

WHAT IS THE "SOCIAL RESPONSIBILITY" PROBLEM?

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The RAND Corporation, Santa Monica, California

From an article in Look (1-12-65):

He had become...one of another 38,000 men and women who every week lose their jobs because of automation [1].

From a church sermon (1-17-65):

It has been estimated that within 35 years, all the productive work in this country will be done by 5% of the people.

From Time (1-8-65):

A record 70 million Americans were at work at the end of 1964, and unemployment, which hovered close to 6% a year ago, dipped below 5% for the first time since 1960 [2].

From a television broadcast (12-6-64):

Q. "Dr. Fein, is it really true that approximately 40,000 people per week are being replaced by automation in the United States?"

A. "Yes, it's true. Experts such as Arthur J. Goldberg, former Secretary of Labor, Willard W. Wirtz, the present Secretary of Labor, Thomas J. Watson, Jr., Chairman of the Board of IBM,

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and Senator Robertson of West Virginia have estimates ranging from 20,000 people a week displaced by automation to 80,000 a week. They all agree, however, that in the years to come, the rate of displacement of man by machine will accelerate, say 40,000 per week during 1964; 50,000 during 1965, 70,000 during 1966, and so on" [3].

From Forbes (6-1-63):

Over the past 5 years, U.S. industrial production has risen some 25% but employment in U.S. manufacturing has declined 2.5% [4].

From the Institute for Cybercultural Research (December 1964):

...approximately 70,000 jobs a week are being lost in the United States due to automation [5].

From Business Week (1-9-65):

In 1956 there were 635,572 people working in the Bell System operating companies, and conversations averaged 178.6 million a day. Eight years later, employment had dropped by 67,286 (10.5%) while the number of phones had jumped nearly 20 million and daily calls were up over 40% [6].

From the New York Times (1-10-65):

If automation destroyed anything like 1.5 to 2 million jobs a year, unemployment today, after a decade of automation, would rival that of the Great Depression.... Almost every year since World War II we have added more new jobs to the American economy than in the years before--the figure has risen from 500,000 or so in the late forties to 1.5 million new jobs a year in the last three years [7].

And from Time again (4-2-65):

Each week, the Government estimates, some 35,000 U.S. workers lose or change their jobs because of

the advance of automation.... If U.S. industry were to automate its factories to the extent that is now possible...millions of jobs would be eliminated [8].

From an editorial in Business Automation (March 1965):

BLS reports that, since the first quarter of 1961, four million jobs have been added to the national economy, while the number of unemployed persons declined by one million [9].

From a gloomy diatribe of 1962:

The dimensions of the situation are becoming plain. The next three years ought to suffice to determine whether a liberated margin is in fact in the making. If by 1964 the unemployment rate is close to 10 per cent, despite the use of all conventional medications, we may be ready to agree once again, as in the thirties, the nation is in a radical dilemma, a dilemma of abundance [10].

Presented above are some quotations on the question of automation and unemployment. Most of the articles from which these quotations are taken are designed to be sensational. Placing these quotations side by side shows that writers are playing fast and loose with statistics. Whether or not they state it explicitly, the theme is: the machines are eliminating jobs. The 35,000-per-week figure is continually replicated (which leads, by simple extrapolation, to the ridiculous figure given in the second quotation).

Newsweek magazine took the trouble to track down that particular figure:

The hottest question raised by automation is: how many jobs does it cost? There is no hard and fast answer, for no one has been able to make a nose count, and even the government's figure of 35,000 jobs lost a week is, in a sense, manufactured.

Basically, statisticians take the growth in productivity (now a little over 3 per cent a year) and employment (some 70 million), get out their slide rules, and come up with the 35,000 figure. They don't maintain that this measures the actual number of men shouldered aside by machines--but rather that it takes 35,000 fewer workers this week to turn out the same amount of goods and services produced last week [11].

One is reminded of a quotation from Robert Hutchins:

The only universally valid statistical truth I know is that there is a direct correlation between the increase in statistics and the decrease in the pleasures of life.

But it isn't a joke to discuss statistics on unemployment. Nor is it funny when computer people are being blamed, by implication, for a situation that may not exist. The question is this: Just what is happening to the quantity and quality of the labor force?

