and external effects (including interdependent utility functions) are ruled out. All labor is homogeneous in its endowment of skills, and only individual tastes are allowed to differ. In such a world the observing economist should expect to find, after the passage of time, that money income and wealth vary among individuals due to variations in job characteristics and tastes for work and leisure.

But, if there are no market imperfections, what role is indicated for Government?[6] Despite the existence of unequal money incomes and unequal wealth, the initial assumptions should convince the most avid egalitarian that every member in society has adjusted his behavior to maximize his own real income, and that society as a whole is at a Pareto optimum. In this perfect world an increase in welfare as a result of Government redistribution of income cannot be postulated short of making cardinal utility measurements for all individuals. However, as the assumptions of perfection are relaxed a role will be built for government.

IV. EXTERNAL EFFECTS IN PRODUCTION

If, in this perfectly operating economy, a new production process is introduced which has an external effect--for example, trains which emit sparks which fall on a farmer's field and burn some of his crops[7]--there will be a conflict over the rights of property use. The entrepreneur whose trains burn the crops can be viewed either as having "taken" some of the farmer's property by using his land to dump sparks, or, alternatively, as having exercised the right to emit sparks into the air, no matter where they fall. Ronald Coase points out that the issue is assignment of what has not previously been recognized as a property right, not the production of railroad services or agricultural products.[8] Left to themselves after rights are assigned, the railroads and the farmer will enter into a contract which will determine how the land is to be used. Clear definition of property ownership simply determines which partner in the transaction is to pay and which is to receive payment for the right to use the property.

If the trains pass the land of many farmers, how the property right is assigned will affect whether or not the appropriate transfers are made. Assume that the most profitable use of the land is to produce some railroad services with sparks, and some agricultural products. If the property rights are held by the farmers, payments by the railroad to the individual farmers could be determined such that, in each case, the value of the land holding remained at least as high as it was before the new technology was introduced. There is every reason to expect that such payments would be determined and paid irrespective of the number of such two-party transactions.

If the property right is assigned to the railroad, however, the appropriate level of transfer will not generally be achieved, for if any farmer pays the railroad to adopt a technology which restricts its emission of sparks, that restriction will enhance the property value of a farmer who has not paid as well as that of the one who has. In such a case, the payer will have produced some wealth which should belong to him, given the distribution rule enunciated at the outset. A transfer of property will have taken place, but a mechanism is needed by which the "donor" can collect from others the value of the property he has bestowed upon them by his action. Acting in their individual interests farmers will not pay for an amount of spark reduction such that the sum of incremental values to all farmers' property just equals the incremental profit derived by the railroad from its last unit of sparks emitted.

Some institutional arrangement is called for if the proper payment level is to be achieved. Many conceivable arrangements could lead to the proper payment by each farmer, but all such institutions would have the role of assessing the value produced and the extraction of payments, i.e., the power to tax. Consistent with the rules of private property, taxation by the agreed-upon institutional agent can be considered as enforcement of property rights over what has been produced. To avoid confiscation of private property in such an activity, this agent must perceive the profit functions of its constituents to determine the optimal payment to the railroad and the distribution of the tax burden across the individuals, the sum of whose marginal profits were just adequate to bring forth the marginal unit of spark reduction. Of course, some farmers will end up paying nothing since the effects on their profits may drop to zero at the margin. The tax is simply a necessary tool to get the "buyers" who want the marginal unit to compensate the agent for the value of the property the agent "sells" to them.

Characteristic of this role of agent is that it has the power to enforce payment for the property transferred. The accepted agent, hereafter called government, is given by the individuals in society the power to collect taxes for the purchase of the collective good provided. If government carries out the role of achieving the desired level of collective action effectively, (i.e., measuring the individual profits, levying taxes accordingly, and paying out just enough to induce the "optimal" production of the collective good), the existence of external effects in production will pose no problem with respect to the achievement of market equilibrium or to the distribution of wealth. Government must act in lieu of the market to produce the collective good desired and paid for by individual consumers if society is to arrive at a Paretian optimum.

