



A Failure to Communicate: The Labour Market Findings of the Negative Income Tax Experiments and Their Effects on Policy and Public Opinion

Karl Widerquist*

**DRAFT, SEPTEMBER 2002. NOT TO BE QUOTED
WITHOUT PERMISSION OF THE AUTHOR(S).**

*The views expressed in this paper are those of the author(s),
and do not necessarily represent the views of BIEN or BIEN-Suisse.*

* University of Oxford, United States.

Contents

Abstract	v
1. Introduction.....	1
2. The experiments.....	2
3. The work-disincentive results of the experiments	9
4. What the experiments could not measure	13
5. Political and media perceptions of the experiments	20
6. Conclusions.....	23
Bibliographical references A (a sampling of non-academic articles on the NIT experiments).....	25
Bibliography B: Academic Articles on the NIT Experiments	27

List of tables

Table 1. Summary of the negative income tax experiments in the United States and Canada.....	8
--	---

List of figures

Figure 1. Academic articles published each year on the NIT experiments (includes working papers, journal articles, and book chapters).....	9
Figure 2. The work disincentive effect	14
Figure 3. Workers receiving NIT.....	14
Figure 4. Completely inelastic demand	17
Figure 5. Completely elastic demand	18
Figure 6. The range of possible market responses to a given horizontal shift in the supply of labour.....	18

Abstract

This paper examines the labour market findings of the negative income tax experiments of the 1970s, and their impact on the public policy debate in the United States. Although both side of the debate use statistics from the experiments to back up their arguments, the results are much more complex and less conclusive than one would hope. When the results were brought before Congress in the late 1970s, researchers failed to make the limits of their analysis clear giving the impression that the results were much more conclusive than they actually were.

Thanks to: Philippe Van Parijs, Michael Grossman, Robert Haveman, Robert Moffit, David Greenberg, and Robinson Hollister.

1. Introduction

Between 1968 and 1980, the United States Government conducted four negative income tax (NIT) experiments, and the Canadian government conducted one. They were designed to test the effects of a guaranteed income, which unconditionally assures all citizens some minimal level of income. The growing debate today about the basic income guarantee today is greatly affected by the labour market findings of those experiments. Although the modern basic income guarantee movement tends to focus on the basic income variant of the proposal rather than on the negative income tax as tested in the experiments the similarity between the two is so great that any conclusive findings from the experiments would be of great value for the current discussion. However, both basic income supporters and opponents quote the findings of these experiments with equal conviction.

At least 345 scholarly articles have been written on these experiments, but there is no clear consensus on what they implied for policy. The experimental results have been cited both by supporters and opponents of the redistribution of income as evidence for the workability or the unworkability of a negative income tax. For example, in 1993, long after the results were in and the initial flurry of articles was over, Hum and Simpson declared in the *Journal of Labour Economics*, “Few adverse effects have been found to date. Those adverse effects found, such as work response, are smaller than would have been expected without experimentation.” But in the same issue or the same journal, Anderson and Block speculated why social scientists continue to support the NIT “in the face of an avalanche of negative results” provided by the experiments.

Political perceptions of the experiments have been equally confused. The experiments received attention in the popular press in a few brief periods in the 1970s, most particularly in 1977 when Congressional hearings examined results from the experiments as part of their investigation of President Carter's ill-fated welfare reform proposal. The dozens of technical reports including large amounts

of data were simplified down to two statements: It decreased work effort and it increased divorce.

Dozens of editorials appeared in newspapers around the country criticizing the government for spending millions of dollars simply to show that people work less when you pay people not to work. The meaning of the results has been disputed by scholars, but the neither the results nor the disagreements about the results were understood by politicians or the media. Part of the reason for this misunderstanding is the natural difficulty of presenting complex technical results to a lay audience interested only in a bottom line. But part of the responsibility also rests with the scholars who presented bottom line results without clearly communicating just what these results did and did not show.

This paper examines the labour market results of the NIT experiments to determine what conclusions, if any, can be drawn from them conclusively, and how well these conclusions have been perceived by the media and the scholarly community. Part one summarizes the experiments. Part three discusses the ability of estimates of the work-disincentive effect to determine the market equilibrium outcome of a national policy.

2. The experiments

The United States Government sponsored 4 guaranteed income experiments between 1968 and 1980 (see Table 1.) The Canadian government got into the game with one experiment in the late 1970s. These experiments are known collectively as the income maintenance experiments, the guaranteed income experiments, or the NIT experiments. They began at a time when the elimination of poverty was the stated goal of the presidential administration, when there was a growing movement for economic rights, and when many social scientist and policymakers believed that social policy reform was heading in the direction of a guaranteed income. But by the time all of the results were available the movement for eliminating poverty had dwindled and the idea of “welfare reform” was beginning to be associated with dismantling rather than rationalizing the welfare system. To a large extent the NIT experiments simply outlived the movement that

spawned them, but to a small extent the experiments contributed to the demise of progressive social reform.

The primary aim of the NIT experiments was to test the effects of a guaranteed income on the work effort of recipients, and thereby to get some indication of the costs and feasibility of such a programme. Their secondary aim was to test the effects of a guaranteed income on any other effected variable the experimenters could measure. These variables included health statistics, educational attainment and performance, the divorce rate, and many others. But a discussion of these effects is beyond the scope of this paper.

The NIT experiments came about at a time when the negative income tax was being promoted by social scientists of various political backgrounds as a scientific solution to poverty. They were the first large-scale social experiment to use the scientific method of randomly assigning human subjects into treatment and control groups just as medical researchers do when testing drugs. Some social scientists have called the NIT experiments, “experiments in how to conduct experiments”. They have had much large influence in the conduct of social experiments than in the examination of the policy they were designed to test.

Table 1 summarizes the basic facts of the five NIT experiments. The first, the New Jersey Graduated Work Incentive Experiment (which is sometimes referred to as the New Jersey Negative Income Tax Experiment or simply the New Jersey Experiment), was conducted from 1968 to 1972. The researchers originally planned to conduct the entire experiment in New Jersey, but they were unable to find enough poor whites in New Jersey and had to open a second location in Wilkes-Barre, Pennsylvania in order to round out a racially representative sample. The treatment group originally consisted of 1,216 people and dwindled to 983 (due to drop outs) by the conclusion of the experiment. The sample size consisted of black, white and Latino, two-parent families with a male head, that were not approaching retirement, and with incomes below 150 per cent of the poverty line. Treatment group recipients received a guaranteed income for three years.

The Rural Income Maintenance Experiment (RIME) was conducted in rural parts of Iowa and North Carolina from 1970 to 1972. It functioned largely as a

supplement to the New Jersey experiment, which focused on an urban population. It began with 809 and finished with 729 experimental subjects. The treatment group received a guaranteed income for two years. Subjects met the same criteria as the New Jersey Experiment except that single parent, female-headed households were also included. Few, if any, Latinos were included in the sample. Both RIME and the New Jersey experiment began under the direction of Office of Economic Opportunity (OEO) and were completed by the Department of Health, Education, and Welfare when OEO was disbanded.

The largest NIT experiment was the Seattle/Denver Income Maintenance Experiment (SIME/DIME), which had an experimental group of about 4,800 people in the Seattle and Denver metropolitan areas. The sample included black, white, and Latino, families with at least one dependent and incomes below \$11,000 for single-parent families and below \$13,000 for two-parent families. The experiment began in 1970 and was originally planned to be completed within six years. However, researchers were interested in how the long-term effects of a permanent guaranteed income might be different from the short-term effects of a temporary guaranteed income experiment and so they obtained approval to extend the experiment for 20 years for a small group of subjects. This would have extended the project into the early 1990s, but it was eventually cancelled in 1980, so that a few subjects had guaranteed income for about nine years, during part of which time they were led to believe they would receive it for 20 years.

The Gary Income Maintenance Experiment (which is never abbreviated) was conducted between 1971 and 1974. Subjects were almost entirely black, single-parent families living in Gary, Indiana. The experimental group received a guaranteed income for three years. It began with a sample size of 1,799 families, which (due to a large drop-out rate) fell to 967 by the end of the experiment.

The Canadian government got into the business of conducting income maintenance experiments somewhat later. The Manitoba Basic Annual Income Experiment (Mincome) began in 1975 after most of the U.S. experiments were winding down. The sample included 1,300 urban and rural families in Winnipeg and Dolphin, Manitoba with incomes below \$13,000 per year. By the time the

data collection concluded was completed in 1978, interest in the guaranteed income was seriously on the wane and the Canadian government cancelled the project before the data was analyzed. Fortunately, university-based researchers were eventually able to obtain and analyze the data, so that results are available today.

Two parameters are central to the design of any guaranteed income. The guarantee level or the minimum income level (G in Table 1) is the amount the recipient receives if she has no private income. The central goal of a guaranteed income programme is to ensure that no person's (or no family's) income falls below some given level for any reason. Theoretically, the guarantee level can be any number between zero and per capita GDP. A guarantee level that was too low would not significantly reduce poverty or increase income insecurity, but a guarantee level that was too high would have such strong work disincentive effects that the programme would not be affordable. The experiments intended to find out whether a guarantee level sufficient to seriously reduce or even eliminate poverty was feasible. For that reasons guarantee levels between 50 per cent and 150 per cent of the poverty line were tested.

The United States' experiments all defined the guarantee level relative to the poverty line. A guarantee level of 1.0 or higher would eliminate poverty as defined by official statistics. The smaller the guarantee level is, the smaller the work disincentive and the smaller the cost of the programme will be, but the effect on the poverty rate will also be smaller. The larger the guarantee level is, the larger the effect on the poverty rate, but the higher the cost and the greater the work disincentive. The five experiments tested nine different guarantee levels. 0.5 (50 per cent of the poverty level) was tested in the New Jersey and Rural Income Maintenance Experiments. 0.75 was tested in all four of the United States experiments. 1.0 (just enough to eliminate official poverty) was tested in all of the United States experiments except SIME/DIME. 1.25 was tested in only in the New Jersey Experiment, and 1.26 and 1.48 were tested only in SIME/DIME. Mincome, which defined its guarantee level in Canadian dollars rather than relative to the poverty level, tested guarantee levels of \$3,800, \$4,800, and \$5,800 per year.

The other central parameter of any guaranteed income system is the marginal tax rate (t in Table 1), also known as the “take-back rate.” The practical working of the marginal tax rate is slightly different if the guaranteed income is administered as a basic income rather than a negative income tax, but because all five of the experiments tested the negative income tax version, this small distinction is not important here. The take-back rate is the rate at which benefits are reduced as the recipient makes private income. That is, it is the effective income tax rate per dollar of private income for recipients of the negative income tax; hence the term marginal tax rate. A higher marginal tax rate is associated with a lower overall tax-cost of programme¹ but also with greater work-disincentives, and a greater potential “poverty trap.” A lower marginal tax rate is associated with a higher overall cost of the programme, but also with greater work incentives. A lower marginal tax rate is also associated with a greater redistribution of income towards people with incomes above the poverty line. Redistribution to this group might be desirable in terms of equity (as a reward for low-wage workers), but to do so would greatly increase the cost of a programme primarily conceived as an anti-poverty policy². For these reasons, it is important to know what kinds of take-back rates are feasible and the work-disincentive effects of each. The experimenters also tested nine different take-back rates. 0.3 (a 30 per cent marginal tax rate) was tested in the New Jersey and Rural Experiments. 0.35 was tested only in Mincome. 0.4 was tested only in Gary. 0.5 was tested in all of the experiments except Gary. 0.6 was tested only in Gary. 0.7 was tested in the New Jersey Experiment, RIME, and SIME/DIME. 0.75 was tested in Mincome. SIME/DIME tested two non-linear income functions with marginal tax rates of 0.7 minus 0.025 times income and 0.8 minus 0.025 times income. The effect of these two non-linear functions was to impose higher marginal tax rates on lower levels of income and lower marginal tax rates on higher levels of income.

¹ Theoretically higher marginal tax rates could be associated with higher taxes costs if the supply of labour is highly elastic, but this was not expected and did not prove true in any of the experiments.

² The basic income movement today puts less stress on the issue of poverty reduction and more stress on broader equity goals and to them this issue may be less important.

The use of so many different rates of G and t , reduced the numbers of subjects receiving each type of treatment, and therefore reduced the statistical reliability of the results for each. Some of this trade-off is worthwhile to allow for testing of a greater variety of potential parameters, but the experiments might have benefited from more coordinated effort to test a uniform group of parameters. A larger sample subject to three or four broadly spaced parameters might have been more beneficial than smaller groups subject to nine different and unevenly spaced parameters.

The primary goal of the experiments was to test the effects of G and t on work effort. The actual question was much more complex than what was usually reported. Most non-academic articles reported the simple summery statistics of how much less the treatment group worked than the control group but how the nine different levels of G and the nine different levels of t effected the work effort of men and women; primary, secondary, and tertiary household income earners; and whites, blacks, and Latinos in single-parent and two-parent families. From these results, researchers hoped to estimate the costs and effects of a national NIT programme and more generally to learn something about supply in the low-wage labour market. Table 1 summarizes the configuration of the experiments.

Table 1. Summary of the negative income tax experiments in the United States and Canada

Name	Site(s)	Data collection	Sample size	Sample characteristics	G*	t**
			Initial (final)			
The New Jersey Graduated Work Incentive Experiment	New Jersey and Pennsylvania	1968-1972	1,216 (983)	Black, white, and Latino, 2-parent families in urban areas with a male head aged 18-58 and income below 150% of the poverty line.	.5, .75, 1.0, 1.25	.3, .5, .7
The Rural Income-Maintenance Experiment (RIME)	Iowa and North Carolina	1970-1972	809 (729)	Both 2-parent families and female-headed households in rural areas with income below 150% of poverty line.	.5, .75, 1.00	.3, .5, .7
The Seattle/Denver Income-Maintenance Experiments (SIME/DIME)	Seattle and Denver	1970-1976, (some to 1980)	4,800	Black, white, and Latino families with at least one dependant and incomes below \$11,00 for single parents, \$13,000 for two parent families.	.75, 1.26, 1.48	.5, .7, .7-.025y, 8-.025y
The Gary, Indiana Experiment	Gary, Indiana	1971-1974	1,799 (967)	Black households, primarily female-headed, head 18-58, income below 240% of poverty line.	.75, 1.0	.4, .6
The Manitoba Basic Annual Income Experiment (Mincome)	Winnipeg and Dauphin, Manitoba	1975-1978	1,300	Families with head younger than 58 and income below \$13,000 for a family of four.	\$3,800, \$4,800, \$5,800 ***	.35, .5, .75

* G = the Guarantee level(s). Guarantee levels for the U.S. Experiments are reported as a percent of the poverty line, in Canada they are presented in Canadian Dollars.

** t = the marginal tax rate or the "take back rate."

*** Canadian dollars

Sources: Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., (1980) *A Guaranteed Annual Income: Evidence from a Social Experiment*. New York: Academic press.

