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THE NEW JERSEY-PENNSYLVANIA EXPERIMENT:

A FIELD STUDY IN NEGATIVE TAXATION

by

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The fight against poverty has become one of the most important items on the agenda of this country. In reaction to widespread dissatisfaction with traditional welfare programs, the antipoverty innovations of the 1960's emphasized direct action and involvement of the poor. These orientations gave rise to the community action programs. More recently, reflecting the realization that such programs at best can meet the needs of only a small proportion of the poor, attention has turned to income maintenance both for humanitarian reasons and to break the cycle of poverty. This paper reports some preliminary findings from the first field experiment with an income maintenance program, the New Jersey and Pennsylvania negative income tax experiment.[1] Before moving to a discussion of the experiment, however, it is appropriate to place it in the context of alternative income maintenance programs.

ALTERNATIVE INCOME MAINTENANCE PROGRAMS

The United States already has a substantial system of income maintenance and public assistance which derives essentially from the social security legislation of the 1930's. It is necessary to briefly review these programs and evaluate their past effectiveness in combatting poverty to properly understand the many problems which a new and comprehensive income maintenance program must solve.

Structural Versus Distributive Programs

As James Tobin has pointed out, the United States has dealt with low income in two ways [Tobin, 1968]. First, structural remedies have been sought, such as altering monetary and fiscal policies, encouraging education, and providing training and rehabilitation. These programs attempt to alter the earning capacity of the poor by increasing the demand for labor and by raising their skill levels. Second, distributive remedies have been used to make up income deficiencies through cash or in-kind payments or by subsidies to productivity or employment.

Structural programs can be further divided into those which are market solutions and those which are individual solutions to poverty. Market solutions to low income are attempts to end market imperfections. Among these are the manipulation of monetary and fiscal policy to maintain a high level of aggregate demand; anti-discrimination legislation to end discrimination in employment or restrictions on entry into the organized craft occupations; minimum wage legislation; attempts to increase the size and efficiency of the employment service system in matching employers with job vacancies and potential applicants. Individual solutions take the form of building up human capital through programs in health, education, and skill training.

A. Structural programs. There are many who feel that structural solutions are the most adequate for solving the problem of poverty because they deal directly with failures of the economy or the causes of low earning power. Unfortunately, experience reveals that there are two major weaknesses to such solutions. First, there are certain obstacles that limit the effectiveness of structural solutions, at least for the current generation in poverty. The poor have large families, broken homes, physical and mental handicaps, and other problems which are generally untouched by higher minimum wages, better employment services, anti-discriminatory legislation, economic progress or by a larger Gross National Product. Distributive mechanisms are necessary to meet the needs of the poor who are not reached by these endeavors. Second, given our current economic and educational knowledge, structural solutions are long term and not always successful. They involve restructuring labor markets and creating new training systems. Meanwhile the poor must survive. Only distributive programs can guarantee decent standards of survival in the short run.

We have substantial experience today with economic development and manpower development programs, and it is clear that they fall far short of serving the needs of the poor. Although the number of persons in poverty decreases as aggregate demand rises, the hard core poor remain substantially untouched. For example, about the same number of persons in female-headed households were poor in 1966 as in 1959 [Orshansky, 1968]. Almost all of the decrease in the poverty population in the 1960's was among male-headed households. Reduction of unemployment is also accompanied by inflationary trends that further reduce the value of the earnings of poor households. Perhaps most significant is the possible policy reaction to inflation which increases unemployment and disproportionately burdens the poor.

Minimum wage legislation, an important feature of American economic policy, rarely helps the poor who either work less than full time or have large families. At present or future minimum wage levels their incomes would not be sufficient to keep them above the poverty line. Moreover, minimum wage increases can work to the detriment of the poor, if employers, faced with paying higher wages, release low-skilled workers to increase efficiency. Thus, greater industrial coverage under the minimum wage law could well mean greater unemployment and underemployment for the working poor.

With regard to manpower development programs, the results have been disappointing. The Department of Labor estimates that there are 11 million poor for whom work is a feasible way out of poverty. Only some four and a half million have been enrolled in federal manpower programs since 1962, of which about three million have been in work experience programs like Neighborhood Youth Corps. These programs emphasize payments for services performed rather than intensive training for work outside the programs. Of the four and a half million, only 1.4 million, less than one-third, were in intensive training under the Manpower Development and Training Act (MDTA), Job Corps or similar programs. Not all finished the training, nor were all who finished placed in jobs. Of the 1.4 million in these structured work training programs, only 50 percent, or 700,000, completed the programs and were placed in jobs [President's Commission, 1969:246].

Manpower and economic development programs undoubtedly play an important role in aiding the poor to earn more and hold respectable jobs. But alone they are not a solution to poverty in America.