V. EXTERNAL EFFECTS IN INCOME REDISTRIBUTION

After the passage of time in the postulated simple world, a highly skewed wealth distribution might have developed. Those who saved and invested productively could consider themselves "better off" than non-savers or poor investors. If there exist interrelationships in utility functions such that those who are well off feel sorry for those who are less well off, philantropic transfers will take place. Assume that there is one "wealthy" man and one "poor" man. If the marginal utility derived from a dollar spent on his own consumption by the wealthy man is less than the marginal utility to him of raising the income of the poor man by a dollar, he will donate a dollar. An income redistribution will have taken place based solely upon the utility maximizing action of the donor. If there are many poor men and one rich man, the opportunity for costless two-person transactions will lead to redistribution satisfying the same marginal condition.

If the situation is reversed, however, such that there are many relatively wealthy men who share concern for the poor man, a problem will arise because the wealthy men will all receive the benefit of seeing the poor man's income increase irrespective of who makes the donation. Left to itself and assuming no cooperative action by donors, the market will achieve an equilibrium where the most philanthropic donor will find that for him, the marginal utility of an expenditure on his consumption of traditional goods is just equal to the marginal utility of an expenditure on raising the income of the poor man. As with other goods involving external effects, however, this market equilibrium does not represent a Pareto optimum. Some collective action will be called for to ensure that, on the margin, each wealthy individual whose utility rises as a result of an increase in income of the poor man pays what that increase is worth to him. That is, the last unit of increase in the recipient's income should represent the sum of the donors' marginal utilities of increasing his income.

If government, acting as an agent to achieve collective action knows the utility functions of all individuals, it will be able to determine directly those who are to be donors and those to be recipients. It should be recognized that some wealthy men will not donate anything at all while others may donate a great deal. The principle involved is the same as that involved in the case of the railroad and the farmers. A striking conclusion, however, is that income redistribution has been prescribed without invoking a social welfare function and without the use of interpersonal utility comparisons. In fact, only if such a redistribution is made will society end up in a position such that it will be impossible to make one individual better off without making another worse off--the familiar Pareto optimality condition.

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If the assumption of equal skill and wealth endowments is dropped, no new conclusion is reached. Poorly endowed and well-endowed individuals are treated as equals in that they are considered to be equally deserving of protection of their property rights. To the extent that many people, as individuals, feel that income transfers are desirable, government will act as intermediary in lieu of the market to achieve the desired transfers. To the extent that some individuals do not feel that transfers to the poor are desirable, they will not be taxed for contributions to the poor.

The conclusion that transfers made through government action should represent only the desires of donors is shocking to some people and has led many economists with whom I have discussed the subject to reject the distribution rule. Although their objections take many forms, most boil down either to the fact that government does not know donor desires for transfers (which was assumed away), or to what I call the third person problem--i.e., some individuals gain utility by a diminution of the wealth of those wealthier than themselves and they feel that their utility gains from that source should be included in the grand welfare calculus. For this to be a valid issue would require that the third person as a bystander have property rights in the wealth of a second (wealthy) person, for only if he has such a right can he coercively transfer wealth from him to the first (poor) person.

When the third person contributes directly to the poor man, he buys an increase in that man's wealth and no coercion is involved (the poor man can refuse to sell if he sees fit). Coercing the wealthy man who truly does not want to give is another matter, however. Conceivably, one could "buy" a transfer from a rich (second) person to a poor one by agreeing to undertake joint or collective action (I'll give a half-dollar if you give a half-dollar). Such a proposition would only be agreed to, however, if the wealthy person <u>did</u> get a utility increase from a transfer. But if the rich man gets no utility from such a transfer, the third person would have to pay him a dollar for every dollar he transfers, leaving the rich man's position unchanged in the end. Only if the third person had property rights in the wealthier person could he take from him without "buying."

VI. OTHER MARKET IMPERFECTIONS

The initial specification of conditions included perfectly functioning markets. This assumption is useful simply because it allows us to concentrate on distribution questions given otherwise efficient production. If this condition is relaxed and imperfections in mobility, knowledge and competition are allowed, two questions must be considered. First, can an additional governmental role be defined with respect to the treatment of these imperfections? Second, does the existence of these imperfections change, in any way, the conclusion about government's role as the "collectivizing agent?"

The existence of market imperfections is usually discussed in a macro-economic context, i.e., it is recognized that existing imperfections may lead the economy to an equilibrium somewhere inside the production-possibilities curve. A movement to the production-possibilities curve is often discussed in terms of increasing the level of national income. But welfare cannot be evaluated in terms of national income since different levels of income are associated with different distributions of the product and simple price-quantity aggregates do not reveal anything about changes in the underlying distribution of of utilities. Under such conditions, Paretian welfare functions do not allow judgments of welfare to be made. The distributional question can be approached directly, however, by focusing upon the market imperfection which causes the inefficiency.

