

## REVIEW

**The New Industrial State.** JOHN KENNETH GALBRAITH. Houghton Mifflin Company, Boston, 1967. Pp. xiv, 427. \$6.95.

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*The New Industrial State* is an extraordinarily stimulating work—both when one agrees and when one disagrees with Professor Galbraith's conclusions. It is stimulating because of the range and importance of the issues with which it deals, because of its many fresh insights, and because of the wit and urbanity of its prose. Professor Galbraith's principal focus is on "the industrial system," the sphere of the large corporations. He examines their internal processes (how are decisions made and what are the goals and motivations) and their principal external relationships (customers and markets, the federal government, the financial community, the unions, and the educational world).

*The New Industrial State* deals with most of the major economic issues: the role of the antitrust laws, the effects of technology, the control of inflation and of unemployment, and the role of advertising. Galbraith portrays modern economic life as a whole and shows the close interrelationships of the changes taking place in various parts of the economy and its institutions. Moreover, his concluding chapters range far beyond economics and deal with political and philosophical questions: the effect of the industrial system on the values and priorities of American society, and the possible ways to obtain a higher priority for noneconomic values. Professor Galbraith has illuminating observations about almost every subject, and controversial ones about many. *The New Industrial State* is a major work which is likely to have substantial impact on economic thinking and on public policy.

This review is divided into two parts. The first will summarize Galbraith's principal themes. The second will comment on several of these in some detail. In fairness to the reader it should be stated at the outset that the reviewer is a corporation lawyer associated with a large corporation, which is referred to with some frequency in the course of the book.<sup>1</sup> In Galbraith's view, lawyers, and particularly corporation lawyers, are expected to be encumbered by a professional parochialism

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<sup>1</sup> Of course, the views expressed are solely those of the author.

which may be almost as bad as that which he ascribes to his fellow economists.

### I. GALBRAITH'S INDUSTRIAL SYSTEM

The basic thesis of *The New Industrial State* is that the complexity of modern technology, and the comprehensive planning which is required for its application, explain both the nature and the behavior of the large corporations which dominate the modern industrial system.

Corporations must be very large to provide the aggregations of specialized manpower, facilities, and capital required for the application of increasingly intricate technology. The complexity of the technology imposes lengthy lead times from the initiation of a project until a product can be marketed. This in turn calls for comprehensive planning both on the production side and on the marketing side. "Planning" to Galbraith means freeing the corporation as much as possible from the uncertainties of the market. It means securing control over essential sources of supply and other production requirements. It also means securing control over demand and over prices.

He argues that the "management of demand" is made possible because the industrial system has made our society affluent. In the affluent society consumer demand is no longer dictated primarily by direct physical needs. An increasingly large percentage of consumer expenditures are in response to psychological desires such as pleasure and status. As a result, Galbraith argues, consumer demand becomes readily manageable through advertising.

Prices must be controlled because sharp price fluctuations would disrupt the comprehensive planning process which modern technology requires. In Galbraith's words:

The industrial system provides the price control that it requires as an effortless consequence of its own development. Modern industrial planning requires and rewards great size. This means that a comparatively small number of large firms will share the typical market. Each will act with full consideration of its own needs and of the common need. Each must have control of its own prices and will recognize this to be the common requirement. Each will forswear any action, and notably any sanguinary price-cutting, which would be prejudicial to the common interest in price control. This control is not something that must be contrived. Nor, except in a few peculiarly complex cases, is it very difficult to sustain.<sup>2</sup>

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<sup>2</sup> P. 190.

Consistent with this analysis, Galbraith regards the antitrust laws as an anachronism.

The impact of technology and the resulting need for complex planning have reshaped the internal decision-making process of the large corporation. Important decisions usually require a broad range of highly specialized inputs from experts in many technical and managerial disciplines. Inevitably, a large number of people become involved in the decision-making process. Galbraith coins the word "technostructure" to describe this group. While the term has an unfelicitous Germanic sound, it aptly conveys the difference from the traditional concept of "management." Instead of being the exclusive prerogative of a small group of top level managers, the decision-making process requires the active collaboration of a large number of managers and individual specialists at many levels within the organization structure.

With the broad diffusion of decision-making authority there has developed a far greater basis for "identification" by the participants with the corporation and its objectives. This contrasts with the old-fashioned "entrepreneurial" corporation where a sharp separation existed between the ownership group, which ran the corporation for its own profit, and the managers and other employees who executed the orders of the owners. The ability of a large number of employees to "identify" with the corporation has important ramifications. Galbraith suggests that the lack of union success in organizing engineers and other technical personnel is explained by the fact that they have developed a strong identification with the corporation. Even with production workers, the position of the unions has been weakened by the takeover of the technostructure. The disappearance of the old fashioned "bosses" has tended to blunt the emotional edges of labor controversy.

The dominant objectives of the technostructure of the large corporation are, first, to protect its own autonomy from outside interference, and, second, to achieve rapid growth. The maximizing of profits is no longer the all-pervasive objective which it was in the days when the managers of the corporation were also the recipients of its profits. Profits are still important because failure to make adequate profits will result in pressure from directors, and complaints from stockholders. Inadequate profits will also limit the ability to grow without resort to outside financing. Thus, if profits dip too low, serious threats of outside interference may result. Galbraith argues that, as long as profits are sufficient to forestall outside interference, they become a secondary objective. A corporation with a reasonably satisfactory rate of profit is likely to be more interested in increased growth than in maximizing profits. Growth becomes the dominant objective because it will result

in increased responsibilities, salary raises, and promotions for the individuals who make up the technostucture.