B. Distributive programs. There are three general forms which distributive programs take in America today:

1. Social insurance programs, such as Old Age, Survivors and Disability Insurance (OASDI, or Social Security), and Unemployment Insurance. These programs cover risks that are predictable and outside of individual control; they replace lost earnings from retirement, unemployment, death, or disability. All are in some way tied to work and earnings in that they are financed by employee and employer taxes or contributions specified by law.

2. Income subsidy programs, such as Public Assistance and Veterans Pensions. With few exceptions these programs provide cash income transfers only to particular categories of needy persons who are deemed worthy of public assistance--the blind, disabled, and dependent children. The overwhelming majority of income subsidy programs are financed jointly by federal, state, and local governments; all are administered at the state and local level. None are mandatory programs. The federal government grants matching funds to states meeting a small number of requirements, but does not require that states pay benefits at federally determined levels. According to the Heineman Commission there are "over 300 separate programs of cash Public Assistance receiving federal funds, covering different categories of the population under widely varying standards." [President's Commission, 1969:286.]

3. Income-in-kind programs, such as Food Stamps, Medicaid, and Public Housing. In-kind programs for the poor exist for two reasons. First, it is argued that certain services, such as housing, will not

be provided to the poor by the private market in the quantity and price that they can afford. Second, it is argued that the poor will not allocate their money properly, so it is necessary to control choice and quality. Some in-kind programs provide full subsidy (Surplus Commodity Distribution and Medicaid), while others provide only partial subsidy (Public Housing, Rent Supplement, Food Stamps and Medicare).

C. *Evaluation of Distributive Programs*. All three distributive programs are either irrelevant, grossly inadequate, or detrimental to the present status poor. First, let us consider social insurance programs. The failures here are two-fold. Because the poor have irregular work histories and low earnings, they gain little from social security or unemployment insurance. Moreover, few insurance programs provide adequate payments even for workers who have had a solid work history and adequate earnings. Unemployment insurance is particularly unsatisfactory, since it is not universally available and often not available for long enough periods of time. In 1968 nearly two-thirds of the unemployed were not covered by unemployment insurance, primarily because of benefit expirations [President's Commission, 1969]. While we recognize that social insurance does keep many people out of poverty, it is not relevant to our current problem.

There are two major problems with income subsidy programs: inadequate benefits and inadequate coverage. In 1965, of all households receiving cash transfers and below the poverty line before receiving them, 56 percent were <u>still</u> below after receiving them. Thirty-two percent of the pre-transfer poor received <u>no</u> government payments at all [Orshansky, 1968:28]. Average payments per recipient for AFDC equalled $43 per month in January 1969, ranging from $10 in Mississippi to $65 in Massachusetts [President's Commission, 1969]. The poor with intact families cannot qualify for coverage in most states. AFDC-UP does provide for unemployed able-bodied male heads, but less than 100,000 families are covered by this component of public welfare [President's Commission, 1969:22].

The lack of any program for the working poor with intact families appears to have three dysfunctional side-effects. First, it creates work disincentives, and second, it encourages family disruptions. Third, it has a deleterious social effect, because some broken families can qualify for categorical relief and have incomes that exceed those of intact, working families with the same needs.

There are other unfortunate aspects of the public assistance system. Administrative costs are high, in part because it is a decentralized program and, in part, because so much effort is put into screening and surveillance for eligibility. The means test and rules regarding expenditure of benefits deny recipients freedoms other citizens enjoy and often regulations impose constraints most citizens could not meet. Finally, the program lacks uniformity and clarity and grants a great deal of discretionary power to local administrators which is often misused. On this point, Harold Watts has stated [Watts, 1969]:

> Much of the dissatisfaction with our current welfare system stems directly from discretion at the lower levels of authority. The inequities resulting from uneven and sometimes capricious use of this discretion are bad enough, but it can also be argued with some

> merit that the experience of face-to-face dealing with one who has the authority to withdraw or grant a principal means of support itself encourages and even promotes the very habits and attitudes of dependency our society is at some pains to eliminate.

In-kind programs are the least satisfactory of all distributive schemes. Many in-kind programs are demeaning, wasteful, and ineffective, and falsely assume that the poor lack proper values. The Heineman Commission has recommended that special programs providing food to poor families be phased out in favor of cash assistance. It found that surplus food is often thrown away because people do not like it, and eligible families often do not buy food stamps because they have to give up too many nonfood purchases to do so. [President's Commission, 1969:367]. The Commission also has expressed a preference for gradual elimination of housing programs when income supplements approach adequate levels and the private market can meet the demand for low-cost housing [President's Commission, 1969:22].

