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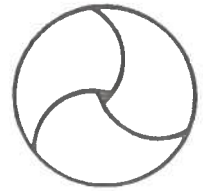
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PLANNING IN AN ENVIRONMENT OF CHANGE

Part I : Beyond the industrial age

Part II : Permissive Planning

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Toward these ends, current research is directed to the economics of urbanization in the West and in the Third World; techniques of environmental management; effects of using new energy sources; emergent patterns of suburbanization and central area reconstruction; evaluation of alternative modes of transportation; design of effective means for supplying social services; contemporary issues in housing policy; regulation of urban growth and uses of land; determinants of urban livability and the factors shaping urban life; and potential improvements in methods of analysis, evaluation, and planning.

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PLANNING IN AN ENVIRONMENT OF CHANGE

Part I : Beyond the industrial age

by MELVIN M. WEBBER

A New Concept of the Future

We are constantly amazed at the speed with which our images and attitudes absorb new ideas and new technologies. Novelty appears to have a rapid decay rate in the modern western world. Once television was made cheap enough for mass distribution, it quickly became part of people's every-day lives. Within a year after Sputnik was launched, space shots scarcely seemed remarkable any more, even though the recent satellites' experiment packages are surely far more sophisticated achievements than the vehicles that orbit them. Then, when satellite transmission of television broadcasts became work-a-day, we readily accepted simultaneous world-wide visual communication as just another clever technological novelty. By next year, heart-transplants will scarcely warrant notice by the news media. And so it has gone, step by step, each dramatic achievement — even the unanticipated big leap—has a way of becoming commonplace after the fact.

Because we have lacked adequate predictive theory of technological or social change, we have tended to confront each incremental development as it occurs, regarding it as a unitary, independent event. Few people have tried to trace the waves of repercussions that those events might in turn generate through the larger systems of which they become new component parts. Fewer still have tried to predict the chains of consequences that numerous and *cumulative* changes would then induce within the larger systems. And so we have calmly accepted each new accretion, telling ourselves that 'the more things change, the more they remain the same'.

Virtually everyone now knows that the rate of discovery and invention has been explosive during these past two decades; and yet we in the developed world seem to have accepted even that fact as a stable condition and take rapid change as a normal, no-change condition. Perhaps this is a further indication of our large adaptive capacities — in both senses of that phrase: first, that modern social systems have been able to absorb new development without permitting them to rock the social order and, secondly, that we must *believe* that change is no-change, for to believe otherwise would itself upset our perceptions of social order. However, even if true in the past, this is not likely to go on. Knowledge of physical, biological, and social systems is expanding at such a fantastic rate that it is triggering off an equally fantastic expansion in the technologies through which those systems can be modified. These new intellectual resources are making it

increasingly possible to anticipate future scientific discovery and technological invention and to forecast some subsequent social effects of discovery and invention. As social theory improves, we are likely to be better able to forecast social change too. In turn, better forecasts will permit us deliberately to plan our responses to those anticipated outcomes — even to select, in some fields, those of the possible outcomes that we happen to prefer. This is to say, in effect, that among the consequences of the knowledge explosion is the emergence of a new way of thinking about the future. That conception is the derivative of our new capacities for prediction, our new images of our powers for controlling future events and, hence, a new outlook suggesting that, to a considerable degree, maybe we really can invent the future.

This new concept of the future represents a remarkable change, a change that is potentially as important as any of the developments that are now building up in the developed world. Let me here simply state my thesis, which I will elaborate upon later.

Pre-industrial societies around the world all seem to be marked by a common perception that the future lies outside the field of vision and certainly outside control. The accumulating studies of peasant and primitive societies are revealing a common fatalism in virtually all of them. Some (the Sioux Indians are one example) do not even have a word for 'future' in their languages. Others that do conceive of future time see its events as in the hands of the gods.

With the coming of industrialization and the commercial economy, possibilities for forward scheduling of production and the requirements for monetary credit provoked a different image of the future. Within the short-run, managers found they could shape the institutions under their control. Observed and anticipated stability in growth rates permitted banks to make loans, with the prospect that they would be repaid. Population forecasters could extrapolate trend lines with some confidence that whatever determined birth and death rates in the immediate past would probably continue to affect them in the immediate future. Indeed, a large insurance industry was in fact built upon the actuarial estimates of probabilities that grew out of these measurements of system stability. For that matter, the whole of the industrial structure was built against the conception of the future that saw a sufficient degree of stability in the short run to justify investment. To account for those future changes that were not or could not be anticipated, the market system developed to feed information on change back into decision centres, so that managers and consumers could then adjust their predictions.

In brief, in the vernacular conception of the industrial age, the future was seen as closely resembling the present; where conditions and events would depart from the present, the response was to *accommodate* to those conditions and events.

The big change which is commented on later, is the current shift away from that image of stability and accommodative response. With the emergence of the post-industrial stage of development, the future is being seen to depart drastically from the present, and it now looks as though men will be seeking more directly

to design the future. If we can characterize a single distinguishing difference between the outlooks of the industrial age and of the post-industrial age it is this: that industry and government in the recent past had to respond to change after the fact; in the post-industrial age they will be intellectually equipped to respond before. That is to say, that the coming style for confronting the future will be forecasting and planning.

We are already seeing the signs of this new post-industrial outlook in the rapid rise of new quasi-science of futurism and, in parallel, the rise of a large number of new kinds of planning institutions. These signs are seen in the projective work of such groups as Resources for the Future in Washington, Professor de Jouvenal's Futuribles group on France, The American Academy of Arts and Science's Commission on the Year 2000 and its several committees on the next ten years. In London, there are the Social Science Research Council's project on The Next Thirty Years, and the Centre for Environmental Studies' group on Developing Patterns of Urbanization. There are more. By now there is a literal flood of new institutes on the future being organized in America and elsewhere. Their counterparts are the new planning institutions with such unlikely names as CONSAD Research Corporation, the RAND Corporation, Systems Development Corporation, and the even more unlikely names Lockheed Aircraft Corporation, Aero-Jet General, Litton Industries, and so on.

The best of the new students of the future are trying to foresee latent qualitative consequences before they become manifest — in effect, to develop an early-warning-system that might signal impending disasters, as well as potentially beneficial outcomes that might be exploited were appropriate action be taken soon enough. Most important, they are attempting to trace out the alternative future histories — particularly the social and economic histories — that would be shaped by plausibly foreseen uncontrollable events and by deliberately designed ones.

Despite the excitement and fashion that is marking this activity, this is probably no fad. Had we been in the forecasting business before, the rise of futurist studies might have been foreseen as a deterministic outcome of the current knowledge explosion. More knowledge, better theory, and improved methods were bound to make conscious confrontation of emphatic and rapid social change inevitable.

Of course, neither students of the future nor practitioners of planning are new phenomena in our midst. There have been individual prophets and forecasters at work for a long time, but these men have typically been aberrants within the world of scholarship. Although scholars generally agree that the test of a theory is its capacity to predict well, theorists in the social and behavioural sciences have traditionally eschewed projective modes of thought in favour of observational modes; and they have done so just as firmly as they have declined normative interpretation in favour of positivistic accounts. The thing that is new is the emergence of a legitimate and organized activity, explicitly devoted to systematic and normative interpretation of potential future histories.

All this can be read as very good news to the city planners, who had for so long been the lonely custodians of a futurist tradition. But this new futurist enterprise can also be read as a serious challenge to the traditional thoughtways and activities of city planning. It is doubtful if city planning will ever be the same again once the impact of this new attitude toward the future, the new predictive technology, and the emerging theoretic sophistication begin to impinge upon it.

City planners have always claimed, of course, that their business is to influence, if not to shape, the future. But until recently, we have been pre-viewing history through very inadequate binoculars. The theory we have had to rely upon has never been good enough. Data have always been too sparse and ill-suited to our wants. Our methods have been too naïve to deal with the complexities of contemporary urbanism. Further, images of the future have always been shaped by the outlook of the industrial age. On all these counts, the new futurism should supply intellectual reinforcements that we have long wished for. This is not to suggest that we shall soon find the magic that will permit us to design the ideal future city. That is neither politically possible nor ethically tolerable. The course of history cannot be controlled either for, as the old-fashioned idea holds, there are logically derivative chains of developmental steps, such that certain social or technological changes determine those that follow.

That deterministic view might seem to be in contradiction with the growing stochastic view that sees events as probabilistic outcomes, and with the older teleologic view that sees history as the resultant of purposive, goal-seeking behaviour of men. These three conceptions are not in contradiction, only in competition.

As planners, we are well served by each. Insofar as our theory and their derivative models can help us to predict deterministically, we can act with greater confidence about the coming changes. Insofar as we can predict probabilistically, we can reduce the odds of error. And, insofar as we can teleologically set out goals and matching actions, we can accomplish the ends we seek. History, however, is not teleologically shaped to the degree that city planners have traditionally presumed. We *can* consciously force some events to happen. But not all. Much of the future will continue to lie outside our control, and we shall have to conform. Some can be approached only with the attitude of the gambler. And some of it can be invented and planned.

Our continuing intellectual problem will be to know when it is most useful to view the future deterministically, when it is best to view it stochastically (and hence as indeterminate), and when we can profitably view it teleologically. That question is likely to take on the character of an intellectual dilemma. In a setting of rapid technological and social change, the possibilities for 'accurate' prediction would seem to decline. But with improving predictive theory, we should also be able more sensitively to anticipate coming changes. And with increasing organizational capacities for large-scale decision and action, we should be able deliberately to shape more of the future than was once possible. No formula is available for resolving these competing views. It may be that the conceptual, methodological,

and governmental issues that surround these images will continue to occupy us as we are carried along into the coming decades.

Some Signs of the Future

Despite the diversity within the community of futurist students, there is a striking consensus among them concerning some of the major historical changes that appear to be under way. Nearly all are by now persuaded that the industrial age is coming to an imminent end in the western developed nations, and with it the end of the age of the industrial city. For a profession that emerged in response to the industrial city, this forecast must surely be of fundamental interest.

