

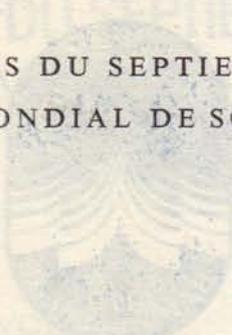
TRANSACTIONS
OF THE SEVENTH
WORLD CONGRESS
OF SOCIOLOGY

ACTES
DU SEPTIEME
CONGRES MONDIAL
DE SOCIOLOGIE



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WORLD CONGRESS OF SOCIOLOGY

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VOLUME I



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TRANSACTIONS OF THE SEVENTH WORLD CONGRESS OF SOCIOLOGY

ACTES DU SEPTIEME CONGRES MONDIAL DE SOCIOLOGIE

Varna, September 14—19, 1970

VOLUME I

CONTEMPORARY AND FUTURE SOCIETIES
PREDICTION AND SOCIAL PLANNING

SOCIETES CONTEMPORAINES ET SOCIETES FUTURES
PREVISION ET PLANIFICATION SOCIALE

PROBLEMS OF SOCIOLOGY
AND DEVELOPMENT IN THE COUNTRIES
OF THE THIRD WORLD

PROBLEMES DE LA SOCIOLOGIE
ET DU DEVELOPPEMENT DANS LES PAYS
DU TIERS MONDE

INTERNATIONAL SOCIOLOGICAL ASSOCIATION
ASSOCIATION INTERNATIONALE DE SOCIOLOGIE

1970

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PREDICTION AND SOCIAL PLANNING
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PREVISION ET PLANIFICATION SOCIALE

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PROBLEMS OF SOCIOLOGY AND DEVELOPMENT
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The Seventh World Congress of Sociology was organized by the International Sociological Association in cooperation with the Bulgarian Organizing Committee, under the sponsorship of UNESCO and under the high patronage of the President of the Council of Ministers of the People's Republic of Bulgaria Mr. Todor Zhivkov.

Le Septième Congrès Mondial de Sociologie a été organisé par l'Association Internationale de Sociologie en collaboration avec le Comité d'Organisation Bulgare sous l'égide de l'UNESCO et sous le haut patronage du Président du Conseil des Ministres de la République Populaire de Bulgarie S. E. Monsieur Todor Jivkov.

AVANT-PROPOS

Le présent document résume les rapports, l'ordre du jour et le programme de la Commission exécutive du Septième Congrès Mondial de Sociologie (Varna, 22-29 septembre 1978) convoquée en vertu principal de l'Article 10 des Statuts de l'Association internationale de sociologie, ainsi que quelques aspects de la promotion de la sociologie et de développement dans les pays en voie de développement.

La Commission des rapports a été formée par le Comité Exécutif de l'Association internationale de Sociologie, d'après les propositions de la Commission chargée d'organiser le Congrès.

Les membres sont nommés par ordre d'alphabet des lettres. Chaque membre est responsable de tout ce qu'il a fait pendant.

L'objectif de la Commission des Rapports du Septième Congrès Mondial de Sociologie, ainsi que celle des trois suivants, est organisé par le Comité d'Organisation Bulgare.

PREFACE

This volume contains the papers listed in the programme of the first plenary session of the Seventh World Congress of Sociology (Varna, September 14-19, 1970), dedicated on the main theme "Contemporary and Future Societies — Prediction and Social Planning", as well as some papers on the problems of sociology and development in the countries of the third world.

Authors of the papers presented here have been chosen by the Executive Committee of the International Sociological Association, following the recommendations of the Programme Committee for the Seventh World Congress.

The papers are published according to the alphabetical order of the author's names. The authors bear full responsibility for the texts they have presented.

The publication of this volume of the Transactions of the Seventh World Congress of Sociology, as well as that of the remaining volumes, is effected by the Bulgarian Organizing Committee.

AVANT-PROPOS

Le présent volume contient les rapports, inclus dans le programme de la première session plénière du Septième Congrès Mondial de Sociologie (Varna, 14—19 Septembre 1970) consacrée au thème principal „Sociétés contemporaines et futures — pronostics et planification sociale“, ainsi que quelques rapports sur les problèmes de la sociologie et du développement dans les pays du tiers monde.

La sélection des rapports a été faite par le Comité Exécutif de l'Association Internationale de Sociologie, d'après les propositions de la commission chargée d'élaborer le programme du Congrès.

Les rapports sont publiés par ordre alphabétique des auteurs. Ceux-ci portent entièrement la responsabilité du texte qu'ils ont présenté.

L'édition de ce volume des Actes du Septième Congrès Mondial de Sociologie, ainsi que celle des trois suivants, est organisée par le Comité d'Organisation Bulgare.

ADDRESS OF GREETINGS BY TODOR ZHIVKOV

It is with pleasure that I have accepted the invitation to address words of greetings to the participants in the Seventh World Congress of Sociology.

The Government of the People's Republic of Bulgaria and Bulgarian scientific and cultural circles see in the Seventh World Congress of Sociology a great forum of world sociological thought. That is why we readily agreed Bulgaria to play host to it.

The development of the scientific and technical revolution is many-sidedly reflected in all spheres of society, and exercises an active influence on its structure and trends of development. The great upswing in science, its growing role in the development of the productive forces and culture and in accelerating the progress of mankind is one of the most characteristic features of our epoch. The field of scientific activity is growing ever wider and new fields of science make their appearance, which require the united efforts of scientists from many countries.

The nobler stands out, therefore, the aim of the International Sociological Association to inspire in sociologists from different countries, irrespective of differences in political conceptions and views, a joint striving for creative scientific searches, for mutual respect and co-operation in the name of the lofty goals of science, in service of humanism, peace and human progress.

We are awaiting the Seventh World Congress of Sociology with great interest, as an important event from a scientific, cultural and ideological viewpoint. We hope that the Congress, which will discuss highly topical problems, will contribute to the enrichment of sociological science. These problems — the problems of the future, of social forecasting, of actively influencing the course of social processes in the name of man's happiness — have always been an object of attention and practical solution in the activity of the Bulgarian Government.

This fact is not accidental. The rapid growth of the productive forces and culture in Bulgaria, the steady development of social relations, the enrichment of man's personality along the road of his all-round development, make it necessary to resort to an ever wider use of science, not only in perfecting production, but also in raising the level of social administration. I am glad to note that in our guiding work we are ever more widely relying on Marxist-Leninist sociological

science and on sociological and other social investigations constituting an important source of information in the taking of science-based decisions.

