Reading Paul Krugman's paper reminded me of the old story of the drunk and the street lamp. A drunk is spotted one night searching on his hands and knees underneath a street lamp. A friend spots him and asks what he is doing. "Looking for my car keys," is the reply. The friend offers to help and gets down on his hands and knees to join the search. "Oh, the keys aren't here," the drunk says. "They're over there," motioning to a spot some distance away. "Then why are you searching here?" the friend asks. "That's where the light is," is the reply.

An observer of this exchange asked to comment on it faces a dilemma. Should he confine himself to such matters as the thoroughness of the drunk's search? Or should his comments also note the obvious problem created by confining the search for the keys to an area where they clearly are not located?

I believe that he should do both, and so I will remark not only on the quality of Paul's paper (which I believe to be high) but also upon the extent to which it addresses the sort of issues that are likely to be of interest to policymakers as they struggle with the issue of whether the United States ought to undertake a program of explicit industrial targeting. Indeed, since I find very little to disagree with in what Paul wrote, I will devote the bulk of my time to the latter.

For I believe that the particular street lamp that Paul (and, indeed, all of us economists) employ — the lamp of "economic efficiency" — will have little or nothing to do with the outcome of this debate. While the efficiency consequences of targeted industrial policies are, of course, enormously important for the performance of the econ-

omy, it is not really a belief that current policies and policymaking processes are *inefficient* that has motivated the current level of interest among politicians on this issue. To be sure, the word "efficiency" is sometimes used, but it bears about as much relationship to what is going on as the light did to the proper location of the drunk's search for his keys.

It may be helpful to remind ourselves of an analogy. During the middle and late 1960s, when the nation was beginning to debate the wisdom of undertaking major programs of social regulation (the control of air and water pollution, workplace health and safety, product safety, etc.), economists spent a great deal of time and space in the professional journals arguing about the extent to which these problems were a result of something we called "market failure." We also developed our ideas concerning how these market failures might "properly" be dealt with. Our favored solutions usually involved some form of pollution tax or permit.

There was, of course, nothing wrong with this literature. It was perfectly correct technically. It also helped provide a vocabulary for the policy debate. Unfortunately, since economists failed to understand what the debate about social regulation was about, vocabulary was about all that they contributed to deciding *where* we as a nation would regulate and, more importantly, *how* this regulation would be conducted.

What was the debate over social regulation really about? It was about such things as "rights" and "equity" and "fairness." Solutions were chosen not because they were "efficient" but because they protected such rights or were perceived as fair. It has only been in recent years, after the nation has spent enormous sums of money on social regulatory programs, often with minimal results, that the consequences of treating social regulatory issues this way have become clear. The notion of treating social regulation as an issue in which efficiency is seen as an important — but still not the sole — operating criterion is slowly gaining currency. Yet even now, the failure of economists to participate in this debate in an effective way is hampering this development. We may have been willing to move out of the direct glare of the street lamp of economic efficiency, but

<sup>1.</sup> For an outstanding example of an especially clear statement of the economist's approach to the issue of pollution and to its control, see the article with this name by Robert Solow in the August 6, 1971, issue of Science.

we have been afraid to move too far into the shadows.

The academic economist might shrug his shoulders and declare that he cannot control the political process. If politicians choose systematically to ignore his advice, then they and their constituents deserve the trouble they get into as a result. Such a view may help the academic keep a clear conscience, especially when (as with social regulation) events eventually prove him correct. But it cannot be satisfying for one who hopes to influence policy and — hopefully — help society avoid making costly and hard to rectify policy mistakes. Since I know Paul Krugman — and most of the people at this conference — to be of the latter school of thought, I hope that both he and you will understand the spirit in which these criticisms and comments are offered.

