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# THE NEW INDUSTRIAL REVOLUTION\*

PHILIP A. HART†

The first Industrial Revolution which burst upon the Western World in the late Eighteenth Century created a social and economic upheaval of unprecedented proportions. The factory system replaced the skilled handicraftsman; the beginnings of mass production introduced scale economies which have transformed the industrialized countries of the world. It also “spawned” certain basic concepts on industrial organization popularized in part by Marx, Shumpter, and most recently by J. K. Galbraith.

These involved the notion that efficiency and technology require giant industrial units and necessarily a high degree of industrial concentration. If this is true, of course, it means that an intricate degree of government control must replace the marketplace as a regulator of prices and product allocation. For no free society can tolerate private industrial empires, responsible only to themselves, making economic decisions affecting the economic, political and social structure of this society without the restraint of either government or competition. Certainly, it should be clear by now that in the highly concentrated society “competition” is only a word, not a reality.

It is surprising to me that so many have accepted a view—that in this nation giant corporations are inevitable—which is so profound in its consequences, without critical evaluation. For our acceptance or rejection of these concepts will largely determine the course of the new industrial revolution which I believe is now enveloping this country.

This new revolution is the result of two forces—the dramatic technological breakthrough now taking place and the merger explosion of the past two decades which is still gaining momentum. Already our two hundred largest corporations control almost sixty percent of all manufacturing assets in the United States. If I were an old Populist, I would say that there were two hundred men who control sixty percent of all the finished products. This merger movement which has been characterized by the conglomerate merger in which the corpora-

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\*A speech delivered at Washington and Lee University on November 15, 1967, under the auspices of the School of Law and the School of Commerce and Administration.

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tion diversifies into relatively unrelated product lines is dramatic. Air-frame manufacturers are producing toothpaste and toothpick manufacturers are producing rocketships.

The writings of Galbraith and like-minded thinkers would indeed have been pertinent in the first industrial revolution. In that period bigger plants generally did mean more efficient production and lower prices to consumers. The impetus to new technology generally did come from the larger industrialists of the day. But to carry over the lessons of the Eighteenth Century—no matter how subconsciously—into the realities of today's industrial complex simply makes no sense.

We know now that plants do have optimum sizes after which no further scale economies appear. More important the largest of modern corporations is not one or even several plants producing the same product. It is more likely to be a giant holding company reaching into many phases of production and service. Actually there are few efficiencies in the giant conglomerate because of its great size and the unrelated functions it seeks to direct. Efficiencies from economics of scale are basically plant efficiencies, and in most concentrated industries we find a great deviation between company concentration and plant concentration. Further distribution efficiencies, which some have attributed to the conglomerate, are more than often offset—if they exist at all—by other economic and managerial disadvantages involved in the complexities of multi-plant and multi-product operations.

The hearings of the Antitrust and Monopoly Subcommittee have indicated that in many cases the most efficient companies are in the middle size range, no matter what measure is used—such as profitability, not an alien measure to our society.

Unfortunately, what Galbraith and others have tended to do is to equate economic power—with its ability to coerce—with economic efficiency. For example, the large consumer product firms are able to get essential advertising at substantial discounts as compared to a smaller, less diversified firm. These discounts result from economic power—not cost savings—nor are they reflected in lower prices for the consumer. It strains the analogy somewhat but to illustrate the point, if when law students went to write their bar exams, they were handed not a pen and paper but boxing gloves and told to slug it out and that the sixty percent left standing would be lawyers, they might be appalled. The strongest would be lawyers—and in a sense that is an efficiency, but not a relevant one. Power, not proficiency, would determine the ranks of the legal profession. I am suggesting that this is the type of thing that some inaccurately regard as efficiency.

It appears to me that this is what is happening in our industrial complex today. Power, not efficiency, is the driving force and the

end result of giant conglomeration. Power, of course, takes many forms, and I use it here in its widest sense. In the area of mergers, it is reflected in the emphasis put on financial manipulation rather than more efficient operation. Why do companies merge today? A reading of current literature and periodicals on reasons for mergers makes more sense to an accountant or investment banker than either an engineer or lawyer. Companies buy "earnings" or "cash flow" or "tax carryover"; they issue convertible debentures so as not to water their capital base. They are concerned about maintaining the return on capital investment, the "earnings per share" ratio—the financial considerations that drive up stock values. I say this not in criticism, but only to point out that efficiency or profit maximization is not the primary motivating force behind the current merger movement.

But assume for a moment that the giant corporation operating in highly concentrated markets could turn out a better product at lower costs—a premise which I am not prepared to accept, but let us assume it. The resulting efficiency would serve no public interest unless competition required it to be passed on to the consumers in the form of lower prices. Yet great concentration and oligopoly markets today dominate our industrial landscape. The result is that the market does not set the price; the company does. The company has always set prices, I know, but it has set them in response to some market discipline which today is little evident. It sets a target profit, prices accordingly, and other oligopolists engage in what I call lockstep pricing. Most companies in highly concentrated industries price together. For example, if Bethlehem Steel announces a five dollar a ton increase in steel, the only remaining question then is when the others will go up to meet it. The *Wall Street Journal*, for instance, is now in the habit of talking about "industry price hikes," not company "price hikes." Doesn't this suggest that, at least, there has been some dilution of competition, that cost savings or increases in productivity mean higher profits, not lower prices?

Today's concern with inflation illustrates this point. Industry is operating at about eighty-three per cent capacity—its lowest point in a year. If competition in the traditional sense were at work, one would expect prices to fall, not rise. Yet prices continue to rise because for the company to reach a target profit in the face of falling capacity or decreased demand, it must raise its prices. What we are faced with today, in my opinion, is not inflation in its traditional sense, but price hikes brought about by the failure of the marketplace, or competition, to operate freely. One hundred years ago the case was clear that they were, but today I doubt it.