Technical innovation is also an important objective. It is closely associated with growth and is of great personal interest to the scientists and engineers who make up a high percentage of the technostucture. However, technical innovation can be a goal only as long as it does not prejudice a minimum level of earnings. Galbraith observes that, given the costs and uncertainties associated with research and development, this can easily happen.

Professor Galbraith argues forcefully for the importance of the autonomy of the corporate decision-making process. In view of the complexities of the planning process, decisions must be based on the knowledge and experience which exists only within the technostucture. The decision-making process will not operate efficiently if it is subjected to outside interference, whether by stockholders, by financial institutions, by government agencies, or by unions. Furthermore, such interference will affect the morale of the technostucture and impair the enthusiasm with which decisions are carried out. Galbraith comments that the vigor with which the technostucture defends its autonomy is justified.

Some of the same factors which have made the technostucture supreme in the American corporation are at work in socialist economies. The complexities of technology and of the planning process make it desirable that the technostucture of state-owned enterprises control the decision-making process. Galbraith points out that in those countries where such control has not been given, the results have been uniformly dismal. The trend toward decentralization in Russia and other Eastern European economies reflects in Galbraith's view not a "return to the market" but a recognition that effective decision-making must be exercised by the technostucture of the particular enterprise, rather than by a centralized state planning agency.

Galbraith observes that the takeover of the technostucture undercuts the fundamental rationale on which socialist doctrine is based. A change from ownership by private stockholders to ownership by the state does not significantly affect the power of the technostucture. There is considerable distress among socialists over how little nationalization of an industry means. Effective public control is simply not practical. Citing the British experience, he notes, "Socialism has come to mean government by socialists who have learned that socialism, as anciently understood, is impractical."<sup>3</sup>

The influence of the bankers in the American industrial system is much reduced from the traditional power of Wall Street because of the takeover of the technostructure and because modern corporations are able to finance their growth largely through retained earnings. Galbraith regards this as one of the key developments. In effect, the "capitalist" has been displaced from the pivotal position of power which he traditionally occupied. This has important implications not only in terms of who runs the corporation, but also on the goals for which it is managed. For example, Galbraith suggests that the emphasis on growth, rather than on profits, reflects the shift of power from the suppliers of capital to the technostructure.

Galbraith also stresses the change in the relation between the corporation and the state. He contends that the traditional dividing line between "public" and "private" activities has been substantially eroded. Particularly in areas involving high technological content, the activities of the federal government and of private corporations are inextricably intertwined. In addition, the industrial system looks to the state for a broad range of actions to stabilize and to expand the economy, and to assure a supply of properly educated, and particularly technically trained, personnel.

In Galbraith's view the relation between the state and the modern corporation is based on common objectives. The state is strongly concerned with the stability of the economy, with expansion and growth, with technical and scientific progress, with education, and, of course, with national defense. Galbraith notes that all of these goals correspond to needs of the technostructure of the large corporation.

Galbraith maintains that the influence of the corporations on the state is enormous. He explains that this influence is not at all sinister. It reflects the fact that both are working together for the same objectives. Looking for the little man with the black bag, or for more sophisticated influence peddlers, is a pointless exercise. The modern corporation has neither the ability nor the incentives to use crude methods for influencing government actions. Important government decisions are generally made by large numbers of people working within the technostructure of government agencies. Because of the large number of people involved, such decisions simply cannot be "bought." However, through the perfectly legitimate day-to-day interaction of countless representatives of the industrial system with their opposite numbers in the federal bureaucracy, great influence is exerted. Galbraith observes that this interaction is a two-way street, and that the government is in a position to exercise great influence on business.

The first three hundred pages of *The New Industrial State* are pri-

marily devoted to understanding how the industrial system functions. Implicit and frequently explicit is a highly favorable judgment of the economic performance of the industrial system. In his final chapters Professor Galbraith discusses what he considers its shortcomings. These, he argues, stem in large measure from its success.

The achievements of the industrial system in the production of goods and in technological progress have shaped the values of American society. This has resulted in the assignment of excessively high priorities to the values at which the industrial system excels, and a slighting of those values which are inconsistent with or unimportant for the goals of the industrial system. In sum, materialistic concerns have taken precedence over esthetic and other noneconomic values. Pollution of air and water, urban decay, lack of highway safety, and failure to preserve natural beauty are among the examples cited by Galbraith where the priorities of the industrial system have overridden other concerns.

Galbraith criticises the reluctance to take public action in those fields where the industrial system has not operated effectively. He mentions urban and suburban transportation, urban housing, community planning, and development of parks and other outdoor recreational facilities. He also expresses concern over the concentration of the industrial system on the technology associated with the cold war.