Today, when history is speeding up so rapidly, these commentators agree on one thing if nothing else: that western society is at a major turning point and that future society will differ vastly from contemporary society. In an article in a recent issue of *Encounter*, Professor Brzezinski put it flatly and unambiguously:

'Ours is no longer the conventional revolutionary era; we are entering a novel metamorphic phase in human history. The world is on the eve of a transformation more dramatic in its historic and human consequences than that wrought by the French or the Russian revolutions. Viewed from the long perspective, these famous revolutions merely scratched the surface of the human condition. The changes they precipitated involved alterations in the distribution of power and property within society; they did not affect the essence of individual and social existence. Life — personal and organized — continued much as before, even though some of its external forms (primarily political) were substantially altered. Shocking though it may sound to their acolytes, by the year 2000 it will be accepted that Robespierre and Lenin were mild reformers.'¹

He then goes on to say that 'Unlike the revolutions of the past, the developing metamorphosis will have no charismatic leaders with strident doctrines, but its impact will be more profound' and, it can be added, more subtle. The major current generators of these changes, he notes, include the computers and the new advances in electronic communication, which are fundamentally 'altering the mores, the social structure, and the values of society'. And the work of the futurists, he reports, already 'indicates that men living in the developed world will undergo during the next decades a mutation potentially as basic as that experienced through the slow process of evolution from animal to human status.'

It is not possible to present here a plausible and coherent scenario that might describe the unfolding of the revolutionary era that we will find ourselves in. But some events that already appear to be 'in the cards' can be recounted.

Because the United States is farthest along the paths toward post-industrial status and because most studies of the future are still localized there, the evidence will be drawn mainly from American experience. Insofar as the path beyond the industrial age is deterministic, the American experience is a precursor of future events in other highly developed societies as well.

The most apparent signal of post-industrialism is the shift in the composition of occupations. Industrialization initially moved men out of farming and related

extractive industries at a rapid rate. (In the United States the proportion of the labour force in primary industries fell from around 90 per cent in 1800 to 75 per cent in 1900 to about 5 per cent today, and it is still falling.) In Britain the current proportion is under 4 per cent. How would people have reacted to a forecaster 100 years ago who predicted that only 4 per cent of the labour force could produce all the products of farming, forestry, and fishing?

There was initially a counter-expansion that absorbed the labour force in manufacturing and related jobs — the ratio went from about 5-10 per cent in 1800 to 37 per cent in 1900. It has fluctuated around that level throughout this century, but it is now declining both as a percentage of total employment and in actual number. (In Britain it has varied between 43 per cent and 49 per cent during the 1910-1964 period.) Recently in the United States there has actually been a net loss in numbers of manufacturing jobs during the past ten years, as the service occupations have been expanding. Now, for the first time in the history of the world, there is a nation which employs more people in service than in manufacturing occupations. That in itself is a revolutionary event of dramatic order.

Despite the reduction of manufacturing employment and despite the reduction of the work week (from 60 hours in 1900 to 40 hours today) manufacturing productivity is still growing, repeating the history of agriculture, which reached its most productive stage only when it decanted its labour in favour of machines. The trends in productivity show no signs of abating. Someone at the RAND Corporation recently made the wild guess that America will eventually be able to satisfy *all* its needs with a mere 2 per cent of its labour force. His guess is a cartoon, of course; but his point is right.

Behind the rise in manufacturing productivity and the move into the service occupations lies the knowledge explosion that continues to impel the changes. Modern manufactured goods are congealed information; they are the products of intensive, organized research-and-development work that employs highly trained minds and sophisticated techniques. The machines that produce the machines are themselves the product of similarly intensive intellectual inputs. The jobs they create require long periods of training, frequently university-based training.

The rising demand for these sorts of R & D workers is being paralleled by a rising demand for other sorts of highly trained specialists — the university teachers, physicians, lawyers, management consultants, and the large varieties of other skilled specialists that complex organization and complex society demand. It is the contributors to and the practitioners within the knowledge industries who are now finding themselves on the crest of the new history. Indeed, the knowledge industry is fast becoming the new centre of influence and power, with the university and the 'R & D' firm assuming the roles that corporations and labour unions have recently occupied.

A coming repetition of the agricultural and manufacturing revolutions will be hitting the service industries in force before long. One reason people have been able to find jobs in the services is that the productivity of these occupations has so far remained low. But the signs of a change are already clear in banking, book-

keeping, and inventory control, where computers have found a ready application; in retail distribution, where customer self-service and mail-order service have reduced the need for sales clerks; and even in machine repair, where it is becoming cheaper to discard worn out parts and to replace them with plug-in components than to repair them. To the degree that cybernation can eventually take over the tedious repetitive service jobs, man-hour productivity will rise and demands for employees will fall.

Some futurists, most notably Donald Michael at the University of Michigan,² are confidently predicting that even middle-level white-collar management jobs will be rapidly falling before the competences of cybernation. As a result, the vast office staffs that have been performing these sorts of tasks are already being displaced. Similarly, routine personnel management jobs, engineering staff jobs, quality-control inspection jobs, and others are being better done by computers; and the bigger and faster machines that are now in the works will have far greater capacities than present models. As a result, the routine office-based paper-work occupations may soon go the way of the manual manufacturing occupations.

To be sure, ever since the cybernation revolution hit us in the mid-1950's, some persons have been heralding the time when the work of advanced societies would be largely consigned to machines, and men would be freed for non-work activities. It is true that it has not happened quite as rapidly as some of them had thought, in part because we have not yet found an adequate alternative means for distributing income other than through employment, in part because many of the service wants of advanced societies are very far from being satisfied. There still remain large latent demands for professional and sub-professional aides in the health services, education, child-rearing and, indeed, in the expanding knowledge industries themselves that could absorb unemployed labour for some time to come. Sport and entertainment are presently occupying increasing numbers of performers. As the volume of free spectator-hours increases with the declining work-week and extended vacations, these are likely to become major industries. But the prospect of massive non-employment is, for the first time in history, becoming real. The United States may soon be passing the threshold at which a full employment economy becomes an anachronistic goal.

As Mario Salvadori has put it, in pre-industrial times 'work was . . . a personal human necessity. A man who could not or would not work was the prey of the forces of nature, and his chances of remaining alive were minimal.' Later, and especially during the *early* industrial era, work was considered 'man's duty and lifted to the level of the most honoured human activity, until it became man's pride'. Then, in the late-industrial period, with the rise of the labour union and supporting national legislation, work became a right. Now, as Salvadori puts it, 'We are . . . witnessing the beginning of a situation in which work is no longer a right but a status symbol.'³

We have already reached the stage when the most highly skilled professionals work the longest hours and the least skilled labourers the shortest. If we should ever reach the stage when only two per cent (or twenty per cent, or even fifty per

cent) of the employables can work, it will clearly be the men with the rarest skills who will hold jobs. The very fact of their being employed will confer high social status, reversing a long-standing rule of social ranking. What then is to become of the rest of us? In the early transition period, how will we deal with the sense of guilt that idleness will raise? The Calvinist ethic now assures us that idleness is the work of the devil and that work is virtuous. Under the initial impact of enforced unemployment, we shall have to create a new ethic to replace the mores that have so strongly dominated the Judeo-Christian world for so long.

And how will people spend their time? Some will find satisfying volunteer service roles in helping others. Some will find creative outlets in the arts, sports, and the more traditional leisure-time activities. But, in addition, *learning* may become the major non-paid occupation of large segments of the population. The signs are by now beginning to show in the expanding demand for adult educational programmes, the rapid growth of educational television, the sales boom in books and magazines, and the growing interest in music, theatre, and the traditional fine arts. A world that turns from making things to enjoying ideas may sound like a fantasy better suited to utopian or science-fiction literature than to responsible forecast. At this stage of things it is still too early to know how the librarians ought to classify it. It is as plausibly the one as the other.

It is equally plausible to expect a continuing rise in popular participation in politics and civic affairs. The long-term trend toward wider distribution of political power and active citizen involvement is being dramatically expressed today in the rebellions localized in the major cities of the world. The current search among the world's youth for meaningful forms of 'participant democracy' is being interpreted by some as a transitional crisis condition that will somehow eventually find a stable resolution. Others see it as a preliminary precursor of a continuing style of inter-generational confrontation. Again, either forecast is plausible.

In a world where machines will do more of our work and institutional change will be rapid, surely different forms of meaningful occupation must evolve. Already the concept of 'full employment' has been modified with the slow accretion of changing practices. Early retirement is displacing people from the labour force before their productive years have run out. Young people are entering the labour force at much later ages than their fathers, first devoting long periods to education. Their delayed entry is paid for in part by the scholarship systems. Britain already offers college grants to virtually everyone who can qualify for college. The United States may soon follow this example; even without universal grants, around 40 per cent of American youth receive some college training, and the proportion is rising rapidly. In California, it is now nearly 80 per cent. It is also true that the number of women in the labour force is also rising, particularly married women, more particularly well-educated married women whose children no longer require them at home. But that too may be in for a change as husbands' salaries rise sufficiently to provide satisfactory family incomes and as more women find productive voluntary outlets for their activities.

Few futurists doubt that family incomes will continue to rise far beyond the wage earners' present expectations.

Kahn and Wiener are using a middle-level projection of United States per capita income for the year 2000 of around \$10,000, a trebling of the 1965 level of \$3,500 in but 35 years. That is equivalent to a shift from around £1,400 to around £4,100 at current official exchange rates. With an annual average growth in Gross National Product (GNP) of 3 per cent in Britain, the 1966 per capita share of GNP would rise from about £590 to £1,400; at 4 per cent it would rise to over £2,000 — well over trebled in 35 years. These are per capita estimates. Multiply them by a modest 4 members per family, and they suggest average family incomes in the year 2000 of the order of £16,000 in the United States and £5,600 in Britain at 3 per cent, and £8,120 at 4 per cent growth rates. Extend these forecasts an additional 20 years and the average family income levels jump to over £31,000 in the United States and between £10,500 and £15,500 in Britain — all expressed in constant purchasing power of money.

These are mean estimates and ignore the questions of income distribution. They are also unrefined forecasts, as any such long-range quantitative estimates inevitably must be. But they do suggest a new scale for our thinking. And they also suggest what happens when large numbers get compounded at even modest growth rates over a few decades.

These forecasts have been adjusted for population increase which is also subject to the effects of compound interest rates operating on large numbers. So to emphasize the point, it is necessary to consider what could happen to GNP itself over the next decades.