Alternative Income Supplement Strategies

In light of the deficiencies of present income maintenance programs, attention recently has turned to consideration of various comprehensive income supplement strategies that would provide nationwide minimum annual incomes to all Americans based on family need or an alternative criterion. The three most widely discussed schemes are:

(1) Guaranteed employment, a program that would make the federal government the employer of last resort for those who could not find jobs;

(2) Children's allowances, which would provide to families a specified grant of money for each child;

(3) Negative income tax, the program of concern in this paper, which provides specified supplements to annual income based on family size, and includes a financial incentive to work feature which reduces payments by some fraction of a dollar for each dollar earned, to insure that those who work always have more income than those who do not.

Criteria for evaluating programs. In order to properly evaluate the relative advantages and disadvantages of each scheme, we need a set of criteria applicable to all. Scholars in the field of income maintenance have emphasized a variety of criteria [Marmor, 1969; Weisbrod, 1969; President's Commission, 1969]. In the absence of a generally accepted set, we offer the following tentative list of factors that most would consider a minimal guideline in evaluating any new income maintenance program:

(1) Adequacy of benefits--how near or above the poverty line will the poor be after payments, or what percent of lost earnings will be replaced by the program.

(2) Scope of coverage--what percent of the poor or the risk population will be covered by the program.

(3) Leakage--how efficient is the program in terms of the percent of total costs spent on administration and in payments to nonpoor as opposed to direct benefits to the poor.

(4) Cost--how much will the program cost the taxpaying public.

(5) Dignity and restraints on behavior--does the program dispense funds without disagreeable surveillance or screening procedures; does the program restrict freedom of movement or choice in the labor or consumer market.

(6) Adverse side effects--does the program have inadvertent consequences such as disruption of family organization, discouragement of labor force participation, or encouragement of labor force withdrawal in order to qualify for funds; does the program interfere with other programs or create undesirable patterns of migration.

(7) Clarity of application and minimization of discretionary power--does the program minimize, if not eliminate, the power of administrators to determine final treatment of recipients, are there clear and precise rules that specify the allocation of benefits in the program.

(8) Equity--are there precise rules for horizontal equity, i.e., the equal treatment of all who are equally placed; are there rules for vertical equity, i.e., clear-cut and reasonable criteria by which groups are differentiated in terms of needs.

(9) Automatic flexibility--is there built into the program anticipations of changing statuses of recipients and economic conditions which provide for automatic shifts in benefits.

(10) Economic stability--does funding or operation of the program have adverse effects on the economy or labor markets.

No attempt has been made to be exhaustive in this list. We have intentionally avoided listing specific program attributes having to do with definition of income and family unit, benefit structure, length of the accounting and payment period, how the program shall be paid for, and other features that are quite obviously critical in the final operation of a program. At present it is not possible to know with any certainty the outcomes for each program on each criterion listed, much less for those details not listed. We lack precisely the kind of evidence for program evaluation that is being collected in the New Jersey-Pennsylvania experiment. However, it is possible to make some estimates of how each program might fare in terms of the above criteria so long as we keep in mind the possible influences of variations in program details.

Space does not allow a detailed application of these criteria to the three comprehensive income maintenance schemes. We present instead a brief summary of the most important weaknesses and strengths of each program.

A. Guaranteed employment. The major advantages of a guaranteed employment program are its utilization of manpower and the fact that income would be dignified by work rather than stigmatized as "given away." The major weaknesses of a guaranteed employment program have to do with adequacy, scope, and adverse side effects. Unless a guaranteed employment program were tied to a generous wage supplement scheme, it could not provide the occupationally unskilled poor with incomes above the poverty line. Nor would making the federal government an employer of last resort assist the one-third of poor families who simply do not have employable members. Finally if, as employer of last resort, the federal government paid unskilled workers wages or supplements sufficient enough to bring incomes above the poverty line, these jobs might very well attract many low paid semi- and unskilled workers from the private sector, an undesirable side effect that would require the imposition of restrictive eligibility rules and tests of need for qualification. These weaknesses appear to outweigh any social gains from linking income to work.

B. Children's allowances. The major advantages of a children's allowance program are that it sets up a simple, easily administered, and dignified right to income based on size of family, a criterion that is not considered by employers in setting wages of workers. There are, however, a number of weaknesses, with respect to adequacy, leakage, and adverse side effects. A good deal depends upon the size of the allowance. If payment per check is as low as in Canada and most other nations (excluding France), it would be inadequate to lift most poor families out of poverty. The major weakness, however, is that children's allowances are very inefficient in eliminating poverty because most of the transfers go to the nonpoor. To make the program efficient most of the payments to the nonpoor must be recovered through positive taxation. One major side effect of the program is the possibility that some persons may withdraw from the labor force if benefits rival wages [Green, 1967]. This is particularly important since the program does not encourage labor force participation. These disadvantages are sufficient to suggest that, despite its several merits, a children's allowance is not an efficient means of alleviating poverty.