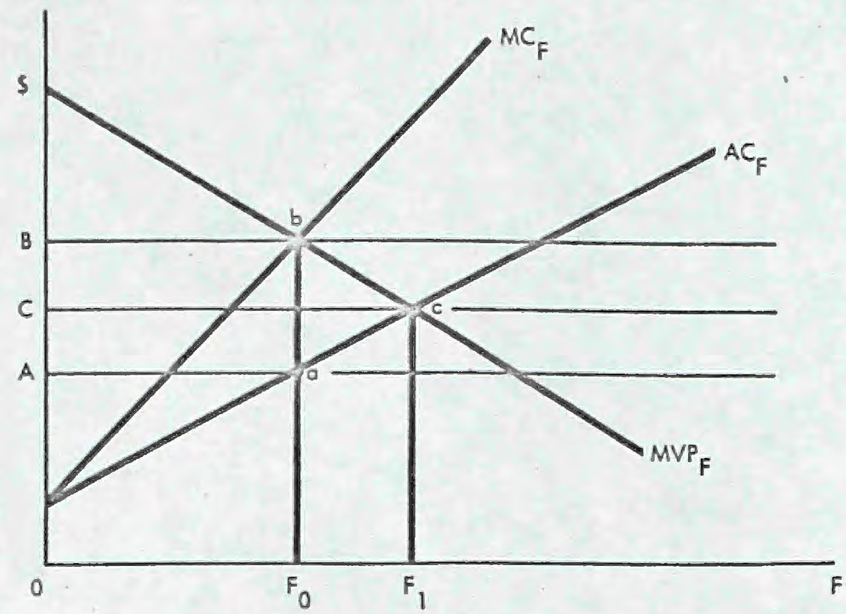
A. IMPERFECTIONS IN COMPETITION

A lack of competition in any product or factor market bespeaks some violation of the distributional ethic enunciated at the outset because, in such a case, some factor will be paid less than the value of its marginal product. For example, where an employer exercises monopsony power in a factor market, there will be a divergence between the price paid for the factor and its marginal value product. This divergence can be considered as expropriation of the property of the factor owner.

If the right of the factor owner to the product of the factor were to be enforced, market operation would lead to an equilibrium where the marginal value product equaled the price of the factor. The accompanying diagram shows equilibria in a monopsonistic factor

market (but a competitive product market) under enforcement and non-enforcement of property rights. In the monopsonistic market, the firm will hire F_0 of the factor for, at that level, the marginal

FIGURE A



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cost of the factor equals the marginal value product. The factor will be paid at rate A while its marginal contribution to production is B. In other words, the firm will be expropriating property produced by the factor equal to area AabB. If the firm is forced to pay the factor its marginal value product, excess supply of the factor at B or excess demand at A will produce a movement to equilibrium at c. Point c, of course, is the equilibrium which would be reached in a competitive market. The same argument can be made about a noncompetitive product market for, in any noncompetitive market, price will not equal marginal cost and some factor will not be paid the value of its marginal product. Wherever noncompetitive markets exist, government should operate to lead them to the competitive solution.

B. IMPERFECTIONS IN KNOWLEDGE

One of the requirements for efficient operation of a market system is that the participants in the system be in possession of the information needed to make a rational decision. Market transactions between individuals are undertaken because each partner to the transaction perceives a gain to himself. If either party misapprehends the value he can derive from the transaction, however, nonoptimal exchanges, i.e., exchanges which do not maximize individual welfare will result. Most cases in which people "make mistakes" do not violate the ethical rule which explicitly leaves to individuals the determination of how to spend their wealth. But in a system in which property rights are traded among individuals there must be some enforcement of contractual arrangements. If property is willingly given up by one individual on the promise of receiving something in exchange which is misrepresented or not then rendered, the failure to live up to contract terms represents a theft or expropriation of his property which is, of course, a violation of the ethical rule.[9]

Consideration of the problem of an imperfection in knowledge as one of misrepresentation or fraud is not usual in discussions of imperfect knowledge in welfare economies. It has been common to suggest that the efficient perfect market allocation of resources depends upon everyone knowing not only presently available investment opportunities, but also future market demands and supplies. It is certainly clear that if technological and consumption possibilities were known to everyone, the allocation of resources in the economy would be more "efficient" than in a condition in which not all individuals know all there is to know. But information is not free in the sense that there are costs of production and acquisition just as with other goods. As long as there are costs associated with increasing knowledge, efficient resource allocation will result from something less than total knowledge and the whole idea of what is perfect knowledge must be reexamined.