In 1966 Britain's GNP was around £32,500 million. At a 3 per cent growth rate that figure would more than double by the year 2000 to £84,400 million. At a 4 per cent growth rate it would nearly quadruple to £122,000 million. At a 5 per cent growth rate it would quintuple to £167,000 million. By present outlooks, a steady 5 per cent growth rate is unlikely, but an average rate somewhat between 3 per cent and 4 per cent is probably a reasonable expectation. For a rough and conservative guess, let us accept that the 1966 level of GNP — £32,500 million — will go to £100,000 million in the next 35 years; a modest trebling. Then consider the levels of public expenditure that will be possible, rather, that will be *necessary* to maintain economic stability. Consider how much can then be allocated to education, motorways, housing, national parks, health services, the British Museum, and so on.

These estimated figures indicate that we are on the verge of unprecedented wealth in the developed nations, a level of affluence that few of us can yet begin to imagine. When combined with the new wealth of knowledge that is forthcoming, this affluence is sure to generate new opportunities, new priorities, and new problems. We must all soon ask how we will be using this new-found wealth and, far more important, what that wealth will do to the highly developed nations where hundreds of thousands might still be poor, and to a world where thousands of millions of people in Asia, Africa, and Latin America will still be absolutely poor and relatively destitute.

Behind the GNP curve lies the recent explosion in the arts, the sciences, and the technologies. This is a world-wide phenomenon, even though it is still heavily localized in but a few nations. Because knowledge is peculiarly ignorant of national boundaries, the scientists, artists, and technologists throughout the world have come to share a common body of information, theory, and method. They share a consensus on values and on the epistemological bases for valuation. In effect they share a common culture.

Unlike the commodities of other enterprises, knowledge has the peculiar properties of drawing upon infinite resources, of being infinitely expandable, and being enriched by consumption. Given the incentives of impelling intellectual pursuits, and barring political or celestial catastrophe, we can expect that the current knowledge explosion will continue. More, we can be confident that it will continue to expand at exponential rates. As more and more people tune into the knowledge channels — whether as students in organized schools, as workers in the knowledge industries, or as persons seeking an avocational substitute for paid work — we can also expect that rising proportions of the populations will share the non-national culture of the present intellectual elites.

The internationalizing effect of science is being abetted by the parallel internationalizing effect of the communications systems that science and technology have spawned. Men who follow the intellectual pursuits are now able to maintain virtually instantaneous contact with each other. As the speed of communication and transportation rise and as the costs fall, the links that unite them are being further strengthened. These links are not new ones, of course. For several hundred years men have been able to stay in touch with each other around the globe. What is new is the speed of communication that is now commonplace, the intimacy that high accessibility provokes, and the extension of these communication lines to nearly the whole of the western world's population.

Although it has been commonplace to note that radio, television, and jet airplanes have shrunk the world to a small fraction of its 19th century size, the scale is still so new that the consequences to society of that contraction are nonetheless still obscure. For example, student revolts around the world certainly cannot be attributed simply to the communications channels that have united the students into a common movement of protest, but those channels were nonetheless a necessary condition to the scenario that has evolved.

Throughout, there can be little doubt about the influence that radio, telephone, and particularly television has had upon similar movements of social protest. Television has the powerful capacity for turning distant events into local ones, for breaking through language barriers, and for communicating meaning as well as information. As its coverage extends to larger spectra of events and to larger numbers of people, it cannot fail to introduce an international unifying force with qualities never available in the world before. Real-time and realistic communication among such diverse places as Morningside Heights, Boulevard St. Michel, and the suburbs of Saigon has a way of turning these places into neighbourhoods within the same city.

Another effect of shrinking space and time has been the recent rise of the international business firm that makes the services of its headquarters' technical staff promptly available to all its branches, wherever they may be. Those global corporate networks are rapidly being bound together by data-transmission lines feeding into headquarters' computers that will further erode regional differences in products and practices. In turn corporate mergers are creating smaller numbers of giants that span nations, further integrating the world-wide economy and speeding up the processes of modernization.

The international revolution of rising expectations, the international student movement, and the international business firms are but the more visible signs of the spatially extensive communities that span nations. They are being paralleled by growing networks of informal organizations that join individuals and groups who share interests. These are perhaps best typified by the contemporary invisible colleges — those loose collections of colleagues which become visible whenever and wherever their members happen to gather, but whose real locations are inside the communication channels their members inhabit. They are typified, too, in the societies of Hippies, musicians, and diplomats who similarly share cultures with others who are spatially dispersed. The spatial extent of these culturally defined communities is spreading rapidly, as the pace of cultural diffusion rises: witness the speed with which fashions in clothes, politics, and architecture get transplanted from one corner of the world to others.

But the internationalizing trends do not necessarily mean that the world is becoming homogenized: just the opposite is happening. There can be no doubt that nationalism is on the rise at the same time that the cultural and economic boundaries of nations are becoming more permeable. So, too, is regionalism, at the same time that national governments and national pride are becoming stronger. Indeed, so too is localism, as the current community-organization drives in both the American suburbs and central city ghettos suggest.

It looks as though we are evolving a very ambiguous and complex sort of place-related social organization, in which groups joined by common interests are finding coherence against a wide range of spatial scales. Similarly, we are evolving a very complex network of interest bonds that are defining voluntary communities of ever more diverse sorts. Put another way, the rising scale of the society, the increased ease of communication, and hence the emergence of a world society is making for a range of cultural diversity that has never been possible before.

It was pre-industrial society that was homogeneous. Members of village communities followed similar life styles, shared common beliefs, and conformed to traditional behavioural norms. Members of the new high-scale world society have the opportunity to choose among a multiplicity of options. They can selectively join any of thousands of sub-groups, each with its own styles and value systems. They can selectively read in an ever-expanding literature, follow any of a growing number of religions and, for the near-future at least, choose careers from among a widening range of possibilities. The numbers of such options have been expanding during the industrial era. Nothing appears to suggest that this long-term trend will

be diverted. Increasing affluence, higher levels of education, and rapid social change are all likely to accelerate the trend to diversity — despite the shrinkage of the globe. I am suggesting that the forecasts of a mass-society are likely to prove wrong. Growing diversity in a growing society will have the inevitable effect of turning what would otherwise be small minorities into large and potentially powerful ones. Post-industrial society is likely to comprise a pluralism of competing minorities, with far less conformity than any in the history of the planet.

The shape of the world-population growth curve over the millenia is well-known, as are the frightening extrapolations into the future. There were about one-quarter billion people in the world at the time of Christ, one-half billion at the time the American colonies were being established, one billion in 1850, two billion in 1925, and there will be around four billion in the mid-1970's. The consensus forecast has been putting it at around six billion in the year 2000. But it may then stabilize there. Donald Bogue reports that the impact of contraception during the past few years has already reversed the long-term trend, and that the rate of population growth has been slackening since 1965. He is predicting that 'from 1965 onward . . . the rate of world population growth may be expected to decline with each passing year. The rate of growth will slacken at such a pace that it will be zero or near zero at about the year 2000, so that population growth will not be regarded as a major social problem except in isolated and small 'retarded' areas.'⁴

If his projection is nearer right than the straight extrapolative ones, and it seems that it is, then one of the two major doomsday threats will be eroded away. But the problems that accompany population growth will not disappear.

The poor and populous nations of the world have been losing ground steadily, relative to the levels of living that are emerging in the highly developed nations. Because population growth rates in the African, Asian, and Latin American nations are likely to respond more slowly to the contraceptive revolution, their status will be relatively worse in the future than now, despite even acceleration in rates of economic development there. At the same time, levels of literacy, aspiration, and international political influence are likely to continue to rise, providing the makings for a new scale of international conflict among the have and have-not nations on an unprecedented scale. Needless to say, those latent conflicts will be exacerbated by the visible contrasts that television and air travel will expose.

Richard Meier has recently been projecting the future patterns of city growth in Asia and finds no way of avoiding forecasts of city sizes up to 40 million.⁵ A few years ago Kingsley Davis prepared a forecast for Calcutta and concluded that the metropolitan area may have 36 to 66 million by the year 2000.⁶ In contrast, 19th century Manchester might have been a very amiable environment, and 21st century Manchester may strike many as a very attractive alternative. It is likely that the city expansion processes in the less developed nations are going to push immigration policy up to the top of the policy agenda in the more developed ones.

Similarly, the disparities in stages of development within the developed nations

are likely to generate the major domestic policy problems there. As measured against any absolute index of quality, life in the contemporary city is far more comfortable and far less riven by hardship than at any time in the past. Even at its worst, housing is cleaner, safer, and more sanitary than it was, say, at the start of this century. Hours of work have been cut dramatically. Disease rates have been drastically reduced; for some dread diseases they have been reduced to zero. Education levels have been raised for virtually all segments of the population. Incomes are up to levels that permit a quality of nutrition never before achieved by national populations at large. On all these indices, the future promises even more dramatic improvements.

And yet we are approaching the end of the century with large proportions of western populations living in poverty — poverty relative to current national norms and to current national capabilities. If poverty is defined as family incomes below half the national median, then the poor comprise twenty per cent of the United States population today and about 16-17 per cent in Britain. The combined effects of the various changes mentioned above do not necessarily mean that their relative status will improve during the next decades. In the absence of concerted efforts to counteract these effects, it is likely that those who are now poor will be relatively worse off than they are now, mirroring the growing relative deprivation of those in the less developed nations.

Those who have the social and cognitive skills that will permit entry into the affluent sectors of post-industrial society are likely to fare very well indeed during the next generations. Those who lack these skills may find the entry points are closed. In the short run, employers can be expected to demand higher and higher levels of education and training. In the United States even clerks are now being required to have twelve years of schooling, and to present themselves in middle-class modes of dress, behaviour, and speech. A growing proportion of occupations requires college-level preparation. Admission into the modern credential-society is becoming increasingly difficult. It is more difficult, in turn, to find positive roles that also confer a sense of personal dignity.

Many in America who still live in pre-industrial status and who have so far been excluded from industrial society have recently been indignantly demanding that they too have access to the modern world. The recent wave of riots is the most outspoken statement of their dilemma. The American experience has not yet been repeated in the other developed nations, where poverty also persists, but where working-class status carries dignity and stability. One wonders, however, whether the present American experience may be an early-warning of future European experience. At this moment in history, America is closest to the post-industrial stage of development. When the European nations and Japan reach that stage in the 1970's and 80's, can we expect that working-class groups will maintain their present stability? From this perspective it looks as if this is the critical question for urban planners. Today, America's central urban policy issue is posed by the dilemma of a large pre-industrial, city-based population in a society about to leave the industrial age. It could soon happen here in Britain as well.