C. *Negative income tax*. This scheme has many obvious advantages. It would be universal in coverage, provide a dignified way to transfer funds to the poor without screening or surveillance, avoid possible disruption of family organization, and, with the work incentive factor built in, encourage voluntary labor force participation. It also minimizes the discretionary power of administrators and provides clear and precise rules of horizontal and vertical equity. As in the federal income tax system, shifts in the organization of the program or recipient status vis-a-vis the program could be easily and automatically accommodated.

The major problems with a negative income tax program have to do with adequacy, cost, and adverse side effects. Adequacy would depend entirely upon where the breakeven points are set. Most programs now being discussed would not do away with poverty. They are seen as needed minimal supplements to earned income. To wipe out poverty via the negative income tax would be expensive, costing in the neighborhood of $25 billion. Insofar as benefits rival wages, a negative tax program, like a children's allowance, may contain work disincentives. But since payments are keyed to earned income, the disincentives should be smaller than under a children's allowance program.

EXPERIMENTAL OBJECTIVES OF THE NEW JERSEY-PENNSYLVANIA STUDY

Whatever the presumed benefits of a negative tax scheme, there are a variety of questions that must be answered before its adoption. With some oversimplification, they can be reduced to one: What is the cost of a negative tax program? To answer this question, we must specify a particular program--a particular tax rate, guarantee level, and a set of eligibility criteria--and examine empirically the work effort under the program.

If tax rates, guarantee level, and eligibility criteria were all that were needed to calculate cost, empirical research would be unnecessary, aside from the determination of the number of eligibles. Nor would research be required if it were possible to determine the work response of participants from theory, but neither economic nor sociological theory is sufficiently developed to provide us with quantitative forecasts in these areas. Both economic and sociological theory will give us qualitative predictions: We expect some people to choose less work as the cost of not working decreases, but we cannot say by how much. We need to know how the response will vary with the tax rate-guarantee level combination and, within combinations, by labor market status, age, race, ethnicity, education, residential location, family size and composition, occupational history, values, etc.

The usual types of economic and sociological data--governmental and private censuses and surveys--are not adequate for answering these questions, for it is extremely unlikely that we could find natural analogues of sufficient size and permanence to be comparable to the exogenously induced changes in a family's unearned income which would be provided by a negative tax program. What evidence we have on the unearned part of a family's income indicate that it is of little consequence for families of low annual income [Weisbrod and Hansen, 1967]. Consequently, we are led to an experimental design for research into the response to a negative income tax.

The particular experiment reported here is chiefly concerned with the broad question of effects on work effort. The dimensions of this question are extremely complex and we shall just list some of the major issues with which the experiment is concerned. This list by no means exhausts all of the important questions associated with work effort response. There are many issues that the experiment, by design, cannot address. We shall return to this problem later.

First, if cash transfers carry with them work disincentives, how do these vary by tax-rate-guarantee combinations? Second, will primary and secondary wage earners respond differently? Theory would lead us to expect that wives working as secondary earners will leave the labor force more readily than their husbands since half their income typically goes to cover the costs of working [Addiss, 1963]. Does this happen and does it happen differentially by transfer treatment? Third, if job opportunities are scarce, do benefits induce migration to areas of tighter labor supply? Fourth, do the guarantees stimulate job changes which produce a fuller utilization of available skills and/or enhancement of skills in order to command a higher price? Fifth, do the guarantees stimulate enrollments to training courses for the purposes of upgrading skills?

Cross-cutting these five issues are questions of response by race, ethnicity, education, age, occupational history, and values. Since the poor are neither uniform in their characteristics nor a random sample of the United States population, estimates of costs must take their composition into consideration. We must learn whether different groups respond in the same way to a particular transfer scheme. We are likely to find that no one program minimizes the disincentives for all groups. If this is the case, examining the intergroup variation in response should provide a basis for constructing ancillary programs to fill in the deficiencies of whatever scheme seems most feasible in terms of the largest group of the poor. And even given the same net aggregate response for two different transfer schemes, we may want to choose, for exogenous policy reasons, the scheme which would minimize the disincentive in one group and maximize it in another. For example, we might want to minimize the disincentive among the young and maximize it among the nearly retired.

Still other questions refer as much to the social as to the fiscal costs associated with a negative tax. For example, we want to know the effect of the transfers on family structure, particularly among blacks. If job-conditioned income instability contributes to marital conflicts and disruptions as currently thought, we want to know if a transfer scheme will reduce them. On the other hand, it is possible for the transfers to increase marital conflict and disruptions. Since the transfer income does not stem from the activities of an individual, questions may arise regarding rights to it. How this potential conflict will be resolved, and how the resolution will differ by ethnic and racial group are also of interest to us.