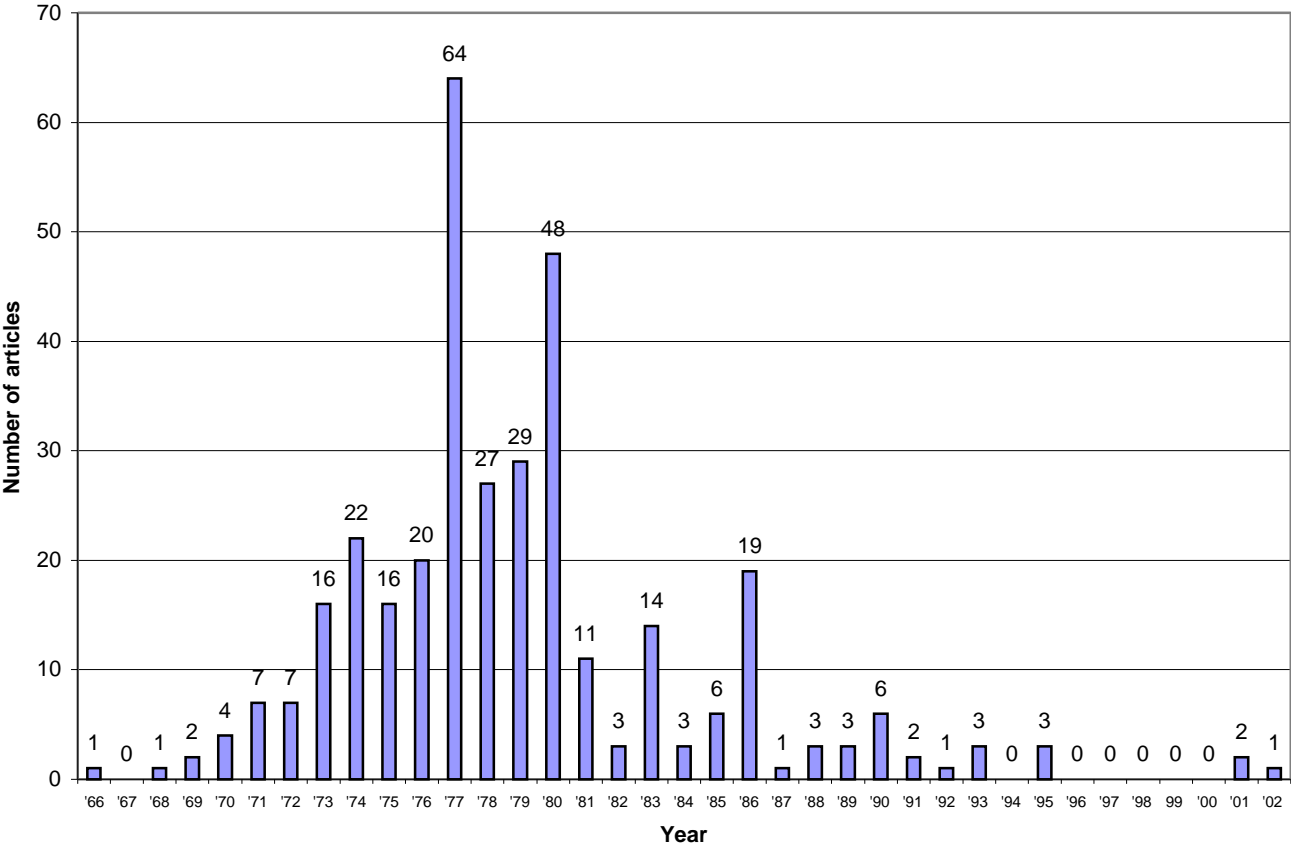
Feber, Robert and Werner Hirsch, 1978. "Social Experimentation and Economic Policy: A Survey." *Journal of Economic Literature* 16: 1379-1414.

Hum, Derek & Simpson, Wayne. 1993. "Economic Response to a Guaranteed Annual Income: Experience from Canada and the United States". *Journal of Labour Economics* 11 (1), 263-296.

3. The work-disincentive results of the experiments

Since 1966, the NIT experiments have been the subject of at least 340 scholarly articles, including working papers, journal articles, and book chapters (see bibliography B for a list). There is some overlap in this number because in some cases the same or a very similar article was published in all three forms. Most of these articles were published in the late 1970s as the experiments reached completion, but a trickle of articles reassessing the experiments continues today. Figure 1 shows the number of articles published each year on the experiments. About half of these articles deal with theoretical, methodological, and interpretational issues. Of those that report empirical findings, nearly half deal with the work disincentive effect.

Figure 1. Academic articles published each year on the NIT experiments (includes working papers, journal articles, and book chapters)



Source: Bibliography B, based on an extensive, but by no means exhaustive survey of the available literature.

Many of the researchers who conducted the experiments and others who examined the data, were strong backers of the programme and viewed the results as proving the feasibility of the NIT, but other researchers, as well as some politicians and members of the media, saw the results as proving the very opposite, that a national guaranteed income could not or should not be adopted. The experimental results seem to be a scientific Rorschach test in which an observer can see whatever she wants to see. The most important reason for this disagreement is that the most general result of the experiment was what everyone expected before the experiment was conducted: the treatment group worked less than the control group, all else equal. This agreed; the central question was how much less for each demographic group and for each level of G and t , and whether this work-disincentive effect fell into the acceptable range for a viable national NIT policy, but the experiments alone could not answer these questions.

Two limitations of the NIT experiments kept them from giving a definitive answer to this question. First, there is no clearly agreed, objective criteria for how much effect on work effort is acceptable, allowing researchers with differing political views to draw opposite conclusions from the same results. Second, the experiments did not replicate the conditions of a national policy on a smaller scale, allowing researchers to claim more meaning to the effects of a national policy than the experiments warranted.

The work disincentive results met two criteria that were important to guaranteed income supporters.

First, the fear that a negative income tax would cause some segment of the population to completely withdraw from the labour force was not confirmed by the experiments. None of the experiments found evidence of such behaviour; the lower work effort of the treatment group relative to the control group took the form of increased weeks of unemployment between jobs, or fewer hours worked per week, but not the wholesale labour market withdrawal critics feared. The distinction between these two different types of work disincentive effects has not been well understood and opponents of the basic income guarantee continue to voice this fear despite the lack of experimental evidence for it.

Second, the cost of the programme was not so great as to make necessarily make the programme technically untenable. Critics of the guaranteed income have feared that work effort reductions would greatly increase the cost of the programme, requiring a large increase in taxes, which would further discourage work, and ultimately lead to the collapse of the programme. Certainly, whether this would happen depends on the level of the guarantee. It would inevitably happen if the minimum income was set near per capita national income, leaving a negligible work incentive, and certainly it would not happen with a guarantee level of \$1 a year which would have a negligible work disincentive, but the results implied that a guarantee level between 50 per cent and 150 per cent of the official poverty level would be financially tenable. Although the work disincentives of the programme would increase the cost of an NIT over what it would have been if it had no effect on hours worked, it was not so much that it could make the programme unaffordable.

But, inevitably the experiments gave two important labour market results that NIT opponents could point to: there was a statistically significant work disincentive effect and that work disincentive increased the cost of the programme over what it would have been if work hours were unaffected by the NIT. Although these results were completely expected, they were reported in the press (see part 5) as if they were the critical findings of the experiments, and they largely shaped political and media perceptions that the experiments proved the failure of the guaranteed income.

Because the work disincentive effects of the NIT were greater than negligible but not so large as to make the programme unaffordable, the meaning of the figures depends on how large is large and how small is small. The work-disincentive effect seems to have been just enough that supporters can claim it to be small and opponents can claim it to be large.

Researches who look at the percentage decline in work effort can claim minimal effects. The basic findings were that male heads of households' (men with wives and children) hours worked declined slightly if at all (relative to the control group). From 0 per cent to 9 per cent depending on the study and the data.

Work effort of female heads of households (single mothers) declined slightly more. Hours worked of married woman and hours worked of teenagers living with parent(s) declined more substantially - in the neighbourhood of 20 to 30 per cent. The decline in work effort among teenagers was not associated with increased hours of schooling, but it was associated with increased school performance in some studies. These figures are not terribly disturbing to guaranteed income supporters. Heads of households taking more time to look for work in between jobs, but not dropping out of the labour force is just the kind of result most supporters had hoped for. Parents spending more time with their children, and teenagers spending more time on their studies, are the kinds of benefits a guaranteed income would hope to give.

But as Keeley, Robins, Spiegelman, and West (1978) and Burtless (1986) independently concluded, even these modest reductions in work effort can cause significant increases in the cost of the programme (relative to what the cost would be if there was no work-effort response), because those whose earnings decline receive a larger share of the payments. Keeley, Robins, Spiegelman, and West found that work disincentive effects increased the cost of the programme by more than 50 per cent, and Burtless found that in some cases a tax expenditure of \$3 would be required to raise the incomes of recipients by \$1 (the rest going to work time reduction). Opponents of the guaranteed income have used these figures to claim that the project is a political non-starter.

But the meaning of these figures can be easily overblown. Imagine a minimum wage experiment in which the government picked out 1,000 low-wage workers and applied the minimum wage only to them. Such an experiment would no doubt find an enormous increase in unemployment in this group because they would be unable to compete with the lower cost of the millions of workers not receiving a minimum wage. But a minimum wage applied to all workers shows a small or even negligible relationship to the average unemployment rate, because the demand for labour responds differently to a change in supply of the market as a whole than it does to a change in supply small group in the market. To a lesser extent this problem affects the NIT experiments in the same way. There is much more that the experiments cannot show than they can. Part 3 discusses the limits

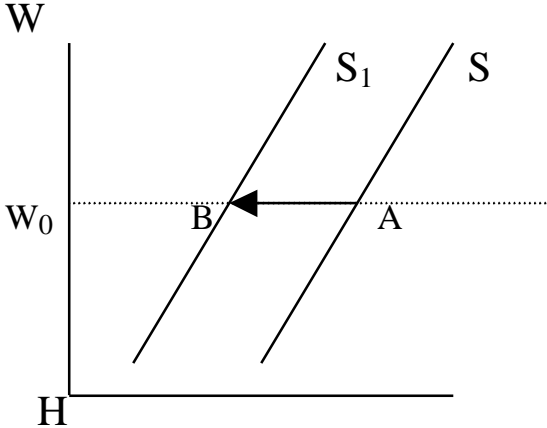
to what the NIT experiments could show about the market effects of a guaranteed income.

4. What the experiments could not measure

All of these precise and technical estimates are small in comparison to what we simply do not know about the effects of a national guaranteed income programme even if the responses of the experiment group are completely representative of the national response. At best the experiments measured the short run horizontal shift in labour supply caused by the experiments (the shift from A to B in Figure 2). But what we really want to know is the long run market response to a permanent national negative income tax (the shift from point A to point C in Figure 3). Without knowing the market response it is impossible to accurately estimate the cost of a national programme or its effects on work hours and poverty. To determine the shift from A to C, researchers would have to know several important pieces of information that the NIT experiments could not measure: First, how does the long-run shift in supply caused by a permanent national programme differ from the short run shift caused by a temporary experiment? Second, even if the experiments perfectly measured the long run supply shift caused by a national programme, to determine the market outcome we would also need to know the long run elasticities of both the supply of and the demand for labour (i.e. the shape of the supply and demand curves).

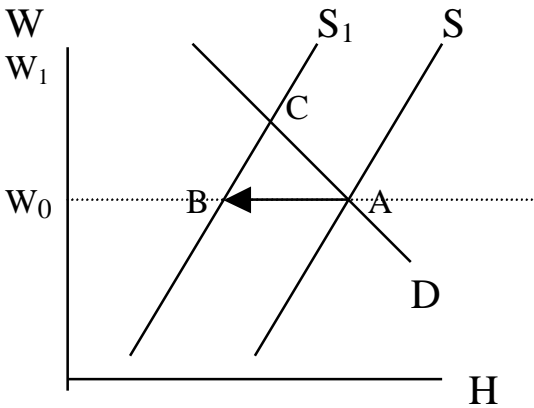
The vertical axis shows the wage (W), the horizontal axis shows the hours worked (H). The work disincentive effect causes the supply among the experimental group to shift from S to S_1 . Because the experimental group is small in comparison to the size of the market the wage (W) is fixed and the shift from point A to point B shows only a decline in hours and no increase in the wage. The experiments give no information about the demand for labour or about the shape of the supply curve, only the size of the shift in supply (Figure 2).

Figure 2. The work disincentive effect



If all workers received the NIT, the market would respond. The market outcome would go from a to C instead of a to B. This would reduce the drop in work hours, increase the income of recipients, and decrease the cost of the programme in terms of tax dollars and efficiency (Figure 3).

Figure 3. Workers receiving NIT



SIME/DIME made some attempt to measure the long-run shift in supply, but as all the researchers involved knew, these experiments were unable to make any estimates of the elasticities of supply or demand. The rest of the section examines these issues in turn.

The difference between the long-run supply shift of a national policy and the shift measured in temporary experiments has been well discussed. This is a

problem that is unique to social science experiments because they deal with human behaviour rather than human biology. If a thousand people in an experiment respond similarly to a vaccine, medical researchers can be reasonable sure that a million people will respond similarly in a national programme. But this may not be true in a social experiment. People behave differently in different circumstances. As Harold Watts described it, an experimental plan that recipients know will be in place for only a few years, is the equivalent of putting leisure time on sale. When laundry soap is on sale, people buy more of it, and we can expect a similar response from a temporary guaranteed income. People, who might want to take a few weeks or months off work sometime in the next ten years, might as well take it while the experiment is going on. Therefore one would expect that the experiments overestimated the decline in work effort.

However, NIT opponents can make the opposite claim just as logically. Because the experiments are only temporary, and recipients know that they must return to the workforce eventually, and will be less likely to drop out for fear of losing work experience or losing their place in line for promotion. Further, some NIT opponents have argued that a national guaranteed income would create a “culture of poverty” in which a subculture develops in which no one is ever expected to get a job. These claims are only speculation, but the NIT experiments were unable to shed any light on whether they are true or not. The only evidence provided by the experiments comes from the SIME/DIME recipients who received an NIT for nine years. These recipients did not behave terribly different from other experimental recipients, but they were only led to believe that their income would be permanent for part of that time, and it is uncertain whether they believed it. And clearly they would have been wise not to believe it. But even if the experiment had gone on for the full 20 years it could not have estimated whether a subculture of dropouts would develop if a national programme were put in place.

Therefore both those who want to believe that the long-run supply shift will be larger than the experiments showed and those who want to believe it is smaller have some theoretical justification for their claims, but that does not mean that the two cancel out; one effect could be much larger than the other. It simply means

that what we actually know about the labour market from these experiments is smaller relative to what we would like to know. The experiments simply do not give any information to answer these questions. It does mean, however, that those who make claims that the long-run effect is certainly larger than the experimental effect (Burless, 1986; Anderson and Block, 1993) are making unwarranted claims that are not supported by evidence.

The ability of the experiments to correctly measure the shift in supply is further complicated by the representativeness of the sample. Only families with low incomes were sampled. Most sampled only families with incomes below 150 per cent of the poverty line, and only SIME/DIME sampled families with incomes as high as 240 per cent of the poverty line. The higher one's private income the less likely she would be to reduce their work effort in response to a programme giving them the possibility of a sub-poverty income without working. Because most of the population makes more than 150 per cent of the poverty line, the effects on the entire labour market would probably be much smaller than the effects measured in the experiment. However, arguably even a small decline in work effort among this group might be considered a serious problem. The experimenters were well aware that 7 per cent decline in work effort among recipients of an NIT would not mean that labour would decline by 7 per cent if an NIT programme was introduced, but if politicians and pundits understood this distinction they did not make it clear.