Some Implications for City Planning

There are a great many other portents of the future that we might have recorded here: the revolution under way in biology and the new possibilities for extending life spans and for genetic engineering, communication prospects that lasers are promising, possibilities for new kinds of air-supported and electrically propelled vehicles, new prospects for weather control, and so on. I have mentioned just a few of the prospects not with the intent of portraying what the future may be like, but rather as a way of suggesting that the social, political, and economic environments for urban life may be in for some quantum changes. If they are, then our concept of future time will also have to change, and with it, our perceptions of our professional roles.

The conception of the future that has been guiding the city planning movement in the past is different from the one emerging in the new explorations. City planning has never really been orientated to future change. Despite the long horizons and the utopian traditions that have marked this field throughout its history, it has been guided by a future-directed ideology that has looked backwards; our binoculars have had an extra set of prisms built-in, so that, when we have aimed them at the future, they have reversed the field of vision.

I find it a sobering reminder, for example, that virtually not one of us foresaw the current affluence. No one foresaw the effects of wide-spread automobile ownership—whether on suburbanization, on the changing functions of the central business districts, or on the ways in which people would use their leisure time.

This is understandable for, instead of systematic forecasts of social change, we have prepared portraits of desired long-range futures for the physical-spatial city, because those portraits were for cities that would be built in the image of the long-range past. With genuinely bold and daring leadership, typically with selfless devotion to the public welfare, we have been proposing designs for future cities that were frequently idealized reconstructions of pre-industrial towns that served pre-industrial societies. I am reminded of the numerous attempts to build locally scaled social neighbourhoods in contemporary American cities; the post-war 'self-contained' new towns in Britain; the anti-auto ideology, and the persisting efforts to reconstruct in industrial democratic societies the kinds of large-scale urban designs that characterized the monarchies of pre-industrial times.

None of us has yet thought through the coming effects on cities and urban societies that now lie implicit in new electronic-communication systems, computers, rising per capita wealth, place-free and low-cost nuclear energy, new air-borne transport systems, new modes of retail distribution, new public-private non-profit corporations, the new movements for participatory democracy, and so on. Nor have we felt the need to, for we have been conducting our affairs against a concept of the future and against a set of substantive models that have not called for these sorts of *qualitative* conjectures.

City planners early adopted the thoughtways and the analytical methods that engineers devised for the design of public works, and they then applied them to the

design of cities. In that context, and in the sense that city plans take a long time to accomplish, our work has indeed been future-orientated.

Seeking a scale on future 'requirements', in the engineering model, we have always attempted to make good long-range quantitative forecasts of the population sizes that the cities must accommodate. Recently we have acquired some considerable skill in forecasting future travel volumes, as a way of scaling future demand for highways. In this sense, too, our work has been future-orientated.

But our plans and scalar forecasts have typically been made against a series of assumptions and on modes of prediction that the new futurists are beginning to challenge. These assumptions include at least the following:—

1. That social organization and social objectives will remain stable during the time-period under review.
2. That there is a society-wide consensus on city-development goals.
3. Because these goals are stable, future goals will be like present goals, and that they are knowable by professionals.

The recent projective studies have made the first two of these assumptions highly questionable. If history is indeed at a turning point without prior precedent, and if cultural diversity is really on the rise, present patterns may not guide us well. These studies suggest that projections of qualitative change must precede quantitative forecasts. They suggest that extrapolations of past trends are no longer reasonable, if only because extrapolation implies that past determinants of trend lines will persist into the future. Similarly they point to some built-in deficiencies of our present quantitative methods. The traditional scientific canons cannot be formally applied to phenomena that cannot yet be either observed or measured; and that plays havoc with empirically derived parameters. Qualitative projection requires reasoned judgment — built upon rigorous theory when it exists, but openly speculative and conjectural when it does not.

The third assumption — that professionals can make decent judgments on future societal *objectives* by observing present ones — a central issue in all planning fields, is even more dubious. First, because so much of the future is unpredictable; second, because professionals are inherently plagued by so many biases that inhibit their comprehension of the wants of increasingly diverse minorities. I shall argue in Part II of this article that a great many decisions that professionals are accustomed to take are best left to the public itself.

I shall also contend that we have frequently asked the wrong questions and sought to control the wrong variables. In the city planning field, for example, we have been asking questions about optimum city size and about optimum city form. Yet, the shifts in recent and future interaction patterns suggest that settlement size is no longer a critical question. For increasing segments of the high-scale societies, it is no longer meaningful. Similarly, questions about over-all metropolitan spatial arrangements are giving way to the more intricate ones concerned with inter-establishment linkages and the ranges of locational opportunity open to types of families and firms. Rather than the design of physical lay-outs of cities,

the city planning task is turning to the design of the fiscal and institutional arrangements that might then control the city-building process and to the designs for social services. The detailed decisions can be left to the consumer.

And then the prime questions that will be raised by the move into post-industrialism are: who is to pay? who is to profit? and who is to decide? The fruits of the coming affluence will inevitably be unequally distributed, and that is likely to become the dominant political fact of the time. It could well be that the distributional questions will also be the dominant ones for city planning.

It could also be that the political urgency of these questions will force an expansion of city planning's traditional preoccupation with the quality of the city to encompass the larger range of concerns with the quality of urban life. Even with a rising flow of wealth through both public and private channels, we shall still have deliberately to plan for the expansion of opportunity and personal freedom. The future is no more likely to be beneficent than perverse and tyrannical. Futurists have written both sorts of scenarios, and they are equally plausible.

In our traditional lines of work, we shall soon have to confront the dilemma posed by the huge sunk investment in the 19th and 20th century cities. The physical plant that future generations will inherit is not likely to match their standards of acceptable quality or their capacities to buy better cities. Buildings and roads have too long a life-span to suit the pace of historical change. The Americans dealt with that fact by simply leaving the old cities behind, and moving out to new settlements in the suburbs. That solved the individuals' problems, but left a social residue unresolved. How will the great cities of Europe deal with old plants that were built in the industrial age?

On the other side of that coin we shall have to confront the dilemma posed, on the one hand, by our fiscal capacities for building an amiable and beautiful environment and the public pressures to build quickly and, on the other, by the paucity of ideas with which to meet that challenge. The fitting criteria of aesthetic quality are not likely to be those that have guided urban designers in the past. Those persons who will be able to afford spaciousness and high geographic mobility will also be able to claim both, and these cannot be simultaneously supplied in the mediaeval, or 19th century, or even the 20th century packages we have been offering. Multi-house and multi-car families will use far more space than we are accustomed to provide; and those demands will be met, whether we co-operate or not. At the same time, and integral with the city designs, they will be demanding opportunities for exciting educational activities, for productive social roles, and for an information-rich life. These opportunities, too, must also be created as necessities — at least as imperative as sewers and streets.

These will be calling for a speculative and inventive capacity that has been rare in our field. If Professor Brzezinski and the others are right about the degree of qualitative change that is before us, we shall find few guides by looking to the cities of the past. As Britton Harris has been contending, we shall have to invent the future city and the opportunities for a rich urban life, because the models have not yet emerged in the course of past history.⁷

There is likely to be a happy congruence between the expanding knowledge of human and social systems, and our capacity to plan for this congruence. Planning has until recently been only an idea. With improving theory and improving computational capability, planning is only now becoming an operational method for defining goals, reaching decisions, and taking actions. In the post-industrial era it is likely to become the normal mode of decision and action — in a wide array of human activities. We are now learning how to apply the idea of planning to the city. And when we do, it may well be that our most troubling questions will surround the issues of equity. The industrial age was dominated by the idea of efficiency. The post-industrial age is likely to be dominated by conflicts over equity. The over-riding question for planners will be 'how shall the social product of an increasingly affluent and increasingly capable society be distributed?' Or, as I put it above: 'Who shall pay?, who shall profit?, and who shall decide?' It is these questions I shall discuss in the January issue of this journal.

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PLANNING IN AN ENVIRONMENT OF CHANGE

Part II : Permissive Planning

by MELVIN M. WEBBER

THE FIRST of these two papers suggested that the rapid onset of the post-industrial stage of development is likely to force two major changes in urban planning. One anticipated change is substantive: the increasing pace of history is revealing a new set of problems, different in kind from those that have been occupying city planners. During the industrial age, the profession's work was aimed at improving the cities' efficiency. In the imminent post-industrial age, unprecedented wealth will turn the equity issues into imperatives. Growing disparities in levels of wealth and welfare among increasingly diverse publics are likely to engender severe conflicts both within the highly developed nations and between the wealthy and the poor nations.

The other major change is largely procedural. New developments in the social and behavioural sciences are increasing our understanding of societal systems — of their component economies, politics, communities, families, and geographies. A consequence of the new theory is a growing capacity to predict future changes in these systems. We are now quickly accumulating the skills for *planning* and then for *engineering* social change.

This could be a highly felicitous development. But it could also be the basis for a new tyranny of technocrats. Already the specialists operating the simulation systems are finding it difficult, sometimes impossible, even to talk to politicians. The concepts they work with are unfamiliar, and the techniques they use seem mysterious. Decision-makers are increasingly forced to accept the conclusions of technical specialists, thus putting the specialists in the role of governors. As the planning technologies grow more complex and as the distribution of information and analytical skills shifts from politicians to technicians, there is likely also to be a redistribution of political power. It now looks as though the post-industrial period will be marked by a new style of government. Dominated by the idea and methods of planning, the coming decades will bring new possibilities for creative confrontation with the future.

This concluding paper focuses upon some questions surrounding the relations between technics and politics as they might affect city planning. As before, my observations and comments are limited to the American scene. What happens there has implications for what happens elsewhere, but these interpretations I must leave to the reader. With that disclaimer, let me simply state my thesis with the aim of making it explicit ahead of time.