The pressures which the industrial system places on the individual, most notably pressures for conformity with the requirements of large organizations, represent another major area of concern. However, Galbraith ends on a generally optimistic note. The industrial system's requirement of greater education has brought with it the rapid growth of what Galbraith terms the "scientific and educational estate." This group should be able to develop an increasing measure of independence from the power of the industrial system. He expects the scientific and educational estate to become an effective political force which will provide some countervailing power to the pressures of the industrial system. This, he argues, should lead to the assignment of higher priorities to those programs and values which the industrial system either downgrades or does not perform effectively.

## II. SOME COMMENTS, QUALIFICATIONS, AND DISSENTS

*The New Industrial State* presents an enormous range of ideas, and a review can hardly do more than touch lightly on a few of them. I will comment on four of Galbraith's themes: (1) the behavior of the technostructure, (2) the decline of the "capitalists," (3) the role of the

market and the antitrust laws, and (4) the relations between the corporation and the state.

### A. *The Behavior of the Technostructure*

Galbraith's technostructure strikes me as a sound and useful concept. His analysis of corporate behavior and motivations has a ring of reality which the more conventional economic analysis generally lacks. Two qualifications may be noted: first, I suspect that Galbraith slights the economic aspects of both corporate and individual motivations. Second, his case for group decision-making is probably overstated.

*Corporate Goals and Motivations.* Galbraith's analysis of corporate goals and motivations rightly stresses the pre-eminence of increased growth among corporate goals. However, the interest of the technostructure in profits is considerably greater than Galbraith suggests. The argument that interest in profits has lessened because the technostructure receives only an insignificant fraction of the dividends paid out misses an important point.

When measured as a percentage of total shares outstanding, the stock ownership interest of the technostructure is generally insignificant. However, when measured as a percentage of the personal savings of the individuals in the technostructure, stock of their company is likely to be a very substantial factor. This has been the natural result of stock options, stock savings plans, and other compensation and benefit plans utilizing the corporation's stock.<sup>4</sup>

One need not be an economist to hazard the guess that a technostructure whose members have a large part of their personal savings in the stock of their company will be quite interested in raising the price of its stock. This is likely to translate itself into a sensitivity to corporate earnings, when it is recognized that the stock market is acutely sensitive to changes in corporate earnings. The market price of a typical blue chip stock will reflect a "price-earnings multiplier" of twenty or even more. The net effect is likely to be a somewhat greater interest in "maximizing profits" than Galbraith assumes.

*Individual Motivations.* Galbraith's analysis of the individual motivations of the members of the technostructure concludes that non-economic motives have become of far greater importance than purely economic ones. As the most important motives he cites "identification," the ability of an individual to identify himself with the objectives of

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<sup>4</sup> It may be noted that the stock option and incentive compensation plans utilizing stock are not confined to the top management. In many corporations they apply to a sizeable group of managers, and technical and other specialists. This supports Galbraith's conclusions regarding the size and importance of the technostructure.

the corporation, and "adaptation," the ability of the individual to obtain satisfaction by shaping and influencing the actions of the corporation.<sup>5</sup>

While Galbraith is right in stressing the importance of psychological motivations, two observations may be relevant: First, the role of economic motivation continues to be very high, even with those who are already well compensated. Any corporate lawyer who has worked on executive compensation arrangements is likely to have learned that the acquisitive instincts of modern managers have not been notably dulled by the satisfactions they obtain from "identification" and "adaptation."<sup>6</sup> Second, was the traditional model of the "economic man" ever valid? Is it not likely that businessmen of the nineteenth century, provided they progressed beyond the level where their daily needs were satisfied, became involved in the issues and personalities of their work in much the same manner as the members of today's technostucture?

*Group Decision Making.* An important premise of Galbraith's concept of the technostucture is that decisions are made by groups, rather than by any single individual. This, he argues, is necessary in view of the complexity of the planning process. No single individual, no matter how gifted, can combine knowledge of all of the disciplines necessary for effective decision-making. By carefully combining the specialized capabilities of a large number of people the corporate planning process is capable of achieving superior results.

It is difficult to fault Galbraith's conclusions, as a broad generalization. Again, however, some limited qualifications should be noted. Contrary to popular stereotypes of the "organization man," the more forceful individuals generally get to the higher levels of the corporate hierarchy. Such individuals will by the nature of their personalities and

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<sup>5</sup> Galbraith replaces the traditional hierarchical chart of the corporation, in which the owners of the corporation are at the top, and power devolves downward, with a conception represented by a series of five concentric circles. In the outermost circle are the stockholders; in the second, production workers; in the third circle are supervisory, clerical, and other routine white collar personnel; in the fourth circle are the scientists, engineers, sales executives, and other specialists; and in the inner circle are the top executives. Galbraith observes that the motivations change as one moves from the outside to the inside of this structure. At the outside motivation is purely pecuniary; for example, stockholders will ordinarily sell their stock if a better return can be obtained elsewhere. As one moves inward, first identification and second adaptation take on a progressively more important role.

<sup>6</sup> Modern executive compensation arrangements make it difficult to separate economic from noneconomic elements of motivation. For example compensation plans which make use of corporate stock obviously reflect and build on what Galbraith calls "identification." Similarly, incentive and bonus plans which reward new ideas and other individual contributions tend to encourage what Galbraith refers to as "adaptation."



positions act in a more assertive manner than is implied by group decision-making. Furthermore, they have an important power over their subordinates which an economist should not overlook: the power of the purse.