In the last few years, the efforts of the Government of the People's Republic of Bulgaria have been directed toward a further improvement of social administration. The construction of an advanced socialist society in our country makes ever higher demands upon the Government, social forecasting and planning. I take the liberty of indicating that the Bulgarian Communist Party, which is the leading and directing force in Bulgaria, its Central Committee and the Bulgarian Government are purposefully working to improve planning not only in the different spheres of social life, but also in the development of the social system as a whole. In this connection, a system of integrated social information on a scale to embrace the whole country is being elaborated.

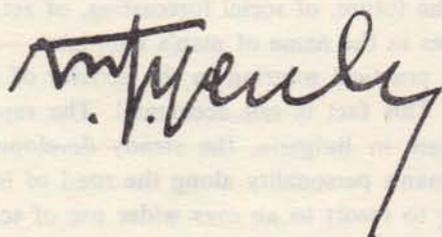
The Government of the People's Republic of Bulgaria devotes great attention to the creation of ever better conditions in the country for a fully fledged development of sociological science. We encourage international relations of Bulgarian sociologists, as an important prerequisite for their mutual acquaintances and exchanges of experience and for a more rapid and successful development of sociological thought in our country.

Here again, as in the other fields of constructive public activity, irrespective of political differences, there can and there should be constructive co-operation for the benefit of science, for the benefit of the peoples. Let scientific discussion and argumentation and, in the final count, let the test in practice show which sociological conception serves best the development of science, the true interests of the masses, peace and progress.

I would like to assure you that the Bulgarian Government and our people will try, in the spirit of traditional Bulgarian hospitality, to create all conditions for a useful and pleasant stay of the delegates and guests to the Congress in the People's Republic of Bulgaria.

With all my heart I wish fruitful work and great successes to the Seventh World Congress of Sociology.

Sofia, April 30, 1970.



*Prime Minister of the People's
Republic of Bulgaria*

CONTEMPORARY AND FUTURE SOCIETIES
PREDICTION AND SOCIAL PLANNING

SOCIETES CONTEMPORAINES ET FUTURES
PRONOSTICS ET PLANIFICATION SOCIALE

Edited by
New York, New York: Charles Scribner's Sons, 1957, 280 pp., \$12.00

THE POST-INDUSTRIAL SOCIETY: TECHNOCRACY AND POLITICS

DANIEL BELL

USA

The rational is real and the real is rational, is a famous phrase of Hegel. By this he did not mean that the existent was real. As a post-Kantian philosopher, he accepted the proposition that the empirical reality was a flux, and that knowledge is gained only through the application of the *a priori* categories necessary to organize them. Thus, the "real" is the underlying structure of concepts which make sense of the confusing froth of the present. For Hegel, the "real" was the unfolding of rationality as the self-conscious reflective activity of mind which gave men increasing power over nature, history and self.

In a fundamental sense, the theme of rationality is also the major underpinning of sociological theory. For Durkheim, as he argued in his *Division of Labor*, the tendency of civilization is to become more rational, and this was a product of the greater degree of interdependence in the world and the syncretism of culture or secularization, which broke down parochial forms. In the writing of Max Weber, the concept of the rational, indeed, moves to the very center of his sociology. In his last lectures, given in the winter of 1919-1920, he points out that modern life is made up of "rational accounting, rational technology, rational law, and with these a rationalistic economic ethic, the rational spirit and the rationalization of the conduct of life."¹ Indeed, as Professor Talcott Parsons points out, "the conception of a law of increasing rationality as a fundamental generalization about systems of action. . . is the most fundamental generalization that emerges from Weber's work." And, drawing a curious parallel—or is it a prophecy?—Professor Parsons concludes, "rationality occupies a logical position in respect to action systems analagous to that of entropy in physical systems."²

These conceptions of rationality are rooted in nineteenth century conceptions of man's relation to nature and society, and they are extensions, in one sense, of the conceptions of progress which had emerged at the end of the eighteenth century. Whatever their philosophical overtones, the concept of rationality received a practical embodiment in industry — and war. The development of every advanced industrial society, and the emergence of what I have called the post-industrial society, depends on the extension of a particular dimension of rationality. But it is precisely that definition of rationality which is being called into question

¹ Weber, Max—General Economic History.

² Parsons, Talcott — The Structure of Social Action, New York, 1937, p. 752.

today, and what I seek to do here is to trace out the vicissitudes of that conception — the technocratic — as it relates to politics. The other tension, of the technocratic and the cultural is discussed elsewhere in these papers.³

I

The Post-Industrial Society

Let me begin first with an extraordinary vision from the past. More than a hundred and fifty years ago, the wildly brilliant, almost monomaniacal technocrat, Claude Henri de Rouvroy, le Comte de Saint-Simon ("the last gentleman and the first socialist" of France), popularized the word *industrialism* to designate the emergent society, wherein wealth would be created by production and machinery rather than be seized through plunder and war. Past society, said Saint-Simon, had been military society, in which the dominant figures were noblemen, soldiers, and priests, and the leading positions in the society were based either on control of the means of violence or on the manipulation of religious myth. In the new society, the "natural elite" that would organize society in a rational, positivist fashion would be the industrialists (actually the engineers or technocrats), for the methods of industry were methods of order, precision, and certainty, rather than of metaphysical thought. In this society, ordered by function and capacity, "the real noblemen would be industrial chiefs and the real priests would be scientists."

The revolution which ended feudal society — the French Revolution — could have ushered in the industrial society, said Saint-Simon, but it did not do so because it had been captured by metaphysicians, lawyers, and sophists, men with a predilection for abstract slogans. What was needed, Saint-Simon added, was a breed of "new men" — engineers, builders, planners — who would provide the necessary leadership. And since such leaders require some concrete inspiration, Saint-Simon, shortly before his death, commissioned Rouget de l'Isle, the composer of the "Marseillaise", to write a new "Industrial Marseillaise." This "Chant des Industriels," as it was called, had its première in 1812 before Saint-Simon and his friend Ternaus, the textile manufacturer, at the opening of a new textile factory in Saint-Ouen.

The episode takes on a somewhat comic air, especially when we read that a number of the Count's followers established a new religious cult of Saint-Simonianism to canonize his teachings. (In the monastic castle to which the followers of Saint-Simon retreated, garments were buttoned down the back so that, in socialist fashion, each man would require the help of another in dressing. Thus was pedagogy reinforced by ritual.) And yet many of these very followers of Saint-Simon were also the men who, in the middle of the nineteenth century, redrew the industrial map of Europe.⁴

³ See Chapters below.

