

Economics and the Quality of Life

John Kenneth Galbraith

In this paper I suggest the social problems, and therewith the political tasks, which become most important with a relatively advanced state of economic development. These tasks are, I believe, of special importance to scientists; their accomplishment places some special responsibility on the scientist.

To see the issues in proper perspective one must have in mind the relation of economic circumstance to social thought and therewith to political action. In the poor society this relationship is powerful and rigid. For various reasons the rich society continues to assume that economic condition must be the dominant influence on social thought and action. This assumption becomes, in turn, a barrier to rational thought and needed action. It is exploited by vested intellectual and pecuniary interests. Let me summarize the matter briefly (1).

Economic circumstance has a dominant influence on social attitudes in the poor society because, for those who are poor, nothing is so important as their poverty and nothing is so important as its mitigation. In consequence, only religion, with, among other things, its promise of later reward for enduring privation with patience, has had a competitive position. And since

for nearly all time nearly all people have lived under the threat of economic privation, men of all temperament and views have stressed the controlling and permanent influence of economic need on social attitude. "The modes of production of material life determine the general character of the social, political, and intellectual processes of life" (2). "Here and there the ardour of the military or the artistic spirit has been for a while predominant; but religious and economic influences . . . have nearly always been more important than all others put together" (3).

In the poor society not only do economic considerations dominate social attitudes but they rigidly specify the problems that will be accorded priority. Under conditions of scarcity and human privation there is obvious need to get as much as possible out of the productive resources that are available—to use the labor, capital, natural resources and intelligence of the community with maximum efficiency. Such effort enlarges the supply of goods and thus mitigates the most pressing problem of the society, which is the scarcity of needed things. There is similar concern over who gets the revenues from production and who thus can buy what is produced, for one man's undue advantage will be another man's painful deprivation. Thus the two classical concerns of normative economics—how to increase productive efficiency and how to reconcile this with distributive equity—are the natural consequence of general poverty.

In the past in poor communities those whom feudal prerogative, sanguinary appropriation, personal fortune, exceptional personal accomplishment or military or political success exempted from the common privation quickly became subject to non-economic preoccupations—military adventure, political entrepreneurship, artistic patronage, sexual achievement, social intercourse, horsemanship. Accomplishment in these pursuits and diversions became, indeed, an index of economic emancipation. Increased well-being of people at large also loosens the grip of economics on social attitudes. Improved efficiency no longer mitigates physical pain and privation. The person who gets more does not of necessity impose suffering on the person who gets less. However, economic compulsions continue to have a highly influential bearing on social attitudes and political behavior in the generally affluent community. Although they release their absolute grip, economic goals retain, nonetheless, much of their original prestige.

This is partly for reasons of tradition. Economic goals having so long been considered paramount, they have come to be considered immutable. Economists have also long equated physical with psychic need; for many years none might pass a Ph.D. examination who said that the wish of a poor family for shelter was superior in urgency to the wish of a well-to-do family for a shelter that outshone that of the family next door. To do so was to interpose unscientific judgments and invite immediate discredit. Psychic need being on a parity with physical need, the urgency of increased production, and thus of the economic problem, was not supposed to diminish with increased well-being.

Economics also retains its grip on social attitudes because of compassionate appeal to the problem of the man who is unemployed or, to a lesser but growing extent, a member of a racially less-privileged group. As living standards have risen, consumption has pressed less insistently on income. Fail-

Professor Galbraith is the Paul M. Warburg professor of economics at Harvard University. An earlier version of this paper was given as the AAAS Distinguished Lecture at the annual meeting of the American Association for the Advancement of Science, Cleveland, Ohio, 27 December 1963.

ure to offset the resulting savings came to mean unemployment. Against the well-being of the majority had thus to be set the misfortune of those whom increasing affluence left without work and reliable income. And this disadvantage, it has come more recently to be observed, is suffered in special measure by Negroes and other minority groups. So even though improvement in living standards might be less urgent, improvement in economic performance to provide jobs for the unemployed and the minorities remained of high importance and appeals to this purpose have a high moral content. Increasingly the purpose of the economy has become not the goods it produces but the jobs it provides.

Economic goals are also strongly, if not always visibly, supported by vested interest. The prestige of important groups in the community depends on the priority accorded to their function. If nothing is so important as production no one is as important as the producer—the businessman. If other goals take precedence so do other people. The importance of economic goals for the prestige of the economist needs scarcely to be emphasized.