To be fair to Paul, he does recognize that how any targeted industrial policy would operate would be determined by factors other than those preferred by economists. For example, the next to last paragraph of his paper reads:

It is already clear from Congressional hearings and popular discussion what the elements of a U.S. program of industrial targeting are likely to be. The key element will probably be a development bank that will provide low-interest loans and loan guarantees to favored firms. These firms will mostly be of two types. First will be firms in mature, linkage industries — in other words, the troubled, high-wage, unionized, politically powerful traditional heavy industries. The second will be key emerging industries — in other words, the glamorous and prestigious high-technology areas. Whatever the intentions, in the U.S. political system it is inevitable that political factors will weigh heavily on the choice of favored firms.

I agree totally with this assessment. Indeed, I wish that he had chosen this last paragraph for the text of his sermon on the dangers of targeting, rather than the sentence on page two which reads:

The case for targeting industrial policy therefore stands or falls on the issue of criteria for selection.

After this sentence, he proceeds to present and evaluate proposed criteria solely with regard to their impact on economic efficiency.

Yet his paper is extremely valuable in that it effectively explodes several of the widespread myths about how several of the more prominently mentioned targeting criteria would operate. It also helps drive another nail into the coffin of that other prevalent myth — the omnip-

otence of Japanese industrial policy.

Unfortunately, for all its persuasiveness, this message is not likely to make much difference to many of those advocating a targeted American industrial policy. As I have already noted, their goals have little to do with the attainment or nonattainment of economic efficiency. They have seen the market work, and they don't like its results. The proponents of targeted industrial policies are not interested in perfecting the market (to use the economist's jargon) but in preventing its operation. To influence them (and, more importantly, the politicians whom they are seeking to influence), economists will have to show (as Paul does, though only indirectly) that the adoption of their proposed criteria will fail to create additional employment or enhance our international competitiveness or lead to "fairer" (if less efficient) outcomes. This I believe economists can do. But it requires us to turn the light of our analysis in the direction of where the lost keys are actually located, not bemoan the fact that the light and the keys are not in the same place.

How can we do this? Consider the example that Paul cites at length, Japanese steel. Though I might differ with him on some of the details (steelmaking technology is not nearly as homogeneous as he alleges; the Japanese have made some important contributions here), the broad outlines of his story are consistent with what I understand to be true; that Japan's support for its steel never generated the economic returns that its government had hoped for and that it produced instead an overgrown industry that eventually had to be shrunk at the cost of a great deal of time and energy. (By the way, I consider the story of Japan's *shrinking* certain industries like shipbuilding and — to a lesser extent — steel to be the true industrial policy miracle.)

However, as useful as examples drawn from the Japanese experience might be, I believe that we would do better to analyze, from an industrial policy perspective, some domestic examples of the application of industrial policy and their consequences. These will provide a better clue as to how such policies, if expanded substantially, might work in this country.

As the supporters of an explicit, targeted American industrial policy correctly observe, this country *has* had an industrial policy for some time. They argue that, except in a few cases — commercial aircraft and agriculture are two favorite examples — this policy has been ad hoc, implicit, and non-targeted. They cite these two cases as ones in which a targeted domestic industrial policy has produced ben-

## eficial results.

I happen to think that they have seriously misrepresented these two cases, though time prevents me from laying out my case in full.<sup>2</sup> But that is beside the point. What I want to do is take a case that they argue proves the necessity of a targeted industrial policy and use that case to argue the reverse. My case — the steel industry in the United States.

Contrary to what is generally alleged, we have had a targeted steel policy in this country. It goes back to the year 1900 when the president of the United States agreed to withhold the application of the antitrust laws in the case of the massive consolidation that created the United States Steel Corporation. It continued as, after having eventually filed such a case, the government essentially took a dive in the face of overwhelming evidence of anticompetitive conduct on the part of both U.S. Steel and other industry members. Its high point was reached in the government's decision after World War II to dispose of the massive capacity it built in a manner that strengthened existing firms, not (as in the case of aluminum) in a manner that increased competition. The government's explicit steel policy continued during the early and middle 1950s when, in order to expand the industry's capacity even further, special depreciation policies applicable specifically to this industry were adopted. Unfortunately for this industry's later history, the capacity added during this buildup was obsolescent at the time it was installed. (Proponents of a targeted industrial policy will doubtless argue that a truly farseeing government would have coupled its aid with a requirement that the industry adopt specific steelmaking technologies. In my view, this objection implies a degree of industrial wisdom that I find impractical to expect of any government, least of all ours.) And, throughout much of this 50-year period, defense procurement — especially naval procurement — was directed at building up the strength of the American steel industry.