The role of executive compensation arrangements as an instrument of motivation and control is very considerable. The higher an individual rises in the corporate structure, the more his compensation depends on the discretion of his superiors. While at lower levels compensation takes the form of fixed salary, at higher levels a steadily increasing share will take the form of bonuses, stock options, and similar arrangements. These give the senior managers some highly effective leverage over those reporting to them. Thus, while the picture of the autocratic captain of industry is clearly out of date, the ascendancy of the committee is far from complete. The reality lies somewhere in between.

Having noted these qualifications, let me reemphasize that Galbraith's analysis of the technostructure, its goals and its decision-making process, seems basically sound. Anyone who has observed corporate affairs at close range is likely to be impressed by his realism. His analysis provides many useful insights into the operation of one of our least understood institutions. This is a major contribution, particularly when compared with the mythological character of much of the writing about American corporations.

#### B. *The Technostructure and the "Capitalists"*

Galbraith deals with the shift in power from the owners of capital to the technostructure at some length. While the point itself is hardly new, Galbraith's analysis is quite intriguing. He observes that throughout history power has been associated with the factor of production which is hardest to obtain or replace. Until the nineteenth century land was the critical factor. Agriculture was the dominant economic activity, and power in society was clearly in the hands of the land owners. The nineteenth century, however, saw a shift of power from land ownership to control of capital. The economic theory of that century, beginning with Marx, reflects the central power position of the "capitalists."

In Galbraith's industrial system the most crucial factors of production are the management and technical skills which are combined in the technostructure. It is these skills which are hardest to obtain or replace. Adequate capital, on the other hand, is generally available either through retained earnings or from the enormous supply of savings which our society is accumulating in such forms as pension

funds, insurance, and mutual funds. This has resulted in a shift of power similar to that from land to capital in the nineteenth century. Galbraith points out that this shift is reflected in "[a] dozen matters of commonplace observation—the loss of power by stockholders in the modern corporation, the impregnable position of the successful corporate management, the dwindling social magnetism of the banker, the air of quaintness that attaches to the suggestion that the United States is run from Wall Street, the increasingly energetic search for industrial talent, the new prestige of educational talent and educators . . . ."<sup>7</sup>

Adolf Berle and others have deplored the loss of control of corporate stock owners and regard it as something of a perversion of the corporate system. Galbraith treats the change as an inevitable consequence of the modern industrial system. He notes that the stockholder who is not an active participant in the work of the corporation simply is not in a position to take a meaningful part in the decision-making process.

Galbraith's analysis provides an answer to those who for reasons of nostalgia or politics cannot give up the notion that the hidden hand of Wall Street still pulls the strings. Various, interlocking directorates and the control of mutual funds or pension trusts are cited as possible techniques through which Wall Street still exercises its control. Galbraith's analysis undermines such speculation. In a society where there are enormous supplies of savings, those who manage the sources of capital simply do not have the leverage to exercise extensive power. Experience with corporate financing transactions bears out Galbraith's analysis. Anyone who has worked on the bond issues of large corporations will find it difficult to avoid the conclusion that he is witnessing one of the more impressive triumphs of form over substance.

There has of course been a very sharp increase in corporate debt financing during the past two years. This has resulted in considerably higher interest rates. However, it does not appear to have had any appreciable effect on the power position of the suppliers of capital. At the higher interest rates adequate funds appear to be available. In the unlikely event that a shortage of capital should develop, and corporations could borrow money only on terms which give the lender a real voice in the business, I suspect that Galbraith is right in assuming that most corporations would sooner curtail their expansion plans than give up their autonomy.

### C. *The Technostructure, the Market and the Antitrust Laws*

It is appropriate to consider together a number of Galbraith's ideas in the general area of the relation between the industrial system and

its markets. This will include his concept of the management of demand, and his views about the antitrust laws.

*The Management of Demand.* Galbraith makes much of the power of the corporation to "manage the demand" for its products. The principal tool for this purpose is advertising. Galbraith is almost certainly correct in stressing the important role which advertising plays in the economy. One of his major premises is the importance to the industrial system of steadily increasing production of goods and services. Increasing production must, of course, be accompanied by increasing consumption. Galbraith regards all-pervasive advertising as the necessary tool to assure that consumption will keep up with production. This appraisal of the role of advertising seems much sounder than the view of more traditional economists, who denigrate the importance of advertising and criticize it as an economically wasteful activity.

However, Galbraith's concept of "management of demand" assumes a degree of control which simply does not exist. Advertising is a very crude tool which, when successful, will have a favorable effect on demand. However, its success is not predictable. There can be no assurance that more advertising will sell more goods. Any corporation which experienced the sudden and dramatic fall-off in demand for consumer appliances during the last quarter of 1966 will look with some incredulity at Galbraith's observations regarding the power to "manage demand."

It is true of course that corporate planning would be improved if demand could be managed. Marketing managers would no doubt be delighted to exercise such power. However, there is an enormous gap between the desire and its realization. The concerns which Galbraith expresses in his final chapters about some of the implications of the management of demand can be postponed until we have reached that distant and dubious millenium when psychology has become an exact science. For the present, the corporation must continue to live in a highly unpredictable world, where even the best laid marketing plans will often go awry.