In addition, we are examining consumption and savings patterns, use of time, fertility and child-spacing, political consciousness and participation. Because of their importance, some of these issues are being researched even though the experiment is not designed to address them efficiently. For example, while we will look into the issues of fertility and child-spacing, these questions really require an experiment of greater duration. And while we will examine the impact of income transfers on the economic and political structures of the sampled neighborhoods, the problem truly requires an experiment which supports all of the eligibles in an area--which the present one does not.

THE DESIGN OF THE EXPERIMENT

Since the major purpose of the experiment is to assess work effort response and since most of the poor are in intact families in urban areas, the experiment is restricted to families with nonstudent male heads, 18-58 years of age, able to work, and with normal[2] family incomes no more than 150 percent of the poverty line for each family size. The sample has been drawn from poverty tracts in Trenton, Paterson, Passaic, and Jersey City, New Jersey, and Scranton, Pennsylvania. The first part of the sample was drawn in Trenton in August, 1968; the final segment was selected in Scranton in September, 1969. Our experience is that roughly 80 percent of the eligibles will fall between 100-150 percent of the poverty line.

The basic design contains one experimental and two control groups. Once eligibility is determined from a special screening interview, families are randomly assigned to one of eight negative tax plans which together define the experimental group or to one of the two control groups. The experimental group contains 659 families; the first control group consists of 650 families, the second of 100.

The eight tax plans are combinations of tax rates and guarantee levels which, in our judgment, encompass the area of greatest policy interest. Tax rates range from 30 to 70 percent, and guarantee levels vary from 50 to 125 percent of the poverty line (thus for a family of four, the range of guarantees currently run from $1,741 to $4,352).[3] Table 1 shows the combinations selected for experimentation. Table 2 gives the guarantee levels by family size.

After families have been assigned to groups, all, experimental and control, receive a pre-enrollment interview. The purpose of this interview is to obtain baseline data in a variety of areas uncontaminated by knowledge of the experiment or the inception of transfers. Subsequently, the experimental families are visited by enrollers who explain the program to them and solicit their cooperation. If obtained (less than seven percent refuse), they receive payments for three years. Their only obligation is to report their income and family composition each month and to submit to quarterly interviews.

The first control group is also interviewed quarterly. The size of this group (650 families) reflects a concern for attrition which grew as sampling and interviewing progressed.

One of the most difficult methodological problems in studies of this kind arises from the possibility that the transfer effects which are observed are due to the experiment rather than to the payments. Since we are asking people quarterly about their work (and if they are not working, whether they have looked for work), it is possible that our interviews might stimulate work-related responses. We cannot eliminate such effects, but we can measure them by means of the second control group, which will be interviewed annually. Initially it will be selected from the same list of eligibles as the other groups. However no effort will be made to maintain the same group over the three years. It would be extremely difficult to do so, given the once-a-year contact, and not really necessary. A comparable sample is all that is required, and it can be drawn freshly each year.

Because of a concern for ethnic and racial difference in responses, an effort was made to balance the sample in terms of the variables. We employed a form of stratified random sampling in order to ensure adequate numbers of black, Puerto Rican, and white families. Had this not been done, there would have been an excess of Puerto Ricans and too few whites. Currently, the sample composition is 37 percent black, 29 percent Puerto Rican, and 34 percent white.

Finally, our design recognizes that the experiment exists in competition with current welfare programs, and during its existence these programs may provide higher support levels. The likely result of such a situation is that some families will elect to receive welfare in preference to the experiment's benefits. Rather than simply drop these families from our program and lose all of the effort invested in and information obtained from them, we chose to continue these families as part of the experimental group, but pay them only the minimum benefit. It would, of course, be of little use to pay them more, since welfare would only cut their payment but an equivalent amount. We do not believe this is by any means an optimal solution to the problem, but as yet we do not know of a better one.

FINDINGS AND METHODOLOGICAL ISSUES

While detailed statistical analysis of the data collected thus far is yet to be undertaken, our experience does permit us to report some preliminary findings relevant to a national negative tax program and to current and future experiments. The findings are of two types: (1) those which relate to both possible national programs and to other experiments, and (2) those which refer more directly to other experiments. In the latter section, we shall also address some methodological problems with experiments in general and our experiment in particular. The preliminary nature of the findings cannot be overemphasized. It would be inappropriate to draw strong inferences from them.