City planning has not yet adopted either the planning idea or the planning method. It has instead internalized the concepts and methods of design from civil engineering and architecture. In the post-industrial period, when planning will be the characteristic mode of deciding and acting, city planning is likely to adopt a rationalistic posture with respect to valuation and to future change, displacing its traditional ideological posture. It will thus increase its power, including the power to help some groups and to hurt others. If city planning also carries over some of its traditional roles and self-images, the exercise of its new-found power will unwittingly hurt just those groups that are least able to help themselves. To counter that implicit danger, we shall need built-in procedures for *valuing* the wants of increasingly diverse publics and for *evaluating* the planned actions to test whether these actually do serve the valued ends.

The Idea of Planning

I shall be using the term 'planning' to refer to a special way of deciding and acting. The minimum necessary conditions of the planning method are these:

1. The explication of goals, objectives and targets for each subsystem under consideration including, in the public sphere, each of the publics that will be touched by the planned actions.
2. The continuous forecasting of both qualitative and quantitative changes that lie outside the planners' control.
3. The continuous forecasting of likely chains of consequences, within and especially among subsystems, resulting from each set of alternatively hypothesized planned actions.
4. The appraisal of investment costs and welfare pay-offs attached to each alternatively projected history. If a reasonable fit is found between an hypothesized course of action and the value sets, a time-sequenced action strategy is synthesized, comprising shorter-run action tactics, each with its timed targets. Each shorter-run tactic is carefully appraised for its likely net return, and is then expressed in the language of fiscal budgets.
5. The continuous monitoring of the systems being planned. A constant flow of information on actual outcomes is fed back into the planning system to signal forecasting errors and to actuate corrective steps. In addition, early warning of imminent danger or opportunity can alert deciders and, most important, the effectiveness of goal-directed actions can be empirically evaluated for each subsystem and each public.

The distinguishing marks of the planning approach to decision and action are, then, its explicit goals basis, its evaluation of alternative futures and alternative future courses of action, and its reliance upon feedback of outcomes and pay-offs. Planning is *inherently* oriented to outputs; it views inputs, such as public services

and facilities, as *investments* which have ascertainable pay-offs to client publics. As such, planning is essentially an *economizing* approach to the future, constantly appraising trade-offs among alternative investment strategies in search of the desired welfare returns.

This is certainly a highly idealized conception of a planning process. As an ideal, it is unattainable. But it is an ideal worth pursuing, for we profit as we approach it. At the present stage in its history, city planning has made but small headway toward this ideal.

TWO COMPETING TRADITIONS

Two sources have stimulated the city planning movement and have shaped its development. The one, an offspring of the German Rationalization and the scientific management movements, cast city planning in the role of the city engineer who sought to improve efficiency in the city's physical plant. The other, an offspring of the earlier social reform movements, cast it in the role of the social reformer who sought to improve the lot of people living in the cities. The parent of both sources was, of course, the industrial revolution that emptied the farms, crowded the cities, and generated a new society plagued by the problems of adapting to rapid change. Both sources have exerted continuing, albeit competing, influence during this century, but the engineering approach has been dominant.

With the rise of the factory system, populations became concentrated in the cities that housed the new industries; the cities themselves, however, grew in pre-industrial patterns. City engineering and city planning developed as attempts to exploit available city-building technologies and, later, to invent new ones. As a result men soon learned how to dispose of wastes, to supply sanitary water, to build intra-city transportation systems, to provide schools and hospitals, and even to build tolerable housing of some quality for everyone.

These were no modest successes. We have only to look to the Calcuttas of the contemporary world to appreciate how far we have come. Despite the many inadequacies of present-day western cities, we must surely agree that their record is impressive. To be sure, we have yet to solve air-, water-, and noise-pollution problems; housing quality does not begin to match our technological capabilities; and no city has yet disposed of traffic congestion. But the early objectives have been won. Epidemics of the dread diseases are gone. Obnoxious spill-overs from factories to adjacent houses have been largely eliminated. Producers are accessible to their suppliers and customers, and retail outlets are accessible to residents. The majority of the cities' residents *can* live with a sense of decency and some even with dignity. Our cities *do* work. If we knew how to measure their overall efficiency, they would probably score pretty high.

Much of that success reflects the comparative simplicity of the problems inherent in the early industrial city. The early city planners could properly consider that solutions to problems stood in direct, one-to-one relation to demonstrated causes — typhoid to a water-carried salmonella, traffic breakdowns to unpaved muddy streets, rodent infestations to accumulated garbage, and so on.

The science of the time supplied the explanations that, in turn, led to direct technical solutions. So long as there was consensus on objectives, there was little doubt about the actions to be taken.

The critical step in that process is the epistemological one — the concept that cause and effect are directly related — such that causes of problems can be identified and that correct and direct solutions can be found. This was a reasonable presumption for the kinds of problems being treated in those early days. Because the systems being dealt with could be conceived as being effectively independent, unilateral intervention was initially sufficient. Recourse to the planning method was therefore unnecessary.

Later, when the massive problems had been alleviated, when the cities' structures had grown more complex, when ever-more-refined solutions were sought, and when demands for amenities replaced the easier demands for removal of obstacles — it was then recognized that the workings of the city's physical parts really did affect each other. Engineers and planners began to design sets of systems, searching for overall city plans that would simultaneously attack a number of problems. The step was an important one, for it laid the foundations of the systems-analysis and systems-design efforts that permit positive invention of desired future states while also alleviating undesired present conditions.

Taming of the massive problems came just when incomes were rising rapidly and when cultural urbanization was making for cultural diversity among the cities' residents. Those who wanted and could afford better environmental qualities were able to lay claim to them. The overall city plans reflected this growing search for amenity.

At this juncture the technical problem-solving concepts of the engineer merged with the aspiration-raising efforts of the social reformer. It may have been at this juncture also that city planning split off from city engineering, for the engineers typically remained subsystem specialists while the city planners sought to become system-wide generalists. However wide the split, though, the thoughtways of the engineer continued to dominate the work of the system-wide planners. Although city planning has by now developed a professional subculture and although its practitioners profess social purposes far beyond the resolution of current and discrete problems, the city planning movement, I believe, has never outgrown its intellectual origins in city engineering and architecture. The original premises underpinning civic-works design became overlaid with a social ideology that introduced different purposes, but the premises remained in an epistemological eclecticism that continues to mark the trade today. Engineering contributed an operational style and social ideology contributed the purposive rationale for applying that style as a substitute for market processes. But still the idea of planning never got built into the profession's work:

SOCIAL IDEOLOGY'S INFLUENCE ON EARLY CITY PLANNING

The ideology arose in response to the horrid living conditions and physical squalor of the early industrial city, but it was more than a reflection of moral

indignation. Aimed at effecting fundamental social change, it was a positive credo that was inextricably caught up in the main current of American thought and thus shared in a complex network of beliefs. Despite the danger of over-simplification, we can identify a few of the major precepts that have been shaping the city planning movement.¹

1. The city was thought to be unnatural and inherently unhealthy and immoral. In order to counteract its intrinsically evil character, it had to be remoulded to resemble the country town that had preceded it.
2. Especially in America, where immigrants from other parts of the world were considered 'strange' and were seen as a threat to the social order, an effort had to be made to acculturate them. At this time, when the idea of physical environmental determinism was at its peak, the central strategy for turning immigrants into middle-class, stable citizens was to provide them with a middle-class physical environment.
3. In parallel, the middle- and upper-class supporters and leaders of the movement were confident that they knew what was best, both for the migrants to the city and for society at large. They therefore selflessly inaugurated a variety of governmental and philanthropic enterprises, designed to improve the conditions of city life. Anticipating similar contemporary efforts by many decades, they substituted a collective rationality for traditional individual rationality, placing decision-making in the hands of those elite groups who were both informed and oriented to the public interest.
4. At the time these efforts were being made, many city governments in America were controlled by political machines, and they had indeed become corrupt. The reformers were, therefore, determined to keep their programmes out of politics. Their tactic was at first also to keep them out of government. But that soon became unnecessary, for it was found that technical professionalism in government was a more effective way of keeping politics out of government.
5. In the spirit of successful captains of industry, the programmes for betterment were launched with the bold optimism that wilful action could control future outcomes: the city, like the factory, could be designed to accord with deliberate purpose. It was at this point that the teleologic and utopian outlook was implanted within city planning, nearly a century ahead of the recent futurists and planners.

In brief, then, we can typify the early ideology of the American city planning movement as anti-city, elitist, apolitical, rationalistic, sometimes technocratic, but always oriented to an image of the larger public welfare. As direct descendants of the Enlightenment, the early city planners were out to perfect history.

Surely, these were responses to the failure of market processes that controlled construction and use of buildings and space. The general reaction of urban social reformers was to bring the markets to account.

Two major strategies were pursued. The first was to replace market processes

by administered governmental programmes. The second was to constrain market behaviour in an effort to prevent the more outrageous outcomes, by setting limits on the builders and landowners who were profiteering from the city-building bonanza, typically at the expense of the poor. The tactic applied to both strategies was essentially the same. It was, as already noted, to substitute for individual rationality the collective rationality of public-spirited and knowledgeable professionals working inside city government.

These efforts to regulate market processes were in part impelled by an ideological opposition to markets and, in some sectors of the movement, by a distrust of private businessmen. At the time the movement was being organized, though, I suspect it was largely motivated by a recognition that the market was failing to perform as classical economics had promised it would. Pursuing the belief that governments could simply force greedy businessmen to act in the public interest, social reformers adopted the tactics of regulation and direct public enterprise.

RATIONALES FOR GOVERNMENTAL INTERVENTION

The early planners' actions were taken intuitively and without the theoretic supports their successors can draw upon. By now a considerable body of theory has been accumulated in welfare economics and elsewhere that supplies partial credence to the earlier strategies, while simultaneously raising some doubts. We can here simply catalogue several classes of conditions that have been identified as warrants for governmental intervention; later we can examine their relevance to city planning activities.

It is now understood that, in their very nature, markets are incapable of dealing with certain kinds of economic transactions.

First, they are incapable of supplying those goods and services for which it is either impossible or too difficult for a private seller to charge a price and for which he cannot exclude non-paying customers. These, the so-called 'pure public-goods', have the peculiarities that (a) if they are supplied to one, they are thereby supplied to all, and (b) it costs no more to supply an additional person. Since it is costless to serve more customers, social product would be reduced by constraining consumption, and governments have thus been wont to offer these goods and services. The classic example is the lighthouse, but there are a great many more — radio broadcasting, mosquito elimination, streets and highways, and national defence are also pure public goods. If governments or philanthropists did not supply them, they would probably not be supplied at all.