Knowledge is one of those goods over which it is difficult to exercise property rights. Because an individual can buy an increase in his own knowledge and resell it without diminishing his possession of it, the market makes it difficult for the producer of new knowledge to capture the value of its production. The inability of a producer of knowledge to maintain ownership of the product of his effort is similar to the problem of income transfer and the railroad-farmer interaction. The beneficiaries of newly created knowledge would be willing to pay the producer its marginal value rather than do without it, but in the absence of collectivization, society would not arrive at the desirable equivalence of marginal social cost and marginal social value product. Enforcement of property rights by taxation of beneficiaries and transfers to the producer of knowledge would lead to allocation of the appropriate amount of effort to the production of new knowledge.

C. IMPERFECTIONS IN MOBILITY

Immobility of resources has been recognized as an imperfection in market operation which leads to a divergence between the marginal product of two units of a homogeneous factor in the same market. If a constraint exists which prevents movement, it must be imposed by some external agent which prevents the factor from moving to the employment producing the highest return.[10] If the factor is not free to move because some coercive power is preventing it from leaving one activity or entering another, the lack of freedom is a contradiction of the rule of property stated initially.

Restrictions on mobility may arise in one of two ways. The most obvious restrictions are those imposed by legal means, for example, requirements for taxicab medallions which prevent the free entry of capital and labor into the taxi business in many cities and charter limitations restricting entry into the banking business nationally. A second class of restrictions on mobility includes cases where market power is exercised with or without the help of the government to prevent movement of factors into high return activities. Examples can be found in the imposition by labor unions of high costs such as initiation fees or apprenticeship requirements on potential new members. Access of new firms to standard sources of financing may be limited by the application or simply the threat of application of sanctions on lenders by established firms.

In all such cases, restrictions on mobility prevent factors from being so employed as to receive their marginal products. The distribution rule was stated in relation to newly produced products and existing wealth and not with respect to potential product, but restrictions on the use of factor services certainly interfere with the freedom to act implied by the definition of private property. A strict adherence to the ethical rule of distribution implies that both legal constraints and the use of market power to restrict the mobility of factors should be removed by government action.

In summary, the appropriate actions indicated for government in the face of imperfect markets are specific to the type of market imperfection, but they all involve enforcement of property rules as a matter of attaining distributive justice. Clearly, distributive justice will be attained by driving markets to the efficient competitive equilibrium, and it may be convenient and intellectually satisfying for economists to discuss the problem in that context. This should not be allowed to obscure the fact that while efficiency is desirable, justice is compelling. It is the idea that people are being cheated that leads to "truth in advertising" legislation and anti-trust activities, not a waste of resources caused by a lack of knowledge or by monopolistic restraint of output.

The case for government action to collectivize individual desires in the presence of externalities cannot be made in the absence of a commitment to remove these other imperfections in market operation. As was noted earlier, if the distribution of wealth and the distribution of newly created property is unjust, there is no reason to pay heed to the tastes of those who have benefited from injustice. It should be recognized, however, that if the distribution of wealth is unjust, efficiency can hardly be used as a substitute normative concept, for prices only measure resource and product values as derived from the budget constrained desires of consumers for final output.

Two serious problems have been pointed out which cannot be resolved by appeal to the distribution rule. The first problem arises with respect to property which was incorrectly assigned in the past. This is clearly what is at issue when removal of a market imperfection is considered. Members of a union who benefit from its restriction of entry stand to lose when the restriction is removed. The usual interpretation of Paretian welfare rules would require taxation of those who gain to compensate those who lose. But whether or not government has a responsibility to maintain the ex-ante distribution of wealth in such a case is an issue which cannot be resolved within the model. If one adopts the position that government defines all rules of the game, then after people have adjusted to those rules, any change should require compensation by the gainers to the losers. This is a difficult position to maintain for it might as easily be argued that damages should be paid to those hurt by operation of the old rule. On the other hand, it might well be considered appropriate where government removes a constraint it had itself imposed on market operation to the benefit of some special group--for example, in the restriction of entry into the taxi business. A charitable view would be that the restriction was simply the mistaken action of a well-meaning government and those who bought licenses should not suffer because government later saw fit to correct a mistake. An alternative position is that factor owners who have gained at the expense of others deserve no special consideration. In a world in which government announces as its objectives the maintenance of freedom and private property, those who invest to exploit divergences from these operating principles do so at their own risk.