*The Antitrust Laws.* As already noted, Galbraith assumes that the industrial system has control over the prices at which it sells. Galbraith dismisses the antitrust laws as an anachronism, which prevents the weak from getting stronger, without affecting those who already possess market power:

The law is very severe on any overt collusion in the setting of prices. Such collusion simplifies the task of the oligopolists in seeking to arrive at the most advantageous price for all.

And the government scrutinizes closely mergers which might have the effect of increasing the market power of the individual oligopolist. The most important effect is to deny market power to those who do not have it or have difficulty in exercising it while according immunity to those who already have such power.<sup>8</sup>

Galbraith is out of sympathy with the objectives of the antitrust laws. The suppression of price competition is regarded as a requirement of a complex industrial system. He believes that the comprehensive planning, which is necessary for the application of intricate and expensive technology, would be disrupted by severe price competition.

Most importantly, he is not concerned about the dangers of monopoly. In his view, the modern corporation simply does not behave like the old-fashioned monopolist is supposed to behave. It is not interested in the classical objectives of curtailing production and raising prices. Instead of suppressing innovations, the modern corporation is vitally interested in technical change. This paradox is explained by the fact that the modern corporation is run by its technostucture. As already noted, the technostucture's prime objective is growth. With expanding production it must keep prices low enough to attract new customers. Similarly, technical progress is one of its major goals. Thus, in Galbraith's view, the assumptions concerning corporate behavior made by the antitrust laws reflect outdated assumptions concerning the corporate power structure. While they may have been correct when the "capitalists" called the shots, they are inconsistent with the behavior of a corporation run by its technostucture.

One reason for the difficulty of antitrust prosecution is that the large corporation acts in a manner consistent with widely accepted social goals:

[P]rice control by the mature corporations is combined not with inefficient performance as the traditional theory prescribes but with generally favorable performance. . . . [This is] why this control enjoys immunity under law. The law is helpless in applying penalties to what is socially acceptable.<sup>9</sup>

Galbraith also dissents from the traditional concern regarding the evils of bigness. He notes that "nothing so characterizes the industrial

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<sup>8</sup> P. 186.

<sup>9</sup> Pp. 189-90.

system as the scale of the modern corporate enterprise."<sup>10</sup> He dismisses the concern about bigness by observing: "that the largest and most famous corporations, those whose names are household words, . . . should be considered abnormal must seem a little dubious."<sup>11</sup> Galbraith maintains that large size is "the most obvious requirement of effective planning."<sup>12</sup> He treats as irrelevant the old dispute whether the size of the corporation is required by the economies of modern large scale production or whether large size reflects a desire to monopolize:

The size of General Motors is in the service not of monopoly or the economies of scale but of planning. And for this planning—control of supply, control of demand, provision of capital, minimization of risk—there is no clear upper limit to the desirable size. It could be that the bigger the better. The corporate form accommodates to this need. Quite clearly it allows the firm to be very, very large.<sup>13</sup>

In Galbraith's view, one of the principal effects of the antitrust laws is to obscure the existence of market power. In one bit of flowery (or rather leafy) prose, he states: "The fig leaf by which power is kept out of sight is held in place not only by economists but by the statutes of the United States and the decisions of its courts."<sup>14</sup>

He is not overly concerned about the future of the antitrust laws:

After much discussion, the laws will one day be accommodated formally to the reality. In the meantime, the convention by which they exist but are not enforced is by no means intolerable.<sup>15</sup>

Galbraith's views on antitrust are perhaps the most controversial part of *The New Industrial State*. While he scores some telling points, he is also guilty of some wild misses. The economic theories underlying the antitrust laws can certainly benefit from rethinking. Galbraith's lively blasts may well result in some useful ventilation of ideas. His views on bigness are more realistic than those of the traditional economists, both in terms of economic analysis and in terms of political implications. He is correct in observing that even the largest corporations do not behave in accordance with the predictions of the

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<sup>10</sup> P. 74.

<sup>11</sup> P. 73.

<sup>12</sup> P. 74.

<sup>13</sup> Pp. 76-77.

<sup>14</sup> P. 187.

<sup>15</sup> P. 197.

classical model. Galbraith's explanation of their behavior appears quite convincing.

In other areas of his antitrust analysis, however, Galbraith seems to be succumbing to the seductions of the systematizer: he prefers to follow the orderly logic of his system rather than the disorderly facts of the economic world. Galbraith's discussion of the management of prices provides an illustration. An orderly planning process would clearly benefit if prices could be managed. However, with rare exceptions, corporations are not as omnipotent as Galbraith assumes. While most may regard price competition with the abhorrence which Galbraith assumes, they may nonetheless have to accept it as unavoidable. Galbraith is quite right in observing that severe price competition disrupts the comprehensive planning which is necessary for the application of complex technology. Nonetheless, it is true that there has been very severe price competition in the sale of nuclear power plants. This is so even though nuclear power is a field involving highly complex technology, very long lead times from the beginning of a project to its completion, and very large financial risks. In other words, all the factors which make comprehensive planning desirable.