But economic goals accord even more practical support to vested position. If such goals are paramount, public issues will be decided according to economic tests. These are much more uncomplicated than other tests. A road can be put through a park, a monument replaced by an earning asset, a greenbelt turned over to industry or housing, a change in work rules resisted, a welfare measure rejected on a simple showing of economic effect. This is a great advantage to those identified with economic activity. Different goals would lead to a different—and also less predictable—decision with different benefits and other beneficiaries.

Finally economic goals remain important for the vacuum they fill. A society must have a purpose. The most obvious and tangible purpose is to produce goods for private consumption. The annual increase in this production can then be a measure of national vigor. That is the measure we now employ.

We are allowed occasional doubts about our present measures of national achievement. And there are anomalies that are a trifle embarrassing. As more basic requirements are filled, expansion naturally occurs in less urgent items. There is diminished emphasis on steel

or bread grains (these, or the capacity for producing them, may even be redundant) and more on electric golf carts and electric toothbrushes. Questions may arise—as I have noted on other occasions—whether national vigor is to be measured by ability to have dental hygiene without muscular effort or athletic endeavor while sitting down. Economic growth is a measure of stern devotion to national goals. Growth consists increasingly of items of luxury consumption. Thus we perform the considerable feat of converting the enjoyment of luxury into an index of national virtue. This arouses at least some doubts.

We are allowed concern, also, as to whether all of the important tasks of the society, economic and non-economic, are being equally well-performed. The contrast between public penury and private affluence is increasingly remarked. Finally a few may have speculated as to why individuals, as they achieve higher levels of well-being, should escape from economic preoccupations while a nation, passing upward along the same path, must remain under the spell of economic compulsion. Why, if individuals turn to non-economic preoccupations, must a nation remain resolutely Philistine?

But, in general, we remain subject to economic preoccupations. Economic goals are paramount. The guidance of economists on how to achieve them is accepted as a matter of course. There are, I believe, serious dangers in this delegation. This we see if we look more closely at the sociology and the mystique of economics. We then see how this most developed and influential of the social sciences can be influential also in misguidance when the society is subject to change and when the social problem has ceased to be primarily economic.

Change in Economics

Unlike the natural sciences, which have long been viewed as the behavioral norm by economists, economics is subject to two types of change. The first is in the interpretation of given phenomena. The second is in needed accommodation to change in economic behavior or institutions. The development of the social accounts (national income, gross national product, and their components) in the thirties, the evolution of the input-output mat-

rix in the forties, the analysis of money flows, the development of operations analysis, and the application of computer techniques to economic data in the fifties and sixties are all examples of the first type of change. The accommodation of economic theory to the rise of the trade union or the development of the large corporation or to changing behavior resulting from transition of the average person from comparative privation to, by past standards, comparative well-being are examples of the second type of change.

Economics is progressive as regards the first type of change—conceptual advances or innovations in interpretive apparatus are frequent, promptly examined and, where useful, willingly adopted. From index numbers through the social accounts to modern quantitative methods, these developments have contributed greatly to the guidance of the American economy and the conduct of business. Modern public and business administration are deeply dependent on them.

By contrast, economics is rigorously conservative in accommodating interpretation to underlying change. Until quite recently, wage theory was not accommodated to the existence of the unions. Their existence and even their importance was not denied. But, by an agreeable convention, one was allowed in pedagogy and scientific discourse to assume away the effect of such inconvenient change. "Let us suppose there are no unions or other impediments in the labor market." The modern corporation has not yet been assimilated to economic theory, although the corporate system is all but coterminous with mining, communications, public utilities and manufacturing—in short, the largest part of economic life. The theory of the firm makes no distinction between a Wisconsin dairy farm and General Motors Corporation except to the extent that the latter may be thought more likely to have some of the technical aspects of monopoly (4). All economists agree that there has been a revolutionary increase in popular well-being in the past thirty years. Most textbooks have yet to concede that this has altered economic calculation or affected economic motivation. It is not supposed that the shape of the economic problem is changed by being solved.

The reasons for reluctance to admit to the effects of underlying change are three: again there is tendency to

protect vested interest; there is the old and familiar phenomenon of the imitative scientism of the social sciences which is, perhaps, carried farther in economics than in any other discipline; and there is the natural wish of the scholar to avoid rowdiness and controversy.

