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Policy and Poverty

by

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1. Introduction

In a rich country, poverty is a matter of income distribution. This is true whether one measures poverty in an absolute or a relative sense. Poverty in the sense of relative deprivation is a matter of the shape of the distribution of income: no matter how high the absolute income, those with incomes much below the average are adjudged poor. Thus in a rich country public policy aimed to eradicate poverty can take the form of programs designed to truncate the lower tail of the distribution of income so that very few are far below some average, an average which for countries afflicted with relative poverty is acknowledged to yield an adequate level of living.

Before we proceed it is best to make precise the definition of income that seems to be appropriate for a discussion of relative deprivation poverty. Almost all of those classed as poor in a rich country enjoy a private disposable income (earned income minus direct taxes plus transfer payments) sufficient to maintain life at a standard far above that which all but a tiny minority achieve in countries such as India and Pakistan where absolute poverty is the lot of almost all. Part of the poverty problem in the United States centers around the social and personal reaction to how income is received. The welfare recipient can be
poor, even if welfare standards are adequate, if cash income derived from welfare is personally and socially demeaning. Thus social dividend or negative income tax proposals which seemingly remove such stigmas have a receptive audience.

It follows that poverty in the United States relates to the subjective evaluation of well being, what economists have called utility, as much as to the size distribution of conventionally defined income. The relevant income for the study of poverty would measure the total satisfaction, adjusted for purely personal events, that a household gets from both privately procured and publicly provided goods and services. Note that a job in and of itself may be an ingredient in income thought of in this manner.

Such a satisfaction income concept can also encompass a horizon that extends over several generations, so that economic opportunity, in the sense of an expected higher income and status for children, becomes a part of present income. In an open society if the typical horizon is long, the relevant income of the current ambitious and confident poor can be substantially higher than their measured income.

This satisfaction income concept, like utility, cannot be measured directly. A proxy for this income concept might be some measure of the view of the purely relative poor about the fairness or equity of the economy. Thus the existence of a consensus about equity joins efficiency, growth, and stability as a criterion for
judging an economy \(^1\) and as a goal of public policy.

Relative deprivation poverty in contrast to absolute poverty is truly a many-faceted beast. A thorough study of such poverty as a public policy problem primarily dealing with the distribution of income involves measuring the differential social impacts of various measures that could be taken to affect the distribution of measured income. This is beyond my competence, and I believe beyond the present state of the arts in the relevant social disciplines. Thus, even though the social impact of policies designed to affect the distribution of income may be more significant in determining views about dimensions such as equity than changes in the distribution of private disposable income plus public goods, the emphasis in this paper will be with measures that could be undertaken in order to achieve a more equal distribution of private disposable income as well as to increase the publically supplied goods.

In designing public policies to affect income distribution it is necessary to keep in mind that "There are some economic forces so powerful that they constantly break through all barriers erected for their suppression." \(^2\) However, economics after Keynes is not a dismal science. To a modern economist the constraining powerful economic forces do not so restrict what can be so that what exists

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\(^1\) Tibor Scitovsky

must be accepted as inevitable. But as Baumal reminds us, the possibility of policy does not mean that a "good" idea will necessarily achieve a desired goal.

Economic forces can frustrate programs if either the policy objective is inconsistent with such forces or if the program is so poorly conceived that it quite unnecessarily runs afoul of a barrier, even though the objective is, in principle, attainable. Thus an essential step in designing programs is to determine whether forces exist which would make a program ineffective, and whether a particular policy goal is in fact impossible to achieve—perhaps given some set of non-negotiable institutional characteristics—or whether the difficulty arises because the policy instruments that are being proposed are not efficient. Such analysis should make it possible to select programs that get around barriers that are due to the policy instruments used and abort attempts to achieve impossible goals.

In addition, if a "non-negotiable" institutional constraint is an effective barrier to the achievement of a policy goal, the radical question of the value of such institutions needs to be faced.

This paper will take up some economic forces that can frustrate programs to end or alleviate poverty. However, to the extent that inflation, for example, is a result of policies designed to eliminate poverty, the political response to inflation and whether or not inflation is equitable as among classes becomes important. Thus what is attempted here can be extended by investigating the social,
cultural, and political forces that also cannot be suppressed excepting perhaps at a large cost.

In this paper I will first sketch a feasible program of radical changes in the distribution of income by biasing the distribution of the increments to income and then examine a number of barriers which must be taken into account in designing policies to eliminate poverty or redistribute income in the United States. This will be followed by some suggestions for a policy strategy which hopefully gets around the listed barriers. The barriers which will be taken up deal with

1) The Macroeconomics of the Negative Income Tax
2) The Limitations upon Economic Growth,
3) The Stability of Relative Wages, and
4) The Feedbacks from Sustained Full Employment.
I doubt if my list is exhaustive.

The major conclusion of the paper is that an effective program of income equalization or poverty elimination will need to be linked to the production of output, which can take the form of public goods. Instead of transfers by taxation which won't work a program of expansion of public employment and public sector output might do the job. One reason is that potentially the poor could receive a large portion of their income in public goods, the second reason is that such a program could add many of the present poor to the public payrolls. It is necessary in designing such a program that the well off, who are, so to say, being discriminated against, receive recognizable benefits from the income equalization program.
One obvious barrier to the elimination of poverty that will not be discussed is due to the existence of a military establishment whose fun and games absorb some 10% of the Gross National Product. This is an especially relevant barrier to the elimination of poverty, for income used here includes the perceived benefits from the output of the public sectors. We can assume that for many Americans the perceived benefits from foreign adventures, military procurement and space spectacles are less, per dollar of expenditure, than from private procurement and public goods such as schools, parks and safety on the streets. This barrier will not be discussed in detail because I assume, perhaps heroically, that it does not reflect powerful forces inherent in the American enterprise economy. No matter how powerful the military-industrial-research institute complex may be, they are not, I hope, an essential characteristic of American Capitalism.

Underlying this paper is the view that good intentions, bright slogans and cadres of happy warriors are not enough. Programs must be consistent with the nature of the beast; the behavior rules of the economy determine whether programs can possibly have the intended effect. Policy programs not designed to avoid or not powerful enough to overcome such economic barriers will clearly be counterproductive. Hopes raised then dashed are a clear danger to
the fabric of society. Every policy failure becomes evidence to those who do not accept the policy goal that in fact it is impossible of realization. The capabilities of our economy to generate a viable and desirable social order have not been tested, and they will not be tested unless the implications of programs designed to achieve policy goals are thought through before they are implemented.

II The Arithmetic of Radical Income Equalization

During the Great Depression Huey Long articulated radical income equalization ideals with his slogans "Share the Wealth" and "Every man a King". The call to share what in principal already existed, reflected the stagnationist view of the economy which for obvious reasons was then dominant. In an optimistic era such as the recent past, when the arithmetic of compound interest inspired the prevalent view of normal functioning of the economic income equalization or the elimination of poverty could be visualized as being achieved by biasing, in favor of the poor, the distribution of the increments of income due to economic growth.

In the 1969 Economic Report of the President, the Council of Economic Advisors wrote that "Only a small redistribution of the benefits of growth is needed to speed greatly the reduction in poverty....If the increase in real income for the non-poor is lowered merely from 3 percent to 2\(\frac{1}{2}\) percent a year and if that differential of about $2.8 billion annually is effectively transferred to those in poverty, then family incomes for those now
poor can grow about 12 percent annually. This redistribution would eliminate the 1967 poverty gap of $9.7 billion in less than four years. Since any program of redistribution would be likely to reach some of the near-poor and might raise some poor families substantially above the poverty line before others are affected, perhaps a better projection of the time required would be 6 to 8 years.\textsuperscript{1/}

There is no doubt that the modest result envisaged by the Council is arithmetically feasible. The body of this section consists of an arithmetic example of what is involved in biasing the distribution of the growth in income so as to achieve income equalization or the elimination of official poverty within a designated period. The possible variations in programs with the broad objectives of income redistribution are infinite. Two principles underlie the program presented. These are that the portion of the population being discriminated against (the better off) should nevertheless enjoy some improvement in their life standard during each period, and that the period during which the distribution of the benefits from growth are biased toward the poor should be rather short. In addition to these principles, it is necessary to decide for exactly how long the program should be in effect, the target group and the distributive objective of the income equalization program before

\textsuperscript{1/} Economic Report of the President, January 1969, p. 160
a specific program can be spelled out. The period chosen for the example is a decade, and the target is a radical equalization program designed to place a large proportion of the total population close to the present day's median income, adjusted for economic growth over the decade.

The radical income equalization objective turns out to be almost inconsistent with the principle that the well off should continue to benefit at an appreciable rate throughout the program. It is shown that the sacrifice of growth of income by the well off increases as time elapses; this would be true of a more modest program as well.

However, the difficulties with any radical income equalization program lie in the economics, not in the arithmetic. Assuming the validity of the projected growth in income and population, many different feasible programs can be constructed. The deep question is whether there exists any economic mechanism by which the arithmetically possible goals can be achieved.

In the optimistic mid-sixties fiscal-dividend was a popular phrase. It referred to the rise in government receipts that would accompany a growth in income with tax schedules unchanged. The fiscal dividend was supposed to make both a rise in government spending and a lowering of the tax schedule possible. For example a rather generous children's allowance of some $25 a month for all children through fourteen years of age would cost in the neighborhood of two years' fiscal dividend. Thus in a growthman's world
it is only necessary for a transfer scheme to cost less than the growth in the government's tax take with fixed schedules for it to involve no rise and even to allow for a reduction in tax schedules. If a transfer scheme involves transfers in excess of the increment of the tax take with a fixed schedule but less than the rise in income, then even though the tax schedule would have to be raised, it would still be possible for all to enjoy a rise in income. Only if a transfer scheme involves transfers greater than the rise in income would it necessarily require a decline in income for some.