⁴ It is not too much to say, Professor F. H. Markham has written, "that the St. Simonians were the most important single force behind the great economic expansion of the Second Empire, particularly in the development of banks and railways," *Enfantin*, the most bizarre of the St. Simonians, formed the society for planning the Suez Canal. Former St. Simonians constructed many of the European railways — in Austria, Russia, and Spain. The brothers Emile and Isaac Pereire, who promoted the first French railway from Paris to Saint-Germain, also founded the

We may at this point leave the story of Saint-Simon and his followers to the curiosa of the history of ideas, but if, with the spirit rather than the method of Saint-Simon, one speculates on the shape of society forty or fifty years from now, it becomes clear that the "old" industrial order is passing and a "new" society is indeed in the making. To speak rashly: if the dominant figures of the past hundred years have been the entrepreneur, the businessman, and the industrial executive, the new men are the scientists, the mathematicians, the economists, and the engineers of the new computer technology. And the dominant institutions of the new society — in the sense that they will provide the most creative challenges and enlist the richest talents — will be the intellectual institutions. The leadership of the new society will rest not with businessmen, or corporations as we know them (for a good deal of production will have been routinized), but with research corporations, industrial laboratories, experimental stations, and universities. In fact, the skeletal structure of the new society is already visible.

The Transformation of Society

We are now, one might say, in the first stages of a post-industrial society. A post-industrial society can be characterized in several ways. We can begin with the fact that ours is no longer primarily a manufacturing economy. The service sector (comprising trade, finance, insurance and real estate; personal, professional, business and repair services; and general government) now accounts for more than half of the total employment and more than half of the gross national product. We are now a "service economy" — i. e., the first nation in the history of the world in which more than half of the employed population is not involved in the production of food, clothing, houses, automobiles, and other tangible goods.

One can also look at a society not in terms of where people work what kind of work they do, the occupational divisions. In a paper read to the Cambridge Reform Club in 1873, Alfred Marshall, the great neo-classical economist, posed a question that was implicit in the title of his paper, "The Future of the Working Classes". "The question," he said, "is not whether all men will ultimately be equal — that they certainly will not be — but whether progress may not go on steadily, if slowly, till, by occupation at least, every man is a gentleman." And he answered his question: "I hold that it may, and that it will."

Marshall's criterion for a gentleman — in the broad, rather than the traditional genteel, sense — meant that heavy, excessive, and soul-destroying labor would vanish, and the worker would then begin to value education and leisure. Apart from any qualitative assessment of contemporary culture, it is clear, if the first part of his definition still holds, that Marshall's question is well on the way to being answered. The manual and unskilled worker class is shrinking in the society, while at the other end of the continuum the class of knowledge workers is becoming predominant in the new society.

In identifying a new and emerging social system, it is not only in the portents and social trends, such as the move away from manufacturing or the rise of new

Crédit Mobilier, the first industrial investment bank in France, as well as the great shipping company, the Compagnie Générale Transatlantique (the C. G. T. today sails the Flandre and the France), which gave its first ships the names of St. Simonian followers, including the Saint-Simon (1987 tons).

social relationships, that one seeks to understand fundamental social change. Rather it is in the defining characteristic of a new system. In the post-industrial society, what is crucial is not just a shift from property or political criteria to knowledge as the base of new power, but a change in the *character* of knowledge itself. What has now become decisive for society is the new centrality of *theoretical* knowledge, the primacy of theory over empiricism, and the codification of knowledge into abstract systems of symbols that can be translated into many different and varied circumstances. Every society now lives by innovation and growth, and it is theoretical knowledge that has become the matrix of innovation. With the growing sophistication of simulation procedures, through the use of computers — simulations of economic systems, of social behavior, of decision problems — we have the possibility, for the first time, of large-scale “controlled experiments” in the social sciences. These, in turn, will allow us to plot alternative futures in different courses, thus greatly increasing the extent to which we can choose and control matters that affect our life.

In all this, the university, the place where theoretical knowledge is sought, tested, and codified in a disinterested way, becomes the primary institution of the new society. Perhaps it is not too much to say that if the business firm was the key institution of the past hundred years, because of its role in organizing production for the mass creation of products, the university will become the central institution of the next hundred years because of its role as the new source of innovation and knowledge.

To say that the primary institutions of the new age will be intellectual is not to say that the majority of persons will be scientists, engineers, technicians, or intellectuals. The majority of individuals in contemporary society are not businessmen, yet one can say that this has been a “business civilization.” The basic values of society have been focused on business institutions, the largest rewards have been found in business, and the strongest power has been held by the business community, although today that power is to some extent shared within the factory by the trade union, and regulated within the society by the political order. In the most general ways, however, the major decisions affecting the day-to-day life of the citizen — the kinds of work available, the location of plants, investment decisions on new products, the distribution of tax burdens, occupational mobility — have been made by business, and more recently by government, which gives major priority to the welfare of business.

To say that the major institutions of the new society will be intellectual is to say that production and business decisions will be subordinated to, or will derive from, other forces in society; that the crucial decisions regarding the growth of the economy and its balance will come from government, but they will be based on the government’s sponsorship of research and development, of cost-effectiveness and cost-benefit analysis; that the making of decisions, because of the intricately linked nature of their consequences, will have an increasingly technical character. The husbanding of talent and the spread of educational and intellectual institutions will become a prime concern for the society; not only the best talents but eventually the entire complex of prestige and status will be rooted in the intellectual and scientific communities.

The Birth-Years

It is foolhardy to give dates to social processes (when, and by what criteria, can one say that capitalism eclipsed feudalism, at least in the economic sphere?), but our self-consciousness about time, which is itself an aspect of modernity, urges us to seek some symbolic points that mark the emergence of a new social understanding. Alfred Whitehead once remarked that the nineteenth century was dead by the 1880's, and the 1870's was its last lush decade. One could also say that the period from 1880 to 1945 was the period in which the old Western ideologies exploded, culminating in the dreadful travails of fascism and communism as they rode the new Leviathan.

The period since the end of the Second World War has produced a new consciousness about time and social change. One might well say that 1945 to 1950 were the "birth-years," symbolically, of the post-industrial society.

To begin with, the transformation of matter into explosive energy at Hiroshima made the world dramatically aware of the power of science. (It was a demonstration, Gerald Holton has written, "that a chain of operations, starting in a scientific laboratory, can result in an event of the scale and suddenness of a mythological occurrence.")⁵ In 1946, the first digital computer the ENIAC, was completed at the Government proving grounds in Aberdeen, Maryland, and it was soon followed by the MANIAC, the JOHNIAC, and, within a decade, ten thousand more. Never in the history of invention has a new discovery taken hold so quickly, and spread into so many areas of use, as the computer. In 1947, Norbert Wiener published his *Cybernetics*, which spelled out the principles of self-regulating mechanisms and self-adjusting systems. If the atom bomb proved the power of pure physics, the combination of the computer and cybernetics has opened the way to a new "social physics" I/M a set of techniques, through control and communications theory, to construct a *tableau entière* for the arrangement of decisions and choices. In fact, it is not altogether fanciful to suggest that just as the hundred years before 1945 were dominated by machine technology, so the next hundred may be shaped by a new "intellectual technology," which, by systems analysis, simulation, game theory, decision theory, programming, and other methods hitched to a computer, will lay out a new compass of the rationality of means.