Further, very few if any single, childless individuals were sampled. Aside from single parents, this is the group that would be most likely to be expected to drop out of the labour force in response to a guaranteed income. Single parents at the time were eligible for a relatively generous (by current standards) AFDC programmes, and so the relative effect of the NIT would be reduced. Single, childless individuals are not eligible for any non-work-based benefits, and therefore, had they been sampled, one would have expected a larger response from this group, and researches may have found some of the wholesale withdrawals from the labour market that NIT opponents most fear.

These problems effect the accuracy with which the experiment measure the shift in the supply curve (the shift from A to B in Figure 1), but the shift in the supply curve does not give the market outcome, which is seriously effected by the elasticity of both supply and demand. The intuitive reason for this is that when supply decreases, demand responds by offering a higher price to elicit a return of the lost quantity supplied. How large this response is depends critically on the elasticities of both functions.

Examining the extreme cases can show the range of possible outcomes. A shown in Figure 4, if the demand for labour is perfectly elastic (if firms will hire any amount of labour at the going wage, but will not pay even a cent more for any amount of labour), the market equilibrium will be entirely determined by the horizontal shift in the supply of labour regardless of its elasticity. Figure 5 shows the effects of a perfectly inelastic demand for labour. If this is the case, firms need a fixed amount of workers and will pay anything to get it. If so, no amount of labour-disincentive effect will cause any long-run decrease in work effort, firms will pay workers whatever it takes to keep doing the same amount of work. If so, the entire result of the work-disincentive effect would be to raise wages, and there would be no equilibrium decline in hours worked. If demand is completely inelastic, there is no equilibrium reduction in work hours (Figure 4). If demand is completely elastic (Figure 5), there is no change in the wage, and the full reduction in work hours in the experiments would occur in the market.

Figure 4. Completely inelastic demand

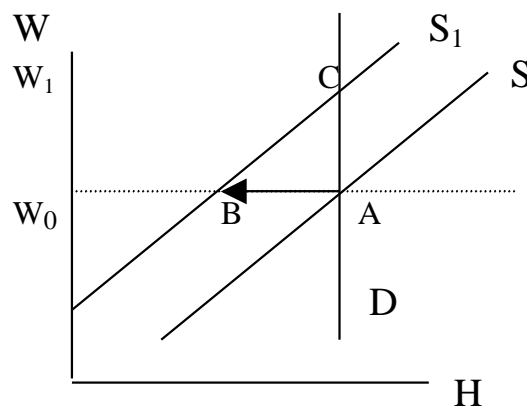
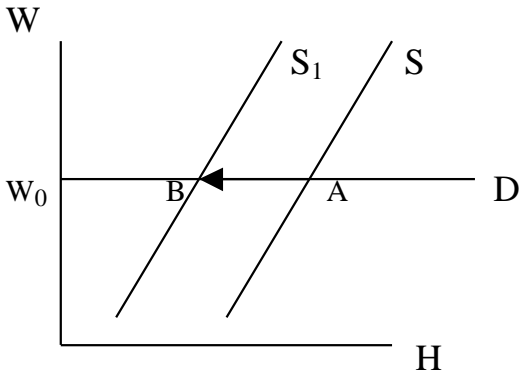
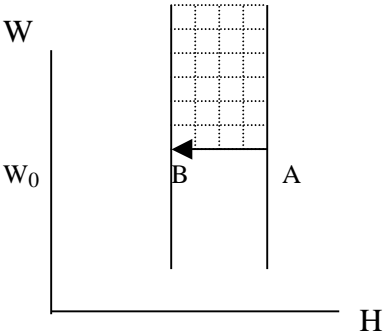


Figure 5. Completely elastic demand



The more general results are that the equilibrium level of work effort will be somewhere between the initial equilibrium (point A) and the horizontal shift in supply (point B), and that the equilibrium wage will be as high or higher than the initial wage. In other words, the market equilibrium will be somewhere in the shaded area in Figure 6. Without information on elasticities, it is impossible to say where in this region the equilibrium would be. Thus, instead of identifying the equilibrium outcome of a negative income tax, the experiments identified only the lower left hand border of a region of possible outcomes.

Figure 6. The range of possible market responses to a given horizontal shift in the supply of labour.



It should be noted that it is theoretically possible for the equilibrium point to be in the region to the upper left of point B if the labour supply is backward bending. However, a backward bending labour supply can be safely ignored in the case of a substantial guaranteed income because backward bending requires that workers' demand for goods is so inelastic that a decrease in wages will cause them to work more hours to maintain their level of consumption. That is quite

reasonable for someone whose labour is the primary or their only source of income, but if a guaranteed income was in place, the lower the wage, the smaller portion of the worker's income comes from that wage and it becomes unreasonable to believe that workers will work more and more to maintain the level of such a small part of their income.

If a backward-bending labour supply curve is ruled out, the experiments found upper-bound estimates for the decline in hours worked, upper-bound estimates for the cost of the programme, and lower-bound estimates for the effect of the programme on the income of recipients.

All of the researchers who worked with the data from these experiments were aware of this shortcoming of the available results. It is extremely basic economics, and it was pointed out as early as 1971 (Browning). Yet, few of the researchers who wrote on the NIT experiments treated this issue with more than a passing mention. It seems to me that there are two reasonable ways to present results under these circumstances. One option is to obtain the best available estimates for the elasticities and simulate the outcome. The other is to present range of possibilities. This would mean showing ranges like the one in Figure 5, and pointing out that to the extent the experiments were capable of correctly estimating the long-run shift in supply, they obtained only an upper-bound estimate of the effect on hours worked, a lower-bound estimate of the effect on the income of recipients, and an upper-bound estimate of the cost of the programme in terms of tax dollars. A few researchers took the first option; I know of none who took the other option.

The most common way of handling the results was to ignore or to effectively ignore the need to know the demand response. Some did not mention the need to know the demand response at all; others mentioned it only in passing as if it would have only a minor effect on the estimates, but nearly all presented their figures as if they were estimates of the equilibrium outcome rather than of the lower bound of possible outcomes. Whether a caveat was made or not, presenting estimates of boundaries of a range of possible outcomes as if they are point estimates of the actual values is clearly misleading. Certainly, economists

understood this, but it is clear from looking at the Congressional testimony and from examining articles in the popular media that the policymakers and pundits did not understand these issues. The technical experts failed in their responsibility to make their lay audience understand the meaning of the results they were presented with.

5. Political and media perceptions of the experiments

Hopefully, parts 2 and 3 have demonstrated that the findings of the NIT experiments are far more complex, subtle, and ambiguous than one might be led to believe by figures such as an X per cent decline in hours worked. But as this section shows, the complexity of the results was largely lost on the politicians and media to whom the findings were reported. Bibliography A contains a survey of about 50 articles from the popular media on the experiments.

The experiments gained significant attention in the press only twice: in 1970 and 1972, when Nixon's Family Assistance Plan (FAP) was under debate in Congress, and in 1977 and 1978 when Carter's Programme for Better Jobs and Income (PBJI) was under consideration. Both plans had elements of a negative income tax, but neither were a pure guaranteed income, although FAP was considerably closer to it than PBJI. In 1970, the first experiment had only been under way for two years and researchers believed that they were at least three years away from being able to produce meaningful results. But at the insistence of the administration and some members of Congress, the researchers released preliminary reports showing no evidence of any work disincentive effect. Some members of Congress (rightly) could not believe the result, and commissioned a review of the results from an independent auditor that concluded the results were "premature," which was just what the researchers had initially warned.

The results of the fourth and largest experiment, SIME/DIME, were released while Congress was debating PBJI, and the existence of work disincentive effects caused quite a stir. Never mind that everyone going into the experiments agreed that there would be some work disincentive effect; when the results were

publicized, members of Congress were appalled and columnists across the country responded with a chorus of negative editorials decrying the guaranteed income, and ridiculing the government for spending millions of dollars to find out whether people work less if you pay them not to work.

The United Press International (1977) simply got the facts wrong saying that the SIME/DIME study showed that “adults might abandon efforts to find work,” when in fact no such evidence was found. The UPI apparently did not understand the difference between a decline in work hours while continuing to work, and abandoning the labour market. The Rocky Mountain News claimed that the NIT “saps the recipients desire to work.” Jones (1977) writing for the Seattle Times presented a relatively well-rounded understanding of the results, but despite this, simply concluded that the existence of a decline in work effort was enough to “cast doubt” on the plan. Similarly Rich (November 18, 1978) implied that the evidence presented that the NIT “might cause recipients to work less,” is enough to disqualify the programme from consideration. Raspberry (1978) declared the experiments a failure simply because people worked less.

Senator Daniel Patrick Moynihan who had written a book in support of the guaranteed income a few years early and who had been one of the architects of FAP, recanted his support for the guaranteed income as a result of the SIME/DIME findings. He is a sociologist and would be expected to have a sophisticated understanding of statistical data, but he implied in a letter to William F. Buckley later published by the National Review that the mere existence of a work disincentive effect was an important factor in his recantation. He stated, “But were we wrong about a guaranteed Income! Seemingly it is calamitous. It increases family dissolution by some 70 percent, decreases work, etc. Such is now the state of the science, and it seems to me we are honour bound to abide by it for the moment.” He held Congressional hearings on the results in November of 1977 to discuss the evidence, but media reports and politicians comments on the results did not betray a real understanding of the results.

Headlines such as “Income Plan Linked to Less Work,” and “Guaranteed Income Against Work Ethic” appeared in newspapers. The Knight News Service

(1978) quoted Jodie Allen of the Labour Department commenting on Spiegelman's cost estimates saying, "It could easily turn out that the government might spend billions of dollars on benefit payments and have little effect on the families' incomes. Instead, most of the (government) expenditures would offset reductions in earnings" apparently in complete ignorance of the possibility of a demand response and the affect it could have to increase family earnings and reduce government expenditures. Only a few exceptions such as Carl Rowan for the Washington Star (1978) considered that it might be acceptable for people working in bad jobs to work less, but he could not figure out why the government would spend so much money to find out whether people work less when you pay them to stay home.

Spiegelman, one of the directors of SIME/DIME, defended the experiments in the Washington Star (1978), saying that the experiments provided much needed costs estimates that demonstrated the feasibility of the NIT. He said that the decline in work effort was not dramatic, but he did not offer an explanation for why so many commentators believed the results were dramatic and why they drew such different conclusions than he did. Demokovich (1978) is one of the few popular writers who considered the reduced work effort small, but the more common reaction was shown in the Denver Post (Brimberg 1980). Citing only that a work disincentive effect existed, not its size, Brimberg quoted Senator Bill Armstrong of Colorado as saying the experiment was, "An acknowledge failure. Let's admit it, learn from it, and move on."

It may be an impossible task to communicate such complexities to an audience interested only in sound bytes or in the bottom line, but I cannot help thinking that social scientists have a responsibility to do a better job than we did in this instance. None of the articles in the popular media that I was able to find betrayed any understanding that the experiments measured only the horizontal shift in the labour supply function. None seemed to understand the elementary economic principle that a change in supply necessitates a demand response that will greatly affect the equilibrium outcome. The understandings of the NIT experiments displayed in the popular press were so superficial, that it is

reasonable to accuse social scientists of failing to communicate the meaning of their results.

6. Conclusions

Even if the public had been made to understand more of the complexities of results, as long as there is a significant political block that believes any work disincentive is unacceptable, the NIT experiments were bound to give ammunition to NIT opponents. To that extent it was a mistake for any guarantee income supporters to agree to the experiments in the first place. One writer asked what would have happened if the introduction of Social Security had been preceded by a retirement insurance experiment. It would certainly have shown that it caused people to save less for their retirement and to retire sooner than they otherwise would have, giving considerable ammunition to Social Security opponents. But to those who believe that low-wage workers need more power in the labour market, and that a basic income guarantee can give them that power, if it is affordable, the NIT experiments demonstrated the feasibility of a desirable programme. And, therefore, the NIT experiments, as long as they are discussed, will always mean different things to different people. But these differences are more philosophical than scientific. None of the facts of the findings are persuasive enough that they should cause either supporters or opponents to change their minds.

Why was the supply response to the NIT experiments so widely ignored? One reason is that scientists like to focus on the results, not the limits of their research. Another reason is that they probably assumed this fact was too obvious to be bothered with among social scientists and too difficult to be dealt with by a lay audience. Perhaps, opponents didn't want to bring it up because it waters down their argument that the work disincentive is "large" and the costs are "high." Perhaps, supporters didn't want to bring it up because it is much more difficult to make a case for NIT based on the desirable effect on wages that a work disincentive might have, than to make the case that the work-disincentive is "small." Using the small argument requires only an objective look at empirical evidence. But using the desirability argument requires not only empirical data that the experiments could not produce, but also a much more complex ethical

argument. It affronts those who want to keep wages low to keep profits high and those who espouse the extreme version of the work ethic stating that everyone must at all times work. Although the basic income guarantee is not work-ethic friendly in that sense it is worker friendly because it allows those who do work to command higher wages, and it gives those who might consider not working a positive incentive (rather than a punitive incentive) to work.

Is it worth it to allow some to drop out to increase the wages of those who don't? That answer depends on how big the increase in wages is and how big the decline in work effort is, whether it means few hours worked by many or dropping out by some, and on other issues. If dropping out means leaving the labour force to become an unhappy, idle soul who drains the resources of others, perhaps not. If dropping out means pursuing artistic, educational, spiritual, entrepreneurial, or care-giving activities that will ultimately benefit others, perhaps so. These issues, both positive and normative, are the issues that separate supporters from opponents of the idea. The NIT experiments were able to shed only a small amount of light on a few of these issues. The most important questions went unanswered. The NIT experiments were able to indicate only very tentatively that a basic income guarantee is financially feasible at a cost of certain side effects that people with differing political beliefs may take to be desirable or disastrous. To claim more would be to overstate the evidence.