In the above paragraphs the technique for achieving radical income equalization is identified with some unspecified transfer scheme. These could take the form of a negative income tax, wage supplements or some set of specific programs such as child allowances and old age pensions. Transfer payments need not carry the entire burden of income equalization if sharp changes in relative incomes from work can be affected or if public employment is undertaken.

Income is defined here as personal income. Thus the income concept is narrower than that which was deemed most appropriate for the study of poverty which is disposable income plus income in kind from public goods.

Rainwater has called for a nation of average men. This is interpreted here as the existence of an income distribution in which approximately 50% of the family units are in a narrow lowest income class, with the incomes of the other 50% of the population distributed
as in the upper tail of the present income distribution. In Rainwater's idea this narrow lowest class is to be centered around the present median income.

In 1966 the median income was about $7,400, i.e., it was in the $7,000-7,999 income class. The income equalization target that was selected for the arithmetic exercise was to bring all incomes below the median class up to an $8,000 level in 1976, and to allow all incomes in the median income class and above to increase at a growth rate inconsistent with this income equalization objective and the postulated rate of growth in aggregate income.
Table 1

Distribution of Income Families 1966

<table>
<thead>
<tr>
<th>Total Money Income</th>
<th>% of Families</th>
<th>% of Family Income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>per Interval</td>
<td>Cumulative</td>
</tr>
<tr>
<td>Under - 1000</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>1000 - 1499</td>
<td>2.3</td>
<td>4.6</td>
</tr>
<tr>
<td>1500 - 1999</td>
<td>3.1</td>
<td>7.7</td>
</tr>
<tr>
<td>2000 - 2499</td>
<td>3.4</td>
<td>11.1</td>
</tr>
<tr>
<td>2500 - 2999</td>
<td>3.2</td>
<td>14.3</td>
</tr>
<tr>
<td>3000 - 3499</td>
<td>3.5</td>
<td>17.8</td>
</tr>
<tr>
<td>3500 - 3999</td>
<td>3.3</td>
<td>21.1</td>
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<tr>
<td>4000 - 4999</td>
<td>7.1</td>
<td>28.2</td>
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<td>8.4</td>
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<td>9.47</td>
<td>46.0</td>
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<tr>
<td>7000 - 7999</td>
<td>9.3</td>
<td>55.3</td>
</tr>
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<td>8000 - 8999</td>
<td>8.1</td>
<td>63.4</td>
</tr>
<tr>
<td>9000 - 9999</td>
<td>7.0</td>
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</tr>
<tr>
<td>10,000 - 11,999</td>
<td>11.2</td>
<td>81.6</td>
</tr>
<tr>
<td>12,000 - 14,999</td>
<td>9.2</td>
<td>90.8</td>
</tr>
<tr>
<td>15,000 - 24,999</td>
<td>7.5</td>
<td>98.3</td>
</tr>
<tr>
<td>over - 25,000</td>
<td>1.7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* See Table 2

Annual growth rate necessary to achieve objectives indicated
<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage Increase (Billions)</th>
<th>Total Growth of Family Income Since 1966 (Billions)</th>
<th>Cost of Redistribution (Billions)</th>
<th>Hypothetical Income Equalization Program Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969</td>
<td>1.69</td>
<td>1.79</td>
<td>6.89</td>
<td>2.96</td>
</tr>
<tr>
<td>1970</td>
<td>1.79</td>
<td>1.79</td>
<td>6.89</td>
<td>2.96</td>
</tr>
<tr>
<td>1971</td>
<td>1.85</td>
<td>1.85</td>
<td>6.95</td>
<td>3.11</td>
</tr>
<tr>
<td>1972</td>
<td>1.92</td>
<td>1.92</td>
<td>7.10</td>
<td>3.19</td>
</tr>
<tr>
<td>1973</td>
<td>1.98</td>
<td>1.98</td>
<td>7.29</td>
<td>3.24</td>
</tr>
<tr>
<td>1974</td>
<td>2.01</td>
<td>2.01</td>
<td>7.39</td>
<td>3.26</td>
</tr>
<tr>
<td>1975</td>
<td>2.05</td>
<td>2.05</td>
<td>7.48</td>
<td>3.27</td>
</tr>
<tr>
<td>1976</td>
<td>2.08</td>
<td>2.08</td>
<td>7.52</td>
<td>3.27</td>
</tr>
<tr>
<td>1977</td>
<td>2.10</td>
<td>2.10</td>
<td>7.56</td>
<td>3.27</td>
</tr>
</tbody>
</table>

To be computed.
The arithmetic example assumes a 4% growth rate of real GNP and a 1.25% growth rate of population. Thus a 2.75% growth rate in per capital income was assumed. On the basis of the most recent observations the growth rate assumed for real GNP may be a bit small, and the growth rate assumed for population may be somewhat high. If this is so then, as the income to be redistributed is fixed in per capita terms by the redistribution goals, the income available for increasing the real per capita income of the upper income groups will be greater than assumed. Thus the virtual stagnation of the above median per capita income toward the end of the program decade will not be necessary.*

For every income class below the $7,000 level, the ratio of $8,000 to the midpoint of the income class was calculated. From this the rate of growth which if compounded over a decade would transform the class midpoint income into the target income can be determined. Thus $8,000 ÷ $2,250 = 3.56 and a 13.5% annual rate of growth of real income will transform the income of the midpoint of this income class into $8,000. (See Table I for the required growth rates for all income classes.)

* If real GNP grows at 4.5% and population at 1% then per capita income would grow at 3.5%. As the amount needed for redistribution will decrease due to the smaller population and as the growth in total GNP has increased, the amount available in each year to make the well off better off increases.
The burden of such an income equalization program increases with time. In the first year of such a program some $2.96 billion would be redistributed; this is but 17.9% of the $16.52 billion rise in income during the year. In the 10th year (1976 in the example) family income will have grown by $198.4 billion but in this the final year of the program the total cost of redistribution will be $68.0 billion, 34.2% of the decade's increase in income will have gone into the redistribution pot. As a result of this increased burden of the redistribution program, the rate of growth of per capita income of the upper income group decreases from 1.89% in the first year to 0.19% in the 10th year.

It seems obvious that the program detailed here, though arithmetically feasible, might be politically unpalatable. A redistribution program must yield "benefits" to all, and a rise in per capita income of the just above middle groups by 0.19% while rapid advances of the impoverished are taking place seems politically indigestible. It also seems obvious that there is not enough income in one half of 1% of income, the redistribution postulated by the President's Council, to affect a radical equalization of income in a finite time; the ratio of the increment in redistribution to the increment of income growth is 54.4% in the 10th year. This means that some 2.1% of the overall income in the terminal year would have to be distributed via some scheme from the upper income to the lower income groups.
A more modest target or one stretched over more years will be arithmetically feasible and might also be more attractive politically. Thus if the original program is sustained for 7 years the upper income groups would still be enjoying in excess of 1% increase in per capita income in the terminal year. Over the 7 year time interval, the bottom $500 group would have risen to about $3,000 and the group with a midpoint of $1,250 per year would have risen to about $4,560. The $4,500 midpoint class income would have risen by some 31% to about $6,000. That is the radical program might be adopted for a shorter time, leaving the final approach to the Rainwater goal for a longer stretch of time.

It is a characteristic of the algebra of geometric processes of redistribution that the burden of the program grows and is greatest in its final stages. Thus growing political objections to redistribution programs can be expected as they progress unless the programs of redistribution simultaneously yield benefits perhaps in kind to the already well off. A transfer by taxation scheme (negative income taxes) might not be politically acceptable even for a modest goal whereas a work program with the same income equalization results, that yield perceived benefits to the upper income groups might be acceptable. A program for radical income equalization cannot be accepted as the basis for action just because the arithmetic checks out.
The Macroeconomics of the Negative Income Tax

From time to time public policy proposals which once were far out achieve social respectability. This seems to be the case with the "social dividend" - or to give the idea its more fashionable label "the negative income tax". A straightforward social dividend gives every person alive, rich or poor, working or unemployed, young or old a designated income by right. Taxes would be paid on income from work or property, thus private disposable income would be the social dividend plus income from work minus taxes: A negative income tax gives every eligible unit some fraction of the difference between actual income from work or property and some designated income. They are fully equivalent techniques for generating differences between the distribution of disposable income and the distribution of earned income.

For a household of four the social dividend might be worth $3,000 per year and a tax of 1/3 might be levied on income from work or property. Thus no earned income results in $3,000 of disposable income, $6,000 of earned income results in $7,000 of disposable income, $9,000 of earned income results in $9,000 of disposable income and $12,000 of earned income results in $11,000 of disposable income.

A negative income tax might be written to supplement private income from work or property by making up 1/3 of the difference
between such income and $9,000. Thus zero earned income results in $3,000 of disposable income, $6,000 of earned income results in $7,000 of disposable income, $9,000 of earned income results in $9,000 and $12,000 will pay a net tax of 1/3 on ($12,000-$9,000) resulting in $11,000 of disposable income.

Thus the two are identical, only the label is different. A reason for the easy acceptability of the negative income tax is that different advocates favor it for different reasons. Some proposals are really a solution to poverty on the cheap, that is to say the negative income tax is a way to distribute no more than is at present distributed in various welfare and direct income projects, but to distribute it more efficiently. If a negative income tax is to be effective in eliminating poverty or equalizing income it will have to be larger than the present welfare schemes. If it is to be relatively cheap to administer it will more than likely take the form of a social dividend. Thus a meaningful negative income tax can be conceived of as a substantial social dividend.