In those years, the basic relationships between science and government were laid out with the creation of the Atomic Energy Commission and the National

⁵ Contrast the role of science in World War II with World War I. In *Modern Science and Modern Man*, James Bryant Conant, who before becoming a distinguished educator was a prominent chemist, tells the story that when the United States entered World War I, a representative of the American Chemical Society called on Newton D. Baker, then Secretary of War, and offered the services of the chemists to the government. He was thanked and asked to come back the next day, when he was told that the offer was unnecessary since the War Department already had a chemist.

When President Wilson appointed a consulting board to assist the Navy, it was chaired by Thomas Edison, and this appointment was widely hailed for bringing the best brains of science to the solution of naval problems. The solitary physicist on the board owed his appointment to the fact that Edison, in choosing his fellow members, had said to President Wilson: «We might have one mathematical fellow in case we have to calculate something out.» In fact, as R. T. Birge reports (in his study «Physics and Physicists of the Past Fifty Years,» in *Physics Today*, 1956), during World War I there was no classification of physicist; when the armed forces felt the need of one, which was only occasionally, he was hired as a chemist.

Science Foundation. Through these agencies, commitments have led to enormous government spending in research and development, and to the underwriting of large laboratories and research stations through a variety of creative new social forms—university facilities, non-profit corporations, university consortiums, and the like.

If we turn from the dramatic change in science to the prosaic realm of political economy, new techniques and new commitments were forged during those crucial years from 1945 to 1950. The concept of Gross National Product (G. N. P.), the basic tool for all macroscopic economic analysis, was first used in 1945, although the term had been announced in President Roosevelt's budget message to Congress the previous year. In 1946, Congress passed a Full Employment Act, which established a Council of Economic Advisors and stated, as a matter of national policy, that each man had a right to a job, and that society had the responsibility of maintaining full employment. By 1950 Wassily Leontiev had outlined his input-output tables, which provide a planning grid for the entire economy. Mathematicians and economists at RAND had worked out the technique of linear and dynamic programming to give us queuing techniques in production decisions. Technical economics had become inextricably intertwined with public policy, especially through the Council of Economic Advisors.

If one looks beyond the provincial horizon of one's own country one also sees in these years the emergence of an entirely new world system, with the creation of the *tiers-monde* and the fateful relationship of former colonial countries to once imperial powers; the self-conscious recognition of the idea of development—economic, political, and social; the beginning awareness that such social-system terms as capitalism and socialism may be part of a more inclusive social process within the rubrics of industrialization and bureaucratization, and even that these societies, as variants of industrial systems, may be converging in the pattern of their economies into some new kind of centralized-decentralized market-planning system.

Finally, there has occurred what is perhaps the most pervasive change in moral temper 1/M a new "future-orientation" on the part of all nations and social systems. Some observers have seen the dawn of a new universal history in the fact that all societies, for the first time, are creating common technological foundations. Of course, economic, political, and cultural diversities among nations are still far too great for us to be able to see a single world society, at least within this next century. And yet common foundations are being laid, particularly in the establishing of international scientific communities, and common aspirations are being voiced. The common thread is the orientation to the future and the recognition that men have the technological and scientific possibility of controlling the changes in their lives consciously, and by social decision. But such conscious control does not mean the "end of history," the escape, so to speak, from necessity, which Hegel and Marx emphasized in man's relation to nature, but the beginning of vastly more complicated problems than men have ever faced before.

The Time Machine

It was once exceedingly rare to be able to observe the formation of institutions *de novo*. Social change was crevice and slow-moving. Adaptations were piecemeal and contradictory, the process of diffusion halting, the spread of ra-

tionalization difficult and cumbersome. In his reflections on history thirty-five years ago, Paul Valéry, the quintessential Frenchman of letters, remarked:

"There is nothing easier than to point out the absence from history books, of major phenomena which were imperceptible owing to the slowness of their evolution. They escape the historian's notice because no document expressly mentions them. . . .

An event which takes shape over a century will not be found in any document or collection of memoirs. . . .

Such was the discovery of electricity and the conquest of the World by its applications. Events of this nature, unparalleled in human history, appear in it — only as something less noticeable than some more spectacular happening, some happening, above all, more in conformity with what traditional history usually reports. Electricity in Napoleon's day had about the same importance as, in the days of Tiberius, could have been ascribed to Christianity. It is gradually becoming apparent that the general innervation of the world by electricity is more fraught with consequences, more capable of modifying life in the near future, than all of the so-called 'political' events which have happened from Ampère's day to the present time."⁶

Today, not only are we aware of trying to identify processes of change, even when they cannot be dated, but, there has been a speeding up of the "time-machine," so that the intervals between the initial forces of change and their application have been radically reduced. A study of twenty major technological innovations that have had a substantial economic and/or social impact during the last sixty to seventy years indicates that every step in the process of technological development and diffusion has accelerated during this period. Specifically:

The average time span between the initial discovery of a new technological innovation and the recognition of its commercial potential decreased from 30 years (for technological innovations introduced during the early part of this century, 1880-1919) to 16 years (for innovations introduced during the post-World War I period) to 9 years (for the post-World War II period).

The time required to translate a basic technical discovery into a commercial product or process decreased from 7 to 5 years during the 60-70 year time period investigated.

The rate of diffusion (measured by economic growth) for technological innovations in-

⁶ Paul Valéry — Reflections on the World Today, New York, Pantheon Books, 1948, p. 16.

roduced during the post-World War II period was approximately twice the rate for post-World War I innovations and four times the rate for innovations introduced during the early part of this century.⁷

Perhaps the most important social change of our time is a process of direct and deliberate contrivance. Men now seek to anticipate change, measure the course of its direction and its impact, control it, and even shape it for predetermined ends. "The transformation of society" is no longer an abstract phrase but a process in which governments are actively engaged on a highly conscious basis. The industrialization of Japan by the old Samurai class was an action aimed at transforming an agrarian economy from the top, and it succeeded remarkably because of the disciplined nature of social relationships that had existed in post-Meiji restoration society. The extraordinary upheavals in the Soviet Union, more ruthless and more concentrated in time than the changes in any other society in history, were carried out on the basis of specific plans, in which the movements of the population, as well as industrial targets, were plotted on social charts. The breakdown of the old colonial system has brought about, since the end of World War II, the creation of almost fifty new countries, many of them committed abstractly to the idea of "socialism," in which the creation of new industrial and urban economies is the fundamental agenda of the new elites. And in the older Western societies we have seen the emergence of planning in more differentiated forms, whether it be target plans, indicative planning, induced investment, or simply economic growth and full employment.