National Programs and Experiments. The critical experimental question is, of course, the work effort response to the negative tax payments. Two measures of this response are currently available: (1) changes in the size of the average payment, and (2) relative change in the average earned family incomes for the experimental and control groups. If wage earners drop out of the labor force and substitute negative tax payments for earned income, the size of our average payment should rise over time. Moreover, average earned family income in the experimental group should decline relative to average earned family income in the control groups.

Based on fourteen months experience in Trenton and eight months in Paterson and Passaic, we can say that there is little indication that wage earners are leaving the labor force. On the contrary, our average payments have been quite stable over time, and average earned family incomes have risen and at approximately the same rate for both the experimental and control groups.[4] It appears that the increases in family incomes are due to increases in the prevailing wage rates. Thus both measures indicate that work effort is undiminished by negative tax transfers.

In addition, there is no evidence that families have treated the payments as a windfall, even during the very first payment periods.

Fears of spending sprees or unusual expenditures have not been justified. It appears that families budget the payments as they do any other item of income.

From the standpoint of national program cost, another important experimental issue is the likely participation rate of the eligible population. Projections of program costs vary markedly depending upon the particular tax rate, guarantee level, and population groups the estimator chooses to incorporate. But all estimates assume complete participation of the eligible population. This is a perfectly reasonable assumption if a national program is structured to make payments automatically. For example, benefits might be computed and paid as a result of filing the annual tax return. However, if application for benefits is discretionary, then the assumption is not viable and current cost estimates may be excessively high.

Because participation in the experiment is voluntary, we did not assume full participation of the eligible population. Given the percentage of the eligibles utilizing current welfare programs, unemployment compensation, and tax rebate procedures, this just did not seem reasonable. Rather we expected that those families whose normal income was close to their breakeven point, or whose income fluctuations brought them close to their breakeven point, might not find the size of the payment worth the bother to apply for it. And as income rose, we expected that an increasing number of families with self-definitions as nonpoor would reject the payments.

Thus far these expectations have been confirmed and the results are observable in terms of the families who have dropped out of the experiment or refused to participate. As of mid-November, 47 of the roughly 650 experimental families had withdrawn from the experiment. Of these 47, 41 were at or above their breakeven point just prior to quitting the program. Five of the six families who were below their breakeven point--that is, who received more than the minimum payment--dropped out either because they moved and could not be located[5] (one case) or because they moved out of the continental United States (four cases).[6] For only six of the 41 families at or above their breakeven point was a move the basis for attrition. (Of these six, four moved and could not be located; this figure should be compared with the one withdrawal among the six receiving more than the minimum payment which involved a family that moved and could not be located.) While evidence based upon such small numbers is suggestive at best, it seems reasonable to propose that families receiving the minimum payment may not believe as strongly as families receiving higher payments that keeping the experimenters informed of their whereabouts is worth the bother. Analysis of the refusals provides further substantiation for the general point. Over all cities, 71 percent of the families who refused to participate (54 families) would only have received the minimum payment in any case. Of the remainder, virtually all were families on welfare who did not feel it to their advantage to change to our programs.

Altogether, the number of families who have dropped out is roughly 7 percent of the experimental group and 14 percent of those receiving the minimum payment. It would be extremely difficult to project these figures into estimates for a national program. Families whose incomes exceeded the experimental criterion when eligibility was determined but whose incomes subsequently dropped below it are excluded. Thus net attrition may be less than 7 percent. On the other hand, the exigencies of the research design have required that we make every effort to persuade families to remain in the experiment. Matters are further complicated by the fact that those who withdrew are spread across eight experimental tax plans, so no plan contains enough cases for reliable estimates. Nonetheless, it is clear that if participation in a national program is voluntary, there may well be significant underutilization--as is the case with other voluntary transfer programs.

Experiments. However valuable it may be for an estimate of national program participation, attrition is a serious problem for an experiment. Not only may samples become too small to permit reliable estimates of effects, but if attrition is at all selective (and we have seen that it is), the estimates that can be calculated on those remaining in the experiment may be greatly biased. The problem is particularly acute in the control groups, since there are fewer benefits to induce cooperation. Thus far, we have lost 44 control group families out of 650.

The experiment began with payments to all families, experimental and control, of $5 per interview, in the rather naive (it now appears) hope that this amount would be sufficient to hold the cooperation of the main control group. It was not. Moreover, the minimum payment of

$5 a month did not seem to be enough to sustain the cooperation of many experimental families. Therefore a decision was made to substantially increase the incentives. Now the main control group is paid an $8 per month "filing fee" for keeping our office informed of their addresses, and the minimum experimental payment is $20 per month. While we are hopeful that these solutions will alleviate the problem, it is as yet too early to judge their effects. Admittedly, the remedy slightly distorts the experimental approximation to reality, since it can be said that now all families are receiving payments. However, the problem does not appear to be significant. The amount involved probably is not large enough to affect estimates, and in any event, responses are likely to be more readily observed in terms of the variation in payments than in terms of their absolute levels.