The ostensible rationale for all this assistance? National security, broadly defined.

What went wrong? I have already suggested one thing. Any time an industry is "force fed" as our industry was during the '40s and '50s (and as the Japanese industry was during the '60s), there is a

<sup>2.</sup> My argument in the case of commercial aircraft is made in some detail in "U.S. Support for Civilian Technology: Economic Theory Versus Political Practice." *Research Policy*, Summer 1974, pp. 2-16.

danger of a "vintage problem" developing. If, due to government's having looked the other way regarding competition for 50 or so years, the industry has grown very inbred, this danger is compounded. Having become used to following the leader (traditionally the U.S. Steel Corporation) in most important business decisions, industry is unlikely to question critical technology choices.

Getting locked in to the wrong technology was one problem. Another was the industry's not recognizing that, at least in the American political system, and unlike what the critics of our current industrial policy charge, there is a quid pro quo. What was it in the case of steel? Help in the politically important issue of price stability. Having given the steel industry so much aid, it is not surprising that President Kennedy in the early 1960s expected the industry to be forthcoming when he needed a bit of price moderation. In this case, however, the industry pleaded to be treated just like any other industry — in other words, *not* to be expected to behave differently in exchange for differential treatment.

Another instance where the government expected — and did not get — help from the industry was when it came to dealing with another important political and social problem, the control of air and water pollution. Steelmaking (especially the steelmaking technologies chosen by our industry) is a tremendous generator of conven-, tional pollutants — especially particulate emissions into both air and water. The geographic concentration of steelmaking facilities accentuated this problem. Given the economic prominence of our steel industry, and the knowledge that it had been the recipient of extensive federal assistance, it was only natural for it to be singled out for special attention when the nation decided that it would at last mount a serious attack on the problem of environmental pollution. How did the industry respond? By dragging its heels as much as possible. Steel -especially Big Steel — became known among environmentalists as perhaps the most recalcitrant of industries. Little wonder that innovative pollution control techniques, when proposed to be applied to steelmaking facilities, were viewed with special skepticism by the environmental community.

What would those who favor targeted industrial policies have had the country do? Exempt the steel industry from pollution control laws? Probably not. Instead their favored solution — and certainly the industry's and its labor unions' — probably would have been to grant import protection, thereby enabling the industry to pass on any

higher costs due to pollution control to its customers without the fear of being undercut by imported steel (which, in many cases, was also being subjected to pollution controls at least as stringent as those being applied domestically). Indeed, the government did eventually grant the industry, either explicitly or implicitly, a considerable degree of import protection. But before this, the industry developed its own solution — and, in the course of doing so, compounded its eventual adjustment problems.

Before the late 1960s, steel's import problem was primarily confined to the ground gained — often temporarily — by imports during periodic nationwide steel strikes. To solve this problem, the industry negotiated with its principal union, the United Steelworkers, a nostrike contract. In exchange for agreeing not to strike, the USW received an extremely generous package of pay and other benefits that eventually helped to make the domestic industry totally uncompetitive internationally. In short, the private solution that was undertaken in response to what was perceived as a temporary import problem created the need for either long-run and increasing import protection or for a drastic shrinkage of the domestic industry.