In designing a welfare system allowance must be made for its systemic as well as its primary target effects. In terms of the standard income-expenditure model that economists have found useful, the impact of the welfare system upon the labor supply function, the consumption function and the liquidity preference function need to be taken into account.
The theorem to be proven is that under quite reasonable assumptions a negative income tax cannot raise the real guaranteed minimum income level and cannot appreciably affect the distribution of income; that is if constraints upon maintaining GNP or economic growth are introduced a major part of the redistributive impact and net benefits to the poor must be inflated away.

The lesson to be learned from this exercise is that for any large scale transfer by taxation scheme, in which the transfer is divorced from labor market participation, success may be impossible to achieve.

Many variants of a negative income tax have been proposed. Some are well nigh frauds in terms of raising the cash income of the poor and near poor, they were mainly designed to clean up the administration of welfare schemes. A meaningful negative income tax would not only raise by a significant amount the cash income of the poor but it would also raise the income of the near poor and even of families with income above the median income.

For our example of a meaningful negative income tax a standard family of four will be assumed to receive a $3,000 social dividend and to pay a 33 1/3% tax on the first $15 thousand of income. For incomes greater than this the marginal tax rate will be above 33 1/3%. With this scheme everyone making less than $9,000 a year is better off. If we assume that the rate on $9 to $15 thousand bracket was 25% prior to the tax and 33 1/3 after the tax, then for those
making in excess of $15,000, a $500 decrease in disposable income will occur, for those between $9,000 and $15,000 the decrease in disposable income will be a proportional part of the $500. If this tax does not gather enough to pay for the negative tax payments then the required points will need to be added to the tax schedule perhaps above the break even income level. Whether the negative income tax substitutes for an equal amount of social security or whether social security is taxable income above the minimum will be an important detail that might determine what additional taxes are needed. We assume, perhaps heroically, that the negative income tax would not throw the budget way out of balance at full employment.

An effective negative income tax would have three effects: an incentive effect operating through the supply curve of labor, a wealth effect operating through the consumption function and a cash balance and flow effect operating through the liquidity preference or demand for financial assets function.

An effective negative income tax will both increase the disposable income of those earning less than the break even income and raise the proportional tax rate on income from work to families in the neighborhood of the break even income. A large portion of the total labor used is from "second" wage earners (women) and from overtime. Even if the basic work week labor, supplied by heads of households in the labor force, is not affected, the willingness of women to take on part-time work (Christmas, etc.) and for the head
of the household to work overtime will be affected.

Experiments with the disincentive effects of a negative income tax are highly desirable. However, studies which examine the effect on very low income workers, may miss the most important disincentive effect from taxes, the withdrawal of some labor by those in the labor force. For leisure may be more valuable to households with adequate income than to low income families. That is the major disincentive effects from high marginal income tax rates may very well be at the median rather than at the low, or high, incomes. Policy proposals made by those with high incomes, where the job itself may yield "income" in kind, and tested on those with very low incomes may have little predictive validity for the vast majority of income receivers, those closely clustered around the median.

For simplicity output produced is a function of labor employed. At a given money wage aggregate demand is transformed into an inelastic demand for labor,

\[ N_D = (Y, W_0) \]

Labor supplied is a function of the real wage, real non-human capital and the real capitalized present value of the welfare system. However, the welfare system is fixed in nominal terms \( \bar{E} \), so the real capitalized value of the welfare system is \( KE/p \). (K is a capitalization operator). Labor supply is

\[ N_S = N (w/p, K, KE/p) \]
with \( \frac{dN_s}{d\bar{w}/p} > 0, \frac{\partial N_s}{\partial K} < 0, \frac{\partial N_s}{\partial KE/p} < 0 \), and

\[ p = \lambda w_0, \] the price level is proportional to the money wage.

Assume a target to the level of real g.n.p., \( \hat{Y} \). This implies a target labor demand. Initially \( KE_1/p \) is such that \( N_s \) at \( \bar{w}/p = N_D \).
With an improvement in the welfare system, \( KE_2/p > KE_1/p \), \( N_s \) at \( \bar{w}/p < N_D \), which implies that income produced falls below target income \( \hat{Y} \).

Assume that either by monetary or fiscal devices aggregate money demand is maintained at \( \hat{Y} \). This excess demand in money terms results in higher money wages which is soon translated into higher prices. Basically inflation can take place without affecting the gap between aggregate demand and supply except as the rise in prices reduces the real present value of the welfare schemes. This will make the labor supply function shift downward. It is obvious that in this simple model equilibrium will be achieved when

\[ KE_2/p_2 = KE_1/p, \] i.e., the model is homogeneous of degree zero in the welfare system and prices and as between equilibrium positions improvement in the welfare system will induce an equal proportional rise in prices.

An effective negative income tax raises the floor to real income for each family. Given a family's income and human and non-human wealth and taking the economic and demographic position of the family into account, there exists contingencies under which their current
disposable income and income in kind would, in whole or in part, be due to the welfare system. The present value of these welfare receipts times the "subjunctive" likelihood of the various contingencies occurring, discounted back to this date, gives the present value of the welfare system to a household. Households not on welfare — or not even receiving the negative income tax — are made better off by the existence of such protection against even unlikely contingencies. The welfare scheme is in the nature of free insurance policy. Certainty of income at the minimum level, or certainty of supplements, on the occurrence of contingencies, is, for risk averters, the equivalent of an increase in income.

A meaningful negative income tax will raise the present value of the welfare system substantially for the poor and the near poor. If the likelihood of unemployment or short time is taken into account, a large portion of workers experience such events over a 4-5 year period. We can assume that they will be better off by some substantial amount as a result of the higher floors.

The sharp rise in a specialized dimensions of the welfare system, such as medicare, is equivalent to a rise in the wealth of households that are eligible or close to being eligible for these benefits. In addition those households who would have contingent responsibilities if medical expenses occur for those presently eligible are better off: i.e. "children" are better off when parents are protected by medicare.
An improvement in the system of welfare payments can be expected to raise the consumption - income ratio at all except the very highest incomes. The higher c/y ratio of the past few years may be explicable by the fact of medicare and the improvements in the welfare schemes that have gone along with the war on poverty.

The consumption function of interest to us can be written as

1) \( C = C(Y, KE) \) where \( C, Y \) are consumption and income, \( KE \) the capitalized value of welfare schemes and \( P \) the price level. A rise in \( KE/P \) will raise \( C/Y \).

With investment exogenous, excluding specific references to other expenditures and taxes, we have that

2) \( Y = (C, I) = \oint (1, Hi KE/P) \) such that \( \frac{dY}{dKE/P} > 0 \).

Offsetting the rise in 'wealth' in the form of the capitalized value of the contingent welfare receipts is the certain decline in present value of those whose disposable \( Y \) is lowered in order to finance the negative income tax. We assume that welfare payments equal the tax receipts and that there is no net distribution effect upon consumption: the gains in consumption by the actual recipients offset the declines in consumption by the net tax payers. Thus \( E_t = T_t \).

However in addition to the actual transfer payments there is a gain from the insurance policy absorption of uncertainty effect of the scheme. This is a net gain in wealth due to the welfare scheme. Thus if we write the consumption function-

3) \( C = C(Y, KE, KT) \) and \( KE = KT \) we nevertheless have
that

\[ 4) \quad \frac{dC}{d\left(\frac{KE}{p}\right)} > \frac{dC}{d\left(\frac{KT}{p}\right)}, \quad \frac{d\left(\frac{KE}{p}\right)}{p} = \frac{d\left(\frac{KT}{p}\right)}{p} \]

That is an equal rise in welfare payment and taxes during a period will raise consumption.

If cash flow from income and property is susceptible to reduction due to economic events a household if rational will hold some precautionary balances of liquid or cash assets. The introduction of a negative income tax results for many units in a substantially higher guaranteed cash flow per period than existed prior to the tax. Thus precautionary cash and near cash assets can decrease. The affected households now can reduce their liquidity either by going into more adventurous financial assets or by purchasing consumers capital goods. This portfolio transformation will mean that the average cash and near cash balance per dollar of income will decrease. Independently of any expansion in the money supply or a fiscal stimulus, aggregate money demand should increase as a negative income tax is introduced.

The rise in the consumption income ratio and the decrease in precautionary balances both tend to raise aggregate demand. Aggregate demand increases cannot result in a rise in employment (except transitory) for prices respond to the rise in wages and thus the labor supplied does not increase. The only operative shifting of curves phenomena is the role of rising prices in eroding the real value of the improved welfare package. This will continue until
consumption plus investment is at the full employment level.

Aggregate demand will return to its old level with a greater or smaller consumption and a greater or smaller level to the real capitalized value of welfare depending upon whether investment responds positively to the welfare schemes or whether investment declines. Ignoring labor supply effects if investment demand declines then full employment at stable prices can conceivably be achieved even if prices don't fully inflate out the rise in welfare. Note that if a sufficiency of investment demand is questionable, then the labor supply reducing effect and the consumption function raising effect of improving welfare might be appropriate. In the 1930's the introduction of a social security system was desirable. In the 1960's an improvement of nominal welfare may do no good with respect to real welfare.

If in addition to a target level of income there is a target rate of growth of income, which is obtainable only if investment is some proportion of income, then presumably the authorities see to it that the necessary investment is put in place. A rise in welfare raising the consumption function will lead to excess aggregate demand if investment is given. This excess aggregate demand will continue until the consumption ratio is reduced, which in our model will be the result of price increases inflating out the improvement in the welfare schemes.

It seems evident that the proposition that a generous distribution
of money income to the poor in the form of a by right social dividend will necessarily result in a rise in real welfare receipts by the poor, is false. A negative income tax seems like a poor principal instrument in a serious income equalization program.
Policy and Poverty (Part II)

by

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IV The Limitation on Economic Growth

An arithmetically feasible program of radical income equalization depends critically upon the rate of growth of aggregate output. If output does not grow fast enough then the path to income equalization, or even the path to a much more modest goal, the elimination of poverty, can be blocked.