On vested interest there need be little comment. We all have a lively stake in what we understand. Moreover, much underlying change, especially the movement to higher levels of well-being, diminishes the urgency and scope of economic judgment and diminishes, in some degree, the importance of the discipline. Unions and corporations introduce social theories of organization which replace the economists' market theory; well-being reduces the importance of economic choice and therefore of economic advice based on economic calculation. So, like cavalymen, locomotive firemen and fundamentalist pastors, economists find it tempting to deny what it is professionally disadvantageous to concede.

The natural sciences are not subject to underlying institutional or behavioral change. In consequence, economics seems more scientific if it is deemed to have a similar immutability. This explains, in turn, the considerable scientific self-righteousness with which sophisticated scholars avow the irrelevance of, say, the advent of modern advertising for the theory of demand. It is a libel on the subject to suppose that its scientific verities are affected by such superficial change. Moreover, the first steps to bring institutional changes within the framework of economic analysis are invariably tentative, oral rather than mathematical and lacking the elegance of a methodological innovation. Hence they are readily dismissed by the men of scientific reputation or pretension as rather sloppy (5). Thus does scientism sublimate the progressive instincts of the profession away from institutional accommodation and into methodological advance. It does so with the blessing of presumptively scientific attitude, method and conscience.

But an instinct to caution also plays a role. Methodological change rarely has implications for public policy; if it does, they are likely to be minor. Assimilation to change, by contrast, may have large and radical policy implications. Economists who have been associated with such changes and the related policy—the late Lord Keynes in

Britain, Alvin Hansen in the United States—have led a highly controversial existence. This is not to the taste of all. I do not suggest that economists are craven. Other disciplines have far less experience with controversy because they are not under attack at all. But it seems certain that many economists do find harmony agreeable. At the present time, having just come through the accommodation to underlying change now denoted as the Keynesian Revolution, and having discovered that the critics who once dissented are acquiescent and may indeed be sensing a common ground with economists on the conservative consequences of according priority to economic goals, there may well be a special reluctance to look for new trouble. In the intellectual backwaters the name of Keynes still strikes a radical note. Surely it is possible to bask a bit longer in the reputation for living dangerously that his name thus invokes (6).

Accommodation to Change

This reluctance to accommodate to underlying change is not new. Its consequence is that in time of change the practical advice which reflects the accepted economic view will often and perhaps usually be in error. The advice will relate to previous and not to the present institutions; but, needless to say, action must be related to the reality. If it is not it will be in some degree damaging.

The danger here can be illustrated by reference to the last great change in underlying behavior and institution and the related watershed in economic decision. In this century, as I have observed, unemployment—the failure to use resources—replaced the problem of efficiency in resource use. In the autumn of 1929, when unemployment began to grow rapidly, President Hoover's first instinct was to cut taxes, which he promptly recommended, and to urge corporations to maintain purchasing power by not reducing wages. This was completely in conflict with accepted economic views. These continued to respond to the belief that efficient production, not unemployment, was the central need. In accordance with these views there should be no interference with the labor market. Business confidence, also important for efficiency, required adherence to the gold standard and a balanced federal budget. This

advice was of no value for preventing unemployment; nearly all economists would now agree that measures so inspired would make matters worse. In time, it might be added, Mr. Hoover surrendered to the accepted economic view. The subsequent reversal of the approved policies by President Roosevelt in 1933 was viewed at a minimum with skepticism and at a maximum with hostility by most economists of acknowledged reputation (7, 8). This outcome was to be expected. There had been extensive underlying change leading to change in the problem to be solved. Accommodation was, as usual, slow. Prescription was, accordingly, for the wrong problem. As a matter of prudence, this tendency of economists must be expected in any time of change.

Unemployment

The preoccupation of economists continues to be with unemployment and with the immediately related question of the volume of output of goods and services which is the remedy for unemployment. As noted this is reinforced by moral sentiment. Only the heartless would countenance any other concern. Once again underlying change has made the preoccupation partially obsolete; as a result the recommendations are once again either irrelevant or damaging. I have used the phrase "partially obsolete." The problem is complicated by the tendency of institutional change to introduce new preoccupations without entirely dispensing with the old ones. In the 1930's, though unemployment became the central problem, inefficiency did not become unimportant. Economy in the use of resources remained desirable both in the interest of domestic users and the competitive position of the country. A high level of employment and an adequate rate of economic growth remain important now. The need is to prescribe first for the most important problems. If there is inconsistency in prescription for the primary and secondary (or other subordinate) problems, priority must go to the primary problem.

