Wage Dependence in the Postwar United States

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Bowles and Gintis (1982) argued that the "citizen wage" (a.k.a., the social wage) has become an increasingly important part of the standard of living of workers in the post-WWII United States. Many have accepted this claim. For instance, Wallerstein (1995) writes,

> What the welfare state essentially involved was a social wage, where a portion (*a growing portion*) of the income of wage-workers came not directly from employers' wage packets but indirectly via government agencies" (emphasis added).

According to Bowles and Gintis, the growth in the social wage had two consequences. First, it contributed to an increase in workers' bargaining power within the firm: As workers relied less and less on employment compensation they were able to better resist the demands of individuals capitalists. This, in turn, contributed to a worsened performance for an economy premised on capitalist control over the workplace. Second, the growth in the social wage contributed to an important phenomena: Workers were able to use the state to redistribute income in their favor.

Below I present evidence that challenges the claim that the social wage has become increasingly important to workers. In particular, I present data on the level and trend in "wage dependence" for workers in the post-war U.S. economy. Wage dependence is the extent to which the average worker depends on capitalists for his/her standard of living. It is defined as:

$$WD = \frac{employment\ compensation}{employment\ compensation\ +\ social\ wage},$$

where "employment compensation" is the post-tax value of wages and benefits workers get from employment and "social wage" is

the value of goods, services, and transfers employed workers get from the government. The denominator is a measure of a worker's standard of living.

If the social wage grows faster than employment compensation, then WD will fall. In this case, workers become less dependent on capitalists for their standard of living. Bowles and Gintis (1982) implicitly argue that WD has fallen over the postwar period. Indeed, they argue that WD has fallen so low that workers have been "partially deproletarianized." These claims are challenged below.

RELATED LITERATURE

Shaikh and Tonak (1987) and Miller (1989) argue, contra-Bowles and Gintis, that the growth in the social wage did not contribute to a redistribution of income toward workers. They argue that movements in the "net social wage" indicate that state spending and tax policies contributed to a redistribution of income *away* from workers. The net social wage is the value of the workers' social wage minus the value of taxes workers pay to the state.

However, such an observation (even if true) does not undermine Bowles and Gintis's more important claim: The growth in the social wage undermined capitalist control over the workplace.

No direct relationship exists between the net social wage and wage dependence. Table 1 presents hypothetical data for an individual worker's social wage, tax payments to the government, and pre-tax and post-tax employment earnings. It also calculates the associated net social wage and wage dependence.

In year 1, government spending/taxation policies contribute to a small redistribution of income toward workers. In year 2, state spending/taxation polices now contribute to a redistribution of income away from workers. Yet, the growth in the social wage and the increase in tax payments in year 2 together *reduce* workers' dependence on capitalists within the workplace. In year 3, state policies shift so that they contribute toward a substantial redistribution of income toward workers; yet, workers become *more* dependent on capitalists within the workplace. Finally, in year 4, state spending/taxation policies contribute to a large redistribution of income away from workers. Ironically, workers' dependence on capitalists falls to zero.

Clearly, the level and trend of the *net social wage* tells us little about the relative bargaining power of workers and capitalists within the workplace, arguably the primary concern of Bowles and Gintis (1982).

Table 1

Net Social Wage and Wage Dependence

Year	Social Wage (SW)	Taxes (Tx)	Net Social Wage (SW − Tx)	Pre-tax Wage (PreW)	Post-tax Wage (PostW) (PreW − Tx)	Wage Dependence $\frac{PostW}{(PostW + SW)}$
1	55	50	5	400	350	.86
2	95	100	-5	400	300	.76
3	100	50	50	400	350	.78
4	300	400	-100	400	0	0

PRELIMINARY ALTERNATIVE ESTIMATES OF THE SOCIAL WAGE

The main claim of Bowles and Gintis (1982)—that the growth of the social wage reduced workers' dependence on employers—has not been subjected to independent confirmation or rejection. The present paper presents a partial test of this claim by reestimating employment income and the social wage for three years (1952, 1968, 1994), and then calculating wage dependence for these years in the postwar United States. The level and trend of wage dependence over the postwar years can then be determined.

This paper presents estimates for wage dependence for *employed production and non-supervisory workers* in private non-farm businesses. These workers are arguably the core of the working class within the United States. (Below I will use "production workers" as shorthand for "employed production and nonsupervisory workers in private non-farm businesses.") Excluded are supervisors/managers and workers within government and agriculture.