Bibliographical references A (a sampling of non-academic articles on the NIT experiments)

Year	Article
1970	Nelson, Dale. 1970. "Annual Income Experiment Set." <i>Skagit Valley Herald</i> , Mt. Vernon, WA. March 9.
1970	Morris, Maribeth. 1970. "2,200 City Families Will Get \$5.1 Million Income Aid." <i>Seattle Post Intelligencer</i> . June 16.
1970	Jones, Margorie. 1970. "35 Families Join Income Plan; More to Sign Up Next Month." <i>Seattle Times</i> . November 28
1971	<i>Seattle Times</i> . 1971. "1,000 Families to Receive Income Aid." February 3.
1972	Kershaw, David N. 1972. "A Negative-Income-Tax Experiment." <i>Scientific American</i> , 227(4), October 72, 19-25.
1974	Cleverly, F. 1974. "Manitoba Tries Guaranteed Income." <i>Vancouver Sun</i> . March 1.
1975	Cleberley, F. 1975. "Manitoba's Guaranteed Income Experiment." <i>Montreal Star</i> , August 30, p. 76 – 77.
1976	Cleverly, F. 1976. "Guaranteed Income Trail Runs into Difficulties." <i>Montreal Star</i> , March 6, p. 48.
1976	<i>Business Week</i> . 1976. "Positive Values of the Negative Income Tax." November.
1977	<i>U.S News and World Report</i> . 1977. "ABC's of Carter Welfare Plan—And the Changes It Would Bring." August 22.
1977	<i>Socioeconomic Newsletter</i> . 1977. "Califano Relies on HEW Tests to Bolster Welfare Plan." White Plains, NY: Vol. 2, No. 7. July.
1977	New York Times News Service. 1977. "Welfare 'Sweetener' Blunts Criticism." <i>Washington Star</i> . Aug. 7.
1977	Samuelson, Paul A. 1977. "Welfare Reform." <i>Newsweek</i> . Aug. 29.
1977	Steiger, Paul E. 1977. "Divorce Linked to Income Gains in Welfare Study." <i>Los Angeles Times</i> . November 4.
1977	Kamien, Al. 1977. "HEW Study Links Guaranteed Income to Family Breakup." <i>Rocky Mountain News</i> , November 14.
1977	United Press International. 1977. "Guaranteed Income Against Work Ethic." <i>Seattle Daily Journal Commerce</i> , November 16.
1978	"Welfare: A Surpizing Test" <i>Newsweek</i> , Nov. 27, 1978.
1978	<i>Newsweek</i> , 1978. "Welfare: A Surprising Test." November 27.
1978	Sacramento Bee Editorial Board. 1978. "Welfare and Families." <i>Sacramento Bee</i> . March 18.
1978	Ostrum, Carol. 1978. "To Each According to His Need?" <i>Seattle Sun</i> . March 22
1978	Rich, Spencer. 1978. "Welfare Plan Linked to Family Splits." <i>The Washington Post</i> . May 2.
1978	Pine, Art. 1978. "The Negative Side of Negative Tax." <i>Washington Post</i> . May 12.
1978	Associated Press. 1978. "Social Experiment Finds." <i>New Orleans Time-Picayune</i> . May 19.
1978	Jones, Marjorie. 1978. "\$60 Million, 8-Year Social Experiment: Test Casts Doubt on Income Plan." <i>Seattle Times</i> . May 18.
1978	Schiller, Bradley, R. 1978. "When Welfare Families Know their Rights." <i>The Wall Street Journal</i> . July 11.
1978	Moynihan, Daniel Patrick. 1978. "Letter to William F. Buckley." <i>National Review</i> . September 29.

-
- 1978 Rich, Spencer. 1978. "Income Plan Linked to Less Work: Marriages Break Up, Study Also Finds." *Washington Post*. November 16.
- 1978 United Press International. 1978. "Study Raises Questions on Welfare Reform." *Washington Star*. November 16.
- 1978 New York Times. 1978. "Moynihan Says Recent Studies Raise Doubts About 'Negative Income Tax' Proposals." *New York Times*. November 16.
- 1978 Knight News Service. 1978. "Next Welfare Plan: Lower Cost, Benefits." *San Francisco Examiner*. November 16.
- 1978 Rich, Spencer. 1978. "Moynihan Sees \$6 Billion Increase in Welfare Cost Under Revision Plans." *Washington Post*. November 18.
- 1978 Bartlett, Charles. 1978. "A New Hitch for Welfare Reform." *Washington Star*. November 20.
- 1978 Raspberry, William. 1978. "A Failed Experiment in Guaranteed Income." *Washington Post*. November 20.
- 1978 Andersen, Martin. 1978. "Welfare Reform on the Same Old Rocks." *New York Times*. November 27.
- 1978 Rocky Mountain News Editorial Board. 1978. "A Valuable Test." *Rocky Mountain News*. November 29.
- 1978 Moynihan, Daniel Patrick (Interview with). 1978. "Some Negative Evidence About the Negative Income Tax." *Fortune Magazine*. December 4.
- 1978 Rowan, Carl T. 1978. "A Little Common Sense in Place of Money." *Washington Star*. December 6.
- 1978 Spiegelman, Robert G. 1978. "Letter to the Editor." *Washington Star*. December 15.
- 1978 Demkovich, Linda E. 1978. "Good News and Bad News For Welfare Reform." *National Journal*. December 30, 1978.
- 1978 Newsweek. 1978. "Welfare: A Surprising Test." *Newsweek*. November 27.
- 1979 Lenkowsky, Leslie, 1979. "Welfare Reform and the Liberals." *Commentary*, March.
- 1979 Lambro, Donald. 1979. "Easy Money at HEW." *Conservative Digest*. April. Reprinted from *Policy Review*.
- 1979 SocioEconomic Newsletter. 1978. "Flare-Up on Negative Income Tax." *SocioEconomic Newsletter*. January.
- 1979 Spiegelman, Robert G. 1979. "Letter to the Editor." *SocioEconomic Newsletter*. March.
- 1979 New York Times Editorial Board. 1979. "Scare Talk About Welfare Reform." *New York Times*. February 13.
- 1979 Greene, Leonard M. 1979. "Letter On Income Maintenance Experiments: Too Soon to Jump to Conclusions." *New York Times*. February 20.
- 1979 Reinhold, Robert. 1979. "Test in Seattle Challenges Minimum-Income Plan." *New York Times*. February 5.
- 1980 Demkovich, Linda E. 1980. "It May Be a Race Against the Clock For Welfare Reform Package in 1980." *National Journal*. January 26.
- 1980 Brimberg, Judith. 1980. "Income Security Project Flounders; Halt Sought: Guaranteed Income Programme Fails." *Denver Post*. February 14.
- 1981 Moffit, Robert A. 1981. "The Negative Income Tax: Would it discourage work?" *Monthly Labour Review*, April.
- 2001 Hum, Derek and Wayne Simpson, 2001 "A Guaranteed Annual Income? From Mincome to the Millennium." *Policy Options / Options Politiques*, January – February.

Bibliography B: Academic Articles on the NIT Experiments

(Alphabetical by author)

Year	Citation
1979	Aaron, H. J. and J. Todd. 1979. "The Use of Income Maintenance Experiment Findings in Public Policy, 1977-1978." <i>Industrial Relations Research Association, 31st Annual Proceedings</i> , Madison, Wisconsin, pages 46-56.
1978	Aaron, Henry and John Todd, 1978. "The Use of Income Maintenance Experiment Findings in Public Policy, 1977-78." <i>Industrial Relations Research Association Series, Proceedings of the Thirty-First Annual Meeting</i> : 46-56 (August).
1975	Aaron, Henry Jr., 1975. "Cautionary Notes on the Experiment." Pechman, Joseph A., and P. Michael Timpane (Ed.), 1975. <i>Work Incentives and Income Guarantees: the New Jersey negative income tax experiment</i> . Pechman, Joseph A., and P. Michael Timpane (Ed.), 1975. Washington (D.C.): Brookings institution: 88-110.
1980	Adams, C. 1980. "A Reappraisal of the Work Incentive Aspects of Welfare Reform," <i>Social Service Review</i> 54 (4): 521-536 (December).
1993	Anderson, Gary M and Walter Block, 1993. "Economic Response to a Guaranteed Annual Income: Experience from Canada and the United States: Comment." <i>Journal of Labour Economics</i> 11 (1), S348-63.
1978	Anderson, M. 1978. <i>Welfare: The Political Economy of Welfare Reform in the United States</i> . Sanford, CA: Hoover Institution Press.
1990	Ashenfelter, Orley and W. Mark Plant, 1990. "Nonparametric Estimates of the Labour-Supply Effects of Negative Income Tax Programmes." <i>Journal of Labour Economics</i> 8, no 1. pt. 2: S396-S415.
1977	Ashenfelter, Orley, 1977. "The Labour Supply Response of Wage Earners in the Rural Negative Income Tax Experiment" <i>Industrial Relations Sections, Princeton University, Working Paper No. 95</i> .
1978	Ashenfelter, Orley, 1978. "The Labour Supply Response of Wage Earners." <i>Welfare in Rural Areas</i> , John L. Palmer and Joseph A. Pechman (eds.), Washington, DC: Brookings Institution.
1980	Ashenfelter, Orley, 1980. "Discrete Choice in Labour Supply: The Determinants of Participation in the Seattle and Denver Income Maintenance Experiments." Working Paper no. 136. Princeton, NJ: Princeton University, Industrial Relations Section.
1983	Ashenfelter, Orley, 1983. "Determining Participation in Income-tested Social Programmes." <i>Journal of the American Statistical Association</i> 78, applications section: 517-525.
1973	Atkinson, T, J. Cutt, and H. M. Stevenson 1973. <i>Public Policy Research and the Guaranteed Annual Income: A Design for the Experimental Evaluation of Income Maintenance Policies in Canada</i> . Toronto: York University.
1977	AuClaire, Philip A. 1977. "Informing Social Policy: The Limits of Experimentation." <i>Sociological Practice</i> 2 no. 1: 24-37 (Spring).
1977	Avery, Robert and Harold W. Watts, 1977. "The Application of an Error Component Model to Experimental Panel Data." <i>The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses</i> . Hard W. Watts and Albert Rees (eds.) New York: Academic Press: 383-392.

-
- 1977 Avery, Robert, 1977. "Effects of Welfare "bias" on family earnings response." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 303-322.
- 1980 Avrin, Marcy E., 1980. "Utilization of Subsidized Housing." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1978 Avrin, Marcy, 1978. "The Impact of Income Maintenance on the Utilization of Subsidized Housing." Research Memorandum No. 54. Center for the Study of Welfare Policy, SRI International (July).
- 1975 Barth, Michael C., Larry L. Orr, and John L. Palmer, 1975. "Policy Implications: A Positive View." *Work Incentives and Income Guarantees: the New Jersey negative income tax experiment*. Pechman, Joseph A., and P. Michael Timpane, (eds.) Washington (D.C.): Brookings institution.
- 1979 Basilevsky, A. and Sproule, R. "The Accuracy of Income Reporting in Mincome Manitoba." Technical Report No. 10, Mincome Manitoba.
- 1979 Basilevsky, A., Derek Hum, and D. Sabourin. 1979. "Income Reporting Behavior in a Negative Income Tax Programme: A Comparison of Retrospective and Prospective Reporting Methods in Mincome Manitoba." Technical Report No. 9. Mincome Manitoba.
- 1977 Bawden, D. L. and William S. Harrar 1978. "Design and Operation." In *Welfare in Rural Areas: The North Carolina-Iowa Income Maintenance Experiment*. J. L. Palmer and J. A. Pechman (eds.) Washington, DC: Brookings Institution, p. 23-54.
- 1977 Bawden, D. Lee and William S. Harrar (eds.) (1977), "Final Report of The Rural Income Maintenance Experiment," Madison, WI: Institute for Research on Poverty, University of Wisconsin. Also Cited as 1976.
- 1977 Bawden, D. Lee, 1977a. "Income and Work Response of Husbands." *Rural Income Maintenance Experiment: Final Report*. D. Lee Bawden and W. Harrar. Madison: Institute for Research on Poverty, University of Wisconsin.
- 1977 Bawden, D. Lee, 1977b. "Income and Work Response of Wives and Dependents." *Rural Income Maintenance Experiment: Final Report*. D. Lee Bawden and W. Harrar. Madison: Institute for Research on Poverty, University of Wisconsin.
- 1977 Bawden, D. Lee, 1977c. "Purpose and Design of the Rural Income Maintenance Experiment" *American Journal of Agricultural Economics* 59, no. 5: 855-858 (December).
- 1970 Bawden, D. Lee. 1970. "Income Maintenance and the Rural Poor: An Experimental Approach." *American Journal of Agricultural Economics* 52: 438-441 (August).
- 1976 Bawden, D. Lee. 1976. "Implications of a Negative Income Tax for Rural People." *American Journal of Agricultural Economics*: 754-760 (December).
- 1979 Benus, Jacob, Harland I. Halsey, and Robert G. Spiegelman, 1979. "The Seattle and Denver Income Maintenance Experiments' Counseling Programme and Its Utilization." Research Memo 67. SRI International, Menlo Park, CA.
- 1983 Betson, David and David Greenberg. 1983. "Uses of Microsimulation in Applied Poverty Research," in Richard Goldstein and Stephen M. Sacks (eds.), *Applied Policy Research* (Totowa, NJ: Rowman and Allanheld).
- 1980 Betson, David, David Greenburg, Richard Kasten, 1980. "A Microsimulation Model for Analyzing Alternative Welfare Reform Proposals: An Application to the Pogram for Better Jobs and Income." *Microeconomic Simulation Models for Public Policy Analysis*, vol. 1. Robert Haveman and Kevin Hollenbeck (eds.). New York: Academic Press.

-
- 1980 Betson, David, David Greenburg, Richard Kasten, 1980. "Using Labour Supply Results to Simulate Welfare Reform Alternatives." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1981 Betson, David, David Greenburg, Richard Kasten, 1981. "A Simulation Analysis of the Economic Efficiency and Distributional Effects of Alternative Programme Structures: The Negative Income Tax Versus the Credit Income Tax." *Income-tested Transfer programmes: A Case for and Against*. Irwin Garfinkel (ed.). New York: Academic Press.
- 1979 Billet, C. D. Komus, D. Hum, A. Basilevsky, and R. Sproule. 1979. "Issues in the Administration of Mincome Manitoba: Three Preliminary Assessments. Technical Report No. 11. Mincome Manitoba.
- 1979 Bishop, John, 1980. "Jobs, Cash Transfers, and Martial Instability: A Review and Synthesis of the Evidence." *Journal of Human Resources* 15, no. 3 (Summer).
- 1991 Block, Walter, 1991. *Economic Freedom: Toward a Theory of Measurement*. Vancouver: Fraser Institute.
- 1986 Blum, Barbara B., 1986. "Views of a policymaker and public administrator." *Lessons from the Income Maintenance Experiments*. Alicia H. Munnell ed., Boston: Federal Reserve Bank of Boston.
- 1976 Boekmann, Margeret, 1976. "Policy Implications of the New Jersey Income Maintenance Experiment." *Policy Sciences* 7: 53-76 (March).
- 1974 Boumol, William, 1974. "An Overview of the Results on Consumption, Health, and Social Behavior." *Journal of Human Resources* 9, 2: 253-264.
- 1977 Boumol, William, 1977. "An Overview of the Results." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 1-14.
- 1978 Bradbury, Katherine, 1978. "Income Maintenance Alternatives and Family Composition: An Analysis of Price Effects." *Journal of Human Resources* 13, no. 3: 305-331 (Summer)
- 1986 Bradbury, Kathern L. (1986), "Discussion, of 'Non-Labour Supply Responses to the Income Maintenance Experiments' by Eric A. Hanushek," in Alicia H. Munnea (ed.), *Lessons from the Income Maintenance Experiments*, (Federal Reserve Bank of Boston) pp. 122-125.
- 1972 Brown, C. V. 1972. "Negative Income Tax and the Incentive to Work. *New Society*, June: 461 – 462.
- 1975 Browning, Edgar K. 1975. *Redistribution and the Welfare System*. Washington, DC: American Enterprise Institute for Public Policy Research.
- 1971 Browning, Edgar, 1971. "Incentive and Disincentive Experimentation for Income Maintenance Policy Purposes: Note." *American Economic Review* 61 p. 709-712
- 1971 Browning, Edgar, 1971. "Income Redistribution and the Negative Income Tax: A Theoretical Analysis." Ph.D. diss., Princeton University.
- 1986 Bryant, W. Keith, 1986. "A Portfolio Analysis of Poor Rural Wage-Working Families' Assets and Debts." *American Journal of Agricultural Economics* 68, no. 2: 237-245 (May).
- 1979 Burke, Vincent J. and Vee Burke (1979), *Nixon's Good Deed: Welfare Reform* (New York: Columbia University Press).
- 1989 Burtless, Gary (1989), "The Effect of Welfare Reform on Employment, Earnings, and Income" in Phoebe H. Cottingham and David T. Ellwood (eds.), *Policy for the 1990s* (Cambridge, MA: Harvard University Press), pp. 103-140.
- 1990 Burtless, Gary (1990), "The Economist's Lament: Public Assistance in America," *Journal of Economic Perspectives* 4(x), pp. 57-78.
- 1995 Burtless, Gary (1995), "The Case for Randomized Field Trial in Economic and Policy Research," *Journal of Economic Perspectives* 9(x), pp. 63-84.