It will be agreed that, as unemployment declines from the (perhaps) 25 percent of the labor force which it reached as a maximum during the thirties to the 2 or 3 percent which is the practical minimum, concern

should gradually shift to other issues. Some such transfer of attention should presumably have occurred when unemployment had reached the present level of around 6 percent. Failure so to shift attention will reflect some irrationally stubborn insistence on unemployment as *the* problem. A shift in attention will be even more certainly in order if there are obvious shortcomings in the lives of those who are employed—if education is deficient, regional development is unequal, slums persist, health care is inadequate, cultural opportunities unequal, entertainment meretricious, or racial equality imperfect. And the need for prior concern for education, slum abatement, improved health, regional development, or racial equality would be even more clear if these could be shown to be the cause of unemployment and retarded economic growth. In fact all of the conditions for a shift from the primary preoccupation with unemployment and growth do exist. The primary prescription must henceforth be for what may broadly be called the quality of life. This is now the primary goal.

Reference to the quality of life will be thought replete with value judgments; the condemnation of value judgments is one of the devices by which scientism enforces adherence to traditional preoccupations (9). But there should be no major quarrel even by economists with a social goal which accords the individual the opportunity of providing for all of his needs, not merely for a part of them. And there will, one imagines, be a considerable measure of agreement that the individual is the end in himself and not the instrument of the organization, public or private, which was created to serve him. There are now recognizable imperfections in both of these areas. They follow from the priority accorded economic goals and the considerable power of the machinery we have created to pursue these goals.

Economic Goals

There is first the continuing imbalance in meeting of needs. We identify economic performance with the production of goods and services, and such production is the task of the private sector of the economy. As a result privately produced goods and services, even of the most frivolous sort, enjoy

a moral sanction not accorded to any public services except defense. Desire for private goods is subject to active cultivation—a point to which I will return. And the equation of psychic with physical need excludes any notion of satiety. It is a mark of an enfeebled imagination to suggest (say) that two automobiles to a family is some kind of limit. Public services, by contrast, are the subject of no similar promotion; that there are severe limits to what should be expended for such services is, of course, assumed.

The consequence of this differential attitude is a sharp discrimination in favor of one and against another class of needs. Meanwhile a series of changes in the society increases the pressure for public services. Increasing population and increasing density of population increase the friction of person upon person and the outlay that is necessary for social harmony. And it is reasonable to suppose that growing proportion of the requirements of an increasingly civilized community—schools, colleges, libraries, museums, hospitals, recreational facilities—are by their nature in the public domain.

Finally increasing private production itself increases the urgency of public services. The automobile makes obvious demands in its requirements for streets and highways, for traffic control, control of air pollution and investment in public order. From the pressure of mining, fishing, lumbering and other resource industries on public agencies responsible for conservation to the pressure of the exploding container industry on trash removal, the effect is similar.

It should also be observed that if appropriate attention is not accorded all needs, the private sector itself will suffer in technical performance. As Francis M. Bator has pointed out, "modern science has made public the very activity of producing inventions" (10). And modern industry has come to require its own type of man. One significant consequence is that a major part of the unemployment with which we are preoccupied is of people whose location, family characteristics, youthful environment or race denied them access in their youth to normal opportunities for education and training (11). The same is true of individuals and families which fall below the poverty line (12). Thus it comes about that the remedy for unemployment and individual privation depends to a very

considerable degree on the balance between public and private services—or, more generally, on measures to improve the quality of life.

I have dealt with a number of these concerns before; I do not wish further to risk the rebuke that accrues to the scholar who repeats his own work and that of other people. But there is a new danger in this area which is now urgent.

If unemployment is deemed to be the dominant problem, and if, as in the past, expansion of the economy is deemed a complete remedy, it will not matter much how this is achieved. Tax reduction and an acceleration of the expansion in demand for the output of the private sector will be entirely appropriate. Even some reduction in public services if offset by a larger increase in private outlays will be sound policy. However, if the problem is the quality of the society, it will matter a great deal how the expansion of demand is managed. Improvement in needed public services, given the tendency to imbalance, improves the quality of the society. Expansion of private services without expansion of public services brings *prima facie* no similar improvement. It could lead to distortions that would mean a reduction in the quality of life. And plainly an expansion of the private sector which is won at the expense of the public sector is intolerable. It provides what we least need at the expense of what we most need. And since the ultimate remedy for much unemployment depends on public sector investment in the unemployed (or their children), the policy may fail in even its avowed purpose.