For the experimental group, information is another means to minimize attrition. The program was explained to sample families at some length prior to their enrollment, but a substantial amount of ignorance, confusion, and suspicion remained and further explanations were made in a number of cases. While most of the suspicion appears to have been allayed, a recent sampling of families revealed that a great deal of ignorance still exists. Such ignorance does little to motivate cooperation, and, consequently, we are considering making new explanations to everyone. Clearly, if such knowledge, or the lack of it, affects participation in the experiment, it is likely to affect participation in a national program.

Also related to the question of attrition is the length of the period between income reports and payments. Originally, families were asked to report their incomes monthly and payments were made biweekly. But we quickly discovered that many families, particularly those receiving the minimum payment, found the schedule onerous. Fearing--and finding--attrition we attempted to ease the situation by only requiring those receiving minimum payments to report their incomes every three months. Interestingly, we found more opposition to the new plan than to the old. Investigation revealed that, with the reduced contact under the new plan, families perceived the requests for data as even greater disruptions of their normal scheme of things than they had under the old plan. In addition, since we require each family to submit their pay stubs along with their income reports, we found that they had difficulty keeping track of them over the three-month period. As a result, we returned to the monthly schedule.

Despite their deficiencies, these procedures do represent an improvement over those developed during the planning stage of the experiment. It was intended that both reports and payments would be made on a monthly basis. But pilot interviews suggested that the families would find the schedule bothersome. So we asked ourselves how we could emphasize the benefits of the program. We concluded that we had to make the program more visible and salient to the families. One way to accomplish this is simply to increase rather than decrease contact. But to increase contact by increasing the frequency of the required income reports is to emphasize a negative aspect. Accordingly, we decided to shorten the payment interval; payments are now made every two weeks rather than monthly. Reaction to the change has been remarkably good. Most of the families are paid their earnings weekly or every two weeks, and many have told us that the schedule helps them to integrate our payments into their budgets. Judging from reactions like these, the payment schedule may well have avoided a source of attrition.

More generally, our experience suggests that the length of the interval between payments may significantly affect participation in national programs or future experiments. Keying the transfer interval to the prevailing job payment period could be beneficial.

There are a number of additional questions of interest to both economists and sociologists which derive from the conditions of a negative income tax experiment rather than from negative taxation, per se. These problems are of three types: (1) the relationship between the experiment and competing welfare programs; (2) the difficulties of applying different experimental treatments simultaneously to families in a single locale; and (3) the problems associated with supporting only part of the eligible target population in a neighborhood.

Negative tax experiments must exist in the context of alternative welfare programs which they cannot control and which may offer competing benefits. Changes in these competing programs therefore may seriously affect the behavior of experimental families. For example, during this past summer, New Jersey raised the support level of its AFDC-UP program. As a result, the AFDC-UP payments now exceed the benefits in a number of tax plans in the experiment. This situation has led a number of families to drop our payments in favor of New Jersey's.

Although almost all of these families continue to be interviewed, the loss of these families from our tax plans clearly endangers the validity of the estimates we hope to make about the effects of these plans. Moreover, the loss of families is likely to be systematic, since differences in the educational attainment and sophistication of families imply that the distribution of knowledge about alternative welfare programs is not random. Thus, estimates made on the basis of families remaining in the tax plans may well be biased. It is entirely possible that our experiment, and others like it, could be seriously impaired by current, competing welfare programs.

Another set of problems derives from the possibility of communication among persons on the experiment. As described earlier, some of the tax plans are considerably more generous than others. Obviously, individuals are disturbed when they learn that their families are being supported at a lower level than their neighbors. One family quit the experiment for this reason. Related to this phenomenon is the case of the employer who, discovering that one of his employees was receiving benefits from us, decided the man did not need his job and fired him.

Many of these problems are less likely to occur or, if they did, would have little significance in a national program of negative taxation. However, they are endemic to experimentation in this area, and they do make the problem of obtaining experimental guidance for a national program more difficult.

Some of the difficulties associated with supporting only a proportion of the eligible population in a neighborhood relate to our ability to predict community effects which may emerge under an income maintenance program. A range of neighborhood responses to the infusion of financial resources into poor areas is possible. Services which are currently lacking in these areas may improve, the quality of housing may be raised, or, alternatively, the exploitation of the poor may simply become more rewarding. Similarly, it is possible that, with an increase of resources in poor neighborhoods, the ability to maintain self-interest organizations will improve, possibly resulting in a multiplier effect whereby poor neighborhoods translate some of their new income into political power.