A *second* class of public goods is also impossible to price properly in the market because the consumer does not receive *all* the benefits that arise from his having consumed it. 'External' (social) benefits are realized by others who do not themselves use the service, so the seller cannot charge the buyer at a price that reflects the total social value received. For example, a person treated for a communicable disease gets relief, but others in the neighbourhood also benefit by having their risks reduced. It would be virtually impossible for the physician to collect from the neighbours, and so public-health departments have typically had to take over this function, charging the whole neighbourhood through taxes.²

A *third* situation, involving rather the opposite sort of transaction, has been a major cause of governmental regulation in the urban field. These are dealings that result in negative external effects, that is, social costs, such that neighbours have to bear the costs of someone else's valued activity. For

example, a factory dumps waste into a river that a town downstream uses for municipal purposes. The town must now treat its water supply, but there is no market mechanism by which it can charge the factory for the purification costs. If the factory is to be made to pay those bills, or, alternatively, if it is to be prevented from generating the social costs, the terms must be set outside the market system. Again, government is the only effective agency for dealing with the situation.

Fourth, governments are encouraged to enter business directly when wanted goods are not forthcoming from private enterprise. Some lines of business are just not feasible in the private sector, either because the scale of investment required exceeds available private funding or because the risks involved are too great to entice private capital. Launching vehicles for communications satellites certainly illustrate the first, and probably the second as well. Governments can afford to undertake large and risky investments that private corporations cannot. Modern governments in the western world do not go bankrupt — they only change management.

A *fifth* rationale for public intervention into markets involves the condition, increasingly common in highly integrated societies, in which all persons may profit more if *each* agrees to yield certain of his rights. In this situation a government agency serving as referee facilitates the exchange of information so that all concerned can avoid the hazards attendant upon mutual ignorance of plans. The willingness of the banking community to accept the edicts issued by the central banks is one clear instance; the traffic signal is another; urban renewal programmes are notable ones. Governmental economic stabilization programmes are by far the most dramatic and successful ones. (These are all in the nature of non-zero-sum games in which the total winnings are greater if free market play is constrained.)

A *sixth* situation, closely related, is the circumstance in which private investors acting in accordance with their own relatively short-run calculus of profitability would deprive the public of certain long-run benefits. If, for example, the public values the *future* benefits of a forest more highly than the timber industry (technically, the public applies a lower future-discounting rate), it has the choice of buying the forest and preserving it as a park. Again, when governments' time-horizons have been longer and their discount rates lower than private owners', they have sometimes simply passed laws prohibiting owners from using their resources freely.

Seventh, governmental powers are commonly invoked to prohibit individuals from behaving in self-destructive ways when government judges it can command better information about what is harmful to individuals than can the individuals themselves. Thus, thalidomide and other drugs have been banned. Drawing on the same rationale, government has justified less clear-cut prohibitions, making the use of marijuana a criminal offence and imposing censorship on films and books. (In the United States many local governments go much further, having thick statute books aimed at protecting people from their own immorality and from their inherited propensities to sin.)

The *eighth* case is the obverse of the seventh. Governmental regulations are designed to force or encourage individuals to engage in *healthful* behaviour. Children must attend school for a mandatory number of years; in communities which have fluoridated water supplies, all residents must partake of this benefit (unless, of course, they purchase bottled water). Almost all government programmes aimed at positive self-improvement are permissive and encouraging, however, rather than mandatory. The parks, recreation, theatre, and arts programmes are notable examples.

Ninth, government has sometimes required individuals either to refrain from self-injurious, or to engage in healthful, behaviour because the *short-run* general public welfare would thereby be improved. This rationale, resembling both the second (the social-benefit case) and the sixth (long-range public benefit), is currently popular in city-planning circles. It is exemplified by architectural control — the imposition of aesthetic standards on new buildings, with the aim of improving the city's visual qualities. The increased costs are borne solely by the builders; external benefits (social benefits) are received by the passing publics at no cost.

These nine circumstances suggest that there are indeed conditions in which markets cannot work at all, others in which the social product is increased if government engages in certain enterprises, and still others where regulatory procedures might assure higher returns to all individual consumers. We could catalogue a longer list, of course, but this inventory will serve our present purposes. I shall later want to mention circumstances in which market-type systems attached to governmental enterprises might better regulate the production and distribution of community services.

THE CIVIL ENGINEERING STYLE

In seeking to confront market insufficiencies, city planners early adopted the techniques of civil engineers rather than those of economists. In so doing, they were remarkably inventive. Their major social inventions were the *technical standard*, which set minimum permissible levels of quality; the *master plan*, which set forth overall system design; and the *land-use regulation*, which constrained the locational decisions of individual establishments. These techniques were derived directly from civil engineering; the innovation lay in translating the language of engineering manuals and contracts-and-specifications into governmental laws and regulations. The aim was basically to accomplish in the market place the sorts of deliberate outcomes that are readily accomplished in the centralized decision-setting of an engineer-client relationship or a centrally controlled government enterprise.

This was a quixotic aim, for the city planners paid scant attention to the realities of three major differences between a public market place and a centralized-decision milieu. First, market outcomes are shaped by the actions of thousands of decision-makers, whereas individual buildings are typically designed by only a few. Second, market outcomes represent the vector of innumerable valuations by individuals, each behaving in accordance with his own peculiar value bases, in contrast to the usual consensus that marks an engineering work. And third, the cumulated actions of many deciders work *non-teleologically*, shaping the development patterns of a multiplicity of subsystems, often in subtle and imperfectly understood ways. In contrast, decisions on specific civil projects are typically rationalistic, aimed at accomplishing limited ends for single subsystems.

Three concepts underlying the standards-regulations approach thus need to be re-examined: (1) that there is a meaningful community, comprising all residents of a city or conurbation, who hold to and are bound together by a coherent value system; (2) that technical requirements and standards can be discovered that conform to and further those value systems; and (3) that we can conceive a system-wide, city-development policy that is technically valid and that will promote the overall community's interest.

I suggest that the first two are untenable and that the third is unattainable. But the third can stand as an ideal objective, worth pursuing if, but only if, the first two propositions are rejected. However, to reject the current conceptions of

community and of standards is also to reject the foundations of the present operational style in city planning, and that will call for a reconstruction of the field.

COMMUNITY VALUES

Insofar as there is a city-wide community — that is, a community of persons who share common interests about the city system — it occupies at most but a small part of their attention. It is true enough that everyone living within a single watershed, for example, shares an interest in water supply and flood hazards. But, except during crises, such shared interests are relegated to the far corners of one's concerns, partly because we learned long ago to manage most of these systems.

Most of the place-defined communities to which people belong are small, typically comprising residents living within a few blocks. We have recently been learning something about these local, place-defined communities, and we are beginning to understand how elastic they are, how dramatically their size varies with social class, and how relatively unimportant they are among the many communities to which people belong. As suggested in Part I, the communities most valued by city residents are the thousands of different social groups that are bound together by voluntary association, based on common interests attached to occupation, family, religion, hobby, or shared belief. These social communities are non-territorial in character, bringing people together from various localities.

Each social community is held together by a body of values peculiar to itself, and its value-set may put it in direct competition with other communities. Those persons who value open park-space, wherever it or they may be located, are ready to unite in defence of parks at the first sign of a highway-alignment plan; the social communities of people who like redwood trees are the nemesis of the highway engineer and housebuilder. The organized and informal communities of motorists are partial to highways, almost irrespective of alignment; a proposed route would pit them against the park-loving community. And so on. There has been so much written about the so-called 'metropolitan problem' and the 'metropolitan community' in America that we have accepted these catchphrases as though they referred to something real. The location-defined community, I suggest, claims at most but a small segment of the loyalties, interests, and concerns of city dwellers. If true, then the second concept — that technical standards conforming to community-wide goals can be found — is also doubtful.

EFFICIENCY VERSUS DISTRIBUTION

Every public action generates both efficiency effects and redistribution effects. Engineers have traditionally been alert to the former — the influence of highway alignment on travel costs, the effect of building materials on construction costs, the effects of separating sanitary from storm sewers on the costs of operating a sewage treatment plant. These efficiency effects are internal to the functioning of the subsystems being designed.

There are also *external* efficiency effects, such as the consequences of a flood-control project or a highway project on subsequent settlement patterns. Modern planning technologies are now making it possible to use such public works subsystems deliberately in shaping land-development subsystems within the larger, city-wide system. If we could determine what arrangement of transportation facilities would fit well with what spatial arrangement of economic activities and residence-based activities, we could then test alternative transportation plans for their internal and external efficiencies. This important task is now occupying transportation planners, land planners, education planners, and economic planners; all are seeking to improve investment efficiencies in their respective fields by tracing the external effects on the economic development of nations. Although we can be optimistic about our growing capabilities thus to improve both internal and external efficiencies of the systems we operate upon, it will not be enough.

In addition to improving the workability of the city's components, every public action also shifts the distribution of benefits and costs among the various segments of the population. These redistributive consequences, commonly external to the subsystem being planned, affect various non-client groups, each in different ways and to different degrees.

The current attention to 'community values' in the western world is being largely generated by the external distributional effects. It is not a debate over whether a new motorway box or a new airport conflicts with some holistic objective of the 'metropolitan community'. That community is largely mythical. Rather, it is a debate over which publics are to pay and which are to profit from the government's action.

It is fruitless — and certainly misleading — to compute overall community values. In a complex urban society there is no viable single community. And, because each of a multiplicity of competing communities values things against different value scales, there can be no set of generalized values or criteria against which to appraise a project. There can be only a plurality of competing values held by a plurality of affected groups. If this assertion be valid, it follows that any grand social accounting for a 'whole community' is meaningless, for it hides the distribution of costs and benefits among the affected groups. I suggest that, until we can make group-specific evaluations about the distribution of goods and services among the various communities, we are bound to neglect just those community-value consequences that matter most.

In recent years a number of sophisticated efforts have been made to trace the magnitudes of costs and benefits that would be generated by proposed governmental actions. These aggregative studies (still the prototype in this field) are inherently oblivious to community pluralism. They are used to justify projects whose overall benefits may well exceed their overall costs all right, but which nonetheless may impose considerable hardships upon some persons. Such studies, therefore, may prove to be more harmful than useful. A few studies, seeking to trace the incidences of costs and benefits, are more promising for they seek to anticipate which persons will be helped and which hurt.