There may be times when tax reduction will be a legitimate measure for securing improved economic performance. Defense expenditures are a large share of all public outlays and also are protected by a different set of attitudes. Should it be possible and practical to reduce these, it would be possible and perhaps necessary to reduce taxes—even while improving other services.

It is possible also that prior to the recent tax cut, the tax system, with its highly progressive impact on increased personal and corporate income, took an undue amount of income from the economy when this was at or near full employment. As a result, with lower taxes there could be a higher rate of growth, higher public revenues and better provision for public services.

This case was vigorously made. While I was less confident of the calculations than some of my friends—a recession arising from then current levels of tax collections was firmly predicted for mid-1963—one could not entirely reject the argument. But it is the only case that had merit. The Keynesian argument, which was and remains the more common case for tax reduction, is that any source of spending is acceptable that expands the economy. By bringing unbalanced expansion it misses opportunity for improvement in the quality of life. And since expansion and increased unemployment require improved public services, it may even be self-defeating. It also unites an undiscriminating and obsolete Keynesianism with those who argue for lower taxes and less government. This could be a formidable and damaging coalition (13).

Subordination of the Individual

The quality of life will also suffer if the individual is not an end in himself but an instrument of some purpose that is not his own. This too is inherent in our situation. We have developed an economic system of considerable power. We have reason to be grateful for its achievements. But it has its purposes; it seeks naturally to accommodate society to these purposes. If economic goals are preoccupying we will accept the accommodation of society to the needs of economic organization as an economic imperative. We will regret our surrender but we will reconcile ourselves to the inevitable. If we have economic goals in proper perspective we will see that no such subordination is necessary.

One part of this subordination, that of the individual to specific organization, most notably the corporation, has been much discussed (14). There can be little doubt as to the tendency. The corporation requires its own type of man; he must be willing to subordinate his own goals to those of the organization. And it is necessary that he do so if the organization is to succeed. Such subordination, in some form or other, makes possible group performance of tasks. This merges experience, knowledge or technical skills for a result superior in content and reliability to that of the individual. It is a functional necessity of modern organization. Such suppression of individuality in modern

organization is not lessened by the contemporaneous espousal, as regularly happens, of a muscular creed of individualism.

We must keep this part of the problem in perspective. The competitive market also has its *type*, and it is not so clear that the wary, uncompassionate, self-regarding, wit-matching trader, in whom both deviousness and cupidity may have been as often rewarded as penalized, would have been kept in the Temple in competition with the Organization Man. The corporation executive commits himself voluntarily to what Mr. Whyte has called the social ethic of the corporation (15). He can readily escape if he is willing to forego the compensation which purchases his conformity.

The most serious problem is not the discipline imposed by organization on its members and accepted by them. The problem is the discipline such organization seeks to impose on society to make the latter accord better with its needs. The behavior and beliefs of society are in fact subject to extensive management to accord with economic need and convenience. Not even scientific truth, much as our culture presumes to canonize it, is at all exempt. Thus the tobacco industry does not conceal its discontent with scientists who, on the basis of rather impressive evidence aver that cigarettes are a cause not only of lung cancer but a disconcerting assortment of other fatal or disabling maladies. The economic well-being of the industry requires the active and energetic recruitment of new customers. This need is paramount. So there is no alternative to impeaching the scientists and their evidence (17). We should notice that the freedom of the individual to smoke and contract cancer is not at issue here. That fundamental liberty is not in question.

Similarly, and in conceivably a more dangerous area, we have come to assume that our defense strategy, and even in some degree our foreign policy, will be accommodated to the needs of the industries serving the defense establishment. Before leaving office, President Eisenhower issued his notable warning on the rise of the civilian-military complex, a concern which had previously been pressed somewhat less influentially by the late C. Wright Mills (17). The Eisenhower-Mills contention was, in essence, that defense budgets and procurement were being influenced not by national need but by what

served the economic interests of suppliers. Similar consideration, as distinct from national need, has manifested itself on behalf of manned bombers, Skybolt, Dyna-Soar and other weapons including some where it met with success. The resistance in 1963 to the partial nuclear test ban by organizations closely identified with the manufacture of weapon delivery systems was motivated not by a unique view of national interest but by industrial need and the preferences of the Air Force.