Machines inevitably displace people; they always have. If digging dirt with bare hands were pleasurable and efficient, then the plow, the shovel, and the steam shovel would never have been invented. All technological progress involves changes in jobs. Two outstanding cases are frequently cited:

- 1) Without dial telephones, we would need all the women in the country as switchboard operators to handle today's telephone calls.
- 2) The same situation is now taking place in the processing of bank checks. Without automatic machinery, the banks could not handle this flow of paper. The little girls who sorted the checks are disappearing, and are not missed.

The purpose of machines is to displace people: hopefully, to free them from drudgery and--even more hopefully, perhaps--to create real wealth in the process. Along the way, new jobs might also be created.

The nagging thought persists that, though the net effect on the country of the introduction of new machinery might be positive, a large quantity of displacement still remains. Moreover, it is felt that the ones who will get hurt (the unskilled, the minority groups, the teenagers, and so on) will be badly hurt--perhaps permanently. This may be a real problem, and should doubtless be studied. Drucker [7], however, points out that in at least one of these instances--teenage unemployment--automation cannot be blamed.

I want to inquire into the following question: To what extent should I, as a computer man and as a responsible citizen, worry about this problem (if it is a problem) and what, if anything, should I try to do about it?

First, what is the magnitude of the problem? Are ten people per day getting hurt, or ten thousand? (And no matter what the figure is today, what would be a reasonable estimate for a decade from now?) I can remain remarkably calm if the figure is ten per day; without being callous, that's a small price to pay for real progress. A lot fewer men operate passenger trains now than a decade ago (I guess), but somehow I like having jet planes.

Specific jobs are frequently cited to bolster the scare arguments. For example, the number of elevator operators has gone down drastically with the advent of automatic elevators. Should we get worked up over this? This is

indeed "displacement" of people, but what were they displaced to? If the former elevator operators are now working at new jobs, nothing much seems to have been lost and, indeed, there may be a net gain (i.e., better elevator service).

One argument goes like this: Perhaps the problem isn't acute now (what with an expanding economy and all) but it will be fierce in the future and we should start worrying about it now. But where are the figures to bolster this argument? The only trend visible at the moment is that our society is producing (because of computers? in spite of computers? independent of computers?) lots of new jobs. One might as well argue that we should be concerned over a pending shortage of people--it makes as much sense.

Technological progress has always brought displacement of people; the sudden cries of anguish are puzzling. King Gillette caused the displacement of a lot of barbers; Shick, in turn, decimated the ranks of safety razor makers. Leather is about to yield some of its market to Corfam; would anyone (besides the leather people) want to call a halt? The list could go on and on; unless we are to stand still, there must be displacement of people. The hope, of course, is that the benefits resulting from change outweigh the social problems for those displaced.

There is an unemployment problem, without doubt. What there is not is any measure whatsoever of how much of it is due to automation, much less an estimate of the probable effects in the future. And if we could get any grip on those figures, we are still faced with the question of what to do about it.

Several discussion sessions organized to consider these problems have been, to put it as charitably as possible, pathetic. Excluding the crackpots (who seem to flock to such meetings), the discussions still resemble large buckets of steam, for a simple reason. The social scientists know little or nothing about computers or technology in general (in fact, they frequently preface their remarks with that admission). This leads to nonsense, the least of which is utter confusion between mechanical-transfer mechanisms and feedback control. But the computer people are not much better off, knowing little or nothing about economics. As a result, each group tends to blame the other for a problem, and neither group defines the problem (or, if they do define the problem, they have no figures to cite other than some of the weird ones quoted at the beginning).

As Charles Silberman puts it, in a Fortune article:

...discussions of the future of science and technology have turned into 'a competition in ominousness' [quoting Albert Wohlstetter]. In their eagerness to demonstrate that the apocalypse is at hand, the new technocratic Jeremiahs seem to feel that any example will do; they show a remarkable lack of interest in getting the details straight, and so have constructed elaborate theories on surprisingly shaky foundations [12].

If it continues to be difficult to define the problem and quantify it, then I suggest that due consideration be given to a plausible hypothesis; namely, that the problem doesn't exist. It may just turn out that computers are a blessing, cybercultural research notwithstanding to the contrary.

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