EMPLOYMENT COMPENSATION

Employment compensation has two components: post-tax earnings and post-tax benefits. I use the average weekly earnings for production workers as my measure of workers' pre-tax earnings from employment. I then subtract estimated federal, state, and local income tax payments along with Medicare and disability tax payments to get post-tax earnings. These calculations generally follow the methodology of Weisskopf (1984); see also Nilsson (1996b).

Many workers earn a variety of non-wage benefits, most importantly health care benefits and pension benefits. Further, employed workers also earn claims on future OASI (Old-Age and Survivors Insurance, more commonly "social security") benefits, as the value of such benefits are tied to worker employment earnings. As explained in Nilsson (1996c), the present value of future OASI benefits can be reasonably proxied by the current tax payments made by workers and employers into the OASI system. The U.S. court system has explicitly supported such an approach (Speise 1988).

Table 2 presents data on real weekly post-tax compensation (1994 dollars) for production workers for the three years considered in this paper. As seen, post-tax compensation grew between 1952 and 1968. However, by 1994 production workers' post-tax compensation has fallen below the 1968 figure.

Table 2
Weekly Employment Compensation
(1994 dollars)

Year	Post-Tax Compensation
1952	$ 306
1968	428
1994	420

THE SOCIAL WAGE

The social wage relevant to worker dependence comprises government-provided goods, services, and transfers that contribute to an *employed* worker's material standard of living. To calculate this social wage two steps are necessary. First, the government programs that benefit employed workers must be identified. Second, the contribution to workers' material standard of living made by these programs must be measured. Neither of these steps is easy and, necessarily, judgment calls must be made in both these steps. Again, due to space constraints, the many details behind these two steps cannot be presented here (see Nilsson 1996c).

The estimates for the social wage presented in this paper differ from those presented in Bowles and Gintis (1982) in two main ways. First, this paper does not assume that all social welfare programs benefit *employed* workers: Some programs, like unemployment insurance benefit payments, do not benefit employed workers. Other programs, like social security, only *indirectly* benefit employed workers, as most of the spending on these programs goes to retired workers. Second, this paper does not simply assume that current government *spending* on a government program that benefits employed workers adequately measures the contribution this program makes to the standard of living of employed workers. For some government programs (e.g., education) the growth in spending far exceeds the growth in services provided to workers.

What Programs Benefit Employed Workers?

The National Income and Product Accounts (NIPA, table 3.15, Government Expenditures by Function) classify government programs into 20 categories. Many of these programs contribute to the standard of living of employed workers. However, some do not.

For instance, many of these programs primarily benefit members of the working class (broadly defined) who are not engaged in wage labor: income support, welfare, VA benefits, housing/community services, and labor training. These programs benefit unemployed workers, the poor who are out of the labor force, and retired workers, and thus are worthy of praise. However, little of the spending on these programs goes directly or indirectly to employed workers. Therefore, they do not contribute to the social wage of *employed* workers.

Other government programs contribute only little to employed workers' social wage. For instance, the space program, agricultural programs, energy programs, international affairs, central administration, economic development, regulation, and miscellaneous government commercial activities do not directly or indirectly contribute to the social wage of production workers employed in private non-farm businesses.

The two biggest individual contributors to the material standard of living of employed workers are education and OASI programs. Education programs indirectly benefit many workers by providing educational services to their dependents. Therefore, education programs contribute to the standard of living of employed workers.

OASI generally does not *directly* benefit employed workers as virtually all of the spending on this set of programs goes to those outside the labor force. However, some of this spending *indirectly* benefits employed workers. It does so by replacing intra-family transfers that workers would have made in the absence of these social security programs. Before the appearance of the Old Age and Survivors' Insurance, workers often provided a significant part of the standard of living of their relatives who were too old to work. OASI reduced the payments children, other relatives, and friends had to make to ensure that the elderly had shelter, clothing, food, and medical care. In this way, OASI programs contribute to the material standard of living of employed workers.

The other individual government programs that contribute to the social wage of employed workers are less important than the two programs mentioned above. Transportation programs (primarily highways/roads) contribute to the standard of living of workers. In the absence of this (almost always free) transportation system, workers would find their standard of living harmed. Civilian safety programs include both fire and police services that benefit employed workers. Government health and hospitals spending includes, among other things, public health, medical research, and consumer and occupational health and safety. Such spending contributes to the material standard of living of workers. Recreation and cultural programs, along with natural resources programs, provide benefits to the working class (and others). Subsidies for postal service benefit workers.

The Valuation of Social Consumption

Space constraints permit me to only sketch the methodology used to estimate the contributions made to workers' standard of living by the two most important programs. Nilsson (1996c) discusses in detail the methodology used to estimate the contribution made by government programs to the social wage of employed workers.