-
- 1982 Burtless, Gary and David Greenberg (1982), "Inferences Concerning Labour Supply Behavior Based on Limited Duration Experiments," *American Economic Review*. 72, pp. 488-97 (June).
- 1978 Burtless, Gary and David Greenberg, 1978. "The Limited Duration of Income Maintenance Experiments and its Implications for Estimating Labour Supply Effects of Transfer Programmes." Technical Analysis Paper No. 15. Office of Income Security Policy, Department of Health Education and Welfare (October).
- 1978 Burtless, Gary and Jerry A. Hausman, 1978. "The Effect of Taxation on Labour Supply: Evaluating the Gary Negative Income Tax Experiments." *The Journal of Political Economy* 86, no. 6: 1103-1130 (December).
- 1986 Burtless, Gary. 1986. "The Work Response to a Guaranteed Income. A Survey of Experimental Evidence", *Lessons from the Income Maintenance Experiments*, Alicia H. Munnell ed., Boston: Federal Reserve Bank of Boston.
- 1988 Cain, Glen and D. Wissoker 1988. "Marital Breakups in the Seattle-Denver Income Maintenance Experiment: A Different Conclusion." Discussion Paper no. 870-88. University of Wisconsin—Madison, Institute for Research on Poverty.
- 1990 Cain, Glen and D. Wissoker 1990. "A Reanalysis of Marital Stability in SIME/DIME." *American Journal of Sociology* Vol. 95, No. 5. (March), pp. 1235-1269.
- 1990 Cain, Glen and D. Wissoker 1990. "Response to Hannan and Tuma." *American Journal of Sociology* 95, No. 5. (March), pp. 1299-1314.
- 1986 Cain, Glen C. 1986 "The Income Maintenance Experiments and the Issues of Marital Stability and Family Composition and the Income Maintenance Experiments." *Lessons from the Income Maintenance Experiments*. Alicia H. Munnell ed., Boston: Federal Reserve Bank, p. 60-93.
- 1973 Cain, Glen C. and Harold Watts (eds.), 1973. *Income Maintenance and Labour Supply*. New York Academic Press.
- 1973 Cain, Glen C. and Harold Watts, 1973. "Towards a Summary and Synthesis of the Evidence." In *Income Maintenance and Labour Supply*. Cain, Glen C. and Harold Watts (eds.), New York Academic Press.
- 1977 Cain, Glen C., 1977. "Fertility Behavior." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 225-250.
- 1974 Cain, Glen C., Walter Nicholson, Charles Mallar, and Judith Wooldridge, 1974. "The Labour-Supply Response of Married Women, Husbands Present." *Journal of Human Resources* 9, 2: 201-223.
- 1977 Cain, Glen C., Walter Nicholson, Charles Mallar, and Judith Wooldridge, 1977. "Labour-Supply Response of Wives." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Hard W. Watts and Albert Rees (eds.) New York: Academic Press. 115-162.
- 1989 Choudhry, Saud 1989. *Income Maintenance Experiments and Household Transition Dynamics: A Temporal Treatment of Incremental Effects*. Ph.D. Thesis, University of Manitoba
- 1976 Christopherson, Gary, 1976. *The Administration of the Seattle and Denver Income Maintenance Experiments*. Princeton, NJ: Mathematica, Inc.
- 1983 Christopherson, Gary, 1983a. *The Final Report of the Seattle-Denver Income Maintenance Experiment, vol. 2. Administration*. Princeton, NJ.: Mathematica Policy Research.
- 1983 Christopherson, Gary, 1983b. "Implementation." *The Final Report of the Seattle-Denver Income Maintenance Experiment, vol. 1. Design and Results*. Menlo Park, CA: SRI International, p. 55-87.
- 1983 Cogan, John F, 1983. "Labour Supply and Negative Income Taxation: New Evidence from the New Jersey-Pennsylvania Experiment." *Economic Inquiry* 21, no. 4 (October): 465-84.
- 1978 Cogan, John F. (1978), *Negative Income Taxation and Labour Supply: New Evidence from the New Jersey-Pennsylvania Experiment* (R-2155-HEW, Santa Monica, CA: The Rand Corporation).

-
- 1969 Cohen, S. S. 1969. "Administrative Aspects of a Negative Income Tax." *Pennsylvania University Law Review* 5: 678-699.
- 1980 Collard, David. 1980. Social dividend and negative income tax. *Taxation and Social Policy* (C. Sandford, C. Pond & R. Walker eds), London: Heinemann, 1980, 190-202.
- 1978 Committee on Finance, U.S. Senate. Welfare Research Experimentation. Hearings of November 15-17, 1978. Washington, DC: U.S. Government Printing Office.
- 1981 Comptroller General of the United States, 1981. *Income Maintenance Experiments: Need to Summarize Results and Communicate the Lessons Learned*. Report to the Honorable Daniel P. Moynihan, the United States Senate. U.S. General Accounting Office.
- 1969 Conlisk, J. and Harold Watts, 1969. "A Model for Optimizing Experimental Designs for Estimating Response Surfaces." *American Statistical Association Proceedings*, Social statistics section 64
- 1972 Conlisk, John and Kurz, Mordecai, 1972. "The Assignment Model of the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 15. Center for the Study of Welfare Policy, Stanford Research Institute, July 1972.
- 1986 Coyle, Dennis and Aaron Wildavsky, 1986. "Social Experimentation in the Face of Formidable Fables." *Lessons from the Income Maintenance Experiments*. Alicia H. Munnell ed., Boston: Federal Reserve Bank of Boston.
- 1979 Crest D., C. Billet, D. Hum, D. Komus, and A. Quarry. 1979. "The Administration of the Payments System of Mincome Manitoba." Technical Report No. 4. Mincome Manitoba.
- 1981 Danzinger, S., Haveman, R. & Plotnick, R. 1981. How income transfer programmes affect work, savings and the income distribution: a critical review. *Journal of Economic Literature* 19, 975-1028.
- 1980 Davis, Virgil and Arlene Waksberg, 1980. "Data Collection and Processing." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1973 De Vanzo, Julie and David H. Greenberg, 1973. "Suggestions for Assessing Economic and Demographic Effects of Income Maintenance Programmes." Santa Monica, CA: The Rand Corporation (June).
- 1980 Dickenson, Jonathon, 1980. "The Structure of Labour Supply Response and the Structure of Preferences: Alternative Estimates for SIME/DIME." Research Memorandum, Working Paper SRI-SD6. Menlo Park, CA: SRI International (December).
- 1983 Dickenson, Katherine P. and Richard W. West, 1983. "Impacts of Counseling and Education Subsidy Programmes." *The Final Report of the Seattle-Denver Income Maintenance Experiment, vol. 1. Design and Results*. Menlo Park, CA: SRI International, p. 201-256.
- 1971 Elesh, D., J. Landinsky, M J. Lefcowitz, and S. Spilerman. 1971. "The New Jersey-Pensylvania Experiment: A Field Study in Negative Taxation." In *Income Maintenance: Interdisciplinary Approaches to Research*." L. L. Orr, R. G. Hollister, and M J. Lefcowitz. Chicago: Marham, p. 14 - 35.
- 1972 Elesh, David and E. MacCarthy. 1972. "Labour Force Participation Among Male Heads of Households in the New Jersey-Pennsylvania Negative Income Tax Experiments: Preliminary Results." Madison: Institute for Research on Poverty, University of Wisconsin, Discussion Paper.
- 1977 Elesh, David and M. J. Lefcowitz, "The Effects of Health on the Supply of and Returns to Labour." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Hard W. Watts and Albert Rees (eds.) New York: Academic Press: 289-320.
- 1986 Elmore, Richard F., "A political scientist's view of the income maintenance experiments." *Lessons from the Income Maintenance Experiments*. Alicia H. Munnell ed., Boston: Federal Reserve Bank of Boston.

-
- 1976 Felder, H. E., A. Hall, and Y. Weiss, 1977. "The Impact of Income Maintenance and Manpower Subsidies on the Decision to Invest in Human Capital: Interim Results from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 34. Center for the Study of Welfare Policy, SRI International (June)
- 1978 Ferber, Robert and Werner Hirsch, 1978. "Social Experimentation and Economic Policy: A Survey." *Journal of Economic Literature* 16: 1379-1414
- 1978 Galligan, Richard J. and Stephen J. Bahr, 1978. "Economic Well-Being and Marital Stability: Implications for Income Maintenance Programmes." *Journal of Marriage and the Family*, May: 283-290.
- 1977 Galloday, Frederick L. and Robert H. Havemen, 1977. *The Economic Impacts of Tax-Transfer Policy: Regional and Distributional Effects*. New York: Academic Press.
- 1982 Garfinkel, Irwin ed. 1982. *Income-Tested Transfer Programmes: The Case For and Against*, New York: Academic Press.
- 1973 Garfinkel, Irwin, 1973. "On Estimating the Labour-Supply Effects of a Negative Income Tax." *Income Maintenance and Labour Supply*, Glen Cain and Harold Watts, eds. Pp. 205-264. New York: Academic Press.
- 1974 Garfinkel, Irwin, 1974. "Income Transfer Programmes and Work Effort: A Review." *Studies in Public Welfare* Paper No. 13. How Income Supplements can Affect Work Behavior (February).
- 1974 Garfinkel, Irwin. 1974. "The Effects of Welfare Programmes on Experimental Responses." *Journal of Human Resources* 9, no. 4: 530-555.
- 1977 Garfinkel, Irwin. 1974. "The Effects of Welfare Programmes on Experimental Responses." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 279-302.
- 1983 Greenberg, David and Harlan Halsey, 1983. "Systematic Misreporting and Effects of Income Maintenance Experiments on Work Effort: Evidence from the Seattle-Denver Experiment." *Journal of Labour Economics* 1, no. 4 (October): 380-407
- 1973 Greenberg, David and Kusters, Marvin, 1973. "Income Guarantees and the Working Poor: The Effect of Income Maintenance Programmes on the Hours of Work of Male Family Heads." *Income Maintenance and Labour Supply*, Glen Cain and Harold Watts, eds. Pp. 14-101. New York: Academic Press.
- 1979 Greenberg, David and Kusters, Marvin, 1979. "Income Guarantees and Working Poor: The Effect of Income Maintenance Programmes on the Hours of Work of Male Family Heads." Santa Monica, CA: The Rand Corporation (December).
- 1983 Greenberg, David H. 1983. "Some Labour Market Effects of Labour Supply Responses to Transfer Programmes," *Journal of Social-Economic Planning Sciences* (Fall).
- 1976 Greenberg, David H. and James R. Hosek, 1976. "Regional Labour Supply Response to Negative Income Tax Programmes." Santa Monica, CA: The Rand Corporation (February).
- 2002 Greenberg, David, Donna Links, and Marvin Mandell, forthcoming. "Chapter 6, Income maintenance Experiments so it must be viewed as being in draft form." *Social Experimentation and Policy Making*. Urban Institute Press
- 1981 Greenberg, David, Robert Moffit, and John Friedmann. 1981 "Underreporting and Experimental Effects of Work Effort: Evidence from the Gary Income Maintenance Experiment." *Review of Economics and Statistics* 63: 581-589 (December).
- 1980 Groeneveld, Lyle, Nancy Tuma, and Michael Hannan, 1980a. "The Effects of Negative Income Tax Programmes on Marital Dissolution." *Journal of Human Resources* 15: 654-674.

-
- 1980 Groeneveld, Lyle, Nancy Tuma, and Michael Hannan, 1980b. "Marital Dissolution and Remarriage." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1980 Groeneveld, Lyle, Nancy Tuma, and Michael Hannan, 1980c. *Topics in the Analysis of the Effects of SIME/DIME on Marital Stability*. Technical Memo, SD 12. SRI International, Menlo Park, CA.
- 1983 Groeneveld, Lyle, Nancy Tuma, and Michael Hannan, 1983. "Marital Stability." *Final Report of the Seattle-Denver Income Maintenance Experiment, vol. 1. Design and Results*. SRI International, Menlo Park, CA, p. 257-387.
- 1980 Hall, Arden R., 1980. "Education and Training." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1980 Hall, Arden R., 1980. "The Counseling and Training Subsidy Treatments." *Journal of Human Resources* 15: 591-610.
- 1973 Hall, Robert 1973. "Wage, Income, and Hours of Work in the U.S. Labour Force." *Income Maintenance and Labour Supply*, Glen Cain and Harold Watts, eds. Pp. 102-162. New York: Academic Press.
- 1975 Hall, Robert, 1975. "Effects of the Experimental Negative Income Tax on Labour Supply." *Work Incentives and Income Guarantees: the New Jersey negative income tax experiment*. Pechman, Joseph A., and P. Michael Timpane (Ed.), 1975. Washington (D.C.): Brookings institution: 115-147.
- 1978 Halsey, Harlan I., 1978. "The Effective Federal Income Tax: Evidence from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 55, The Center for the Study of Welfare Policy, SRI International (July).
- 1980 Halsey, Harlan I., 1980. "Data Validation." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1977 Halsey, Harlan I., Mordecai Kurz, and Arlene Waksberg, 1977. "The Reporting of Income to Welfare: A Study in the Accuracy of Income Reporting." Research Memorandum No. 42, The Center for the Study of Welfare Policy, SRI International (August).
- 1990 Hannan, Michael and Nancy Tuma, 1990. "A Reassessment of the Effects of Income Maintenance on Marial Dissolution in the Seattle-Denver Experiment." *American Journal of Sociology* 95: 1270-98.
- 1988 Hannan, Michael T., and Nancy Tuma, 1989. "A Critique of Cain and Wissoker's Reanalysis of the Impact of Income Maintenance on Marital Stability in the Seattle-Denver Experiment." Technical Report 89-7. Cornell University, Department of Sociology.
- 1974 Hannan, Michael T., S. E. Beaver, and Nancy Tuma, 1974. "Income Maintenance Effects on the Making and Breaking of Marriage: Preliminary Analysis of the First Eighteen Months of the Denver Income Maintenance Experiment." Unpublished Manuscript, SRI International, Menlo Park, CA.
- 1976 Hannan, Michael, Nancy Tuma, and Lyle Groenveld, 1976. "The Impact of Income Maintenance on the Making and Breaking of Marital Unions: Interim Report." Research Memorandum No. 28. Center for the Study of Welfare Policy, SRI International (June)
- 1977 Hannan, Michael, Nancy Tuma, and Lyle Groenveld, 1977. "A model of the Effect of Income Maintenance on Marital Dissolutions: Evidence from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 44. Center for the Study of Welfare Policy, SRI International (February)
- 1978 Hannan, Michael, Nancy Tuma, and Lyle Groenveld, 1977. "A Summary Discussion of the Results from Income Maintenance on Marital Dissolutions: Evidence from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 56. Center for the Study of Welfare Policy, SRI International (October).