There are factors which can reduce the rate of growth of output, even if full employment is maintained. To a large extent, the growth in overall output per capita has been the result of differing rates of growth in productivity in the various sectors. If the output of sectors with high or rapidly increasing labor productivity is growing fast enough, so that their total employment increases, then total output will tend to grow rapidly. If the output of such sectors is growing slowly, so that the labor force in these sectors is declining, then overall growth in output will be slowed.

Thus in our model rapid growth is compounded of two elements — rapid rates of increase in productivity in some sectors and increases in employment in these progressive sectors. If factors are operative which tend to increase rapidly the labor force allocated to

1/ An alternative growth model posits that there are two sectors — a high and a low productivity sector. Both of these sectors are stagnant, productivity in each sector remains constant but output grows as a result of labor shifting from the low to the high productivity sector. Obviously in such a world in time growth ceases once all labor is in the high productivity sector.
sectors where productivity grows slowly then the rate of growth of output would tend to decline. It may very well be that the current need for improvement in the urban service sectors is such a growth reducing factor.

Baumol has made precise, within a simple two sector growth model, some of the implications of unbalanced growth in productivity. He postulates the existence of two sectors - one technologically progressive, the other technologically stagnant. In the progressive sector output per standard laborer grows exponentially, in the stagnant sector output per standard laborer remains constant. For the growth of income and the movements of the price level to be determined, it is necessary to make precise assumptions about the assignment of labor and relative wages in the two sectors.

The Baumol model consists of two sectors, a stagnant sector in which labor productivity does not grow at all and a progressive sector in which productivity grows at a constant exponential rate given by $e^{rt}$. Thus in the stagnant sector

1) $Y_{st} = aL_{st}$

and in the progressive sector

2) $Y_{pt} = bL_{pt}e^{rt}$. In addition wages grow at the same rate as productivity in the progressive sector,

3) $W_t = W_0e^{rt}$. The wage behavior assumption is not

---

1/ William J. Baumol, op. cit.
necessary, excepting that it enables us to make precise statements about the behavior of the price level.

The implications of these assumptions can be stated in four theorems. 1/

Theorem 1. The cost per unit of output in the stagnant sector $C_s$, will rise without limit while $C_p$, the unit cost in one progressive sector, will remain constant.

$$\frac{C_{st}}{Y_{st}} = \frac{W_{oe}rt}{aL_{st}} = \frac{W_{oe}rt}{a} \rightarrow \infty \text{ as } t \rightarrow \infty$$

$$\frac{C_{pt}}{Y_{pt}} = \frac{W_{oe}rt}{bL_{pt}e^rt} = \frac{W}{b}$$

$$\frac{C_s}{C_p} = \frac{W_{oe}rt}{a} = \frac{be^rt}{a} \rightarrow \infty \text{ as } t \rightarrow \infty$$

Theorem 2. There is a tendency for the outputs of the stagnant sectors whose demands are not highly inelastic with respect to price or elastic enough with respect to income to decline and perhaps ultimately, to vanish.

Suppose elasticity of demand with respect to price and income was such that

$$\frac{C_sY_s}{C_pY_p} = \frac{W_{oe}rtL_{st}}{W L_{pt}e^rt} = \frac{L_{st}}{L_{pt}} = A \text{ (a constant)}$$

hence

$$\frac{Y_s}{Y_p} = \frac{aL_{st}}{bL_{pt}e^rt} = \frac{a}{be^rt} A$$

1/ Baumol pp. 417 – 419
\[
\begin{align*}
A &= \frac{a}{\beta r t} \quad t \to \infty \\
Y_p &= bL_p e^{rt} \quad bY_p = \frac{L_s}{\beta r t} = K \quad L_s = L_p e^{rt} K \quad L_p = \\
L &= L_s + L_p \\
L_s &= L - L_p = L - \frac{L_s}{K e^{rt}} \quad L_s = (L - L_s) K e^{rt} \quad L_s = \frac{L K e^{rt}}{1 + K e^{rt}} \\
L_s &= \frac{L}{1 + \frac{1}{K e^{rt}}} \quad \lim_{t \to \infty} = L \\
L_p &= L - L_s = L - L \frac{K e^{rt}}{1 + K e^{rt}} = L \frac{1}{1 + K e^{rt}} \\
L_p &= \frac{L}{1 + \frac{1}{K e^{rt}}} = 0 \\
\end{align*}
\]

This vanishing is a ratio effect, not \( c \to 0 \) as \( t \to \infty \), but rather that the output of the stagnant sector is constant. The value of output in the stagnant sector remains a constant ratio to value produced in the progressive sector.

Theorem 3. If the ratio of the output of the two sectors is held constant, more and more of the labor force must be allocated to the stagnant sector and the amount of labor in the progressive sector will tend to approach zero.

Corollary. If the labor force is growing, a larger and larger percentage of the labor force will be assigned to the stagnant sector.
Theorem 4. An attempt to achieve balanced growth in a world of unbalanced productivity must lead to a declining rate of growth relative to the growth in the labor force. In particular if productivity in one sector and the total labor force remain constant the growth rate of the economy will asymptotically approach zero.

\[ I = B_s Y_s + B_p Y_p = B_s a L_s + B_p b L_p e^{rt} \]

\[ I = \frac{B_s a L K e^{rt}}{1 + K e^{rt}} + \frac{B_p b e^{rt} L}{1 + K e^{rt}} - \frac{L (K b_a + B_p b) e^{rt}}{1 + K e^{rt}} \]

\[ R = L (K b_a + B_p b) \]

\[ I = \frac{R e^{rt}}{1 + K e^{rt}} \]

\[ \frac{dI}{dt} = R \left[ \frac{(1 + K e^{rt}) r e^{rt} - e^{rt} K r e^{rt}}{(1 + K e^{rt})^2} \right] \]

\[ = \frac{R r e^{rt}}{(1 + K e^{rt})^2} \]

\[ \frac{dI}{dt} = \frac{R r e^{rt}}{(1 + K e^{rt})^2} = \frac{1}{1 + K e^{rt}} \]

\[ \lim_{t \to \infty} \frac{dI}{dt} = \lim_{t \to \infty} \frac{1}{1 + K e^{rt}} = 0 \]
Corollary. If balanced growth is sustained in a world of unbalanced technology and money wages rise at the rate of increase of productivity in the progressive sector, then the rate of increase of prices will approach the rate of increase of productivity.

The G.N.P. deflator \( P \) equals money gross national product dividend by output.

\[
P = \frac{c_s y_s + c_p y_p}{Po} = \frac{P_0 e^{r t} L_{st} + P_0 b^{r t} L_{pt}}{1 + Ke^{r t}}
\]

\[
P_t = \left(1 + Ke^{r t}\right) P_0 \left(a L_{st} + b L_{pt}\right)
\]

\[
P_t = \frac{P_0}{R} \left(a L_{st} + b L_{pt}\right) \left(1 + Ke^{r t}\right)
\]

\[
\frac{dP}{dt} = \frac{P_0}{R} \left(a L_{st} + b L_{pt}\right) Ke^{r t}
\]

\[
\frac{dP}{dt} \bigg/ P_0 = \frac{Ke^{r t}}{1 + Ke^{r t}} = \frac{1}{1 + \frac{1}{Ke^{r t}}}
\]

at \( t = 0 \), \[\frac{dP}{dt} \bigg/ P \bigg/ \frac{1}{1 + K} = \left(\frac{b y_s}{a y_p} \right) \left(\frac{a y_p + b y_s}{a y_p}\right)^{-1} \]

\[
\frac{dP}{dt} \bigg/ P \bigg/ \frac{1}{1 + K} = \left(\frac{b y_s}{a y_p} \right) \left(\frac{a y_p + b y_s}{a y_p}\right)^{-1} \]

at \( t \rightarrow \infty \), \[\frac{dP}{dt} \bigg/ P \bigg/ \frac{1}{1 + K} \rightarrow 0 \]
If the technologically progressive sector is commodity production and the technologically stagnant sector is the service and particularly the government sector then the Baumol model has a certain charm as a tool for interpreting current problems and recent history. The early postwar period witnessed a veritable explosion in commodity production, and the income and price elasticities of demand were such that a relative growth of commodity production took place, to the neglect of the publically supplied amenities and services. The starving of the public sector under the conditions of the 1950's was one of the themes of Galbraith's Affluent Society - a volume which also announced the elimination of all but pocket and case book poverty.

The easy identification of services with low productivity growth and commodity with high productivity growth should not be carried too far. In the process sketched in the theorems, a relative price ratio can develop at which the mechanization of service production becomes feasible. The development and proliferation of car washing machines and the coming substitution of the labor economizing telephonic facsimile printer for the mailed letter are examples. The relative rise in the cost of postal services, particularly the impossibility of substituting machines for the human reader of human scrawls, implies that in the not too distant future the facsimile transmission of personal mail over telephonic wires will be cheaper than the present mail system in urban centers.
The wiring of our households with facsimile receivers and transmitters, newspaper printing devices and wired television is already feasible - and would increase labor productivity in what now seems like a set of chronically stagnant sectors.

Thus the labor assigned to income elastic-price inelastic technologically stagnant sectors of the economy may grow, but the rise in relative prices, the ever rising portion of gross national product spent on these sectors will act as a lure to the introduction of new techniques. This implies that whenever the production of a labor intensive apparently income elastic commodity or service draws an increasing volume of employment, there exists a real challenge in terms of the potential payoff from particular technological changes. Thus job elimination, reminiscent of the substitution of automatic for manual elevators, can be expected to occur.

The message is that the process sketched by Baumol does change relative prices and tend to drive certain productions, especially those that are not especially income elastic or price inelastic, out of the market. For the income elastic and price inelastic stagnant sectors the growth of employment and income produced in the sector serves as a lure for technical progress. Thus the drag to growth and the stimulus to accelerated increases in price levels from Baumol's disease should not be viewed as a necessarily permanent affair but rather as a recurrent "stage" which leads to cycles in the
growth of an economy.