What do the proponents of a targeted industrial policy suggest that the government should have done when the industry was negotiating the no-strike agreement that turned out to have such disastrous long-run consequences? Should it have somehow blocked the approval of the contract? Or do they believe that merely pointing out the contract's possible longer-run implications would have been enough to prevent its being entered into? (This would have required them to have correctly anticipated future inflation rates.) Or would they have been willing to undermine the need for the contract by blocking the import of foreign steel during a domestic steel strike?

The clincher to my story is that there is another steel industry in this country, one that generally has been too small to be favored by government industrial policy. This industry is composed of the so-called mini-mills which, in fact, have become quite large and quite sophisticated producers. This portion of the industry has been technologically innovative, has remained much more competitive internationally than Big Steel, and has, on average, been much more profitable. Indeed, one of the major threats to its success has been the efforts by the government to protect Big Steel in the mistaken belief that somehow Little Steel doesn't exist or is unimportant.

I hope that I have made my point by now. I cannot think of a single

domestic industry (other than perhaps those that directly produce weapons) that has been the subject of more continued governmental interest than Big Steel. Throughout much of the industry's history, this attention was directed almost solely at strengthening the industry, regardless of the eventual consequences. To be sure, in later years, the government asked for — and generally did not receive — what it viewed as an appropriate quid pro quo for this assistance. But still, it gave the industry important support. (I am reliably informed that a recent study conducted by a reputable consulting firm for the domestic industry found that the current level of implicit and explicit subsidies the industry receives equals, and in some cases exceeds, the foreign subsidies about which the industry complains so vociferously. Needless to say, this study was never published.)

I have no difficulty in believing — as apparently does Paul — that an omnipotent, omnicient, benevolent dictator could have developed a better steel policy than the one our government actually developed and executed from 1900 to the present. I also have no problem, with the benefit of hindsight, in identifying instances where this policy clearly went wrong. What I would like the proponents of targeted industrial policy to show is how, given the sort of information government could reasonably be expected to have had and the sort of political pressures that they clearly would have been operating under at the time, any other steel policy would have turned out significantly better. I also would like these individuals to candidly acknowledge the extent to which the industry's current difficulties can be directly traced to the government's attempt to promote this industry and, at the same time, extract a bit in the way of political return.

I could cite other cases. For example, there is much current interest in improving the competitiveness of the domestic machine tool industry. The Japanese example has again been held up before us as one worthy of emulation. But here, even perhaps more than in steel, the domestic machine tool industry has been the beneficiary of so much targeted domestic assistance (primarily on the grounds of its contribution to the national security) that it is hard to conceive of what more the government might reasonably do. The remedies that currently are being tossed around — such as additional import relief — will, I believe, weaken rather than strengthen the industry and regard the adjustment it so clearly needs.

These two cases (as well as others that I could name) lead directly to the central question that those who argue for widespread adoption

of targeted industrial policies by this country would do well to face: how would such policies actually work, not in some sort of idealized world of perfect information and disinterested decisionmakers, but in the American political and social context. Since my time is limited, I will confine myself to a few broad assertions that I would be willing to defend.

• Any targeted American industrial policy would be extremely nontransparent. It would rely not on cash grants but on our tax system, our system of trace restrictions, and the differential application of our government procurement policies, our antitrust laws, and our environmental and occupational health and safety laws.

Why do I argue this? Because it is important to our political system — and will remain so — not to be seen as writing checks to any domestic industry, no' matter its importance. Our political process puts a tremendous additional cost on cash grants that have to be openly voted for by the Congress and approved by the president.

What does this imply? For one thing, that the costs of such a policy would be considerably larger than its proponents acknowledge. Since we do not have a parliamentary system, billsproviding for special tax or trade or antitrust or regulatory relief assistance to a targeted industry would be broadened, also giving assistance to nontargeted industries whose entrepreneurs were skillful enough to discover ways of making them appear to qualify for such assistance. This would not only raise the budgetary costs of any program of targeting (in terms of tax revenues foregone, for example). It also would strengthen the current tendency in business to hire and promote "paper entrepreneurs" — individuals skilled in selecting investments because of their particular tax advantages or other politically favored characteristics. Ironically, it is the growth of such paper entrepreneurship that one prominent proponent of targeted industrial policy, Robert Reich, has advanced his remedy as a cure for. It would be the opposite.