In all these diverse activities, the fundamental themes are rationality, planning, and foresight — the hallmarks in short, of the technocratic age. In all this, the vision of Saint-Simon seemingly has begun to bear fruit.

The Technocratic Mind-View

In France, where the idea of technocracy has been more widely talked about than in any other country, it has been defined as "a political system in which the determining influence belongs to technicians of the administration and of the economy," and a technocrat, in turn, is "a man who exercises authority by virtue of his technical competence."⁸

⁷ "The Rate of Development and Diffusion of Technology," by Frank Lynn, Appendix, Volume II, Studies prepared for the National Commission on Technology, Automation and Economic Progress, U. S. Government Printing Office, February, 1966, p. 33.

⁸ Dictionnaire alphabétique et analogique de la Langue Française, Paris: Société de nouveau Littre, 1964; and Grand Larousse Encyclopédique, Paris, 1964.

The word technocracy itself was first coined by William Henry Smyth, an inventor and engineer in Berkeley, California, in three articles published in the *Industrial Management* of February, March, and May in that year. These were reprinted in a pamphlet, and later included with nine more articles, written for the *Berkeley Gazette*, in a larger reprint. The word was taken over by Howard Scott, a one-time research director for the *Industrial Workers of the World*, and was popularized in 1933-34, when *Technocracy* flashed briefly as a social movement and a panacea for the depression. The word became associated with Scott, and through him with Thorstein Veblen, who, after writing of *The Engineers and the Price System*, was briefly associated with Scott, in an educational venture at the *New School for Social Research* in 1919-1920. Interestingly, when the word became nationally popular through Scott, it was repudiated by Smyth, who claimed that Scott's use of the word fused technology and autocrat, "rule by technicians responsible to no one,"

But a technocratic mind-view, one can say with some sense of paradox, is more than just a matter of technique. In its emphasis on the logical, practical, problem-solving, instrumental, orderly, and disciplined approach to objectives, in its reliance on a calculus, on precision and measurement and a concept of a system, it is a world-view quite opposed to the traditional and customary religious, esthetic, and intuitive modes. It draws deeply from the Newtonian world-view, and the eighteenth-century writers who inherited Newton's thought did indeed believe, as Hume has Cleanthes say in his *Dialogues Concerning Natural Religion*, that the author of Nature must be something of an engineer, since Nature is a machine; and they believed, further, that within a short time the rational method would make all thought amenable to its laws.⁹ Bernard de Fontenelle, the popularizer of Cartesianism, precipitated a gory conflict with the humanists (reflected in Jonathan Swift's *Battle of the Books*) when he declared: "The geometric spirit is not so bound up with geometry that it cannot be disentangled and carried into other fields. A work of morals, of politics, of criticism, perhaps even of eloquence, will be the finer, other things being equal, if it is written by the hands of a geometer."¹⁰

The most comprehensive statement of this world-view was made by an unexpected precursor of the technocratic ideology, the nineteenth-century mathematician Augustin Cournot, who is better known for his applications of mathematics to economics than for his writings on history. But as he interpreted the rise of technological civilization, Cournot saw a general movement in history from the vital to the rational. He foresaw an era of mechanization which would be "post-historic," since universal rationalization would provide a stability to society that resulted from the erosion of instincts and passions and the perfection of admini-

whereas his original word implied "the rule of the people made effective through the agency of their servants, the scientists and technicians."

For the origin of the term, see William H. Smyth, *Technocracy Explained by its Originator*, San Francisco Chronicle, 1933, and J. George Frederick, ed., *For and Against Technocracy: A Symposium*, New York, 1933. For a discussion of the relations between Veblen and Scott, see my introduction, "Veblen and the New Class," to the Harbinger edition of *The Engineers and the Price System*, New York, 1965.

⁹ It should be pointed out, however, that de la Mettrie, the author of the famous book *Man the Machine*, died of overeating and gout; he stoked the machine too well.

¹⁰ Mindful, perhaps, of some of the hubris of the past, Norbert Wiener, thirteen years after the publication of his *Cybernetics*, warned his readers not against the inadequacies of the machine but against its possible success. "We have already made very successful machines of the lowest logical type with a rigid policy," he wrote. "We are beginning to make machines of the second logical type, where the policy itself improves with learning. In the construction of operative machines, there is no foreseeable limit with respect to logical type, nor is it safe to make a pronouncement about the exact level at which the brain is superior to the machine." But even though a completely "intelligent" machine is still far off in the future, the immediate problem, Wiener said, is that while machines do not transcend man's intelligence, they do transcend men, in the performance of tasks. "We have seen," he pointed out, "that one of the chief causes of the disastrous consequences in the use of the learning machine is that man and machine operate on two distinct time scales, so that the machine is much faster than man and the two do not gear together without some serious difficulties. Problems of the same sort arise whenever two control operators on very different time scales act together, irrespective of which system is faster and which system is slower." (See Norbert Wiener, "Some Moral and Technical Consequences of Automation," *Science*, May 1960).

The point would seem to be that when a machine is constructed to absorb its incoming data at a pace faster than it can be fed, we may not, like the sorcerer's apprentice, think of turning it off until it is too late.

stration. In this post-historic era, statistics would more and more be substituted for history as a means of studying human events.¹¹

Man's progress toward greater rationality was, of course, the theme of Max Weber, who in his great sociological canvas of Western history saw in the rationalization of law, of economics, of violence, of administration — a law of increasing rationality was his fundamental generalization about the convergence of all systems of action — a parallel with the second law of thermodynamics. Societies, Weber said, are changed when there is an infusion of charismatic energy which breaks the bounds of old traditional constraints, but in the "routinization of charisma," the stock of energy is consumed until, at the end, there is only a dead mechanism, and the administrators of the system become "sensualists without spirit, specialists without heart, a nullity..."¹²

But it is in this conception of rationality as functional, as rationalization rather than "reason," that one confronts the overriding crisis of the technocratic mode. The virtue of a belief in History was that some law of reason was operative: history had either a teleology as defined by Revelation, or some powers of emergence or transcendence that were implicit in man's creativity. In Hegel, the "cunning of reason" was the evolution of man's self-consciousness — the end of the mystery of "objectification" wherein men made things, idols, gods, societies "outside" of themselves, and often worshipped them as fetishes — so that, finally, he could "recognize himself in a world he has himself made." Thus the end of history — the overcoming of nature, and the overcoming of the duality of subject and object which divided the "self" — was the beginning of freedom, of courses of individual and social action that would no longer be subject to any determinism. However metaphorical these sentiments were — though they were quite realistic in their picture of man's slavish dependencies in the past — they did posit some ends to the march of rationality.