Baumol's model shows us that there is a lure to technical progress in changing relative prices and to factor allocations, but there is no guarantee that the progress will occur. First there may be temporary - or even long run - blocks due to knowledge and engineering problems.

Education and perhaps some aspects of police work (which may be one aspect of education under consideration i.e. custodial care of children) seem to require a fixed high labor input per unit of output. The custodial aspect of hospital care - bed pans and alcohol rubs - remain labor intensive - and the sophisticated aspects of medical care are also labor intensive. Thus there will at any time be a core of labor intensive price inelastic income elastic services which will be the essential drag to output growth.

In addition there will at any time be beaurocratic or institutional blocks to technical progress. The railways, public mass transportation and the postal system are three examples that readily come to mind where the vested interests of labor and management combine to continue traditional ways of doing things. At present the vested interests of the over the air broadcasters and the regulating authority are standing the the way of progress in the direction of the 'wired city' which, in combination with facsimile transmission and electronic printers, will be the solution to the labor intensive distribution of much of the printed matter.
The relative size and the relevant elasticities of output of the technologically and institutionally recalcitrant sectors will determine the rate of growth of the economy. At some periods the stagnant sectors - because of a recent breakthrough - will be relatively small so that the rate of growth of real G.N.P. will be high. At other times they will be large so that the rate of growth of real G.N.P. will be small.

With the rate of growth of G.N.P. a variable depending upon technological and institutional time dependent variables, the viability of a trickle down or share the growth policy philosophy toward poverty is also variable. In periods when G.N.P. grows rapidly even a small bias in the distribution of income in form of the lower income population can result in a sharp rise in their income. For example if the top 20% have 50% of the aggregate income and the bottom 20% have 5% of the income, a shift of 1% of the top 20%’s income to the bottom 20% of the population can result in a 10% growth in the income of the bottom 20%. If G.N.P. per capita is growing say at 5% per year then the income of the top group can grow at 4% while the income of the bottom group can grow at 15%. If growth in per capita income slows to 1% per year, then by holding the top group fixed an 11% growth in the income of the bottom group can be achieved. In an environment where the median income group’s growth in income is restricted to 1% a year any attempt to redistribute in favor of the bottom group will be associated with considerable social friction.

As an aside - and the slowdown in income growth of the median income groups was mainly due to factors associated with the war in
Vietnam rather than those identified as Baumol's disease, the Wallace phenomena and the more active resistance to Negro demands occurred during a period in which the real income of the industrial wage earner may have been stagnant due to inflation. If the blue collar worker’s real income is rising at some 3% per year, then he will perhaps believe that there is enough here for all of us chickens and accept the integration of Negroes into the labor force and efforts to improve the relative lot of the Negro. However halt his progress and the resistance to income distribution efforts will increase.

But to return to the major theme: if income distribution is the name of the game, and if the distribution of income is to be "rectified" by biasing the distribution of growth, then it is necessary for the overall growth rate to be sufficiently high so that a substantial growth in income for all except perhaps the very top can be sustained. If Baumol's disease is in one of its more virulent phases - due perhaps to beaurocratic and institutional as well as to technological reasons - then the potential for biasing growth in disposable income is diminished. Under these circumstances we could expect more virulent opposition to income redistribution as well as more persistence demands for change.

Note also that the beaurocratic resistance to change may be reinforced by slow growth. If the prospects for improvement are not all that great there will be an intensified effort to protect what one has. Britain may be a prime example of this phenomena.
IV. Appendix: An Arithmetic Example of Baumol's Disease

Assume that final demand is such that the "physical" output of the two sectors is equal at all times. Thus workers will be shifted from the technologically progressive sector to the technologically stagnant sectors. Assume that wages are set in the progressive sector and that wages determine prices so that the nominal price per unit of the output of the progressive sector remains constant. Wages are the same in the two sectors, thus the price per unit of output in the stagnant sector rises at the same rate as productivity increases. It is clear that as this process continues, the labor force will be switched from the progressive to the stagnant sector, the growth rate of output will decrease and the rate of increase in the price level will asymptotically approach the rate of increase in productivity.

Let us assume that initially we have 200 workers, 100 assigned to each sector. Wages equal $1 per period in both sectors, the value of output is $200 per period. Output per man hour grows at 6% per period in the progressive sector. In order to keep output the same in the two sectors, some three workers are shifted from the progressive to the stationary sector for the second period. Wages now equal $1.06, output in each sector is 1.03, the total value of output is $212.18, the growth rate of output is 3%, and the price index has risen from 100 to 103.
If 150 workers are assigned to the stagnant sector and 50
to the progressive sector then the output per man in the progres-
sive sector will need be 3 times the output of the first example.
In this case wages will be $3 per period and total output is 300
units. The value of output in the stagnant sector is $450, in
the progressive sector it is $150, so that G.N.P. is 600. The
price level is 2.0. Labor productivity in the progressive sector
grows at a 6% rate, so that at the end of 1 period productivity
in the progressive sector is 3.18. As a result 2.15 workers will
need be shifted to the stagnant sector, the wage rate will rise
to $3.18 and the value of output in the progressive sector is
$152.15 and in the stagnant sector it becomes $483.85. Real out-
put has grown from 300 to 304.3 or approximately 1.5%. The money
value of income produced rises to $636.00 so that G.N.P. deflator
rises from 2.0 to 2.09, i.e. by 4 1/2%.

In the third case the initial conditions are ten workers in
the progressive sector and 190 in the stagnant sector. The pro-
ductivity in the progressive sector is now 19 times as great as
in the stagnant sector so that output is 190 in each sector, real
G.N.P. is 380. Market value of G.N.P. is $3800 so the price level
is 10.0. After one period some .54 workers need be shifted to the
stagnant sector to maintain equality of output in the two sectors.
The real value of G.N.P. rises to 381.08, real growth is some .3
of 1%. The wage rate rises to 20.14, market value of output is
4,028. The price level is 10.57; a 5.7% increase in prices has
taken place.
V The Stability, Perhaps Perversity, of Relative Wages

The distribution of income from work depends upon relative wages. In the original poverty numbers a large percentage of those in poverty worked full time during the year. If the distribution of relative wages can be affected by policy or by the behavior of the economy, then the possibility exists that poverty can be eased by relative wage changes.

Note that income from work is only a part of total income, that the overall income distribution includes income from property (interest and profits) and capital gains in excess of price level increases. During the period under consideration, the sixties to date, there was a run up of corporate profits after taxes and sizeable capital gains resulted from the run of success the economy experienced. 1/ These factors tended to bias the distribution of the increments of income toward the wealthier. However, the distribution of income from property, or even the share of income going to property is not of special interest to the poor and not well off portions of the population: their income is derived from work and for their income to gain on the average income it must first improve relative to other incomes from work.

A simple model of "high" wage and "low" wage industries, in which, in order to be selective, high wage industries attempt to keep their wages at a premium over other wages during a period of normal slack

1/ The argument that a rise in investment relative to income leads to a rise in the ratio of profits to income is closely identified with Kaldor. See N. Kaldor "Alternative Theories of Distribution"
in the labor market, indicates that in a period of tightening labor markets low wages will tend to rise more rapidly than high wages. The high wage sector sets a money wage $W_H$ so that its supply of labor is infinitely elastic at this wage. A rise in demand increases employment, at an unchanged money wage. The supply schedule of labor to the low wage sector is some market supply curve minus employment in the high wage sector. A rise in employment in the high wage sector shifts the supply curve of the low wage sector to the left, $S_L^1$ shifts to $S_L^2$; the rise in overall demand that shifted the demand curve for labor in the high wage sector up also shifts the demand curve for labor in the low wage sector to the right. Thus wages in the low wage sector rise from $W_{L0}$ to $W_{L1}$, and given an
invariant wage in the high wage sector \( W_H \) the ratio of low to high wages rises.

An alternative model, using the same format, would have \( W_H \) as some ratio to low wages. If the high wages are in "administered" industries then the price of the product could be set as some mark up on wages. In this case a rise in \( W_H \) will also shift \( D_H \) up by the same amount. Thus in Diagram 11, the rise to \( W_{H2} \) and \( D_{H2} \) means that the change in employment \( OE \) remains the same, but the relative wages of high and low wage workers has remained unchanged.

**DIAGRAM 11**

If the model of Diagram 1 is relevant then a protracted period
of full employment, and in particular, a period of relatively tight full employment, such as we have witnessed since 1965, should result in a narrowing of the spread among wages. It also means that sustaining full employment would be a weapon for the elimination of poverty above and beyond its impact on the unemployed and the underemployed. If the model of Diagram 11 is relevant then no improvement in the status of the low wage worker can be expected from high employment aside from that due to the rise in employment.

In the 10 years 1959 through 1968 the total number of persons in poverty fell from 38.9 million to 22.0 million. In the 8 years from 1960 through 1967 the percentage of white families living in poverty fell from 18.1% to 10.2%; the percentage of non-white families living in poverty fell from 55.1% to 35.3%. Even though some of the credit may go to various training and community action programs, the decline in poverty seems most closely related to the rise in employment, including the increase in the armed forces.

The impact of tight labor markets upon the population in poverty seems clearest when attention is focused upon the non-whites in poverty. In 1960 some 55.1%, in 1963 some 50.9%, in 1966 some 40.0% and in 1967 some 35.3% of non-white families were living in poverty. In 1960 the overall unemployment rate was 5.5%, in 1963 the unemployment rate was 5.7%, in 1966 and 1967 the unemployment rate was 3.8%. Between 1960 and 1967 the armed services increased by more than 900 thousand and "civilian" employment by more than 8 million. It seems
evident that the benefits to the non-white from the sustained prosperity lagged behind the benefits to the whites.