However, many of these effects cannot be adequately studied since only a proportion of the eligible population in any neighborhood is supported by the experiment. Some of the possible neighborhood responses may require a minimum critical value of disposable income before they can occur. The aggregate amount of money provided to a neighborhood may be too low to allow us the opportunity to study community organization effects.

Another kind of problem deriving from support of only a proportion of the eligible population stems from pressures that have been exerted to place specific individuals under the support program. Organized political groups in a few instances have viewed the experiment as a potential source of favors for important constituents. Pressure has been exerted to admit particular individuals into the experiment or onto the program staff. Fortunately, we have been able to resolve these problems without affecting the integrity of the experiment. However, the potential for such interference will have to be considered in planning future experimental research on income maintenance.

CONCLUSION

Income maintenance experimentation is important for two reasons: first, there is the significance of the specific policy decisions for which it attempts to provide guidance. How much will it cost? How should it be structured, etc.? Second, and perhaps of greater long-run importance, income maintenance experiments are a first attempt to guide significant social policy decisions by experimentation. If they prove useful, the nature of social policymaking in this country may undergo a radical change. But, whatever the potential of experiments, we must recognize that they are enormously difficult to execute successfully. It is for this reason that we have noted here a number of the difficulties that have arisen in course of the New Jersey-Pennsylvania experiment.

Of course, we have not and cannot cover all of the issues here. Some are being addressed elsewhere. Three projects covering other topics are currently underway, although they are at earlier stages of the experimental process. The first is a replication of the New Jersey-Pennsylvania experiment in a rural setting. The study is being conducted in Iowa and North Carolina under the direction of D. Lee Bawden of the University of Wisconsin's Poverty Institute. Although a major question is the response of rural residents to differential tax rates and guarantee levels, this study also will examine the residential mobility response to these same experimental variations.

As a result, the sample is more nearly representative of the poor in its area and includes female-headed households and unrelated individuals. More importantly, however, provisions have been made to include persons who spin-off from the experimental families and establish households of their own. At this point the experimental households have just been chosen and payments started.

Another important question currently under investigation is the extent to which work response to a negative tax system would interact with a manpower program. This study is being conducted in Seattle, Washington, in cooperation with the Model Cities Program. At present it is still in the design stage, so it is not possible to describe the specific structure of the experiment. In the third experiment, located in Gary, Indiana, particular attention is being given to the impact of negative taxation on family stability and structure. In both Seattle and Gary the experimental samples will be representative of the cities' poor populations.

In closing, we would like to mention a critical issue that heretofore has received little attention: the ethical questions in social experimentation. One set of problems arises from the fact that we are intervening in major ways into the lives of human beings--even if it is ostensibly for their betterment. For example, do we have any responsibility for what happens to persons in the experiment after the payments have ended when they know, or at least were repeatedly told, that the benefits will only be paid for a given time period? More specifically, if, for those eligible for welfare, there is a time gap between the end of our payments and the start of welfare, do we have a responsibility to assist them financially? What are our obligations if families develop patterns of life that cannot be sustained without the experimental payments?

A second set of issues stems from the need to minimize nonexperimental stimuli. For example, the press has been extremely interested in the details of the experiment. One part of this interest is a continual request to talk with experimental families in order to add "human interest" to their stories. But to meet these requests would be to make publicity yet another experimental stimulus. After some initial difficulties, we have been able to persuade them to report less personalized stories. But it is clear that the problem of the relationship between the needs of social experiments and institutions such as the press is a general one, and new standards must be worked out. The public does have a "right to know," but successful social experiments also require a limit to that right.

We raise these issues as warnings to future experimenters rather than as problems capable of universal solutions. We note only that we hope to report at a later time on our particular solutions.

TABLE 1

Negative Income Tax Plans in the New Jersey Experiment

("X" marks plans in use)

	Tax Rates		
Guarantee Levels	30%	50%	70%
.50 Poverty Line ($1,741)*	X	X	
.75 Poverty Line ($2,611)	X	X	X
1.00 Poverty Line ($3,482)		X	X
1.25 Poverty Line ($4,352)		X	

*Figures in parentheses are guarantee levels for a family of four.

TABLE 2

Guarantee Levels by Household Size

Guarantee Levels	Household Size 2	3	4	5	6	7	8+
.50 Poverty Line	$1,055	$1,450	$1,741	$1,952	$2,136	$2,294	$2,426
.75 Poverty Line	$1,582	$2,175	$2,611	$2,928	$3,204	$3,441	$3,639
1.00 Poverty Line	$2,110	$2,901	$3,482	$3,904	$4,273	$4,589	$4,853
1.25 Poverty Line	$2,637	$3,626	$4,352	$4,880	$5,341	$5,736	$6,066

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