While Galbraith's view of the industrial system is more realistic than that of traditional economists, it is rather neater than the real world. Corporate behavior simply is not as "planned" as he assumes. It is true that the modern corporation has enormous resources at its disposal, and that its ability to overcome technical, marketing and other problems is often impressive. Nonetheless the range of uncertainties which affects most corporate decisions is far greater than Galbraith's analysis would lead one to expect. While the importance of long-range planning is constantly recited in the corporate liturgy, the differences between preaching and practice are great. Immediate pressures are invariably more pressing than the long term interest. For example, the long term importance of price stability is quite as important to the corporation as Galbraith assumes. Nonetheless, the long term interest in stabilizing prices is all too often overcome by the immediate pressure to unload last month's inventory.<sup>16</sup>

The notion that large corporations can regard themselves as immune from the antitrust laws, like the concept of "management of

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<sup>16</sup> Galbraith's analysis of the technostructure provides at least a partial explanation for this phenomenon. In the technostructure a great deal of decision-making authority has been decentralized and is exercised at relatively low levels in the organization. At these levels, the immediate pressures are obviously far more acute than long-range concerns. In addition, executive "measurement" and compensation arrangements have an inevitable tendency to accentuate the short term. Short term results are far easier to measure than long-term changes.

demand" is something that businessmen may dream about, but will not recognize as part of their real world. The threat of dismemberment is probably not very real. However, particularly in the area of mergers, the antitrust laws are more like a chastity belt than like Galbraith's fig leaf. The reason why many recent attacks on mergers under Section 7 of the Clayton Act have been directed against smaller companies is not, as Galbraith suggests, because the antitrust laws are enforced more harshly against the weak. The real explanation may well be that the prohibition against acquisition of competitors by companies with substantial market power is so unambiguous that few large corporations attempt to make such acquisitions. Similarly, the reason why conglomerate mergers have become so popular is probably not because businessmen really prefer "mixed marriages," but because the antitrust laws effectively bar the acquisition of competitors.

Perhaps the most fundamental question raised by Galbraith's attack on the antitrust laws relates to their underlying values. Even with due allowances for a lawyer's professional parochialism, I find it very hard to question the fundamental soundness of the antitrust laws. It seems to me that the antitrust laws are necessary from both an economic and political standpoint. I strongly suspect that an economy without antitrust laws would be quite different from our present industrial system. It seems inevitable that there would be an enormous increase in economic concentration. Absent the antitrust laws, what is there to keep corporations from acting upon the temptation to buy up their competitors? Furthermore, in the absence of Section 1 of the Sherman Act, it seems inevitable that there would be comprehensive price fixing, division of markets, and other forms of cartelization.

It is possible that, consistent with his emphasis on the importance of efficient planning, Professor Galbraith would accept much greater economic concentration, as well as comprehensive price fixing and market regulation. However, I question whether the American political system would accept it. The aggregation of economic power would become so great that its exercise by private organizations might not long survive. Corporate decision making would almost certainly be subjected to government supervision and control. Furthermore, even if such increased concentration would be politically acceptable, I question whether it would be economically desirable. One of the healthiest aspects of our economic system lies in its diversity of decision making. The practical effect of the antitrust laws has been to preserve a system where there are a number of large companies in each industry. The increased concentration which would result in the

absence of the antitrust laws would clearly impair the benefits of diversified decision making.

Finally, there are real questions regarding manageability. In a passage quoted previously Galbraith suggests that, in terms of the efficiency of the planning process, "there is no clear upper limit to the desirable size; it could be that the bigger the better."<sup>17</sup> This is a very questionable notion. While corporate experience has shown that we can manage very large units, it has also shown that increasing size, coupled with increased complexity, raises major problems of manageability. The burden of proof that substantially larger enterprises can be managed has not yet been discharged.

In sum, the present industrial system, in which very large size is permitted but several independent units remain in each industry, may well represent an optimum balance. Whatever theoretical economic goals the antitrust laws may have been designed to serve, it seems hard to dispute that they have been a very major factor in the parallelogram of economic, political and social forces which has produced the present system. It would be useful of course to bring the theories and the rhetoric of antitrust laws into line with present day realities. However, it seems unwise to tinker with their fundamentals.

#### D. *The Industrial System and the State*

One of Galbraith's principal themes is the erosion of the distinction between the industrial system and the state:

The industrial system, in fact, is inextricably associated with the state. In notable respects the mature corporation is an arm of the state. And the state, in important matters, is an instrument of the industrial system. This runs strongly counter to the accepted doctrine. That assumes and affirms a clear line between government and private business enterprise. . . . In fact, the line between public and private authority in the industrial system is indistinct and in large measure imaginary, and the abhorrent association of public and private organizations is normal.<sup>18</sup>

The theme is further developed in the final chapters of *The New Industrial State* where Galbraith speculates about the future:

Given the deep dependence of the industrial system on the state and the nature of its motivational relationship to the state, i.e., its identification with public goals and the adapta-

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<sup>17</sup> See note 13 *supra*.