• Industries that might be attracted to a targeted industrial policy on the grounds that it would consistently promote their interests (as they see it) would be in for a shock. As the story I told earlier in steel showed, no government — and especially not our government — could ever be expected to unabashedly promote a given narrow set of interests over a long period of time. Furthermore, as we have seen so recently with respect to synthetic fuels, government interests can change. One minute the government can be smothering an industry with excessive attention and support; the next minute it can turn its

back totally. (Those who point to the Japanese as an exception should acknowledge the possibility that the long dominance of the Liberal Democratic Party, coupled with the strong tradition of bureaucratic continuity, might have something to do with any differences that are observed. In the United States, the one institution with a shorter-run view than business is clearly government, and this problem cannot be solved by a few minor bureaucratic fixes.)

What this means is that the political risks of doing business in this country would increase. This would strengthen incentives for business to hire and promote individuals skilled in dealing with these political risks, further sapping the spirit of entrepreneurship.

• An American industrial policy would overwhelmingly be concerned with seeing to it that no one is harmed too much. In other words, like the political system it reflects, it would be essentially conservative. I recognize that a number of the more prominent of the industrial policy proposals make a big thing out of avoiding concentration on "protecting losers." I argue that, given the way our political system operates, that is impossible. (Paul seems largely to agree with me, though he appears to believe that we also would end up supporting a large number of technological novelties. He may be correct. But to the extent that budgetary and other resources were limited, the losers would get the first claim on them.)

Why is this? Because, as economists and political scientists who study these things rightly observe, in America (and probably elsewhere), existing losses are weighed much more heavily than prospective gains. Put another way, as Charles Schultze has stated, the motto of the American political system is "Be seen as doing no direct harm." This is a system that is best suited at protecting against the effects of rapid change and compensating its actual and feared victims — though usually not in the form of direct cash payments.

There is no reason to expect a targeted U.S. industrial policy to operate any differently. Indeed, if you want to see the most complete and consistent description of how such a policy would operate, turn not to the writings of Robert Reich or Lester Thurow — they assume away the operation of the U.S. political system — but to the writings of Barry Bluestone.<sup>3</sup> Bluestone's industrial policy vision is of a system of change-retarding and change-buffering incentives. I do not

<sup>3.</sup> The best single statement of Bluestone's views is to be found in an article he and Bennett Harrison published in the September 11, 1982, issue of *The Nation* titled ''Radical Reindustrialization: Plan for People — Not Profits.''

share his views about what is desirable, but he has accurately described what likely will happen. Given this, I can certainly see why organized labor finds the targeted industrial policy concept attractive. What I find harder to see is why some of the sunrise industries like semiconductors find the policy appealing.

What would such an industrial policy mean for the country? Here I am in complete agreement with Paul:

It is hard to believe that such a policy will accelerate U.S. economic growth. Its direct effect will probably be to slow growth and raise unemployment. More importantly, the easy answer of targeting will help postpone our coming to grips with the real sources of disappointing U.S. performance.

That is a message that politicians who stay up all night reading Reich's manuscript would do well to ponder.

It is at this point that the supporters of targeted industrial policies are likely to say — as Lester Thurow has said to me — "well, what's your alternative?" There is one, of course, and it doesn't require a blind adherence to the free market. It's consistent with almost any size of government sector. It undercuts any tendency toward the encouragement of paper entrepreneurship. It's even consistent with what I increasingly am coming to believe is the true lesson of the Japanese postwar experience. It's called "de-targeting." How would it work? That's the subject of another paper, but anyone who is interested in the beginnings of the argument should read my July 29 testimony before the Joint Economic Committee.