-
- 1977 Hannan, Michael, Nancy Tuma, and Lyle Groenveld, 1977. "Income and Marital Events: Evidence from an Income-Maintenance Experiment." *American Journal of Sociology* 82, no. 6: 1186-1211.
or is it?
Hannan, M. T., S. E. Beaver, and N. B. Tuma (1977a), "Income and Marital Events: Evidence from an Income-Maintenance Experiment," *American Journal of Sociology* 82(x), pp. 1186-1211
- 1977 Hannan, Michael, Nancy Tuma, and Lyle Groenveld, 1978. "Income and Independence Effects on Marital Dissolution: Results from the Seattle and Denver Income-Maintenance Experiments." *American Journal of Sociology* 84, no. 3: 611-633.
- 1979 Hannan, Michael, Nancy Tuma, and Lyle Groenveld, 1979. "Income an Independence Effects on Marital Dissolutions: Results from the first three years of SIME/DIME." Research Memorandum No. 63. Center for the Study of Welfare Policy, SRI International (October).
- 1986 Hanusheck, Eric, 1986. "Non-Labour-Supply Response to the Income Maintenance Experiments." *Lessons from the Income Maintenance Experiments*, Alicia Munnell, ed. 106-121. Boston: The Federal Reserve Bank of Boston
- 1985 Hausman, Jerry A. and David A. Wise (eds.) (1985), *Social Experimentation* (Chicago: University of Chicago Press).
- 1979 Hausman, Jerry and David Wise, 1979. "Attrition Bias in Experimental and Panel Data: The Gary Income Maintenance Experiment." *Econometrica* 47 no. 2: 455-473 (March).
- 1976 Hausman, Jerry and David Wise. "The Evaluation of Results from Truncated Samples: The New Jersey Income Maintenance Experiment." *Annals of Economic and Social Measurement* 5 (Fall): 421-475.
- 1976 Havenman, Robert H. and Harold W. Watts, 1976. "Social Experimentation as Policy Research: A Review of Negative Income Tax Experiments." *Evaluation Studies* 1: 406-431
- 1995 Heckman, James J. and Jeffrey A. Smith (1995), "Assessing the Case for Social Experiments," *Journal of Economic Perspectives* 9(2), pp. 85-110.
- 1977 Hollister, Robinson G. and Charles E. Metcalf, 1977. "Family Labour-Supply Response in the New Jersey Experiment." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Hard W. Watts and Albert Rees (eds.) New York: Academic Press. 185-220.
- 1974 Hollister, Robinson, 1974. "The Labour-Supply Response of the Family." *Journal of Human Resources* 9, 2: 223-252.
- 1993 Hum, Derek & Simpson, Wayne. 1993. "Economic Response to a Guaranteed Annual Income: Experience from Canada and the United States". *Journal of Labour Economics* 11 no. 1, part 2: S263-S296 (January).
- 1992 Hum, Derek and Saud Choudry, 1992. "Income, Work and Marital Dissolution: Canadian Experimental Evidence." *Journal of Comparative Family Studies*.
- 1991 Hum, Derek and Wayne Simpson, 1991. *Income Maintenance, Work Effort, and the Canadian Experiment*. Ottawa: Economic Council of Canada.
- 1993 Hum, Derek and Wayne Simpson, 1993. "Whatever Happened to the Guaranteed Income Idea?" *Canadian Public Administration* 36 (3) 442-50.
- 1995 Hum, Derek and Wayne Simpson, 1995. "Reducing Spending...." *Canadian Public Administration* 38(4): 508-612 (1995)
- 1988 Hum, Derek, 1988. "Integrating Taxes and Transfers." *Canadian Tax Journal* 3: 671-690
- 1979 Hum, Derek, M. Laub, C. Metcalf, and D. Sabourin. "The Sample Design and Assignment Model of the Manitoba Basic Annual Income Experiment." Technical Report no. 2. Winnipeg: Mincome Manitoba, 1979.

-
- 1976 Hurd, Michael, 1976. "The Estimation of Nonlinear Labour Supply Functions with Taxes from a Truncated Sample." The Socioeconomic Research Center, SRI International. Research Memorandum no. 36 (November).
- 1973 Husby, Ralph, 1973. "Impact of Negative Income Tax on Aggregate Demand and Supply." *Western Economic Journal*, p. 111-117.
- 1973 Husby, Ralph, 1973. "Work Incentives and the Cost Effectiveness of Income Maintenance Programmes." *Quarterly Review of Economics and Business*, p. 7-13.
- 1980 Johnson, Terry R. and John H. Pencavel, 1980a. "Welfare Payments and Family Composition." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1980 Johnson, Terry R. and John H. Pencavel, 1980b. "Utility-Based Hours of Work Functions for Husbands, Wives, and Single Females Estimated from Seattle-Denver Experimental Data." Research Memorandum No. 71. Menlo Park, CA: SRI International (April).
- 1982 Johnson, Terry R. and John H. Pencavel, 1982. "Forecasting the Effects of a Negative Income Tax Programme." *Industrial and Labour Relations Review* 35, 221-234 (January).
- 1984 Johnson, Terry R. and John H. Pencavel, 1984. "Dynamic Hours of Work Functions for Husbands, Wives, and Single Females." *Econometrica* 52 (March): 363-389.
- 1980 Johnson, William R, 1980. "The Effect of a Negative Income Tax on Risk-Taking in the Labour Market." *Economic Inquiry* 18, no. 3 (July): 395-407
- 1974 Joint Economic Committee, U.S. Congress, 1974. "How Income Supplements Can Affect Work Behavior." *Studies in Public Welfare Paper No. 13*. Washington, DC: U.S. Government Printing Office (February).
- 1974 Juster, Thomas F., 1974. "Rethinking the Allocation of Resources in Social Research." *Monthly Labour Review* (June): 36-39.
- 1979 Kaluzny, Richard L. "Changes in the Consumption of Housing Services: The Gary Experiment." *Journal of Human Resources* 14, 4 (Fall): 496-506.
- 1981 Keeley, Michael C. 1981. *Labour Supply and Public Policy: A Critical Review*. New York: Academic Press.
- 1980 Keeley, Michael C. and Philip Robins, 1980, "Experimental Design, the Conlisk-Watts Assignment Model, and the Proper Estimation of Behavioral Response." *The Journal of Human Resources* 15, 4 (Fall): 480-498.
- 1980 Keeley, Michael C. and Philip Robins, 1980. Originally, 1978. "The Design of Social Experiments: A Critique of the Conlisk-Watts Assignment Model." Research Memorandum no. 57. Menlo Park, CA: Stanford Research Institute, Center for the Study of Welfare Policy. Then Published as Revised version in *Research in Labour Economics* 3, edited by Ronald G. Ehrenberg, JAI Press, 1980.
- 1976 Keeley, Michael C. Philip K. Robbins, and Richard G. Spiegelman, 1976. "The Estimation of Labour Supply Models Using Experimental Data: Evidence from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 29. Center for the Study of Welfare Policy, SRI International (August).
- 1977 Keeley, Michael C., 1977. "The Impact of Income Maintenance on Geographic Mobility: Preliminary Analysis and Empirical Results from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 47. Center for the Study of Welfare Policy, SRI International (October).
- 1977 Keeley, Michael C., 1977. "Using Post-Experimental Data to Derive the Effects of a Permanent Income Maintenance Programme." Mimeograph. SRI International.
- 1978 Keeley, Michael C., 1978. "The Estimation of Labour Supply Models Using Experimental Data." *American Economic Review* (December) p. 873-887.

-
- 1978 Keeley, Michael C., 1978. "The Impact of Income Maintenance on Fertility: Preliminary Findings from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 49. Center for the Study of Welfare Policy, SRI International (March).
- 1978 Keeley, Michael C., 1978. "The Impact of Income Maintenance on Fertility: Preliminary Findings from the Seattle and Denver Income Maintenance Experiment." Research Memorandum No. 49 (March).
- 1979 Keeley, Michael C., 1979. "Taxes, Transfers, and Subsidies and Demand for Children: The Impact of Alternative Negative Income Tax Programmes." Research Memorandum No. 65 (June).
- 1979 Keeley, Michael C., 1979. "The Destination Choices and Earnings of Migrants: The Impact of Alternative Negative Income Tax Programmes." Research Memorandum No. 64 (May).
- 1980 Keeley, Michael C., 1980. "Demand for Children." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1980 Keeley, Michael C., 1980. "Migration." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1980 Keeley, Michael C., 1980. "The Effects of Negative Income Tax on Migration." *Journal of Human Resources* 15: 695-706.
- 1980 Keeley, Michael C., 1980. "The Effects of Negative Income Tax Programmes on Fertility." *Journal of Human Resources* 15: 675-694.
- 1981 Keeley, Michael C., 1981. *Labour Supply and Public Policy: Critical Review*. New York: Academic Press
- 1977 Keeley, Michael C., Philip Robins, Robert Spiegelman, and R. West, 1977a. "The Labour Supply Effects and Costs of Alternative Negative Income Tax Programmes: Evidence from the Seattle and Denver Income Maintenance Experiments, Part 1: The Labour Supply Response Function." Research Memorandum No. 38, Center for the Study of Welfare Policy, SRI International, (May).
- 1977 Keeley, Michael C., Philip Robins, Robert Spiegelman, and R. West, 1977b. "The Labour Supply Effects and Costs of Alternative Negative Income Tax Programmes: Evidence from the Seattle and Denver Income Maintenance Experiments, Part 2: National Predictions Using the Labour Supply Response Function." Research Memorandum No. 39, Center for the Study of Welfare Policy, SRI International, (May).
- 1977 Keeley, Michael C., Philip Robins, Robert Spiegelman, and R. West, 1977c. "An Interim Report on the Work Effort Effects and Costs of a Negative Income Tax Using Results of the Seattle and Denver Income Maintenance Experiments: National Predictions: A Summary." Research Memorandum No. 39, Center for the Study of Welfare Policy, SRI International, (June).
- 1978 Keeley, Michael C., Philip Robins, Robert Spiegelman, and R. West, 1978a. "The Labour Supply Effects and Costs of Alternative Negative Income Tax Programmes." *Journal of Human Resources* 13 (Winter): 3-36.
- 1976 Keeley, Michael C., Philip. Robins, Robert Spiegelman, and R. West, 1976. "The Estimation of Labour Supply Models Using Experimental Data: Evidence from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 29, Center for the Study of Welfare Policy, SRI International, (August).
- 1978 Keeley, Michael C., Philip. Robins, Robert Spiegelman, and R. West, 1978b. "The Estimation of Labour Supply Models Using Experimental Data." *American Economic Review* 68: 873-887 (December).
- 1980 Keeley, Michael C., Robert Speigelman, and Richard West. 1980. "Design of the Seattle/Denver Income-Maintenance Experiments and an Overview of Results." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.

-
- 1979 Kehrer, Barbara H. and Charles M. Wolin, 1979. "Impact of Income Maintenance on Low Birthweight: Evidence from the Gary Experiment." *Journal of Human Resources* 14, 4 (Fall): 434-462.
- 1977 Kehrer, Kenneth C., 1977. *The Gary Income-Maintenance Experiment: Summary of Initial Findings*. Princeton, NJ: Mathematica, Inc.
- 1979 Kehrer, Kenneth C., 1979. "Introduction (to the JHR special issue: The Gary Income Maintenance Experiment)." *Journal of Human Resources* 14, 4 (Fall): 431-433.
- 1980 Kehrer, Kenneth C., John F. McDonald, and Robert A. Moffitt (1980), "Final Report of the Gary Income Maintenance Experiment: Labour Supply," *Mathematica Policy Research*.
- 1971 Kelly, Terrance F. and Leslie Singer, 1971. "The Gary Income Maintenance Experiment: Plans and Progress." *American Economic Review* 61 (May): 30-42.
- 1977 Kerachsky, Stuart H., 1977. "Health and Medical Care Utilization: A Second Approach." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 129-150.
- 1972 Kershaw, David N. and Joseph C. Small, 1972. "Date Confidentiality and Privacy: Lessons from the New Jersey Negative Income Tax Experiment." *Public Policy* 20 no. 2: 257-280 (Spring).
- 1976 Kershaw, David, and Jerilyn Fair 1976. *The New Jersey Income-Maintenance Experiment volume I: Operations, Surveys, and Administration*. New York: Academic Press.
- 1990 Kesselman, Jonathan, 1990. "Income Security via the Tax System: Canadian and American Reforms." Discussion Paper no. 90-31. Vancouver: University of British Columbia.
- 1976 Kessleman, Jonathan R. 1976. "Tax Effects on Job Search, Training, and Work Effort." *Journal of Public Economics* 6: 255-272.
- 1986 Killingsworth, Mark and James Heckman, 1986. "Female Labour Supply: A Survey." *Handbook of Labour Economics*, vol. 1, Orley Ashenfelter and Richard Layard, eds. Pp. 103-204. Amsterdam: North Holland.
- 1975 Killingsworth, Mark R. "Must a Negative Income Tax Reduce Labour Supply: A Study of the Family's Allocation of Time." Industrial Relations Section, Princeton University Working Paper No. 78.
- 1984 Killingsworth, Mark, 1984. *Labour Supply*. Cambridge: Cambridge University
- 1977 Knudsen, Jon Helge, John Mamer, Robert A. Scott, and Arnold R. Shore, 1977. "Information Levels and Labour Response." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Hard W. Watts and Albert Rees (eds.) New York: Academic Press: 347-368.
- 1977 Knudsen, Jon Helge, Robert A. Scott, and Arnold R. Shore, 1977. "Household Consumption." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 251-276.
- 1971 Kurz, Mordecai and Robert G. Spiegelman, 1971. "The Seattle Experiment: The Combined Effect of Income Maintenance and Manpower Investments." *American Economic Review* 61 2: 22-29 (May).
- 1972 Kurz, Mordecai and Robert G. Spiegelman, 1972. "The Design of the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 18, Center for the Study of Welfare Policy, Stanford Research Institute, (May).
- 1973 Kurz, Mordecai and Robert G. Spiegelman, 1973. "Social Experimentation: A New Tool in Economic and Policy Research." Research Memorandum No. 22, Center for the Study of Welfare Policy, Stanford Research Institute, (November).
- 1975 Kurz, Mordecai, Philip K. Robins, and Robert G. Spiegelman, 1975. "A Study of the Demand for Child Care by Working Mothers." Research Memorandum No. 27, Center for the Study of Welfare Policy, Stanford Research Institute, (August).