<sup>18</sup> Pp. 296-97.



tion of these to its needs, the industrial system will not long be regarded as something apart from government. Rather it will increasingly be seen as part of a much larger complex which embraces both the industrial system and the state. . . . Increasingly it will be recognized that the mature corporation, as it develops, becomes part of the larger administrative complex associated with the state. In time the line between the two will disappear.<sup>19</sup>

I doubt whether Galbraith's observations are correct as an interpretation of current facts, and I seriously question their soundness from the standpoint of public policy. The accuracy of the analysis and the desirability of the policy must obviously be dealt with separately.

Galbraith's analysis stresses the importance of federal defense and space expenditures to the industrial system. He argues that such expenditures are important both for the management of the aggregate demand of the whole economy and for underwriting the research and development costs of the industrial system. The experience of the past year would suggest that the defense budget, far from being a tool for the management of the economy, has been its most seriously unsettling influence. In addition, the value of government-funded research and development for other industrial applications is far from clear. The largest part of government research and development expenditures are for defense and space programs. Much of these expenditures are in areas of technology which are so esoteric that their application for industrial uses, within any period which is of interest from a business standpoint, is highly unlikely. Few corporations have been able to move from a position in defense technology into commercial business.

Galbraith's observation that government contracts represent one of the most attractive markets for the industrial system is not likely to be accepted by most businessmen.<sup>20</sup> Defense business is generally regarded as involving great uncertainties which are not, in any practical way, manageable by the corporation. In addition, it brings low profits and relatively little carryover in technology or even in management skills to other corporate activities.

Galbraith's assertion that government contracts provide a base for industrial planning is of very doubtful validity. The difference in the

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<sup>19</sup> Pp. 392-93.

<sup>20</sup> It is of course important to distinguish between the small number of large corporations whose business is preponderantly government oriented, and the much larger number of corporations which do only a small share of their business with the government.

management disciplines required for governmental contract activities and those of commercial businesses cannot be overestimated. Corporations which are active in both government and commercial work have repeatedly discovered that managers who were successful in defense businesses had great difficulty in making a transition into commercial businesses.

The related argument that the cold war supports the planning of the industrial system is almost certainly wrong. Government contract activities are invariably run separate and distinct from the commercial activities of a corporation. Anyone who has dealt with government auditors knows that a corporation cannot charge against government contracts corporate planning or other overhead costs which are not directly related to the contract work.

Galbraith's argument about the influence of the industrial system on the state draws heavily on examples related to defense procurement. The fact that the Defense Department, in drawing specifications for a new weapons system, will work closely with prospective contractors, and that in this process of consultation modifications of the specifications of the weapons systems will be made, hardly proves Galbraith's contention that defense contractors have a significant influence on defense policy.

Such relationships between the Defense Department and its suppliers are not radically different from those between purchasers and suppliers of custom designed industrial equipment in a purely commercial field. For example, a steel company which wishes to purchase an electronic control system will work very closely with its prospective suppliers before determining the characteristics of the system it will purchase. The control system manufacturer may well convince the steel company to add or delete a particular feature of the system. However, it would seem unrealistic to use such an example as a basis for drawing far reaching conclusions regarding the influence of electronics manufacturers on the steel industry.

Galbraith's observations regarding the erosion of the line between government and industry are not consistent with my own observations of government-industry relationships. It is obviously difficult to generalize about such a large subject. However, my experience suggests that the line between the government and the corporation becomes more sharply drawn, the more closely related the subject matter of a contract will be to private commercial interests. Where a corporation is working on a government directed project which has no commercial application, the relationship is generally quite relaxed. On a government program with some commercial potential the relationship

is likely to become more sensitive. Finally, when the government provides support for a privately directed activity the strains are often very sharp. Particularly in the third category, there is likely to be acute sensitivity on the part of government personnel that private industry may "take advantage" of the government. Differences in the relationship are probably explained better by psychological than by ideological factors. They are nonetheless quite important to an analysis of government-industry relations.

Finally, it is worth noting that legal formalities, regardless how artificial they might appear, can have enormous practical consequences. Separate corporate identity is a case in point. From the economic standpoint, it may look like a highly artificial exercise. Much of the formal procedure of corporation law can be criticized as outmoded or irrelevant. Nonetheless, the law makes the corporation a separate entity, with broad powers, flexible organization and a smoothly functioning process of succession to the leadership. That corporations are extremely viable institutions is beyond argument. That such institutions would readily submerge their identity and "become part of the larger administrative complex associated with the state" seems doubtful.

Apart from the accuracy of Galbraith's analysis there is the underlying policy issue: would the erosion of the line between the corporation and the state be desirable? I believe that a key feature of the present industrial system is that it decentralizes decision-making power. Galbraith's dichotomy between economic activity which is subject to "planning"<sup>21</sup> and economic activity which is subject to "the market" ignores a most crucial point: whether planning is performed by a single agency or by a large number of relatively independent units.