However, these are only extreme cases; they highlight an effort that is pervasive and inherent. No producer, in our present state of economic development, would be so naive as to launch a new product without appropriately reconstructing the pattern of consumer wants to include the innovation. He cannot be sure of succeeding. But he would never be forgiven if he failed to try. Nor does any commercially viable producer leave the consumer to unpersuaded choice among existing products. The management of consumption in accordance with economic interest has become one of the advanced arts of our time. The participants urge their virtuosity in uninhibited terms save, perhaps, when it becomes a subject for scientific discussion. At this stage it becomes a bland though indispensable exercise in providing public information.

In a well-to-do community we cannot be much concerned over what people are persuaded to buy. The marginal utility of money is low; were it otherwise people would not be open to persuasion. The more serious problem lies in a conflict with truth and esthetics. The meretriciousness associated with the shaping of popular taste to economic need is by way of becoming one of the hallmarks of the culture. There is little that can be said about most economic goods. A toothbrush does little but clean teeth. Aspirin does little but dull pain. Alcohol is overwhelmingly important only as an intoxicant. An automobile can take one reliably to a destination and return him and its further features are of small consequence as compared with the traffic encountered. There being so little to be said, much must be invented. Social distinction must be associated with a house or automobile, sexual fulfillment with an automobile or shaving lotion, social acceptance with a hair oil or mouthwash, improved health with a cigarette or a purgative. We live sur-

rounded by a systematic appeal to a dream world which all mature, scientific reality would reject. We, quite literally, advertise our commitment to immaturity, mendacity, and profound gullibility. We justify it by saying it is economically indispensable.

The conflict with esthetics is even more serious and much more general. As the economic problem is resolved, people can be expected to become increasingly concerned about the beauty of their environment. The natural priorities of a society proceed from the getting of the goods to getting the surroundings in which they can be enjoyed. But, at least in the short run, there is no necessary harmony between economic and esthetic accomplishment. On the contrary, short-run conflict must be assumed.

With rare and probably accidental exceptions, an esthetically attractive environment requires development within an overall framework. Thus agreeable urban communities are invariably those in which law or fashion allow of variant treatments within a larger and symmetrical framework. Such communities must be related to properly protected open space, for parks and countryside lose their meaning if they are invaded at random by habitation, traffic, industry, or advertising. Some segregation of industry and commerce from living space is essential if the latter is to be agreeable—neither a steel mill nor a service station is an esthetically rewarding neighbor. In a different area good theatre and good music require the protection of a mood; they cannot be successfully juxtaposed to rhymed jingles on behalf of a laxative.

Economic Priority

All of this is in conflict with short-run economic priority (18). The latter will seek the greatest possible freedom for uninhibited use and dissonance; it is the essence of esthetics that there be some framework and hence some control. Those who sense the need for such control surrender to the assumed economic necessity. For its part economic organization strongly affirms its need for freedom. Proposals for control are pictured as subversive; concern for beauty is pictured as effete. Purely as a matter of tactics this makes sense. It is an elementary precaution in a conflict of this kind to identify the enemy with bolshevism or pederasty.

We see, however, that this need not necessarily be accepted. The priority of economics will continue to be defendable—and with enhanced vigor that derives partly from the sense of increasing obsolescence and the need to resist it. But we can have the social planning that erases grime and squalor and which preserves and enhances beauty. A price in industrial efficiency may be necessary. Indeed it should be assumed. Economic development enables us to pay the price; it is why we have development. We do not have development in order to make our surroundings more hideous, our culture more meretricious or our lives less complete.

Nor, as scholars and scientists, should we be detained for a moment by the protest that this is a highbrow view and that people want what they want. This is the standard defense of economic priority. Those who most insist that this is what people really want are those who most fear that, given the opportunity, people would make a different choice—one that involves a greater measure of social control of environment.

It will be sensed that these are controversial matters—much more controversial than the questions surrounding economic growth and full employment. Important questions of social policy inevitably arouse passion. A consensus is readily reached on those that are unimportant or on their way to solution. There could be no better test that economics is now solving the wrong problem.

Escape from the commitment to economic priority has, it will be clear, a broadly emancipating role. It enables us to consider a range of new tasks from the beautification of our cities, the cleaning up of roadside commerce and advertising, the enlargement of cultural opportunity, the redemption of mass communications to the suppression of the influence of weapons makers on foreign policy. The political and social power that is available for these tasks is not negligible. Scientists, humane scholars, teachers, artists, and the community that is identified with these preoccupations have been asserting themselves with increasing influence and self-confidence. Given a clear view of the issue and need and given release from the assumption of economic priority, that influence will surely deepen and expand. Nothing is more to be wished, welcomed and urged.