-
- 1974 Kurz, Mordecai, Philip K. Robins, Robert G. Spiegelman, Richard W. West, and Harlan I Halsey, 1974. "A Cross Sectional Estimation of Labour Supply for Families in Denver 1970." Research Memorandum No. 24, Center for the Study of Welfare Policy, Stanford Research Institute, (May).
- 1973 Kurz, Mordecai, Robert G. Spiegelman, and J. A. Brewster, 1973. "The Payment System for the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 19, Center for the Study of Welfare Policy, Stanford Research Institute, (June).
- 1973 Kurz, Mordecai, Robert G. Spiegelman, and Richard W. West, 1973. "The Experimental Horizon and the Rate of Time Preference for the Seattle and Denver Income Maintenance Experiments: A Preliminary Analysis." Research Memorandum No. 21, Center for the Study of Welfare Policy, Stanford Research Institute, (November).
- 1977 Ladinsky, Jack and Anna Wells, 1977. "Social Integration, Leisure activity, media exposure, and Lifestyle Enhancement." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 195-224
- 1974 Lampman, Robert, 1974. "The Decision to Undertake the New Jersey Experiment." *Final Report of the New Jersey Experiment*, vol. 4. Madison, WI: Institute for Research on Poverty and Mathematica.
- 1975 Lane, Robert, 1975. "Social Science Research and Public Policy." *Policy Studies and the Social Sciences*: 287-291. Stuart S. Nagel (ed.) Lexington, MA: Lexington Book, D.C. Health and Company.
- 1977 Lefcowitz, Myron J. and David Elesh, 1977. "Health and Medical Care Utilization." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 113-128.
- 1974 Lerner, Robert I. And Alan A. Townsend, 1974. "Conflicting Objections in Income Maintenance Programmes." *The American Economic Review* 64, no. 2: 205-211 (May).
- 1975 Levine, R. A., "How and Why the Experiments Came About" in J. Pechman and M. Timpane (eds) *Work Incentives and Income Guarantees: the New Jersey negative income tax experiment*. Washington, DC: Brookings Institution.
- 1981 MaCurdy, Thomas E. 1981. National Bureau of Economic Research, Working Paper number 0624
- 1975 Mahoney, Bette S. and W. Michael Mahoney, 1975. "Policy Implications: A Skeptical View." *Work Incentives and Income Guarantees: the New Jersey negative income tax experiment*. Pechman, Joseph A., and P. Michael Timpane, (eds.) Washington (D.C.): Brookings institution.
- 1977 Mallar, Charles D., 1977. "The Educational and Labour-Supply Responses of Young adults in Experimental Families." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Harold W. Watts and Albert Rees (eds.) New York: Academic Press. 163-184
- 1978 Masters, Stanley H., 1978. "Comments on Robert Michael: The Consumption Studies." *Welfare in Rural Areas: The North Carolina-Iowa Income Maintenance Experiment* John Palmer and Joseph Pechman, eds. 171-173. Washington, DC: Brookings Institution.
- 1977 Masters, Stanley, and Irwin Garfinkle, 1977. *Estimating the labour supply effects of income-maintenance alternatives*. New York (N.Y.): Academic press.
- 1977 Maxfield, Myles Jr., 1977. "Estimating the Impact of Labour Supply Adjustments on Transfer Programme Costs: A Microsimulation Methodology." *Mathematical Policy Research* (June).
- 1977 Maynard, Rebecca A., 1977. "The Effects of the Rural Income Maintenance Experiment on the School Performance of Children." *American Economic Review* 67, no. 1: 370-375 (February).
- 1979 Maynard, Rebecca C. and Richard J. Murnane, 1979. "The Effects of a Negative Income Tax on School Performance: Results of an Experiment." *Journal of Human Resources* 14, 4 (Fall): 463-476.

-
- 1979 McDonald, John F. and Stanley P. Stephenson, Jr., 1979. "The Effect of Income Maintenance on the School-Enrollement and Labour-Supply Decisions of Teenagers." *Journal of Human Resources* 14, 4 (Fall): 488-495.
- 1973 Metcalf, Charles, 1973. "Making Inferences from Controlled Income Maintenance Experiments." *American Economic Review* 63: 478-483.
- 1974 Metcalf, Charles, 1974. "Predicting the Effects of Permanent Programmes from a Limited Duration Experiment." *Journal of Human Resources* 9, no. 4: 530-555.
- 1977 Metcalf, Charles, 1977. "Consumption Behavior: Implications for a Permanent Programme." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 93-112.
- 1977 Metcalf, Charles, 1977. "Predicting the Effects of Permanent Programmes from a Limited Duration Experiment." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 375-399.
- 1977 Metcalf, Charles, 1977. "Sample Design and the Use of Experimental Data." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 413-440.
- 1978 Michael, Robert, 1978. "The Consumption Studies." *Welfare in Rural Areas: The North Carolina-Iowa Income Maintenance Experiment*, John Palmer and Joseph Pechman, eds. 149-171. Washington, DC: Brookings Institution.
- 1977 Middleton, Russell and Vernon L. Allen, 1977. "Social Psychological Effects." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 151-194.
- 1985 Moffitt, Robert A. 1985. "A Problem with the Negative Income Tax," *Economic Letters* 17, 261-265
- 1979 Moffitt, Robert A., 1979. "The Labour Supply Response in the Gary Experiment." *Journal of Human Resources* 14, 4 (Fall): 477-487.
- 1981 Moffitt, Robert and Kenneth Kehrer. 1981. "The effect of tax and transfer programmes on labour supply: the evidence from the income maintenance experiments." *Research in Labour Economics* 4, 103-150.
- 1974 Morrill, William A. 1974. "Introduction (to JHR symposium—The Graduated Work Incentives Experiment)" *Journal of Human Resources* 9, 2: 156-157.
- 1973 Moynihan, Daniel P. (1973), *The Politics of a Guaranteed Income: The Nixon Administration and the Family Assistance Plan* (New York: Random House).
- 1987 Mroz, Thomas. 1987. "The Sensitivity of an Empirical Model of Marital..."
- 1986 Munnell, Alicia H. ed. 1986. *Lessons from the Income Maintenance Experiments*. Boston: Federal Reserve Bank of Boston.
- 1980 Munson, C. Eric, Philip K. Robins, Gary Stieger, 1980. "Labour Supply and Childcare Arrangements of Single Mothers in the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 69, Center for the Study of Welfare Policy, SRI International (January).
- 1980 Munson, C. Eric, Philip K. Robins, Gary Stieger, 1980. "Labour Supply and Childcare Arrangements of Single Mothers." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1981 Murnane, R. and R. Maynard and J. Ohls, . "Home Resources and Children's Achievement" R.E. Stat Aug.
-

-
- 1986 Murray, Charles, 1986. "Discussion of the Policy Lessons." *Lessons from the Income Maintenance Experiments*. Alicia H. Munnell ed., Boston: Federal Reserve Bank of Boston.
- 1986 Nathan, Richard P., . "Lessons for future public policy and research " *Lessons from the Income Maintenance Experiments*. Alicia H. Munnell ed., Boston: Federal Reserve Bank of Boston.
- 1976 National Council of Welfare (Canadian), 1976. *Guide to the Guaranteed Income*. Ottawa: National Council of Welfare.
- 1989 Neuberger, Leland Gerson, 1989, *Conceptual anomalies in economics and statistics: lessons from the social experiment*; New York: Cambridge University Press.
- 1977 Nicholson, Walter, 1977. "Differences Among the Three Sources of Income Data." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 353-374.
- 1977 Nicholson, Walter, 1977. "Expenditure Patterns: A Descriptive Survey." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 15-44.
- 1977 Nicholson, Walter, 1977. "Relationship of female Labour-Supply characteristics of the experimental sample to those of other samples." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 323-340.
- 1979 O'Connor, J. Frank and J. Patrick Madden, 1979. "The Negative Income Tax and the Quality of Dietary Intake." *Journal of Human Resources* 14, 4 (Fall): 507-517.
- 2001 O'Connor, Alice. 2001. *Poverty Knowledge: Social Science, Social Policy, and the Poor in Twentieth Century U.S. History*. Princeton, NJ: Princeton University Press.
- 1983 Office of Income Security Policy, U.S. Department of Health and Human Services 1983. *Overview of the Seattle-Denver Income Maintenance Experiment Final Report*, Washington, DC: U.S. Government Printing Office.
- 1980 Ohls, J. "The Demand for Housing Under a Negative Income Tax" in E. Stromsdorfer and G. Farkas *Evaluation Studies Review Annual* Vol. 5 p. 502.
- 1968 Orcutt, Guy and Alice Orcutt, 1968. "Incentive and Disincentive Experimentation for Income Maintenance Policy Purposes." *American Economic Review* 58: 754-772.
- 1977 Orr, Larry L, Robinson Hollister, and Myron Lefcowitz, 1971. *Income Maintenance: Interdisciplinary Approaches to Research*. University of Wisconsin Institute for Research on Poverty Monograph Series. Chicago: 1971.
- 1978 Palmer, John and Joseph Pechman, eds., 1978. *Welfare in Rural Areas: The North Carolina-Iowa Income Maintenance Experiment*. Washington, DC: Brookings Institution.
- 1975 Pechman, Joseph A., and P. Michael Timpane (Ed.), 1975. *Work Incentives and Income Guarantees: the New Jersey negative income tax experiment*. Washington (D.C.): Brookings institution.
- 1975 Pechman, Joseph A., and P. Michael Timpane, 1975. "Introduction and Summary." *Work Incentives and Income Guarantees: the New Jersey negative income tax experiment*. Pechman, Joseph A., and P. Michael Timpane, (eds.) Washington (D.C.): Brookings institution.
- 1980 Pencavel, John, 1980. "Market Work Decisions and Unemployment of Husbands and Wives in the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 68. Center for the Study of Welfare Policy, SRI International (January).
- 1986 Pencavel, John, 1986. "Labour Supply of Men: A Survey." *Handbook of Labour Economics*, vol. 1, Orley Ashenfelter and Richard Layard, eds. Pp. 103-204. Amsterdam: North Holland.

-
- 1977 Poirier, Dale J., 1977. "Characteristics of attriters who took the attrition interview." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 399-412.
- 1977 Poirier, Dale J., 1977. "Spline Functions and their Applications in Regression Analysis." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Hard W. Watts and Albert Rees (eds.) New York: Academic Press: 369-382.
- 1977 Poirier, Dale J., 1977. "The Determinants of Home Buying." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press:
- 1980 Pozdena, Randall J. and Terry R. Johnson, 1980. "Demand for Assets." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1986 Prescott, David, Robert Swidinsky, and David Wilton, 1986. "Labour Supply Estimates for Low-Income Female Heads of Households Using Mincome Data." *Canadian Journal of Economics* 19 no. 1: 134-141.
- 1970 President's Commission on Income Maintenance Programmes. 1970. Washington DC: US Government Printing Office.
- 1986 Rainwater, Lee, 1986. "A Sociologist's View of the Income Maintenance Experiments." *Lessons from the Income Maintenance Experiments*. Alicia H. Munnell ed., Boston: Federal Reserve Bank of Boston.
- 1977 Rea, Samuel A Jr., 1977. "Investment in Human Capital under a Negative Income Tax." *Canadian Journal of Economics* 10, no. 4 (November): 607-620.
- 1975 Rees, Albert and Watts, Harold W., 1975. "An Overview of the Labour Supply Results." *Work Incentives and Income Guarantees: the New Jersey negative income tax experiment*. Pechman, Joseph A., and P. Michael Timpane, (eds.) Washington (D.C.): Brookings institution.
- 1974 Rees, Albert, 1974. "An Overview of the Labour-Supply Results." *Journal of Human Resources* 9, 2: 158-180.
- 1977 Rees, Albert, 1977. "Labour Supply Results of the experiment: a summary." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Hard W. Watts and Albert Rees (eds.) New York: Academic Press.
- 1974 Rivlin, Alice M. 1974. "How Can Experiments be More Useful?" *The American Economic Review* 64, no. 2: 346-354 (May).
- 1974 Rivlin, Alice M. 1974. "Social Experiments: Their Uses and Limitations." *Monthly Labour Review* (June): 28-35.
- 1975 Rivlin, Alice M. and Michael P. Timpane, 1975. *Ethical and Legal Issues of Social Experimentation*. Washington, DC: The Brookings Institution.
- 1977 Robins, Philip K. and Nancy Tuma, 1977. "Changes in Rates of Entering and Leaving Employment under a Negative Income Tax Programme: Evidence from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 48, Center for the Study of Welfare Policy, Stanford Research Institute (March).
- 1983 Robins, Philip K. and Richard W. West, 1983. "Labour Supply Response." *Final Report of the Seattle-Denver Income Maintenance Experiment*. Washington, DC. Government Printing Office.
- 1978 Robins, Philip K. and Richard West, 1978a. "Participation in the Seattle and Denver Income Maintenance Experiments and Its Effects on Labour Supply." Palo Alto, CA: Stanford Research Institute, Center for the Study of Welfare Policy, Research Memorandum No. 53.

-
- 1978 Robins, Philip K. and Richard West, 1978b. "A Longitudinal Analysis of the Labour Supply Response to a Negative Income Tax Programme: Evidence from the Seattle and Denver Income Maintenance Experiments." Palo Alto, CA: Stanford Research Institute, Center for the Study of Welfare Policy, Research Memorandum No. 59.
- 1980 Robins, Philip K. and Richard West, 1980a. "Programme Participation and Labour-Supply Response." *The Journal of Human Resources* 15, 4 (Fall): 499-523.
- 1980 Robins, Philip K. and Richard West, 1980b. "Labour Supply Response of Family Heads Over Time." *A Guaranteed Annual Income: Evidence from A Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic Press.
- 1980 Robins, Philip K. and Richard West, 1980c. "Labour-Supply Response Over Time." *The Journal of Human Resources* 15, 4 (Fall): 524-544.
- 1985 Robins, Philip K. and Richard West, 1985. "Programme Participation and Labour-Supply Response." *Journal of Human Resources* 20:567-582.
- 1986 Robins, Philip K. and Richard West, 1986. "Sample Attrition and Labour Supply Response in Experimental Panel Data." *Journal of Business and Economic Statistics* 4: 329-338.
- 1979 Robins, Philip K. and Sue McNicoll, 1979. "The Cross-Experimental Adjusted Means Project." Memorandum. Menlo Park, CA: SRI International.
- 1979 Robins, Philip K. and Sue McNicoll, 1981. "Additional Runs for the Cross-Experimental Adjusted Means Project." Memorandum. Menlo Park, CA: SRI International.
- 1977 Robins, Philip K., 1977. "Job Satisfaction and Income Maintenance: Evidence from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 45, Center for the Study of Welfare Policy, Stanford Research Institute (October).
- 1980 Robins, Philip K., 1980. "Job Satisfaction." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1980 Robins, Philip K., 1980. "Labour Supply Response of Family Heads and Implications for a National Programme." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1984 Robins, Philip K., 1984. "The Labour Supply Response of Twenty-Year Families in the Denver Income Maintenance Experiment." *Review of Economics and Statistics* 66: 491-195.
- 1985 Robins, Philip K., 1985. "A Comparison of the Labour Supply Findings from the Four Negative Income Tax Experiments." *Journal of Human Resources* 20, 4: 567-582.
- 1980 Robins, Philip K., Nancy Brandon, and K. E. Yeager, 1980. "Effects of SIME/DIME on Changes in Employment Status." *The Journal of Human Resources* 15, 4 (Fall): 545-573.
- 1980 Robins, Philip K., Nancy Tuma, and K. E. Yeager, 1977. "Effects of the Seattle and Denver Income Maintenance Experiments on Changes in Employment Status." Research Memorandum No. 70, Center for the Study of Welfare Policy, Stanford Research Institute (April).
- 1980 Robins, Philip K., Richard W. West, and Michael G. Lohrer (1980), *Labour Supply Response to a Nationwide Negative Income Tax: Evidence from the Seattle and Denver Income Maintenance Experiments*, Research Memorandum draft, Socioeconomic Research Center, SRI International, Menlo Park, CA.
- 1980 Robins, Philip K., Richard West and G. L. Stieger, 1980. "Breakeven Status and the Labour Supply Response to an NIT Programme: Evidence from the Seattle and Denver Income Maintenance Experiments." Palo Alto, CA: Stanford Research Institute, Center for the Study of Welfare Policy, Research Memorandum No. 73 (August).