Things Ride Men

Saint-Simon, the "father" of technocracy, had a vision of the future society that made him a utopian in the eyes of Marx. Society would be a scientific-industrial association whose goad would be the highest productive effort to conquer nature and to achieve the greatest possible benefits for all. Men would become happy in their natural abilities. The ideal industrial society would by no means be classless, for individuals were unequal in ability and in capacity. But social divisions would follow actual abilities, as opposed to the artificial divisions of previous societies, and individuals would find happiness and liberty in working at the job to which they were best suited. With every man in his natural place, each would obey his superior spontaneously, as one obeyed one's doctor, for a superior was defined by a higher technical capacity. In the industrial society, there would be three major divisions of work, corresponding, in the naive yet almost persua-

¹¹ On Cournot, see George Friedmann, "Les technocrates et la civilisation technicienne," in *Industrialisation et Technocratie*, edited by Georges Gurvitch, Paris: A. Colin.

¹² The most comprehensive discussion of Weber's "increasing law of rationality" can be found in Talcott Parsons, *Structure of Social Action*. The phrase at the end of the paragraph is from Weber's conclusion to *The Protestant Ethic*.

sive psychology of Saint-Simon, to three major psychological types. The majority of men were of the motor-capacity type, and they would become the laborers of the industrial society; within this class, the best would become the production leaders and administrators of society. The second type was the rational one, and men of this capacity would become the scientists, discovering new knowledge and writing the laws that were to guide men. The third type was the sensory, and these men would be the artists and religious leaders. This last class, Saint-Simon believed, would bring a new religion of collective worship to the people and overcome individual egoism. It was in work and in carnival that men would find satisfaction, and in this positivist utopia, society, in the famous vision of Saint-Simon, would move from the governing of men to the administration of things.

But in the evolution of technocratic thinking, things began to ride men. For Frederick W. Taylor, the founder of scientific management, who was perhaps most responsible for the translation of technocratic modes into the actual practices of industry, any notion of ends other than production and efficiency of output was almost nonexistent. Taylor believed strongly that "status must be based upon superior knowledge rather than nepotism and superior financial power," and in his idea of functional foremanship he asserted that influence and leadership should be based on technical competence rather than on any other criteria.

Out of Taylor's reflections (and his own compulsive character) came the idea of scientific time-study and, more broadly, the measurement of work — for it is with the measurement of work and the idea of unit cost, rather than with the introduction of the factory as such, that modern industry gains distinctive meaning as a new way of life.

Taylor's principles were based upon the following: the time it takes to do a specific job; incentives and bonus systems for exceeding norms; differential rates of pay based on job evaluation; the standardization of tools and equipment; the fitting of men to jobs on the basis of physical and mental tests; and the removal of all planning and scheduling from the work floor itself into a new planning and scheduling department, a new superstructure, the responsibility for which was in the hands of the engineer.

By setting "scientific" standards, Taylor felt that he could specify the "one-best way" or the "natural laws" of work, and so remove the basic source of antagonism between worker and employer — the question of what is "fair" or "unfair."¹³ But in his view of work, man disappeared, and all that remained was "hands" and "things" arranged on the basis of minute scientific examination along a detailed division of labor wherein the smallest unit of motion and the smallest unit of time became the measure of a man's contribution to work.

In Marxism, another great source of technocratic thought, the same dissolution of ends, and concentration on means alone, also appears. Hegel had seen man's growth as an ideational process in which self-consciousness triumphed over limited dependencies of subjectivity and objectification. Marx naturalized this

¹³ See *The Principles of Scientific Management*, by Frederick W. Taylor, p. 10, reprinted in the compendium *Scientific Management* (Harper & Bros., New York, 1947).

Interestingly enough, Taylor's condemnation of "waste and confusion" made him seem progressive to many young engineers, and one of Taylor's chief disciples, Morris T. Cooke, became a link with Veblen. See my essay, "Veblen and the New Class," op. cit.

historic process by seeing man's growth in material and technical powers, in the growth of his means over nature. But what would this lead to? In his earlier works Marx had envisioned socialism as a state where a man would be a hunter in the morning, a fisherman in the afternoon — and perhaps a superior lover at night; in which there would be no distinction between mental and physical work or between town and country. The single image of socialism for Marx, by and large, was the end of the division of labor, which he saw as one of the sources, along with private property, of the alienation of men from society. But in his later writings these naive ideas had vanished, and Marx, in his conception of man as "emergent", assumed that new powers would be created and new visions of life would be achieved which his own generation, limited by nature and human frailty, could not yet envisage. And so, the ends of history were left ambiguous.

In Lenin, who bears the same relation to Marx that Taylor does to Saint-Simon, the conception of ends disappears almost completely. For Lenin was the superb technician of power. The creator of the disciplined party and cadre, Lenin was able to create a flexible instrument of revolution and subversion which could lash hundreds of thousands, even millions, of persons into action. But once the power had been won, only a fumbling and incoherent vision of the future could be detected. In *State and Revolution*, written as the first manual of socialism, Lenin assumed that running a society would be as simple as running the postoffice, and administration would become so simple that any shoemaker could be an executive.

When the power had finally been secured in a war-torn, broken-down country, Lenin's formula for socialism turned out to be only Soviet power plus electrification.¹⁴ The irony of it is that today in the Soviet Union, as in the other communist

¹⁴ Lenin, as is well known, was strongly attracted to the ideas of Frederick W. Taylor. In an address in June 1919 on "Scientific Management and the Dictatorship of the Proletariat," he stated: "The possibility of socialism will be determined by our success in combining Soviet rule and Soviet organization or management with the latest progressive measures of capitalism. We must introduce in Russia the study and teaching of the Taylor system and its systematic trial and adoption." [See the citation and the discussion in *The End of Ideology*, Glencoe, Illinois, 1960, p. 253.] More of this can be gleaned from some newly discovered materials from Lenin's archives.

During 1968-1969, the Soviet press devoted considerable space to this material from Lenin's archive on the first few months of the new Soviet government. In an article in *Komsomolskaya Pravda* for January 11, 1969, V. Chikin takes off from a "unique Lenin album," which is being completed by scholars from the central party archives, on Lenin's efforts to work out "just principles and a judicious system of government management," and the author draws on some "rough notes and instructions, newspaper articles and detailed reports," to make the following observation:

Ilyich Lenin sets himself the special goal of teaching practicality to the Bolshevik leaders who had not yet broken out of the sweet captivity of revolutionary romanticism. He notes to himself: 'Practicality and efficiency as a slogan.' And knocking the 'romantics' right out, he advances a completely unexpected formula for socialism:

"To scoop up with both hands the best from abroad: Soviet power + the Prussian railway system plus American technique and the organization of trusts + American education, etc., etc. + + = Σ = socialism."

True, to judge from the evidence of eyewitnesses, the first efforts to 'Americanize' the office work in the CPC [Council of People's Commissars] had no success.