But, even if we could accurately forecast the likely distributions of external costs and benefits to specific groups or communities and compare the consequences of alternative courses of action, how are public decisions then to be made? How are we to know what distribution of benefits and costs would be best? Here our technical analytical heritage fails us; it provides no basis for determining how benefits *should* be distributed. As Princeton economist William Baumol has put it,

'There is nothing in economic analysis which permits us to say that individual A should optimally receive [a fixed amount of income or other benefit more than] B. The value judgments involved in recommending a distribution of income must somehow be grafted onto the economic information . . .'³

Because economic theory has nothing to say about the comparative advantages of alternative distributions, we have always dealt with these questions politically. By now there are many overt governmental practices that are explicitly intended to redistribute incidences of benefits and costs. Unashamedly, they are politically determined. Elderly persons who could not possibly benefit from public education of the young are nonetheless required to pay the taxes that support state schools. Welfare payments to the poor are distributed from general tax revenues. Housing is supplied with governmental funds at low rents that are commensurate with low incomes. In the United States, federal grants for public transit service are now having to pass a new kind of test, a political test, after they have passed their technical tests. The new question is: what will the proposed transit project do for the poor?

However novel the redistributive criteria may be for transportation engineers, they are old ones to city planners. And yet, by having adopted the engineer's idea of *standards*, the distributive objectives are inevitably short-circuited.

STANDARDS⁴

These standards establish minimum permissible qualities for goods and services. These are distinct from those other kinds of standards that set units of measurement (for example, the gramme, centimetre, second), or that are used in industry to permit interchangeability of parts (the configuration of screw threads, for example), or that refer to current experiential norms (as with 'standards of living' or 'academic standards').

Behind the conception of administered or legislated quality standards is the more fundamental idea of *requirements*. The source is clear, for the idea has been developed to its most refined stage in the various fields of engineering. If a given span is to be bridged, a beam of specifiable dimensions is required. If a given amount of water is to be transported at a specified pressure, a pipe of determinate dimensions is required. Behind these determinations lies a body of theory in physics and an accumulated body of empirical tests and experimental findings. Each of these statements is also explicit about the *goals* to be served: if your goal is to span that river, do this; if your goal is to carry water, do that. Having a firm scientific and empirical base and an explicit statement of objectives, engineers

have been able to write standards that conform to these *conditional* requirements. Their approach was adopted at an early stage by practitioners in public health. In turn, it became standard-operating-procedure in city planning.

But when the requirements-and-standards approach was transplanted into the city planning field, neither the scientific basis nor the explicit goals was attached. Lacking an accumulated body of scientific inquiry in the urban field, we have had little hard evidence on which we could rely. Faced with a multiplicity of communities, each with its own goal systems, how was one to know which standards were appropriate?

The problem was solved by dropping the engineer's *conditional* qualification. The 'if' clause was eliminated, and requirements became the expression of what are called 'needs'. As best I understand the idea, needs are seen as absolute necessities, not as conditional preferences. Of course, no prices are attached because no *comparison* of values is possible, nor are trade-offs among competing 'requirements' and 'needs' possible. As *absolute* necessities, they are all equally, and infinitely, valued ends.

In this manner the economizing basis for selecting standards and for selecting courses of action was rejected in favour of ideologically derived assertions of imperatives. In this fashion, too, markets were cut out as indicators of value. Consumers' own market statements about their mix of preferences were replaced by externally adjudged assertions about their needs. Lacking causal theory that might have permitted one to say 'if a given group wants A, they need to do B,' professional judgments were substituted for both A and B. Lacking knowledge of separate groups' wants, professionals decreed the conditions of a universal public welfare. The effect was inevitably thereby to neglect the wants of some publics. The tactic has been so successful that it is by now widespread among the social professions.

Thus, educators proclaim what is good for children. Because they usually do know more than others about education, they have been able to make the operational decisions. Medical people are surely among the most powerful of the professionals; each of us confidently puts his life in his physician's hands, on the presumption that he knows what is best. And so, too, with a growing array of professionals from television repairmen to solicitors.

As the professions have been able to claim expertise and, thus, popular deference, they have taken over control of the various agencies in which they work. Medical people effectively control the governmental medical services, recreationists the park departments, engineers the public-works agencies, and so on. Each field is guided by its own ideology — by profession-specific notions of individuals' 'needs'. Each also has its own altruistic perceptions of the 'public welfare', which typically relies, of course, upon the very sorts of services that the given profession offers.

With his characteristic perceptive acuity, George Bernard Shaw put it most sharply in reporting that 'each profession is a conspiracy against the laity'. His judgment has since been supported by the findings of investigators more systematic

than he, who have recently been studying the bureaucratic processes and delivery systems of the social services. Their research is revealing that the lay groups least served are those who enjoy less-than-middle-class status and who have the least developed skills for dealing with professional suppliers. Among the sharpest of these examinations that I have seen are those by Martin Meyerson⁵ and by Martin Rein.⁶ Meyerson notes that American social policy has been directed toward servicing the 'center-based majorities', perhaps a necessary consequence of supplying standardized services that conform to the preferences of the greatest number of consumers. But the further consequence is that the multifarious minority groups are not well served. In a field he has studied intensely over the years, Meyerson is led to a discouraging conclusion:

'... Urban housing policy of the federal government had as a major aim the improvement of the position of the low-income consumer of housing. Instead, if it strengthened the position of the consumer of housing at all, it was the middle-income household which benefited. Furthermore, most of the gains accrued to the builders and the mortgage lenders. As for urban renewal, it has often replaced the poor in favor of the rich'.⁷

Similar patterns have emerged in other social services — in law, education, transportation, police protection — even (where one might least expect it) in the 'war on poverty'. The accumulating evidence supports the most cynical view: that the social professions have been in the business of serving themselves rather than their clients. The professions' orientation to efficiency on the supply side, to the neglect of equity on the demand side of the system, have surely fostered that sort of producer bias. But no conspiratorial motivations nor racial or class prejudice need be read into it. I believe the cause is simply that professionals have been wearing cultural blinders that narrow their peripheral vision. The middle-class professionals have been unable to understand that some people just do not want what middle-class people may want. They find it difficult to communicate with lower-class clients. They have had no empirical output measures of consumer satisfaction, and so, they have sought to improve the lot of the relatively deprived by supplying the mix of services and facilities preferred by middle-class consumers. These, at least, have the authoritative majority stamp of adequacy.

Cultural barriers to communication are difficult to cross. That is why psychiatrists, for instance, have found it so hard to treat lower-class patients. The valuational, behavioural, and social organizational differences between their cultures are so wide that they cannot be fully understood by psychiatrists. Teachers are faced with the same problem. So are physicians, nurses, social workers, city planners, and policemen. And so, in turn, are the agencies these professions control. The professional shares the behavioural and value norms of middle-class culture, and middle-class culture is simply different from the non-middle-class cultures of other groups. As Oscar Lewis has been at pains to explain, what he calls 'the culture of poverty' is indeed a different social system. The working-class and lower-class publics, who have inadequate social skills for dealing with the majority culture, thus have difficulty in breaking through the cultural barriers that surround hospitals, schools, housing administrations, and the like.

When income deficiencies further reduce their capacities for breaking into the markets, their handicap in accomplishing their own purposes is compounded.

In casting this account in the simplistic language of two or three social classes, I recognize that it cartoons an extraordinarily complicated network of publics. The rapidly increasing pluralism of publics, reflecting the rising affluence of the late-industrial and the early post-industrial periods, may spell the demise of whatever beginnings of a 'mass' society we might once have had. Indeed, it is this growing pluralism that impels me to question the contemporary precepts of professional practice. If the social professions, including city planning, are to hold to their concepts of 'needs', 'requirements' and 'standards'; if they are to continue to seek standardized solutions to problems and standardized objectives for change; if the coming rise of planning should mean further centralization of authority and power in the hands of professional governmental officials — then our style of practice might not permit us to serve the very aims we professionals profess.

Some Prospects for Redirection

At the outset I described planning as a rational approach to accomplishing explicit purposes, and governmental planning as fundamentally oriented to the welfare pay-offs redounding to the various publics' separate purposes. I suggested that the only acceptable test of a governmental programme is an appraisal of how well-off the various client-groups become as a result. The meaningful test of effectiveness can be applied only on the output side, never on the input side.

If there is a single rule of systems analysis and of economics, if there is a single relevant canon of science, this is it: the only acceptable test of an hypothesis — including a policy or an action hypothesis — is whether it works when you try it out. The measure we must meet is demonstrated-effectiveness of outcomes — effectiveness as measured against explicitly enunciated goals. One of the long-standing habits of the traditional social professions has been to measure worth on the input side. Standards are input criteria. So are land-use and building regulations. So are teacher-student ratios and doctor-patient ratios. So are numbers of hospital beds, school buildings, highways, and the rest of the facilities governments build. And so, too, are monetary and fiscal policies and virtually all governmental programmes.

To be sure, all these constraints and facilities are intended to accomplish certain purposes. They have seldom been overtly considered to be ends in themselves. And yet, because these purposes are so seldom made explicit, and because these means have become the stocks of the trades, it is difficult to avoid the inference that the aim of the professions has been to apply the professional instruments.

The give-away comes when one tries to find out whether they *do* serve intended purposes. The evidence is typically nowhere to be found. Despite the gigantic investments in new towns in Britain, for example, no one has yet attempted to find out whether new town residents are any better off than anyone else. Despite

the elaborate epidemiological apparatus, we still do not know whether public health and medical services are making people healthier; we know only about rates of illness. No one has yet attempted to find out whether American land-use zoning has accomplished its purposes — whatever those purposes might be.

There is no evidence because we have not been explicit or specific about our aims for specific publics and because we rarely go back to evaluate what happened. I know of no studies by city planning agencies to appraise the welfare returns to their client groups. Were it not that a few sociologists have been curious, we would have little notion of what it means to live in the Bethnal Greens, the Belfasts, the Levittowns, or the Harlems of this world. City planning measures its success on the input side. We test our productivity by asking how large our staffs and our budgets are, how many cases were processed, how many houses were built, how many miles of highway, how many acres of parks. We do not ask how well-off are the people who live in the houses, use the highways, or play in the parks. We do not ask about the various consumers' schedules of preferences — about the mix of public commodities and services of various quality they desire as they weigh their wants against the spectra of attached prices.