What about technology? Are the giant corporations necessary for

technological advances? In this area the subcommittee has held extensive hearings. The results are, as I read them, conclusive: both invention and innovation are just as likely—if not more likely—to come from the individual inventor, and the small and medium size corporation than the large corporate complex. A research organization which did a study for the subcommittee put it this way:

We have seen the continuing significant role of technically trained, sophisticated independent inventors, who have broken off either from universities, government laboratories, or industrial firms, in the invention of new technologies. We have seen independent technological entrepreneurs play a significant role in the establishment of new small technology-based firms devoted to the first introduction of new technology into use.<sup>1</sup>

The hearings include example after example of significant technological breakthroughs in which the larger corporation, not only did not play a role, but in fact failed to perceive the advantages or, in fact, discouraged development of the breakthrough technology.

Indeed, this last point is crucial. The giant corporation with great amounts of capital sunk in present technology often has strong economic incentive to discourage, not encourage, new technologies. For instance, a practical electric car has been developed both in England and this country by very small entrepreneurs and should be manufactured next year—despite the advantage one would expect the giant automobile manufacturers to have in this field.

The paradox of our present industrial organization is that while overall concentration is rising and bigness is justified by technological imperatives, the natural thrust of new technologies should be toward a more deconcentrated economy increasingly influenced by smaller firms. Modern computer developments, for instance, now available by pooling or leasing arrangements to the smallest corporation, allow economies that once could be obtained only by the largest firms. The new technologies, in many industries, have dramatically cut capital investment and operating costs. For instance, automobile bodies made from new plastic molding processes can result in bodies at least as strong as steel with only a fraction of the capital costs once necessary for the giant presses needed to stamp out steel bodies. Of course, if the company has eighty-two acres of plant with presses only appropriate for stamping out steel, it will be reluctant to change to plastic unless the transition period will be so quick that the loss of capital equipment can be absorbed.

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<sup>1</sup>*Hearings Before the Senate Anti-trust and Monopoly Subcomm.*, 90th Cong., 1st Sess., pt. 6, at 2750 (1967).

The development of pre-stressed concrete has challenged structural steel in many areas. The result—again because of low capital requirements involved in the technology—has been the rapid growth of a competitive pre-stressed concrete industry dominated by smaller producers. It has resulted in great savings, for instance, in highway building programs.

The development of reinforced plastics has developed a highly competitive industry of plastic molders turning out such diverse products as containers, automobile parts, construction material and marine transportation. Again, small capital requirements and the need for great technical skill have resulted in an industry characterized by smaller, efficient and competitive companies. The thrust, then, of the new technologies should be toward a decentralized, more competitive marketplace.

If what I have said is true, the contrast between the old and new industrial revolution should be clear. Bigness in the old was necessary for economic efficiency and for technological advance. Bigness in the new is necessary for neither. If freed from restraints of monopoly power flowing from a highly concentrated industry structure, the new industrial revolution should result in greater efficiency in the smaller, not the giant, firm.

However, to hasten this development, strong antitrust enforcement is needed. Once the "inevitability of bigness" thesis is recognized as fallacious, antitrust becomes manageable. The tools are available to attack many of the giant conglomerate mergers. Antitrust tools, although rusty, also are available to reach identical pricing. If we can slow down the growth of overall concentration through the conglomerate merger, if we can move against some of the artificial restraints such as advertising discriminations, then a meaningful competitive economy is possible, indeed, inevitable.

The necessity for such a program is based not only on economic considerations, but also political ones. Here is where a person who is not an economist may feel more comfortable. Most people would agree that there is a substantial correlation between economic power and political power. We feel more comfortable in a democratic society when political power is dispersed. But to do that we must also disperse economic power. And this is what the antitrust laws are all about.

This is a time in our history when our basic institutions are under close scrutiny; particularly on the college campuses of this country. Attention should also be paid to an essential ingredient in any discussion of power in a democratic country—that is antitrust and its relationship to our political structure. I believe that when its role

is clearly understood the political constituency will develop which will strengthen, encourage, support and demand meaningful, forceful antitrust enforcement. There is no such constituency today, and I think that it is very regrettable. Perhaps as responsible as any for the dismissal and distrust of antitrust have been those who have made old-school Populist speeches about power and big business. We tend to react automatically to reject that type of approach, and oftentimes it is used for very short term gains and with motives anything but healthy. We can go through the ritual of saying that bigness and smallness per se are neither bad nor good, but we must discipline ourselves to acknowledge that bigness has characteristics that smallness does not and that these distinctions and differences require different treatments.

We would all agree that if in this country tomorrow there would be but one source from which all products would flow and to which all people would have to go for employment that it would not be the type of society we would want. However, it would never reach that point because before it did outraged public opinion would require direct wage and price controls. We all agree that one source only would be intolerable; in my opinion, the two hundred corporations that constitute sixty percent of our source is equally intolerable. Between one and two hundred where is the breaking point? Where should the whistle really blow? As the concentration increases, inescapably we come to a government reaction which those who are frequently the most critical of antitrust would be the first to protest. A people organized as we are could not tolerate such an ultimate concentration of economic power; we would require the only other equivalent power structure to move in and run it. Then we would be knee deep in the kind of government directed economics that most antitrust critics would be the first to condemn.

My deep concern is that we are moving rapidly toward a society no thoughtful person really wants without an awareness of where we are going or what the consequences may be. The time is here, I believe, to dust off our antitrust laws and begin seriously to take effective action against concentration of economic power with all its political consequences.