As Galbraith rightly points out, the decision-making process for any complex economic activity will operate effectively only if the decision-making group has real autonomy. In view of the enormous variety and complexity of the industrial system as a whole, its decentralization into separate units seems essential. The mere fact that a number of separate units are in a position to follow a different course of action makes it more likely that one of them will, through a com-

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<sup>21</sup> Galbraith's use of the term "planning" is an unsatisfactory usage in an otherwise superlatively well-written book. He makes a sharp distinction between economic activity which involves "planning" and economic activity which is subject to the market. This dichotomy seems quite unreal. Economic activity is subject to infinitely varying combinations between market pressures and internally "planned" decisions. The observation that American corporations engage in a great deal of "planning" provides a highly tenuous basis for Galbraith's analogies to the "planned" economies of Eastern Europe.

bination of skill and luck, decide upon the most successful course of action. My underlying premise is that decisions will generally have to be made at a time when there will be significant uncertainty about the right answer. Consequently, the planning effort, no matter how comprehensive, will not necessarily provide the right answer.

The development of atomic power for the generation of electricity provides a useful illustration. In the mid-fifties major technical decisions had to be made with respect to the reactor types to be developed. There were many competing systems, each with highly articulate advocates, both in the scientific and in the industrial community. In Britain a centralized decision was made by the Atomic Energy Authority. Here private corporations and the U.S. Atomic Energy Commission each made independent decisions. At the time the decisions were made no one could be sure of the correct answer. Now, with the benefit of a dozen years of hindsight it seems quite clear that the British made the wrong choice. The technology which has achieved the widest acceptance was selected by two private corporations in the United States. They received substantial assistance from the AEC. However, they picked a technology which the AEC for some time did not consider to be the most promising. It is possible that if the American decision-making process had been as centralized as the British, the right technology might not have been chosen.

An additional argument can be made for maintaining the independent identity of the corporation, and keeping it from becoming "part of the larger administrative complex of the state."<sup>22</sup> Galbraith correctly stresses the importance of the autonomy of the decision-making process in any area involving substantial complexity. I suspect that the necessary autonomy is much easier to achieve in a corporate setting than within a governmental framework. Such factors as the annual appropriation process, the role of influential Congressional committees, the political appointment of senior government officials and their high turnover rate, are likely to make the necessary autonomy much harder to achieve within a government setting.<sup>23</sup>

A major strength of the corporate form has been its great flexibility. The ability of a corporation to organize its work with maximum effectiveness for any particular application is substantially greater than

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<sup>22</sup> P. 393.

<sup>23</sup> Galbraith observes that the British Parliament has granted effective autonomy to the public authorities which manage certain nationalized industries. The U.S. Congress has traditionally been most reluctant to free public agencies from public accountability. It seems questionable whether, under our political system, substantial autonomy would be given to such activities, unless they can be turned over to the Central Intelligence Agency.

that of a government agency. The lack of civil service rules and the ability to frame compensation arrangements without arbitrary ceilings and with much more flexible features gives the corporation very great advantages.<sup>24</sup>

For these reasons I seriously question the soundness as matter of public policy of the disappearance of the line between the state and the corporation. Galbraith is correct in arguing that there should be no sharp distinction between "private" purposes and "public" purposes. Corporations perform a wide variety of activities falling into the so-called public sector, both independently and as government contractors. The expanding entry of corporations into the educational field provides one recent example. However, from the standpoint of institutional identity the separation between the state and the corporation must continue. The vastly increasing complexity of economic life makes this essential.

#### CONCLUSION

What impact is *The New Industrial State* likely to achieve? Some predictions can be made with considerable assurance. Galbraith's reputation assures that the book will be widely read. His lucid style assures a high degree of comprehension. The reception will be highly controversial in all parts of the political and economic spectrum.

It is hard to think of a book which offends so many people in so many places. Galbraith deflates the egos of union leaders and investment bankers. He attacks the liberals' traditional belief in the anti-trust laws, and defaces the conservatives' image of capitalism. The relish with which he harpoons his fellow economists is bound to affect the reaction of his professional colleagues. Even though much of his argument represents an effective defense of the role of the large corporation, Galbraith slaughters far too many sacred cows to please the business world. The amiable digression in which he demolishes the most fundamental premises of public ownership and socialism will chill the reception from the left.

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<sup>24</sup> The widespread use of private contracts by the U.S. Government is due not merely to ideological predilections, but to the inability to overcome the rigidities of bureaucratic organization. The organization of the RAND Corporation provides a good illustration. The Air Force recognized that it could not attract and retain top flight talent in various specialized fields necessary for its planning. It was very simple to solve this problem by contracting with a private organization which hired the necessary people at prevailing salary levels for the skills involved. The alternative was realistically unthinkable; it would have been necessary to convince the Civil Service Commission, the Budget Bureau, and assorted Congressional committees to approve the establishment within the Department of the Air Force of a large number of positions with salary levels substantially above that of the Secretary of the Air Force.

After the radiation dies down and the tempers cool, I suspect there will be a growing acceptance of many of Galbraith's ideas. The concept of the technostructure may well become as familiar as Galbraith's prior contributions to our vocabulary: the affluent society and the concept of countervailing power. This should lead to a much better understanding of corporate behavior.

The antitrust laws, I believe, have more life than Galbraith assumes. However, *The New Industrial State* may well pave the way for much greater realism in the underlying economic theories. For other areas such as corporation law and government-industry relations, *The New Industrial State* provides better insights than solutions. These insights are likely to influence future thinking with effects which cannot yet be assessed.

Meanwhile, Professor Galbraith and his more detached readers will have had a most enjoyable time.