References and Notes

1. I have discussed the matter at some length in *The Affluent Society* (Houghton Mifflin, Boston, 1958), chap. 2.
2. Karl Marx, preface to *Critique of Political Economy* (1859).
3. A. Marshall, *Principles of Economics* (Macmillan, London, ed. 5, 1907), p. 1.
4. "... the functioning of the modern corporate system has not to date been adequately explained or, if certain explanations are accepted as adequate, it seems difficult to justify" [E. S. Mason, *The Corporation and Modern Society* (Harvard Univ. Press, Cambridge, 1959), p. 4].
5. One thinks here of Adolf Berle's efforts to bring the corporation within the framework of economic analysis. Though it has many shortcomings it has had much greater relevance to the behavior of the firm than theoretical models which ignore questions of size and corporate structure. But among the economic cognoscenti the work has enjoyed very little standing.
6. I should like to stress again that in discussing the reluctance of economists to accommodate to underlying change my motive is not criticism but to isolate a fact of some contemporary consequence. And while I am identified with the notion that increased well-being has had a profound effect on economic behavior, I am not entering a personal complaint of neglect. On the contrary it is the view of important economists that these contentions have received too much attention. Thus in a recent article George Stigler, the present president of the American Economic Association, expresses "shock" that so many more Americans have read *The Affluent Society* than *The Wealth of Nations* ["The Intellectual and the Market Place," *Univ. of Chicago Graduate School of Business, Selected Papers No. 3* (1963)]. I am reluctant to reply to Professor Stigler for I could seem to be urging the claims of my book against those of a very great classic. And I could conceivably be missing the deeper cause of Professor Stigler's sorrow which may be not that so many read Galbraith and so few read Smith but that hardly anyone reads Stigler at all.
7. The Roosevelt economists were largely without professional prestige. None of them—Rexford G. Tugwell, Gardiner C. Means, Mordecai Ezekiel, Lauchlin Currie—ever fully survived the premature identification with policies that nearly all economists now consider right. They were righteously excluded from professional honors. Nor were they the only ones. In 1936 the Harvard Department of Economics dismissed as eccentric a suggestion that John Maynard Keynes, the prophet of the policies related to unemployment, be numbered among the leading economists of the day who were being endowed with an honorary degree at the tercentenary celebrations in that year. Honors went to men who, in general, urged wrong but reputable policies.
8. Compare, for example, *The Economics of the Recovery Program*, by seven Harvard economists (Whittlesey House, McGraw-Hill, New York, 1933).
9. It is held that the provision of an expanding volume of consumer goods, among which the consumer exercises a sovereign choice, involves no value judgments. This might be approximately true if everything the consumer needs were available from the market and if no attempt were made to manage his choice. Conservatives instinctively but wisely insist that almost all important needs can be provided by the market, and that management of the consumer is of negligible importance. This enables them to rest their case on an impersonal manifestation of individual choice. It is also evident that the preconditions for their case are far from being met.
10. F. M. Bator, *The Question of Public Spending* (Harper, New York, 1950), p. 107.
11. In March 1962, 40 percent of the unemployed had 8 years of schooling or less. This educational group accounted for only 30 percent of the total labor force. At a time when national unemployment was 6 percent among males aged 18 and over, it was 10.4 percent of those with 4 years of schooling or less and 8.5 percent among those with 5 to 7

- years of schooling. Unemployment dropped to 4 percent among those with 13 to 15 years of schooling and to 1.4 percent of those with college training (testimony of Charles Killingsworth, "Automation, Jobs and Manpower," Subcommittee on Employment and Manpower, U.S. Senate [The Clark Committee], 20 Sept. 1963).
12. In 1956, 13 percent of families had incomes of less than \$2000. Of those with 8 or fewer years of education, 33.2 percent had incomes of less than \$2000. Among all unattached individuals 54.1 percent had incomes of under \$2000. Of those with 8 or fewer years of education, 80.3 percent had incomes under \$2000. (National Policy Committee on Pockets of Poverty, Washington, D.C. Mimeographed, 6 Dec. 1963.)
 13. "There is mounting realization of the injury to incentives and economic growth arising out of the magnitude of taxation. From this has come increasing determination to do something about it. This is all to the good. There is also a rising realization that there is something wrong about reducing taxes unless something also is done about curbing expenditures to avoid the need for big deficits in budgets. This also is good. But the general insistence on reducing expenditures falls short of that on reducing taxes. This failure to place equal emphasis on expenditure reduction can mean a danger of continuing big deficits." ("Important Trends in Our Economy," United States Steel Corporation, 1963 Annual Report, p. 38).
 14. W. H. Whyte, Jr., *The Organization Man* (Simon and Schuster, New York, 1956). Whyte relates this subordination is rationalized by "... that contemporary body of thought which makes morally legitimate the pressures of society against the individual" (p. 7).
 15. ———, *ibid.*
 16. On 31 March of this year, Zach Toms, presi-