The second problem arises when the rights to property have not been well-defined or property rights have not been assigned at all. A current example (analogous to the railroad-farmer problem) of such a situation can be seen in the problem of oil spillage from drilling operations in Santa Barbara Channel. Local residents filed lawsuits for compensation in excess of a billion dollars, and the case awaits a court decision on the rights of oil drillers as opposed to the rights of shore dwellers. A decision in favor of local residents would raise insurance rates for drilling in the area, induce the use of more costly protection against spillage in new drilling activities if not stop them altogether, and if oil production were in any real sense subject to market competition, the price of oil would rise. Damages awarded to the local residents, or the insurance payment required to cover future damages, represent the price local residents would demand for the right to spill oil on their beaches. A decision in favor of the oil companies would undoubtedly lead residents to demand political action to prevent further drilling. Any such action would take the form of public purchase of drilling rights from the oil companies, financed by taxes on the residents. However, it is up to the courts to decide how the rights to "use" the ocean should be assigned. There is no "just" way to decide the case, according to the stated distribution rule.

VII. VALIDITY OF THE ASSUMPTIONS

This paper has presented an argument about the role of government in Paretian welfare maximization in a society in which property expropriation is prohibited. Such a society assigns property rights and thereby imposes limits on individual activities relative to infringements on the property of others. The conclusions, particularly that transfers should be based on collective desires of donors strike some people as unacceptable but as Graaf says:

> Whereas the normal way of testing a theory in positive economics is to test its conclusions, the normal way of testing a welfare proposition is to test its assumptions . . .. It is clear that the interest attaching to a theory of welfare depends almost entirely upon the realism and relevance of its assumptions, factual and ethical, in a particular historical context.[11]

Testing the "realism and relevance" of the assumptions as Graaf suggests would be appropriate if tests were available and agreed upon. But without agreement, such testing simply provides a substitute ground for disagreement by those who disagree with the conclusions. None-the-less, it is worth considering what assumptions have been made and how they affect the general argument. The major assumption was that the world is composed of a constant population of infinitely long-lived utility maximizing individuals. The reasons for making such an assumption were:

1. to avoid the controversy which always arises about the "rights" of a dead person to dispose of his wealth; and

2. to avoid having to take a position with regard to protection of the "rights" of children or unborn future citizens.

What happens if the assumption of infinitely long life is dropped? Some people feel that the whole argument is vitiated; economic opportunity for a new person at birth can be conceived to be something beyond the opportunity for the individual to exercise his native talents and to include some measure of his endowment of tangible and human capital. Thus they would argue that (ideally) inheritances should be equalized--that all newborn individuals are entitled to an equal endowment. The eminent philanthropist, on the other hand, would say that people are born with nothing; they are entitled only to whatever they can made for themselves but nothing that belongs to anyone else. He would assert that the offspring of the wealthy are also not entitled to anything at birth, and if their antecedents choose to make them heirs to their accumulated wealth, it must be viewed as a gift, not as a right. The ability of a man to leave his wealth to other people than his heirs supports that position.

As a logical matter, it is hard to see why the same principle which covers other redistributions cannot be applied here. If a special case need be made that any newborn individual in society has property rights in the wealth of the dead or dying, it will pose a number of serious practical problems. First, it will remove the freedom of the individual to use his wealth as he sees fit, and will provide him with an incentive to change his saving, spending and donating behavior, including his willingness to redistribute to the poor while he is alive. Second, it will require a definition of equal endowment, a definition which seems to have eluded most economists so far. Third, provision of such an endowment will provide parents with an extra incentive to have children. Fourth, as stated in the introduction, acceptance of the proposition that individuals (newborn or older) are <u>entitled</u> to some one else's wealth denies the validity of any market activity. Those eminent economists who, in their unhappiness about externalities in the distribution of income, would throw out the market system of distribution rather than devise ways to internalize the externalities deny any value to positive economics and paradoxically deny the validity of their own advice.