It was only after the overall unemployment rate was lowered from the neighborhood of 5.5% to the neighborhood of 4% that an appreciable dent was made in the proportion of non-whites in poverty.
Table 1

Employment, Armed Forces, Unemployment Rates and the Population in Poverty

<table>
<thead>
<tr>
<th>Employment</th>
<th>△ Employment</th>
<th>Armed Forces</th>
<th>△ Armed Forces</th>
<th>△ Forces + Employment</th>
<th>Unemployment rate</th>
<th>Incidence of Poverty***</th>
<th>Persons in Families &amp; Unrelated Ind. in Poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>White</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(millions)</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>63,036</td>
<td>--</td>
<td>2,636</td>
<td>-84</td>
<td>+1510</td>
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<td>--</td>
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<td>38.9</td>
<td>22.1</td>
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<td>+1212</td>
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<td>37.9</td>
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<td>5.2</td>
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<td>22.0</td>
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</tr>
<tr>
<td>75,920</td>
<td>1,548</td>
<td>3,535</td>
<td>+1,89</td>
<td>+1,637</td>
<td>3.6</td>
<td>22.0</td>
<td>--</td>
</tr>
</tbody>
</table>


Current Population Reports: Consumers Income Series P-60 #55, August 1968, Table 2: Incidence of Poverty
From the evidence in Table 1 it seems clear that the rise in employment (including the rise in the armed forces) can be used to explain the decline in the population in poverty. The war on poverty has in effect followed an employment strategy—although the initial gains in employment were not distributed so as to achieve a maximum impact upon the population in poverty. The employment strategy actually followed was not efficient either in terms of the initial impacted population or the bundle of goods produced with respect to the goal of ending poverty. The power of adequate employment opportunities is perhaps made clear by the success in decreasing poverty of even the poorly designed employment program that in fact was implemented. We can only conjecture at the impact that a high employment policy especially designed to reduce poverty would have upon the population in poverty.

Tighter full employment can help the poor in three ways: by moving a family from unemployed to employed status, by eliminating short time and partial unemployment and by raising relative wages. The available evidence indicates that there has been no improvement in the distribution of income from work, relative wages have not improved over the long expansion of the 1960's and over the longer run (since the end of World War II) the evidence indicates that a deterioration in relative wages has occurred.

Table 11 shows the distribution of relative weekly wages in various manufacturing industries mining, construction and trade. The data are summarized in Table III. At the end of World War II the distribution
Table II


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>1.234</td>
<td>1.178</td>
<td>1.175</td>
<td>1.158</td>
<td>1.186</td>
</tr>
<tr>
<td>Contract Construction</td>
<td>1.228</td>
<td>1.226</td>
<td>1.259</td>
<td>1.293</td>
<td>1.338</td>
</tr>
<tr>
<td>Ordnance &amp; Accessories</td>
<td>1.078</td>
<td>1.108</td>
<td>1.208</td>
<td>1.209</td>
<td>1.182</td>
</tr>
<tr>
<td>Lumber &amp; Wood Products</td>
<td>0.896</td>
<td>0.862</td>
<td>0.821</td>
<td>0.825</td>
<td>0.837</td>
</tr>
<tr>
<td>Furniture &amp; Fixtures</td>
<td>0.919</td>
<td>0.893</td>
<td>0.838</td>
<td>0.813</td>
<td>0.816</td>
</tr>
<tr>
<td>Stone, Clay &amp; Glass Products</td>
<td>1.001</td>
<td>0.955</td>
<td>1.031</td>
<td>1.018</td>
<td>1.025</td>
</tr>
<tr>
<td>Primary Metal Industries</td>
<td>1.151</td>
<td>1.198</td>
<td>1.221</td>
<td>1.230</td>
<td>1.192</td>
</tr>
<tr>
<td>Fabricated Metal Products</td>
<td>1.060</td>
<td>1.085</td>
<td>1.096</td>
<td>1.084</td>
<td>1.073</td>
</tr>
<tr>
<td>Machinery</td>
<td>1.136</td>
<td>1.173</td>
<td>1.165</td>
<td>1.202</td>
<td>1.183</td>
</tr>
<tr>
<td>Electrical equipment</td>
<td>1.026</td>
<td>1.000</td>
<td>1.011</td>
<td>0.969</td>
<td>0.969</td>
</tr>
<tr>
<td>Transportation equipment</td>
<td>1.162</td>
<td>1.210</td>
<td>1.242</td>
<td>1.267</td>
<td>1.233</td>
</tr>
<tr>
<td>Instruments &amp; related products</td>
<td>0.989</td>
<td>1.030</td>
<td>1.040</td>
<td>1.010</td>
<td>1.018</td>
</tr>
<tr>
<td>Miscellaneous manufacturing</td>
<td>0.904</td>
<td>0.873</td>
<td>0.827</td>
<td>0.791</td>
<td>0.802</td>
</tr>
<tr>
<td>Food &amp; Kindred products</td>
<td>0.920</td>
<td>0.901</td>
<td>0.959</td>
<td>0.925</td>
<td>0.940</td>
</tr>
<tr>
<td>Tobacco manufactures</td>
<td>0.689</td>
<td>0.675</td>
<td>0.723</td>
<td>0.758</td>
<td>0.762</td>
</tr>
<tr>
<td>Textile mill products</td>
<td>0.822</td>
<td>0.754</td>
<td>0.708</td>
<td>0.731</td>
<td>0.733</td>
</tr>
<tr>
<td>Apparel &amp; related products</td>
<td>0.822</td>
<td>0.691</td>
<td>0.627</td>
<td>0.613</td>
<td>0.636</td>
</tr>
<tr>
<td>Paper &amp; allied products</td>
<td>1.030</td>
<td>1.019</td>
<td>1.060</td>
<td>1.063</td>
<td>1.069</td>
</tr>
<tr>
<td>Printing and publishing</td>
<td>1.226</td>
<td>1.167</td>
<td>1.147</td>
<td>1.092</td>
<td>1.096</td>
</tr>
<tr>
<td>Chemicals &amp; allied products</td>
<td>1.041</td>
<td>1.053</td>
<td>1.150</td>
<td>1.110</td>
<td>1.122</td>
</tr>
<tr>
<td>Petroleum &amp; related products</td>
<td>1.304</td>
<td>1.282</td>
<td>1.322</td>
<td>1.288</td>
<td>1.330</td>
</tr>
<tr>
<td>Rubber &amp; plastic products</td>
<td>1.004</td>
<td>1.031</td>
<td>1.031</td>
<td>0.995</td>
<td>0.987</td>
</tr>
<tr>
<td>Leather &amp; leather products</td>
<td>0.773</td>
<td>0.722</td>
<td>0.674</td>
<td>0.667</td>
<td>0.687</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>1.009</td>
<td>0.978</td>
<td>1.011</td>
<td>0.990</td>
<td>1.013</td>
</tr>
<tr>
<td>Retail trade</td>
<td>0.784</td>
<td>0.705</td>
<td>0.695</td>
<td>0.611</td>
<td>0.617</td>
</tr>
</tbody>
</table>

Source: Computed from Manpower Report of the President, Table C-6, "Gross Average Weekly Earnings of Production or Non-Supervisory Workers on Payrolls of Selected Industries Annual Averages."
Table III

Distribution of Relative Wages (all manufacturing = 100)

Average Weekly Earnings in 21 Manufacturing Industries, Mining, Construction, and Trade

<table>
<thead>
<tr>
<th>Weekly wage as a percent of wage in all manufacturing</th>
<th>1948</th>
<th>1953</th>
<th>1960</th>
<th>1966</th>
<th>1967</th>
</tr>
</thead>
<tbody>
<tr>
<td>125.0 +</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>115.0 - 124.9</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>105.0 - 114.9</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>95.0 - 104.9</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>85.0 - 94.9</td>
<td>4</td>
<td>4</td>
<td>--</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>75.0 - 84.9</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>65.0 - 74.9</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>-- - 64.9</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Table II
Table IV

Coefficients of Variation of Hourly and Weekly Earnings
1960 - 1967

<table>
<thead>
<tr>
<th>Year</th>
<th>Hourly Earnings</th>
<th></th>
<th></th>
<th>Weekly Earnings</th>
<th>Excluding Finance &amp; Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Excluding Finance</td>
<td>Excluding Finance &amp; Trade</td>
<td>Total</td>
<td>Excluding Finance</td>
</tr>
<tr>
<td>1960</td>
<td>23.42</td>
<td>24.12</td>
<td>18.69</td>
<td>25.78</td>
<td>26.52</td>
</tr>
<tr>
<td>1961</td>
<td>23.22</td>
<td>24.05</td>
<td>18.45</td>
<td>26.33</td>
<td>27.15</td>
</tr>
<tr>
<td>1962</td>
<td>22.66</td>
<td>23.33</td>
<td>18.57</td>
<td>25.81</td>
<td>26.61</td>
</tr>
<tr>
<td>1963</td>
<td>21.89</td>
<td>22.82</td>
<td>17.99</td>
<td>25.82</td>
<td>26.68</td>
</tr>
<tr>
<td>1964</td>
<td>22.10</td>
<td>22.85</td>
<td>18.55</td>
<td>26.39</td>
<td>27.08</td>
</tr>
<tr>
<td>1965</td>
<td>22.68</td>
<td>23.49</td>
<td>19.45</td>
<td>27.32</td>
<td>28.13</td>
</tr>
<tr>
<td>1966</td>
<td>21.58</td>
<td>22.39</td>
<td>18.29</td>
<td>27.67</td>
<td>28.48</td>
</tr>
<tr>
<td>1967</td>
<td>21.75</td>
<td>22.52</td>
<td>18.52</td>
<td>27.76</td>
<td>28.55</td>
</tr>
</tbody>
</table>
of weekly wages was closely bunched around the average for all manufacturing, some 7 industries fell into the 95.0%-104.9% of all manufacturing range, some 14 industries fell in the range between 85% and 114.9% of all manufacturing. In 1948, for only one industry was the average income more than 125.0% of the all manufacturing range, for only one industry was the weekly wage less than 75% of the average weekly wage.