Charles Lindblom contends that, whenever we do enunciate ends, we 'select them to conform to the available means'.⁸ Further, it looks as though our ends have become, per se, the sheer application of the available means. Despite the high purposes we proclaim, we seem to live for the professional game. Our pay-offs come from playing the game well, as judged by our professional peers who distribute the rewards that matter most to us. We have no other tangible evidence of success, for we have no external measures of the welfare returns to our client publics.

I expect this picture will be changing swiftly, however. Current work in benefit-cost analysis and cost-effectiveness analysis, the newly emerging social indicators, and the move toward programme-budgeting are now all converging and may soon trigger an output- and client-orientation in the city planning field. The change is already underway in America. But even if we abandon the engineer's thoughtways and internalize the economist's valuational thoughtways, we shall still face the distributional questions that growing pluralism, rising affluence, and persisting poverty will force upon us.

Baumol and his colleagues tell us that economic theory can be of little help in resolving the equity questions. We are therefore left with a cluster of political questions that no technical methods can mask. It does not matter that politicians, publics and planners prefer to believe otherwise and commonly mask these questions and their decisions as being 'merely technical' ones. The equity side of every planning coin is political on its face. Planning is unavoidably and inherently a political activity. I mean that the decisions taken on such important matters as sewerage systems, housing, transport, schools and airports are *political decisions*. No matter how competent the supporting scientific analyses, or how sophisticated the simulation models, these techniques can test only efficiency and, at best, only identify distributional consequences. Insofar as the outcomes of planned actions

effect a reallocation of benefits and costs (and they almost always do), the problems they address can have no technical solutions — only political ones.

In a democratic society the interplay of partisan groups effectively determines not only what is *wanted*, but, therefore, what is *right*. After the technical criteria have been met, the residual (and often determining) evidence is the preferential statements by consumers and by externally affected groups. Open political debate has always been a way of finding equitable outcomes — in part because competing wants can thus be weighed in the political balance, in part because competing wants can then be adjudicated. But public debate is an operational mode also because political expression of preferences is the only way we have to assess appropriate distributions of benefits and costs.

Market places are the counterpart of political forums—the media through which individual purchasers express their preferences as well as the relative weightings they assign to their competing preferences. There are indeed conditions that markets cannot deal with. But there are also many public enterprises, which at present make no direct charge for their services to consumers, whose services could be priced. We do charge for some governmentally provided services (for example, postal, public housing) and we could use the pricing system for other services as well. As yet we have no better way to find out what consumers want than by observing their behaviour under conditions of wide choice. Whether we are considering art museums or automobiles, the political forum and the market place together provide the sensitive testing instruments (on the output side of the systems) for determining the amounts, types, and qualities of public goods or private goods that *should* be supplied.

This is all very well for the wealthy, of course, but persons with but little money have little effective choice in the market place; persons with but little power have little effective voice in the political arena. This is generally true. But, the issue of income distribution among social groups is a separable question from the issue of appropriate mix of public goods and services, and it must be attacked frontally. Yet, given the current facts about income distribution and about costs attached to the available goods and services, our first question must ask how each person chooses to allocate his income among his various wants. However imperfect, such expressions are likely to be more accurate indicators of goodness than are professional divinations. The professions' problem of determining how much of what kinds of public goods and services to supply could be solved in part by adopting quasi-market processes that will supply feedback about wants from consumer to supplier.

I am suggesting that we attach prices to many governmental services that are now distributed without charge. The aim is not, of course, to return to the laissez-faire traditions of the past. Rather, it is to build into our decision-and-action processes those feedback loops which are essential to accomplishing the welfare objectives we seek. Only if each group has a tap into those loops so that it can express its special wants will we be able to serve the growing numbers of minorities and help those who most need help. The requirements-and-standards approach we

have institutionalized is intrinsically insensitive to cultural pluralism. Inherently orientated to the middle of the middle-class, it has worked to the inevitable disadvantage of already disadvantaged groups.

In effect, I am suggesting that the social professions made a mistake somewhere along their historical paths. By substituting profession-specific criteria for markets and political forums, they thought they were removing the problems posed by market imperfections. Instead they created an additional devilish hurdle for consumers. It is not even clear whether American lower-class consumers and other minority groups are any better off for these efforts.

THE VALIDITY AND VARIETY OF PLANNED INTERVENTIONS

As I have already indicated, there are indeed varieties of goods and services that private markets cannot deal with. They cannot handle externalities; private suppliers cannot provide purely public goods; private investors cannot undertake large, high-risk investments; and so on. Certainly all regulations cannot be eliminated. Certainly governmental enterprise will become increasingly necessary.

But even with clear instances of market incapacities (such as the blatant social costs of the river-pollution variety) harmful behaviour might best be constrained by applying incentives rather than direct prohibitions. The voluntary association of Ruhr Valley manufacturers has turned a polluted river into a fresh water supply; the income-tax incentives in America and elsewhere have induced builders to supply needed types of housing; and examples of other successful inducements are now becoming numerous. External social benefits probably cannot be dealt with except through taxation. I, for one, am quite prepared to accept the superiority of governmental information regarding harmful products; the restrictions on drugs, for example, are clear instances in which constraints on individual choice are warranted. But it is equally evident that such constraints must themselves be imposed with severe constraint, lest individuals' prerogatives be usurped by well-meaning moral policemen.

The most difficult questions attach to prohibitions on individual free choice in the name of short-run public benefits (the ninth rationale). Controls of this sort are popular among city planners such as those applying to the use of automobiles and the holding of private land in undeveloped state; among other professionals are various controls on behaviour intended to protect the moral order. I can find no justification for elitist constraints of these kinds; I can see only the erosion of personal freedom at the end of that path. Again, if we could indeed predict confidently that shifts in behaviour would lead to improvements in well-being, it would be far better to devise incentive schemes that encourage individuals rather than to apply the crude administrative regulations to which we have become addicted.

But then, suppose we were clever enough to invent ways of supplying differentiated public goods and services and to price them as a test of consumer wants; suppose we were innovative enough to invent incentive systems which could

supplant standards and regulation. These measures alone would not result in satisfied consumers if their purchasing power were low. We would also have to effect a redistribution of incomes so that those who are now poor could acquire the operational capacity for choice and, most important, so that their children could break away from the generational cycle that now turns working-class children into working-class adults.

At an earlier period of history, direct payments to low-income earners and selective distribution of services carried the very sorts of personal degradation that Richard Titmuss has been cautioning us about. In America the welfare system has been so overlaid by social workers' policing activities that 'welfare' has come to mean its antonym. To avoid the symbolic meanings attached to the dole, designers of social service programmes sought to distribute services directly and universally, in the manner of the British National Health Service. But that route carries all the overburden of problems I have been outlining.

Perhaps we are now prepared to accept a minimum level of income as a right, as the British public has come to accept health services. Several methods for redistributing income are now being explored. The negative-income-tax is especially promising, for it would meet many of the problems mentioned above. By creating conditions of effective consumer choice, it might thereby reduce the roles of professionals in making decisions for consumers. Once it gained favour across the entire political spectrum, the negative-income-tax (or some equally automatic way of establishing an income floor) could soon become a new basis for distributing services. If sufficiently high minimum-income levels can be maintained, we could employ market-type distribution systems to expand the range of choice open to minority consumer groups. Even were all families suddenly to become wealthy, the problems of governmental planning would not disappear, of course, but many problems associated with supplying governmental services and facilities would be removed.

Summary

The post-industrial age will be marked by increasingly diverse publics having increasingly diverse wants and being increasingly involved in political affairs. The combination of diversity with political participation will engender vocal demands for widening arrays of services and facilities. Compound interest rates working on small minorities will inevitably turn them into large minorities, increasingly able, politically, to claim those services. Standards and standardized regulations are not the media that match diversity of wants. Instead, where effective markets do not exist to monitor shifting wants and to feed information back into the planning system, we shall need to invent surrogate market systems to guide public planning.

The burden of my argument is that city planning failed to adopt the planning method, choosing instead to impose input bundles, including regulatory constraints, on the basis of ideologically defined images of goodness. I am urging, as

an alternative, that city planning tries out the planning idea and the planning method.

During the next decades, planning is likely to become the normal mode of deciding and acting in a wide array of societal affairs. At the same time, we shall be living with increasing affluence, increasing relative poverty, and increasing power in the hands of the few technically proficient planners. It will then be all the more necessary that decisions be guided by the *outputs* of government actions, outputs measured by their welfare benefits to the plurality of publics who will inhabit the post-industrial society. The concepts and methods that emerged during the early days of the industrial age are not likely to suit us in the post-industrial age. Now, and increasingly in the future, the hard decisions will have to rely upon explicit statements of the wants of the publics.

Who, then, is to pay and who is to profit? Only the political process can give us these answers. If we do not agree with the outcomes, we still hold the option of using our growing professional influence to affect the political balance. As I have been contending, planning is inside the political system, and, hence, a growing political force in itself. I would wish it to use its growing power toward assuring that the goods, services, and facilities supplied are sufficiently diverse to satisfy even the smallest minority's wants. That is to say, a central principle for public planning is that we use the instruments of government in promoting a diversity of goods and services that the market processes have been failing to deliver.

Who is to decide? Clearly, a wide array of competing groups in and out of government. But if the planning idea can be made to work, an increasing proportion of decisions must be made by individual consumers. After all, they are the ones who know what they want. Far more frequently than we permit ourselves to think, they are also the only ones who know what is best for them.

The post-industrial age will bring unprecedented affluence to western societies. It will also make possible, for the first time in history, a range of choice sufficient to satisfy the preferences of all groups in those societies. The planning idea would accelerate that development. As the counterpart of the idea of democracy, and as an instrument for promoting freedom, I suggest it is worth our giving it a try.

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⁴ The section on standards owes much to John W. Dyckman.

⁵ Meyerson, Martin, National Urban Policy Appropriate to the American Pattern, in *Goals for Urban America*, Brian J. Berry and Jack Meltzer, ed., Spectrum Books; Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967.

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⁸ Hirschman, Albert O., and Lindblom, Charles E., Economic Development, Research and Development, Policy Making: Some Converging Views, *Behavioral Science*, Vol. vii, No. 2, April, 1962, pp. 215-16.