Dropping the assumption that the world is composed of individuals requires that the general conclusions be altered to take into account the existence of family decision making units. The issue of whether or not such units can be considered as true utility maximizers inevitably devolves to questions of when does a child become a sapient individual, and what are the political institutions which lead to exposure of preferences in a small group. I see no way to address the relevance or realism of the assumption that individual units are utility maximizers except to cite the current legal treatment of the head of the household as if he is the spokesman and responsible officer of a corporate body. This is obviously a matter of social convenience rather than a realistic assessment of the head of the household's ability to control or expose the preferences of its other members. To that extent, however, the assumption of individual utility maximizers does not do great violence to currently accepted institutions.

An assumption which was not made is that government[12] knows the preferences of all taxpayers and is in a position to distribute taxes accordingly. In the normative model presented here, I have only tried to describe what should be sought by government, avoiding questions of how well it can succeed. If government does not know all preferences, it does not discredit the normative model, it simply allows for failure to achieve the norm. How much government does or can ever know raises an issue which, although it is receiving increasing attention in the professional literature, will not be discussed here, i.e., the effect of transaction costs on the relative desirability of collective action by the government and private voluntary collective action.

VII. APPLICATIONS

Some people who would otherwise be inclined to support the distribution rule view the fact that property has not always been distributed on the basis of marginal product as grounds for denying the propriety of future distribution on that basis. They hold that the current distribution of wealth is improper and hence the returns to wealth as distributed are unacceptable. But denial of marginal product distribution in the future compounds the inequity. If the inequities of the past consisted in failing to distribute the product according to the rules, it would not be at all inconsistent with established procedure to require those with ill-gotten wealth to pay damages and compensation, i.e., to make a one-time redistribution of wealth. Such a redistribution would be non-distorting and should be aesthetically satisfying (the punishment fits the crime) to advocates of compensation.

If enforcing distribution according to marginal product is accepted as being a realistic and relevant guide for public policy, there are several practical implications for the analysis of public expenditures. First, attention should be devoted to measuring the divergence between factor payments and their marginal value products to provide guidance for government intervention. Although I have not dwelt on questions of how the government should deal with divergences when they have been identified, it is worth noting that in the cases discussed earlier, judicial remedies appear to be appropriate, i.e., anti-trust actions, or civil actions seeking damages for fraud and restraint on movement of factors. Such actions when undertaken now are not accompanied by compensation to the individual who has an established advantage. Second, government expenditures undertaken in response to the large class of problems generally considered to involve the existence of external effects should be evaluated in terms of the returns to taxpayers rather than national income investment efficiency.

For example, the benefit of public expenditures on education should not be measured by comparing the income of the educated individual to the cost of society, but by comparing the returns which accrue to the rest of society to the costs they bear. The benefits of farm price supports should not be measured in the income gained by farmers but in whatever benefit taxpayers receive from those expenditures: reduced welfare payments, farmers held in agriculture,[13] excess capacity preserved as a hedge against war, or any other, or all of these if taxpayers consider them relevant. The desire of taxpayers to purchase these benefits should determine government's level of spending, and taxpayer's preferences and best interests should be the subject of analysis.

It is important, however, not to gloss over the fact that when evaluation of government programs leads to the conclusion that programs should be terminated, or when a position is advocated with respect to assignment of rights in a case of externalities, a basic issue of wealth redistribution is involved. In such cases, it is mistaken for economists to concentrate on the efficiency of resource allocation. Everyone knows that agricultural price supports should be terminated but economists must recognize that their removal would lead to a significant reduction in the value of agricultural land now used in production of price supported crops. Farmers and those who hold mortgages on the land would lose considerable wealth simply because of the "change in the rules" and a strong case can be made that they deserve compensation if such a change is to be made. Just how much compensation to pay would be an appropriate subject for economists to analyze. One of the few cases I know of in which a government allowed increased (although not free) entry into a formerly restricted business occurred in Beirut when additional taxicab licenses were sold in the market and the proceeds used to compensate prior holders of licenses for part of their loss in wealth.

A separate point worth making is that the desires of taxpayers for particular items of collective consumption are likely to vary with geographic dispersion and cultural differences. In cases where benefits are geographically localized, it would be more appropriate for local governments to tax and provide the good than for the national government to do so.