[I am indebted to Paul Zinner for the citation and to Colette Shulman for the translation.]

A technocratic mind-view, one might say, is not only a doctrine but also a temperament. Just as one can observe the awesome obsessiveness in Taylor, so one sees the compulsive order-

countries, the chief demand of individuals is for private cars, individual homes, and other personal possessions. But the nature conditions of work represent no flowering of socialist humanism as it was envisaged in the past. Work, like all production, has become geared to a consumption society and to turning out larger and greater quantities of goods.

In the technocratic mode, the ends have become simply efficiency and output. The ends have become means and they exist in themselves. The technocratic mode has become established because it is the mode of efficiency — of production, of program, of "getting things done." For these reasons, the technocratic mode is bound to spread in our society. But whether the technocrats themselves will become a dominant class, and how the technocratic mode might be challenged, are different questions, which we must now consider.

III

Soldiers Ride Things

It was the root idea of Saint-Simon, August Comte, and Herbert Spencer, the theorists of industrial society, that there was a radical opposition between the industrial spirit and the military spirit. The one emphasized work, production, rationality, the other display, waste, and heroics. Out of technology, economizing,

liness in Lenin. A recently published memoir by Nikolay Valentinov, who spent several months with Lenin in Geneva in 1904, provides a vivid picture of his personality:

In his 'normal' condition, Lenin tended towards an orderly life, free from all excesses. He wanted it to be regular, with precisely fixed hours for meals, sleep, work, and leisure. He did not smoke or drink, and looked after his health doing physical exercises every day. He was order and neatness incarnate. Every morning, before he settled down to read the newspapers, write, and work, Lenin, duster in hand, would put his desk and his books in order. He sewed any loose buttons on his coat or trousers himself, without bothering Krupskaya (his wife). If he found a stain on his suit, he immediately tried to remove it with petrol. He kept his bicycle as clean as a surgical instrument. In this 'normal' condition Lenin would have appeared to any observer as the most sober, balanced, and well-disciplined of men, without passions, repelled by clovenliness, and in particular by Bohemian ways. 'I have already got used to the way of life in Cracow: it is limited, quiet and sleepy,' he wrote to his relatives in 1913. 'No matter how god-forsaken this town may be, I like it better here than in Paris.'

Lenin's didactic utilitarian yardstick is also revealed in a comment of another Russian revolutionist, Vorovsky, to Valentinov:

... Lenin knows none of Goethe's works except Faust. He divides literature into two parts: what he needs, and what he doesn't need. . . [he has managed to find time to read all the volumes of *Znanie* (Knowledge) [a popular literary] miscellany] while he has consciously ignored Dostoyevsky: 'I haven't got time for this rubbish!'

After reading *Memoirs from the House of the Dead* and *Crime and Punishment*, he felt no desire to read *The Possessed* and *The Brothers Karamazov*. 'I know the subject of both of those malodorous works. . . I looked through [*The Possessed*] and threw it away. I don't read such literature — what good is it to me?'

[Nikolay Valentinov, *Encounters with Lenin*, Oxford University Press, 1968, pp. 147 and 49-50.]

and investment would come productivity as the basis of increasing wealth for all, rather than exploitation and plunder as the means of seizing wealth from others. In ancient society, work was subordinated to war and the warrior ruled; in industrial society, life would become pacific and the producer would rule.

The irony is that although the economizing spirit — the deployment of limited resources to attain maximum results — has indeed spread throughout society, as Schumpeter and others have argued, war rather than peace has been in large part responsible for the acceptance of planning and technocratic modes in government. The rise of the mass army, beginning with the Conscription Act passed in 1789 by the French revolutionary government — a system followed by every major power in the nineteenth century except Great Britain and the United States — set forth new modes of organization and supply. War and the mass army have supplied the model, too, for the most curious of social schemas. In 1795, for example, Gracchus Babeuf, the fiery conspiratorial leader of the extreme left-wing of the Jacobin movement, outlined his picture of collective economic planning as follows: All workers would be classified according to the type of work. Society would have exact information on what everyone was doing so that there would be neither underproduction nor overproduction. Society would determine the number of persons to be employed in any particular branch of industry. All would be apportioned to the needs of the present, and to the requirements of the future in the light of probable increases in population. All real needs would be exactly investigated and fully satisfied, thanks to the swift transport of goods to all localities and over all distances. And where was all this drawn from? From the experience of Revolutionary France at war, from the logistical plan for the organization of supplies for an army of 1,200,000 men divided into twelve widely dispersed points.

Instead of peace, every industrial society has a *Wehrwirtschaft*, a term for which, significantly, there is no adequate English translation, but which we could call, perhaps, a “preparedness economy”, or a mobilized society. A mobilized society is one in which the major resources of the country are concentrated on a few specific objectives defined by the government. In these sectors, private needs are in effect subordinated to the mobilized goals and the role of private decision is reduced almost to nothing. The Soviet Union is a mobilized society *par excellence*. Most of the “new states”, in their quest for modernization, have become mobilized: the basic resources of the society — capital and trained manpower — are geared to planned economic change.

In recent years, America has taken on the features of a mobilized polity in that one of the crucial scarce resources, that of “research and development” — and more specifically the work of most of the scientists and engineers in research and development — is tied to the requirements of the military and of war preparedness. The United States has not done this by outright commandeering of talents, or by restricting the right of nongovernmental units to engage in R & D. But since R & D is always a risk, in that no immediate payoffs or profits are assured, and the costs of R & D have become astronomical, few institutions other than the government can underwrite such expenditures. And the government has been compelled to do so because of the extraordinary revolutions in the art of war that have occurred since 1945.

In one sense, as Herman Kahn has pointed out, military technology has supplanted the “mode of production,” in Marx’s use of the term, as a major determinant

of social structure. Since the end of World War II there have been almost three total revolutions in military technology, with complete and across-the-board replacement of equipment, as older weapons systems were phased out without being used. Neither World War I nor World War II represented such complete breaks in continuity.

The sources of these accelerated revolutions — changes in the character of atomic weapons, from manned bombers to missiles, from fixed missiles to roving missiles and from medium range to intercontinental missiles — has been the concentration of research and development and concerted planning for new systems of weaponry. And the technology of "custom-crafted" missile construction, as against bombers, was a chief element in changing the "production-mix" of the aerospace industry labor force, so much so that the Budget Bureau Report on Defence Contracting (the David Bell Report of 1962) estimated that the ratio of engineers and scientists to production workers in the aerospace industry was roughly one-to-one.