In the postwar period a thinning out of the mid-range of weekly wages occurred. In 1960 only 6 industries were in the 95.0% and 104.9% range and only 3 more were in the 105%-114.9% range, the 85.0%-94.9% range was empty. In the period since 1960 a further widening of the range has occurred, so that in 1967 only 5 industries remain in the 95.0% to 104.9% range, two industries are in excess of 130% of all manufacturing and two are less than 65% of all manufacturing. In 1948 the lowest wage (Tobacco manufacturing) was 68.9% of the average and the highest wage (Petroleum and related products) was 130.4% of all manufacturing. In 1967 retail trade was 61.7%, apparel and related trades was 63.6%, while contract construction was 133.8% and Petroleum and Related products was 133.0% of the average of all manufacturing.

Thus it seems as if the post World War II period has seen a dispersion of relative wages and the tighter labor markets of the late 1960's did not lead to a narrowing of the range. Of course, in 1968 labor markets were even tighter than in 1967, and perhaps a
narrowing of the range did occur. However the hope that a little more will make a big difference seems like a weak reed for an economic policy to lean on.

The coefficient of variation is the standard deviation divided by the arithmetic mean. It is a "deunitized" measure of dispersion. Over the extended expansion of the 1960's the coefficient of variation of hourly earnings exhibited some decrease whereas the coefficient of variation of weekly earnings showed some increase. This means that whereas relative hourly wages tended to draw together, overtime and layoffs tended to widen the distribution of income. Over this period of sustained prosperity and tightening full employment, the behavior of hourly rates conformed to the model in which extended prosperity narrows the range of wages but the changes in hours worked offset this tendency so that the range of weekly earnings widened.

It is worth noting that the distribution of hourly earnings is not as dispersed as that of weekly earnings, that the dispersion is relatively narrow when finance and trade are excluded and that for both hourly and weekly earnings— but especially for hourly earnings—the coefficient of variation excluding Finance and Trade did not exhibit much of a trend. Thus we can infer that in the relatively more highly unionized manufacturing, mining and construction sectors the dispersion of wages did not change much over the decade. In addition the differential between hourly wages in trade and finance and in manufacturing narrowed over the decade while the differential in weekly wages widened.
The evidence from the coefficients of variation is consistent with the evidence from the analysis of the behavior of relative wages by industry. The period of the 1960's did not see any narrowing of the spread of wages. If such a narrowing had taken place the income of the low wage Retail trade and Apparel workers would have been substantially higher. For example if these workers received 80% rather than 62% or 64% of all the manufacturing average, their income would have been about 30% higher and the number of families in a close to poverty would have been appreciably reduced (some 10 million workers are in the 4 sectors in which income is less than 75% of the average in all manufacturing.) compared to the actual 1967 situation.

Thus the labor markets as they behaved during the 1960's did not tend to reduce the inequality of incomes as unemployment rates were lowered and kept low. Thus one possible benefit from a full employment policy did not appear. Relative wages were either sticky or perverse. The question is open whether some alternative form of labor market behavior and organization would lead to a different pattern of relative wage and income changes during periods of economic expansion. As things stand we must plan policy on the assumption that the pattern of relative wages is stable, and that if the pattern is to be changed some institutional changes will be needed.
Policy and Poverty (Part II)

by

Hyman P. Minsky

Department of Economics

Washington University (St. Louis)
VI The Feedbacks from Sustained Tight Full Employment

The general success of Keynesian economic policy during the eight Kennedy-Johnson years is not to be doubted even though the last period, which is perhaps of greatest interest, might be classified as a "classical" war rather than a "Keynesian" innovative period in economic policy. The validity of an employment strategy as the rock upon which a serious anti-poverty war is to be based is clear from the experience of the past four years. In effect during these years a poorly designed employment policy was associated with a sharp decrease in the population in poverty.

The employment policy was poorly designed from the point of view of a campaign to eliminate poverty. It was not directed at the poor but rather at a perceived generalized deficiency in aggregate demand. During this period, the available socially and politically approved spending was heavily biased toward military spending (the war in Vietnam was helpful), which in an age of research directly benefits the well-to-do. Furthermore the tax relief granted during this period in order to sustain demand benefited property owners and other high incomes. The employment strategy was implemented by trickle-down tactics.

Nevertheless, even though the target of spending was not the poor, the very fact that tight labor markets were attained and sustained for many months has resulted in an improvement in the lot of the poor. If tight labor markets were continued, a further increase
in the proportion of the population in the pool of experienced workers could be expected to take place. Sustaining tight full employment is necessary to hold the gains that have been made as well as to make further gains possible. Are there any fundamental and strong forces in a capitalist economy which tend to make the sustaining of full employment politically unpopular, unproductive in reducing poverty, or very difficult?

The answer to the question is that there are. "Inflation", especially if it is accelerating, decreases the political popularity of full employment. A rise in the relative wages of urban civic employees (teachers, policemen, firemen, etc.) may, given the limited fiscal power of urban governments, lead to a deterioration of the income provided through public goods. In addition, the upward instability of investment demand combined with the financial repercussions of an investment boom may make it very difficult to sustain full employment.

A. Inflation:

Milton Friedman and some of his disciples have taken to characterizing the decrease in unemployment rates in the recent past as "inflation induced" decreases in unemployment. This terminology runs counter to the Phillips' curve language, popular in this country following a terrific performance put on by Samuelson and Solow at the annual meetings of the Economists in December, 1960. ¹/ which

associates the rate of change in money wages with the unemployment rate. The rate of change in money prices is less than the rate of change in money wages because of productivity increases. Thus in the Samuelson-Solow-Phillips model a tightening of labor markets is associated with rising prices and wages, but as wages rise faster than prices, the real wage increases. In this world the previously employed and the newly employed both benefit—in fact, as the differential between the rate at which wages and prices change is often assumed to be an invariant, reflecting productivity changes, the improvement of the continuously employed worker's lot is independent of the unemployment rate. Thus as it costs the previously employed workers nothing, they might as well accept the decrease in unemployment. It is a world of "social harmony".

The Friedman world is not a world of social harmony—class conflicts can rage. An excess of aggregate demand over aggregate supply (the excessive aggregate demand is due to too large a rate of growth in the money supply) raises prices relative to wages. This lowers the real wage of workers and as a result employment increases. The rise in prices in excess of the rise in wages lowers the real income of the previously employed workers, making them worse off; the workers moving from being unemployed to being employed are better off. Thus in the Friedmanite world, the profit taker, who gains from rising prices, and the poor benefit from tight labor markets, the regularly employed worker loses.
It seems as if the Friedmanite picture had some validity in 1958. The previous year or so had seen industrial workers' wage rates lag a bit behind price increases. Thus resentment at the state of the world which was improving the lot of the others at the expense of the steadily employed existed and perhaps found a political expression in Wallace sentiment.

Thus the wage rate increases associated with low unemployment generates inflation view looks upon inflation as socially benign, the inflation induced view of how low unemployment rates are achieved sees inflation as socially corrosive. If benign, low unemployment rates plus inflation can continue indefinitely and need not accelerate; if corrosive, then low unemployment rates cannot continue indefinitely, especially in a non-homogeneous society, and as the losers, or non-gainers, try to maintain or improve their position it might very well accelerate.

Sustained low unemployment rates is an exotic environment; American Capitalism hasn't been in this climate for at least forty years, if ever. The question of whether a given rate of inflation will be associated with a given unemployment rate depends in the Friedmanite view upon whether the productivity of the workers whose employment is induced by inflation is permanently increased. If so, then high employment will no longer depend upon a lowering of real wages through inflation. The "natural" or "non-inflationary" employment level is increased.
In the Phillips' view a similar leavening process would shift the relation between price level increases and employment, so that each unemployment rate is associated with a smaller rise in prices.

If the need for inflation to induce lower unemployment is transitory, then in time the inflation induced decline in income of the prior employed will come to a halt. The period of social conflict between the newly and the steadily employed will be relatively short and perhaps we can afford it. If no such shift occurred, then socially the aggregate demand technique for ending poverty via employment is a blocked path.
B. The Wages of Public Employees

Income includes the services received in kind from the public sector. Most of these services, especially the traditional education, health, recreation and public protection, can be considered to be labor intensive. As was shown earlier, these sections may be both non-progressive and blessed with an income elastic demand. Thus as time goes on the labor supply and the relative burden associated with these sectors may increase. However, there is another important element, quite independent of the progress and demand factors, that will make the costs of public sector output rise relative to the cost of private goods.

The expectation that full employment will be sustained affects the relative attractiveness of different occupations. Highly seasonal and cyclical industries and occupations need to pay a premium in hourly or weekly wages over occupations which are not affected by such fluctuations. This is necessary in order to compensate the workers for the uncertainty they carry.

The expected utility to workers from different occupations for those free to choose among occupations will be equal. But to risk avoiders the expected utility associated with a fluctuating income is less than the expected utility
associated with a stable income with the same expected value. That is, making $100 a week half the time and $200 a week the other half of the time yields a smaller expected utility than earning $150 a week all the time.

The simple expected utility calculus needs to be modified depending upon whether fluctuations in income are associated with leisure as a good and whether fluctuating amounts of leisure per week are preferred or are inferior to an equal average but stable amount of leisure per week. However, the main modification that has to be made is whether the fluctuating pattern is known with certainty (fully anticipated) or conjectural.