For example, water resource development, reclamation of arid lands, reduction of air pollution, etc., may provide benefits in excess of costs, but benefits which are consumed collectively only within a given area by a selected group of individuals. The appropriate subject for analysis is, therefore, the regional distribution of benefits for only when the relevant public has been identified can expenditure desires be properly collectivized and expenditures evaluated.

The particular problem of evaluating income transfer programs is not resolved simply by suggesting that government should satisfy taxpayer preferences. Even at this time, it is not clear whether taxpayers are concerned with the recipient's income, consumption, or utility. If income is the focus, it would suggest that society (apart from recipients) is concerned only that all individuals have some opportunity for minimum consumption. In this case, direct money transfers are probably the preferred activity although it is legitimate to consider investments which generate equivalent income streams for the recipient as alternatives. If consumption is the focus, transfers in kind are indicated, such as provision of housing, food, clothing, or whatever are the important items of consumption from the donor's point of view. If the utility of the recipient is the focus, the mechanism of transfer itself must be included in the evaluation. For example, if transfers of money are considered degrading by the recipient while transfers in kind are not, the transfer in kind may be more desirable.

With respect to collective goods in general (including income redistribution) appropriate problems to be addressed in analysis are the exposure of taxpayer preferences, and the exposure of taxpayers' best interests. As analysis is now performed, it appears that these questions are rarely asked and never answered. Yet it is clear that taxpayers often do not recognize their interests and government often acts without a clear definition of whose interests it serves or of the extent of the interest.

The practicality of the guidance offered may be evident only to those who have worked closely with budget allocators in government. It is true that "practical" research on management problems, funded by operating agencies, is nearly always concerned with the question, "How can the agency be more efficient at what it is now doing?" A researcher who answers that question by saying, "Efficiency doesn't matter, this should not be done at all," will find his answer disregarded, and will rightly conclude that an approach which led to that result is "impractical." But when he is asked to evaluate a program as a basis for the allocation of funds from a central budget agency, the researcher will find that the practical question facing the allocator is, "Should I be doing more or less of this activity?" That normative question must be addressed in terms of the allocation of social benefits and costs and only rarely in terms of efficiency. In this context, a model which provides general guidance on how the normative question should be addressed is of great practical value[14] to both the researcher and the decision maker.

The difficulty involved in making the measurements suggested, i.e., identifying the marginal product of factors and the social benefits of government programs should not be considered as demonstrating the "impracticality" of the approach. What is being suggested is not that society should seek something completely <u>new</u>, but that in studies of government programs something be measured which is different from what economists have concentrated on. Even if measurements of some variables are impossible and must be left for estimation to the political process, the identification of those variables whose values should be estimated would be of practical value to individuals who must determine the allocation of government expenditures.

In the real world of taxation and expenditure it will be impossible to assure perfect equity. Practical divergences from perfection pose the problem of devising an information system which will make possible a more appropriate distribution of taxes and benefits. This problem is less the concern of the economist than of the political scientist, but that it is important and relevant to today's problems is beyond dispute. The occasional refusal of some individuals to pay taxes to support war, for example, can be viewed as an indication that those individuals consider the defense provided to be of little or no value to them. The inequity involved in forcing them to pay for defense they do not want should disturb political scientists and lead them to search for more perfect signals for tax distribution purposes.

While the political scientist searches for better signals, the short run problem of working within the context of the present political structure must be handled to a large extent by assuming for the purpose of taxation that some individual differences do not exist. Imperfect as these assumptions must be, they appear to offer a better basis for evaluation of government programs than do those depending on implicit interpersonal comparisons of utility.

When this article was written the author was on the staff of the Institute for Defense Analyses. The author would like to thank Dr. William Niskanen, Mrs. Eloise Smith, and Dr. Norman Breckner for the helpful comments and the moral support they offered during preparation of the paper.

[1] N. Kaldor, "Welfare Propositions in Economics, and Interpersonal Comparisons of Utility," Economic Journal, 49,(September 1939), J.R. Hicks, "The Foundations of Welfare Economics," Economic Journal, 49, (December 1939); T. Scitovsky, "A Note on Welfare Propositions in Economics," Review of Economic Studies, 9, (November 1941); P.A. Samuelson, "Evaluation of Real National Income," Oxford Economic Papers, NS, II, (January 1950); J. deV. Graaf, Theoretical Welfare Economics, (Cambridge University Press, 1963). For an indication of the confusion still surrounding the issue, see the exchange of notes and articles on welfare criteria by D.H. Robertson, I.M.D. Little, J.E. Meade, E.J. Mishan, C. Kennedy, M.Dobb, A.K. Sen and S.K. Nath in the Economic Journal issues of March, 1962; June, 1963; December, 1963, and March, 1965.