-
- 1980 Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., (1980) *A Guaranteed Annual Income: Evidence from a Social Experiment*. New York: Academic press.
- 1966 Ross, Heather, 1966. *A proposal for a demonstration of new techniques in income maintenance*. Washington, DC: United Planning Organization (December).
- 1974 Ross, Heather, 1974. "Case Study of Testing Experimentation: Income Maintenance and Social Policy Research." *Social Experiments and Social Programme Evaluation, Proceedings of the Washington Operations Research Council Symposium*. James G. Abert and Murray Kamass (eds.). Cambridge, MA: Bollinger Press.
- 1975 Rossi, Peter H. "A Critical Review of the Analysis of Nonlabour Force Responsees." *Work Incentives and Income Guarantees: the New Jersey negative income tax experiment*. Pechman, Joseph A., and P. Michael Timpane, (eds.) Washington (D.C.): Brookings institution.
- 1976 Rossi, Peter H. and Katharine C. Lyle, 1976. *Reforming Public Welfare: A Critique of the Negative Income Tax Experiments*. New York: Russell Sage Foundation.
- 1985 Sabourin, Donald, 1985. "Participation in Income-tested Social Programmes: Evidence from the Mincome Experiment." Winnipeg: University of Manitoba, Institute for Social and Economic Research.
- 1977 Saupe, William E. 1977. "The Rural Income Maintenance Experiment, Welfare Reform, and Programmes for Smaller Farms." The University of Wisconsin-Madison, Institute for Research on Poverty Discussion Papers.
- 1975 Sawhill, Isabel V. George Peabody, Carol A. Jones, and Steven B. Caldwell, 1975. *Income Transfers and Family Structure*. Report 979-03. Washington, DC: The Urban Institute.
- 1974 Skidmore, Felicity, 1974. "Availability of Data from the Graduated Work Incentive Experiment." *Journal of Human Resources* 9, 2: 265-278.
- 1975 Skidmore, Felicity, 1975. "Operational Design of the Experiment." *Work Incentives and Income Guarantees: the New Jersey negative income tax experiment*. Pechman, Joseph A., and P. Michael Timpane, (eds.) Washington (D.C.): Brookings institution.
- 1986 Solow, Robert M., . "An economist's view of the income maintenance experiments." *Lessons from the Income Maintenance Experiments*. Alicia H. Munnell ed., Boston: Federal Reserve Bank of Boston.
- 1980 Spiegelman and K. E. Yaeger, 1980. "Overview (of the special issue The Seattle and Denver Income Maintenance Experiments)" *The Journal of Human Resources* 15, 4 (Fall): 463-479.
- 1976 Spiegelman, Robert G. and Richard W. West, 1976. "Feasibility of a Social Experiment and Issues in its Design: Experiences from the Seattle and Denver Income Maintenance Experiments." Business and Economic Statistics Section, *Proceedings of the American Statistical Association*: 168-176.
- 1983 Spiegelman, Robert G., 1983. "History and Design." Final Report of the Seattle-Denver Income Maintenance Experiment, vol. 1. Design and Results. Menlo Park, CA: SRI International, p. 1-51.
- 1977 Spilerman, Seymour and Richard E. Miller, 1977. "The Effect of Negative Income Tax Payments on Job Turnover and Unemployment Duration." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Hard W. Watts and Albert Rees (eds.) New York: Academic Press: 221-252.
- 1977 Spilerman, Seymour and Richard E. Miller, 1977. "The Impact of the Experiment on Job Selection." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Hard W. Watts and Albert Rees (eds.) New York: Academic Press: 253-286.
- 1983 SRI International (1983), *Final Report of the Seattle-Denver Income Experiment, Volume I: Design and Results* (Washington, D.C.: U.S. Government Printing Office).
- 1985 Stafford, Frank P. (1985), "Income-Maintenance Policy and Work Effort: Learning from Experiments and Labour-Market Studies," in Hausman and Wise (eds.), *Social Experimentation* (Chicago: University of Chicago Press) pp. 95-143.
-

-
- 1971 Tella, Alfred, Dorothy Tella, and Christopher Green, 1971. *The Hours of Work and Family Income Response to Negative Income Tax Plans: The Impact on the Working Poor*. The W. E. Upjohn Institute for Employment Research.
- 1979 Thoits, Peggy, 1978. "Income Maintenance, Life Changes, and Psychological Distress: Implications for the Life Events Theory." Research Memorandum No. 66. Center for the Study of Welfare Policy, SRI International (July).
- 1978 Thoits, Peggy, and Michael T. Hannan, 1978. "Income and Psychological Distress: Evidence from the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 50. Center for the Study of Welfare Policy, SRI International (March).
- 1980 Thoits, Peggy, and Michael T. Hannan, 1980. "Income and Psychological Distress." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1979 Tuma, Nancy Brandon and Michael T. Hannan, 1979. "Dynamic Analysis of Event Histories." *American Journal of Sociology* 84, no. 4: 820-854.
- 1980 Tuma, Nancy Brandon and Philip K Robins, 1980. "A Dynamic Model of Employment Behavior: An Application to the Seattle and Denver Income Maintenance Experiments." *Econometrica* 48, no. 4 (May): 1031-52
- 1986 Tuma, Nancy Brandon, 1986. "Discussion." *Lessons from the Income Maintenance Experiments*, Alice Munnell (ed.) Boston: The Federal Reserve Bank of Boston, p. 99-105.
- 1977 Tuma, Nancy, Lyle Groenveld, and Michael Hannan, 197. "Variation Over Time in the Impact of the Seattle and Denver Income Maintenance Experiments on the Making and Breaking of Marriages." Research Memorandum No. 43. Center for the Study of Welfare Policy, SRI International (February).
- 1976 Tuma, Nancy, Lyle Groenveld, and Michael Hannan, 1976. "First Dissolutions and Marriages: Impacts in 24 Months of the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 35. Center for the Study of Welfare Policy, SRI International (August).
- 1977 Tuma, Nancy, Lyle Groenveld, and Michael Hannan, 1977. "First Dissolutions and Marriages: Impacts in 24 Months of the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 35. Center for the Study of Welfare Policy, SRI International (February).
- 1978 Tuma, Nancy, Michael Hannan, and Lyle Groenveld, 1978. "Dynamic Analysis of Marital Stability." Research Memorandum No. 58. Center for the Study of Welfare Policy, SRI International (September).
- 1974 Tuma, Nancy, R. Cronkite, D. K. Miller, and M. Hannan. 1974. Measurement of Unobservable Variables Describing Families." Research Memorandum No. 23, Center for the Study of Welfare Policy, Stanford Research Institute, (June).
- 1983 U. S. Department of Health, Education, and Welfare 1983. Assistant Secretary for Planning and Evaluation, Office of Income Security Policy, Overview of the Seattle-Denver Income Maintenance Experiment Final Report.
- 1976 U. S. Department of Health, Education, and Welfare, 1976. Summary Report: Rural Income Maintenance Experiment, November, 1976.
- 1973 U. S. Department of Health, Education, and Welfare, Summary Report: New Jersey Graduated Work Incentive Experiment, December, 1973.
- 1976 U.S. Department of Health, Education, and Welfare, 1976. *Summary Report: Rural Income Maintenance Experiment*. Washington, DC: U.S. Government Printing Office.
- 1981 U.S. General Accounting Office, Income Maintenance Experiments: New to Summarize Results and Communicate the Lessons Learned, Report Number HRD 81-46, April 17, 1981.

-
- 1978 U.S. Senate, 1978. *Welfare Research and Experimentation: Hearings before the Subcommittee on Public Assistance of the Committee on Finance, United States Senate*. Washington: U.S. Government Printing Office (November).
- 1979 Van Loon, R. 1979. "Reforming Welfare in Canada." *Public Policy* 27: 469
- 1970 Watts, Harold W. (1970), *Adjusted and Extended Preliminary Results from the Urban Graduated Work Incentive Experiment, Madison WI: Institute for Research on Poverty* (University of Wisconsin).
- 1977 Watts, Harold W. and Albert Rees (eds.) 1977. *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. New York: Academic Press.
- 1977 Watts, Harold W. and Albert Rees, 1977. *The New Jersey Income-Maintenance Experiment, Volume II: Labour-Supply Responses*. New York: Academic Press.
- 1977 Watts, Harold W. and Dale Poirier, 1977. "The Estimation of Normal Wage Rates and Normal Income." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Harold W. Watts and Albert Rees (eds.) New York: Academic Press. 393-414.
- 1973 Watts, Harold W. and Glen C. Cain, 1973. "Labour Supply Effects of the New Jersey-Pennsylvania Graduated Work Incentives Experiment." *Final Report of the Graduated Work Incentives Experiment*. Madison: Institute for Research on Poverty, University of Wisconsin.
- 1977 Watts, Harold W. and Horner, David, 1977. "Labour-Supply Response of husbands." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Harold W. Watts and Albert Rees (eds.) New York: Academic Press. 57-114.
- 1977 Watts, Harold W. and John Mamer, 1977. "Analysis of Wage-Rate Differentials." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 341-352.
- 1970 Watts, Harold W., Dale J. Poirier, and Charles Mallar (1970), "Sample, Variables, and Concepts Used in the Analysis," *Adjusted and Extended Preliminary Results from the Urban Graduated Work Incentive Experiment* (Madison WI: Institute for Research on Poverty, University of Wisconsin) pp. 33-56.
- 1977 Watts, Harold W., Dale J. Poirier, and Charles Mallar, 1977. "Sample, Variables, and Concepts used in the analysis." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Harold W. Watts and Albert Rees (eds.) New York: Academic Press. 33-56.
- 1977 Watts, Harold W., Jon K. Peck, and Michael Taussig, 1977. "Site Selection, Representativeness of the Sample, and Possible Attrition Bias." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 441-466.
- 1974 Watts, Harold W., Robert Avery, David Elesh, David Horner, M.J. Lefcowitz, John Mamer, Dale Poirier, Seymour Spillerman, and Sonia Wright, 1974. "The Labour-Supply Response of Husbands." *Journal of Human Resources* 9, 2: 181-200.
- 1971 Watts, Harold, 1971. "The Graduated Work Incentive Experiments: Current Progress." *American Economic Review* 61 (May): 15-21.
- 1980 Weiss, Yorman, Arden Hall, and Fred Dong, 1980. "The Effect of Price and Income on Investment in Schooling." *Journal of Human Resources* 15: 611-640.
- 1980 West, Richard and G. Stieger, 1980. "The Effects of the Seattle and Denver Income Maintenance Experiments on Alternative Measures of Labour Supply." Research Memorandum No. 72. Menlo Park, CA: Center for the Study of Welfare Policy, SRI International (May).

-
- 1978 West, Richard, 1978. "The Rate of Time Preference of Families in the Seattle and Denver Income Maintenance Experiments." Research Memorandum No. 51. Menlo Park, CA: Center for the Study of Welfare Policy, SRI International
- 1979 West, Richard, 1979a. "The Effects of the Seattle and Denver Income Maintenance Experiments on the Labour Supply of Young Nonheads." Research Memorandum No. 60. Menlo Park, CA: Center for the Study of Welfare Policy, SRI International (May).
- 1979 West, Richard, 1979b. "The Impact of the Seattle and Denver Income Maintenance Experiments on Wage Rates: An Interim Analysis." Research Memorandum No. 61. Menlo Park, CA: Center for the Study of Welfare Policy, SRI International (May).
- 1979 West, Richard, 1979c. "A Preliminary Analysis of the Effects of the Seattle and Denver Income Maintenance Experiments on the Choice of Occupation." Research Memorandum No. 62. Menlo Park, CA: Center for the Study of Welfare Policy, SRI International (May).
- 1980 West, Richard, 1980. "Effects on Wage Rates: An Interim Analysis." *Journal of Human Resources* 15: 641-653.
- 1980 West, Richard, 1980. "Labour Supply Response of Youth." *A Guaranteed Annual Income: Evidence from a Social Experiment*. Robins, Philip K., Robert G. Spiegelman, Samuel Weiner, and Joseph G. Bell, eds., New York: Academic press.
- 1980 West, Richard, 1980. "The Effects on the Labour Supply of Young Nonheads." *Journal of Human Resources* 15 (Fall): 574-590.
- 1981 Whiteford, Peter. 1981. "Work Incentive Experiments in the United States and Canada." Research Paper No. 12. Research and Statistics Branch, Development Division, Department of Social Security, Australia
- 1972 Williams, Walter (1972), *The Struggle for a Negative Income Tax*, Seattle, Washington: University of Washington, Institute of Government Research pp. 2-11.
- 1974 Wilson, John Oliver, 1974. "Social Experimentation and Public-Policy Analysis." *Public Policy* 22: 15-37.
- 1977 Wooldridge, Judith, 1977. "Housing Consumption." *The New Jersey Income-Maintenance Experiment Volume III: The Impact on Expenditures, Health, and Social Behavior, and the Quality of the Evidence*. Watts, Harold W. and Albert Rees (eds.) New York: Academic Press: 45-72.
- 1977 Wright, Sonia, 1977. "Social Psychological Characteristics and Labour-Force Response of Male Heads." *The New Jersey Income-Maintenance Experiment Volume II: Labour-Supply Responses*. Hard W. Watts and Albert Rees (eds.) New York: Academic Press: 321-346.
- 1986 Zellner, Arnold, and Peter E. Rossi, . "Evaluating the methodology of social experiments." *Lessons from the Income Maintenance Experiments*. Alicia H. Munnell ed., Boston: Federal Reserve Bank of Boston.

In economics, a negative income tax (NIT) is a welfare system within an income tax where people earning below a certain amount receive supplemental pay from the government instead of paying taxes to the government. Such a system has been discussed by economists but never fully implemented. According to surveys however, the consensus view among economists is that the "government should restructure the welfare system along the lines" of one. It was described by British politician Juliet Rhys-Williams in A retrospective on the negative income tax experiments: Looking back at the most innovative field studies in social policy. K Widerquist, A O'Connor, W Williams, R Hollister, H Watts, RA Levine. *The ethics and economics of the basic income guarantee*, 95-106, 2017. 47. 2017. Lockean theories of property: justifications for unilateral appropriation. K Widerquist. *Public Reason* 2 (1), 3-26, 2010. 41. 2010. A failure to communicate: The labour market findings of the negative income tax experiments and their effects on policy and public opinion. K Widerquist. 2004a, 497-538, 2004.