dent of Liggett & Myers Tobacco Company, said of the Surgeon General's report: "we think . . . [it] went beyond the limits of the problem as now understood by other qualified scientists." At the same time the president of the American Tobacco Company, Robert B. Walker, dismissed the scientific evidence as "... first of all the frustrations of those who are unable to explain certain ailments that have accompanied our lengthening span of life on earth and who see in tobacco a convenient scapegoat." On 14 April, Joseph F. Cullman, III, of Philip Morris, Inc., said that his advisers "do not feel the prime conclusion is justified on the basis of available scientific knowledge and evidence."

17. C. W. Mills, *The Power Elite* (Oxford Univ. Press, New York, 1956).
18. Given the self-destructive character of much unplanned investment, the longer-run conflict is not so clear.

Environment and Man in Arid America

Geologic, biologic, archeologic clues suggest climatic changes in the dry Southwest in the last 15,000 years.

Harold E. Malde

The study of ancient people in the dry Southwest has long commanded the attention of scientists interested in man's response to a changing environment. Although environment is not the only factor controlling man's destiny, its influence is particularly evident in the Southwest, where small climatic changes have noticeably altered the landscape, the plants and animals, and man's way of life. In this survey I indicate only a few of the methods used to gain an understanding of man's past, emphasizing recent contributions and basing the chronology mainly on radiocarbon dating, tree-ring counts, and pottery sequences. The chronology contains numerous gaps and dubious dates, but it is the best framework available. A chronology can also be constructed by correlating local stratigraphic sequences, but such sequences are commonly incomplete and their correlation

is still problematic. Moreover, many interesting biogeographic matters and isolated archeologic sites are not yet tied to geologic stratigraphy. In this article stratigraphic names from geologic and archeologic parlance are avoided, except for a few terms in general use.

Several kinds of evidence in the Southwest point to a period of cool and moist conditions, coinciding with the close of the Pleistocene, followed by warmer, drier conditions, and then by a return to a somewhat cooler and wetter climate; but the sequence of environmental change is complicated by climatic fluctuations of lesser magnitude and by differences in the impact of climate on different landscapes.

Earliest Signs of Man

The age of man in the New World has not yet been satisfactorily determined, but there is undoubted evidence in the Southwest that he hunted mammoth and other large animals about

12,000 to 13,000 years ago—when the last Pleistocene glaciers still covered northern North America—using bifacial blades known as Clovis points (1). Some archeologists (2) recognize a "pre-projectile point" assemblage of less specialized tools (identified as crude scrapers, pebble choppers, and hand axes) more primitive than Clovis points and presumably older. Despite the lack of specific evidence, because of the diversity of man's environmental adaptations in early times it is not unreasonable to assume an age for man in the New World of at least 15,000 years (3).

A few radiocarbon samples, supposedly dating man's campfires, suggest even greater age (4); but for one reason or another these dates are discounted by most archeologists, though not by all.

Geologic Signs of Environmental Change

Geologic evidence of wetter-colder climate during the late Pleistocene, and the subsequent physiographic changes, comes from the history of mountain glaciation, the rise and fall of pluvial lakes in closed basins, accumulation and dissection of alluvium, and the various effects of wind action (5). The position of late-Pleistocene snow line near pluvial Lake Estancia, 100 kilometers southeast of Albuquerque, implies that summer temperature was reduced 5° to 6°C (10° to 12°F) and that annual precipitation increased about 200 millimeters (8 in.) (6). Meteorologic study of a Pleistocene lake in Spring Valley, near Ely, Nevada, indicates a probable 30-percent decrease in evaporation, a 200-milli-

The author is a geologist with the U.S. Geological Survey, Federal Center, Denver, Colorado. This article is adapted from a paper presented 3 September 1963 at the 59th annual meeting of the Association of American Geographers in Denver.