[2] R.A. Musgrave, The Theory of Public Finance, McGraw Hill, New York, 1959, p. 89.

[3] Some economists have tried to get around the problem of defining a social welfare function by directing their analyses toward exposure of both the efficiency gains and the distributive results of programs and presenting these two dimensions to political decision

makers as a basis for their decisions. Thus they suggest implicitly that if there is such a thing as distributive justice, politicans will be able to put a price on it. For examples, see the exchange of articles by A. Maass and R. Haveman in the Quarterly Journal of Economics, issues of May, 1966 and November, 1967; chapters by J. Bonnen and B. Weisbrod in S.E. Chase, ed., Problems in Public Expenditure Analysis, Washington, D.C.: Brookings Institution, 1968; and J.V. Krutilla, "Welfare Aspects of Benefit Cost Analysis," Journal of Political Economy, 69, June, 1961.

[4] This assumption does not preclude the possibility of a one-time redistribution of existing wealth, outside of the rule, but clearly, the distribution of existing wealth cannot be "initialized" very often or markets will cease to function and incidentally, economists will have nothing to talk about.

[5] By this I mean a function in which social welfare increases only if some individuals are better off and none are made worse off as a result of a change. Of course, this requires adherence to the stated distribution rule, and expropriation of property, in its many forms, is prohibited.

[6] Throughout this paper I shall consider that the world is composed of utility maximizing individuals, so that problems of family decision making, parents' responsibility for children, etc., are avoided. A useful convention is to assume a constant population of infinitely long-lived individuals. Under such a condition, even maintenance of

the rights of property ownership could be handled by the private market. Some poeple may wish to argue that, for a society to exist, some rules must be established and adherence to these rules must be enforced, i.e., a court and police system is necessary. I believe that this can be reduced to an argument that a code of behavior is a "good" entering into individual utility functions in which case there are obviously external effects which were ruled out by assumption.

[7] Assume that the railroad service was provided in the past by electric trains which operated at higher cost to the railroad.

[8] Ronald Coase, "The Problem of Social Cost," Journal of Law and Economics, III, October, 1960, page 1.

[9] John Stuart Mill notes a view prevalent in his time, that "government ought to confine themselves to affording protection against force and fraud: that, these two things apart, people should be free agents, able to take care of themselves and that so long as a person practices no violence or deception to the injury of others in person or property, legislatures and governments are in no way called upon to concern themselves about him." Principles of Political Economy, Book V (Longman, Green, N.Y., 1892).

[10] The existence of a constraint leading two units of a homogeneous factor to have different marginal products in the "same" market must be postulated with great care since there is always the possibility that the source of apparent immobility is the exercise of free choice by

the owner of the factor. For example, a laborer who could increase his marginal product by moving from one job to another, and knows it, may find the psychic costs of moving so high that they outweigh the gain from the increased money income. To describe this as a market imperfection is obviously fallacious. The error arises in taking into account only money income in the calculation of marginal product. If the laborer is free to move, knows the returns available from some alternate employment, and yet fails to take advantage of the opportunity, it can be assumed that his utility would fall were he to make the move despite the rise in his money income.

[11] J. Dev. Graaf, op.cit., p. 3.

[12] References to "government" through this paper have involved a generic use of the term. Anybody given authority to tax in order to collectivize the individual spending desires of its members was called government. The government of the United States, or other representative bodies rely on the elective process, lobbying, public hearings and other institutions to expose individual interests in collective goods. In practice, it appears that the assumption is made that what the majority decides describes the unanimous desire of an homogeneous society.

[13] Under the argument that the existence of "family farmers" or workers in agriculture represents a benefit to the nation.

[14] In his article, "A Normative Theory of Transfers," Public Choice, VI, Spring 1969, p. 39, Edgar Olsen notes that he was forced to develop a normative theory in order to evaluate an existing program of housing subsidies.

(Revised: December 10, 1970)