We can assume that seasonal patterns of employment are known with high certainty and that cyclical patterns are conjectural. Thus if there were only seasonal (fully anticipated) fluctuations in employment, the average income over a set of seasons of like labor in different occupations would tend to equalize. However, occupations with unanticipated fluctuations in employment, fluctuations that cannot be forecast with certainty, will need to pay a premium income in order to attract a given class of labor; the expected income in the occupations with cyclically fluctuating incomes will need to be greater than the expected income from cyclically stable occupations.

Public service employment is insulated from all but truly major business declines. The hours, wages, and incomes enjoy large protections against cyclical declines in income. Thus, in a world in
which cyclical fluctuations in income are important, public employees can be expected to earn less on the average than employees in the cyclically sensitive private sector.

If due to a change in the performance of the economy the expectation that cyclical fluctuations are expected to occur is diminished, then the premium of cyclical over stable incomes will need to decrease. However such an attenuation of the expectations that business depressions will occur takes place only after an extended run of prosperous times. Thus it will be associated with full employment and sectoral excess demand for labor. The adjustment of the two classes of wages to the change in expectations will take place by a rapid increase of public sector wages in order to catch up with private sector wages. There will be an independent impact from full employment expectations tending to make the public sector's costs rise relatively to those in the private sector.

As a result of this phenomenon, a deterioration of the public sector or a sharp rise in costs may be expected to occur after an extended period of full employment. To the extent that the anti-poverty strategy is based upon full employment plus a rise in public goods production, the rise in relative wages of public sector employees as a result of full employment is a barrier that might frustrate the policy goal. However, this barrier depends upon the political and social reaction to higher taxes--and will in part depend upon whether the gains from full employment and the income from improvements in public goods are so shared as to be conducive to an acceptance of higher relative costs.
C. The Financial Barrier to Sustaining Full Employment

The 1960's to date have been a most successful period, if success is measured by the absence of a recession, the growth in real Gross National Product and the reduction in the percentage of the population measured as living in poverty. Aside from the accelerated rise in price level since 1964 (which was coincident with the reduction in the unemployment rate and the proportion of non-whites in poverty), the major flaw of the 1960's is that wants expanded at least as fast as output—especially wants for wars and other public goods—so that a feeling of general impoverishment has accompanied the great enrichment. Obviously the problem of scarcity remains as long as wants are expandable; true affluence will follow upon a restriction of wants.

However, even though wants expand as fast or faster than capacity, it nevertheless is true that much of the observed decline in poverty is the result of the expansion being sustained since 1961. The population in poverty would increase sharply if unemployment rates ever jumped to, say, 6.5% or 8.5% from the 3.6% of 1968. Continued success in reducing poverty depends critically upon sustaining full employment and even making labor markets tighter than they have been to date.
However, it may very well be that sustaining an expansion is inherently impossible in an economy such as the United States. The United States is an intensely financial and basically a highly competitive capitalist economy. The very productivity and responsiveness of output to consumer preferences is due to the way in which investment responds to profit opportunities and the way in which financing for such investment is made available through a flexible financial system. Thus the essential characteristic of American Capitalism is a widespread willingness and ability to engage in speculation.

In a world where the memory of past recessions and depressions persists, a run of very good years will tend to attenuate if not erase such memories. But these memories find their expression in liability structures of firms and preferred asset holdings of both households and financial institutions. An attenuation or erasure of such memories will lead to sharp changes in portfolio preference. These changes have two results, an investment boom and a sharp rise in interest rates as demand for investment and position taking financing increases. The rise in interest rates causes both losses to owners of previously issued long-term debt securities, and a higher ratio of cash payment commitments to expected cash receipts by those financing either investment or positions in inherited assets.

The investment boom together with its financial repercussions will initially lead to an accelerating expansion that carries demand beyond full employment demand—which means price level in-
creases. Either because of endogenous limits to how much financing can be extracted from a given financial system or policy actions designed to dampen an inflationary expansion, a break in the explosive expansion will take place. This can lead to a sharp decline in asset values and, following a "liquidity crisis", a sharp reduction in investment demand. A rather serious recession or depression can follow.¹

In 1966 such a process occurred, leading to a mini-panic (called the crunch) around Labor Day of that year. The serious recession or depression did not occur because fiscal policy stepped in well-nigh immediately with a sharp rise in Vietnam war expenditures. The rise in military expenditures in 1966-67 really is a well-nigh perfect example of how government expenditures should rise to prevent a near crash in the financial sector from accelerating to a full blown panic and to abort a sharp decline in income and employment.

It is also evident from the events of 1966-67 that a well-nigh perfect use of coordinated monetary and fiscal policy can prevent the quite awful consequences of a sharp fall in income from occurring, but only at a price that includes a quite quick

recovery of the inflationary pressures. To constrain the explosive tendencies of American capitalism it might very well be true that a more serious set of financial losses and declines in production than occurred on 1966-67 may be needed. This would carry with it a rise in poverty via a rise in unemployment.

Thus it may be true that the explosive forces in American Capitalism make it impossible to sustain extended periods of full employment, such as we have enjoyed in the 1960's. Thus the path to universal affluence through perpetual prosperity may be blocked.
VII Conclusion

By any reasonable view of how fast is fast, the years since 1964 have seen a sharp reduction of the population in measured poverty. This success has been mainly due to the rise in employment--including the armed forces--and little or none of it can be imputed to an improvement in the relative incomes of the low paid employed worker. That is, poverty has been reduced because of a change from unemployment, not because the relative income of those in poverty, even though fully employed during the year, has risen. The industrial wage structure has not changed in the desired way.

It also seems evident that there are sharp limitations on what can be done by transfer payments. In particular the labor force participation and the savings reaction together with the Gross National Product and economic growth targets make it likely that any broad improvement in the transfer payments schemes will be inflated out. Thus if transfer payment schemes are introduced, they should be accompanied with incentives for labor market participation by revising social security, lowering school leaving age, preferential tax treatment of apprentice income and costs, etc. Ever since the Keynesian Revolution, those facets of the welfare system that were in effect introduced to lower labor market participation have been obsolete.

It also seems true that a highly urbanized environment, carrying with it a demand for labor intensive services, may be growth retarding. Thus the possibilities of alleviating poverty or generating equality by biasing the distribution of increments to income
may be limited by a slowdown in the rate of growth of income.

If we add to this urbanization phenomenon the impact of the attenuation of uncertainty upon relative wages it seems clear that the cost per unit of publicly supplied "goods and services" as well as the relative quantity of such goods and services in Gross National Product will rise with both economic growth and economic success. The shift in the proportions of public to private output will obviously have an impact upon the willingness of taxpayers to support programs which yield them no obvious or perceived benefits.

It also seems evident that sustained full employment may not affect relative wages in such a manner as to raise low wages relative to high wages: the terms of trade do not seem to move in favor of the low wage earner during sustained prosperity.

The marked decrease in the numbers living in poverty during the 1960's was mainly due to a run of prosperous years. The financial disruption of 1966 and the even tighter financial market conditions of recent months indicates that it may be impossible to sustain tight full employment and economic growth. If this is so, then the goal of eliminating poverty or equalizing income is even more difficult to attain within our institutional structure than the success of the past few years would indicate.

A gimmick or a good idea is not sufficient for successful economic policy. Meaningful economic policy must be consistent with the underlying behavioral rules of the economy. One behavioral rule is that
a willingness to pay taxes and support programs that involve taxes depends upon the benefits the taxpayer perceives. A welfare program yields little—once true starvation and public begging is eliminated—to all but the most altruistic of taxpayers. Parks, public safety, clean streets, and even the education of others yields perceptible or available benefits to well-nigh all taxpayers. The ability to achieve a radical—or even a modest—income equalization through public expenditures depends upon the public program yielding perceived benefits to those who sacrifice in the form of taxes for the project. If a growth in the public sector can be achieved which yields the equivalent of a $1/2$ percent per year increase in private income to the representative taxpayer (as well as a somewhat larger income equivalent to lower income households), then it is possible that radical income equalization would be acceptable. That is, a work program that yields rapidly rising money income to the additional public employees while it yields perceptible and recognized benefits to others than those employed in the program is a feasible way of equalizing income.

Whether it takes the form of wage subsidies to privately employed workers or government direct demand for labor and supply of particular outputs is not relevant. What is most relevant is that any program of income equalization yield benefits—such as postal services, or even cheap food—to those who pay the taxes. Expensive income equalization programs cannot depend upon altruism—public goods may
provide the vehicle by which self interest is consistent with income equalization. Thus, no income equalization program is truly feasible unless it provides for an increase of labor force participation and in output.

Suggestions have been made that the government be the employer of last resort. In any such program the government would presumably set a wage rate at which it is willing to employ all available workers. This wage rate immediately becomes a wage floor for all sectors, hence I labeled an employer of last resort program as a wage support law; the terms upon which the government stands ready to employ all is analogous to the farm price support programs.

If we look upon wage support as a technique for generating services from the public sector, then there will be benefits to all from the program. If it is possible to constrain the highest wage industries while allowing the wage support level to rise faster than prices, then a wage support law might be able to narrow the range of wages. One of the very high wage industries is contract construction. The government is a major purchaser of the output of contract construction. The government might be able to set a ceiling on how rapidly it will allow such wages to increase. Such a program of restraint in high wages will need to be accompanied by equitable and biting taxation of property and other high incomes.

The urban plight calls for an enlarged public and urban service sector. The needs of wage equalization calls for expanded government
employment at improving wages. Such programs could yield visible benefits to the not poor, thus it may be feasible.

Poverty in America will not be eliminated by simple programs which naively assume that all is possible. There is a serious doubt that a program can be devised to overcome or circumvent what are the more obvious barriers to success in such an effort; however without awareness of the barriers it truly would be a fluke if a successful program were devised.