Public Education. The growth in *education services* provided to students is certainly less than the growth of per student education *spending.* Real spending per public primary/secondary school student increased around 300 percent between 1952 and 1994. However, no one would argue that the public educational services provided to each student has increased by almost 3-fold over the postwar period.

An alternative approach to measuring the education services provided to students could be based on measures of educational achievement instead of simply spending. The problems with using such measures are well recognized (Farr and Fay 1982). However, no other qualitative measure of educational achievement exists that is superior to test scores.

The annual growth in per student educational achievement is approximately 0.30 percent. That is, *per student* learning increased by about 13 percent over the 1952–1994 period. Education researchers have confirmed that such an estimate is reasonable.

The total value of education services provided per production worker is then estimated as follows: 1) Use 1971 as the base year for an index of educational services provided per public school student, 2) multiply the above value of educational services per student by the number of students, 3) multiply the preceding by labor share of output (to take account of the fact that not all educational services go to production workers), and 4) divide the preceding number by the number of civilian workers in the U.S. economy.

The procedures used above to estimate government provided education services per production worker are obviously imperfect. Yet, they are arguably superior to simply using real spending per student as the measure of education services provided.

Social Security. On the one hand, the OASI program reduced poverty rates among the elderly greatly, and reduced their dependence on relatives for their survival. On the other hand, OASI permitted many workers to "retire," because such workers knew that OASI benefits would permit the retired to live without burdening their relatives.

From the point of the social wage, what needs to be estimated is the amount by which employed workers *reduce their transfers to*

the elderly because of government-provided OASI. First, a significant portion of OASI benefits did not replace the contributions of relatives, but replaced *wage earnings of the elderly.* This is because one of the impacts of the OASI system was a marked reduction in the age of retirement.

Second, it appears that the income provided by OASI is greater than the support relatives would have provided in the absence of OASI. A major cause of this is the change in focus of OASI from an assistance program to a program designed to maintain a person's pre-retirement standard of living (see, for instance, Deaton 1989, p. 26).

All the above suggests that OASI payments exceed those that would have been made to the elderly if OASI did not exist. What we need are a) an estimate of how much workers *would have provided* to the elderly in the absence of OASI, and b) an estimate of the reduction in this hypothetical transfer to the elderly caused by OASI. Nilsson (1996c) discusses how such estimates can be generated using the data at hand. The resulting data indicate the contribution the social security program made to the standard of living of employed workers.

Other Programs. The many other government programs that contribute to workers' standard of living are of smaller importance than the two discussed above. And the methodologies used to estimate the contributions these other programs make to workers' standard of living are much simpler (see Nilsson 1996c).

The Social Wage

Table 3 presents estimates for the real weekly social wage. As seen, the weekly social wage more than doubled in real terms between 1952 and 1968. However, the real social wage experienced no meaningful growth between 1968 and 1994.

Table 3
Weekly Social Wage
(1994 dollars)

Year	Social Wage
1952	$ 34
1968	70
1994	71

WAGE DEPENDENCE

Table 4 presents estimates for wage dependence for the three years considered in this paper. The claim that

the social wage grew in importance over the postwar period is supported by the numbers presented in this table. As seen, wage dependence fell somewhat between 1952 and 1968. However, there was no change in WD between 1968 and 1994. Over the whole period, WD fell by 4 percent.

Table 4
Wage Dependence

Year	Wage Dependence
1952	0.90
1968	0.86
1994	0.86

Although wage dependence fell over the whole period, we have no precise way of determining whether a 4 percent drop in wage dependence was meaningful. Yet, intuition suggests that the magnitude of this change was unlikely to have a major impact on the relative bargaining power of workers and employers. Contra Bowles and Gintis, the expansion of the U.S. welfare state did not appear to meaningfully alter the balance of power between workers and employers.

Further, Table 4 fails to support Bowles and Gintis's claim that workers were "partially deproletarianized" over the postwar period. The reliance by workers on employment income for 86 percent of their standard of living hardly seems to represent deproletarianization.

CONCLUSION

The social wage for U.S. production workers grew over the postwar period. However, it did not grow fast enough to meaningfully reduce the dependence of workers on employers. Indeed, in 1994 workers were about as dependent on employers as they were in 1952. The above finding calls into questions claims that the growth in social programs contributed to a shift in the balance of power between workers and employers in the postwar U.S. economy.

It appears that an increase in workers' bargaining power within the firm was not a contributor to the worsened performance of the U.S. economy. Other empirical evidence suggests that a decline in U.S. hegemony in the world economy was a primary cause of the breakdown of postwar U.S. institutions and the consequent worsening economic performance of the U.S. economy (Nilsson 1996a).

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