In the Economic Report of the President presented to Congress in January 1963, President Kennedy declared: "The defense, space and atomic energy activities of the country absorb about two-thirds of the trained people available for exploring our scientific and technical frontiers. . . . In the course of meeting scientific challenges so brilliantly, we have paid a price by sharply limiting the scarce scientific and engineering resources available to the civilian sectors of the American economy." By now it is likely that President Kennedy's estimates were too low, and if one looks at R & D alone, about three-fourths of the engineering and scientific brains of the country are devoting themselves primarily to projects that derive from a mobilized polity.

But it is not only in the engulfing of technology that a significant change has taken place; there has been similar change in the modes of decision-making which has brought the technocratic figures to the fore. It is the McNamara "revolution" that has transformed military logistics, and for this reason one can say that McNamara joins Saint-Simon and Frederick W. Taylor as a hierophant in the pantheon of technology.

In the days before the revolutions in military technology, an airplane might be designed by the Air Force and farmed out to a private contractor. It was common practice in the 1950's for the Air Force to pay the development costs of four or five planes and then choose one for quantity production. All of this was possible so long as the development costs (designs, tools, mockups) of a single prototype were about \$100 million. By 1956 this cost had increased by a factor of five, and over the same period the estimated cost of a single missile had increased by a factor of fifty. By the time Robert McNamara became Secretary of Defense, costs had risen so enormously that some system of "value engineering" — computing the cost-effectiveness ratios of alternate weapons systems — had to be introduced.

In the long run, the "systems revolution" in the Pentagon may turn out to have been as vital to the spread of technocratic thinking as any combination of numbers of the scientific personnel within military projects. For what it did was introduce a new form of rationalization of governmental structure. The key idea, of course, is not just cost-effectiveness, but assessing the value of a weapons system in different kinds of programs and objectives. In the system of program budgeting, the entire structure of line-item budgets, which had been traditionally organized,

was overhauled to serve "functional" programs.¹⁵ The system of program budgeting adopted by the Department of Defense proved so successful that in May 1966 President Johnson ordered all departments and agencies of the government to reorganize their fiscal arrangements on the basis of the Planning-Programming-Budgeting System.

In a technical sense, there can be little quarrel with an effort to regroup in some logical fashion the scattered efforts of government programs and put them down in some systematic form. In the fiscal 1965 budget, for example, funds for education were dispersed through more than forty agencies. The expenditures of the U. S. Office of Education constituted only one-fifth of the total federal education budget. A program-budgeting system can thus unify what constitutes the education program of the American government. The difficulty arises, however, when one goes one step further and tries to discover, within a narrow economic calculus of cost-effectiveness techniques, the social value of one program as against another. Expenditures for defense may constitute the first line on a federal budget because, in the language of utility theory, defense constitutes a "single-peaked preference curve" in which the society, by and large, is agreed on the importance — and priority — of these efforts. But what about the situations in which there is no such agreement — such as science policy, or social policy, or welfare policy? How does one decide? When men have different valuations, how does one choose? For this the technocratic view has no answer.

Who Holds Power?

Decisions are a matter of power, and the crucial questions in any society are: *Who* holds power, and *how* is power held? Fortyfive years ago, Thorstein Veblen, in his *Engineers and the Price System*, foresaw a new society based on technical organization and industrial management, a "soviet of technicians", as he put it in the striking language he loved to use in order to scare and mystify the academic world. In making this prediction, Veblen shared the illusion of that earlier technocrat, Henri de Saint-Simon, that the complexity of the industrial system and the indispensability of the technician made military and political revolutions a thing of the past. "Revolutions in the eighteenth century", Veblen wrote, "were military and political; and the Elder Statesmen who now believe themselves to be making history still believe that revolutions can be made and unmade by the same ways and means in the twentieth century. But any substantial or effectual overturn in the twentieth century will necessarily be an industrial overturn, and by the same token, any twentieth century revolution can be combatted or neutralized only by industrial ways and means."

¹⁵ Thus, the American defense effort is organized not along the traditional lines of Army, Navy, and Air Force, but in nine basic programs: Strategic Retaliatory Forces, Continental Air and Missile Defense Forces, General Purpose Forces, Airlift and Sealift Forces, Reserve and National Guard Forces, Research and Development, down into "program elements" (there are now 800 such elements in the Defense Budget) which are intended to accomplish common missions. The original rationale is laid down in a book by Charles Hitch and Roland McKean, *The Economics of Defense in the Nuclear Age*. A more extended application of the concept is contained in the Rand volume, edited by David Novick, *Program Budgeting — Program Analysis and the Federal Budget*.

If a revolution were to come about in the United States — as a practiced skeptic, Veblen was highly dubious of that prospect — it would not be led by a minority political party, as in Soviet Russia, which was a loose-knit and backward industrial region, nor would it come from the trade-union “votaries of the dinner pail,” who, as a vested interest themselves, simply sought to keep prices up and labor supply down. It would occur, he said, along the lines “already laid down by the material conditions of its productive industry.” And, turning this Marxist prism to his own perceptions, Veblen continued: “These main lines of revolutionary strategy are lines of technical organization and industrial management; essentially lines of industrial engineering; such as will fit the organization to take care of the highly technical industrial system that constitutes the indispensable material foundation of any modern civilized community.”

The heart of Veblen’s assessment of the revolutionary class is thus summed up in his identification of the “production engineers” as the indispensable “General Staff of the industrial” system. “Without their immediate and unremitting guidance and correction the industrial system will not work. It is a mechanically organized structure of the technical processes designed, installed, and conducted by the production engineers. Without them and their constant attention to the industrial equipment, the mechanical appliances of industry will foot up to just so much junk.”

This syndicalist idea that revolution in the twentieth century could only be an “industrial overturn” exemplifies the fallacy in so much of Veblen’s thought. For as we have learned, no matter how technical social processes may be, the crucial turning points in a society occur in a political form. It is not the technocrat who ultimately holds power, but the politician.

The major changes which have re-shaped American society over the past thirty years — the creation of a managed economy, a welfare society, and a mobilized polity — grew out of political responses; in the first instances to accommodate the demands of economically insecure and disadvantaged groups — the farmers, workers, Negroes and the poor — for protection from the hazards of the market; and, later, because of the concentration of resources and political objectives following the mobilized postures of the Cold War and the space race.

All of this opens up a broader and more theoretical perspective about the changing nature of class and social position in American society. A class, in the final sense, means not a specific group of persons but a system which has institutionalized the ground rules for acquiring, holding, and transferring power and its attendant privileges. In Western society, the dominant system has been property, guaranteed and safeguarded by the legal order, and transmitted through a system of marriage and family. But over the last twenty-five to fifty years, the property system has been breaking up. In American society today, there are three co-existing modes of power and social mobility, and this baffles students of society who seek to tease out overlapping and often conflicting social positions. There is the historic mode of property as the basis of wealth and power, with inheritance as the major route of access. There is also, however, technical skill as the basis of power and position, with education as the necessary route of access to skill. And finally there is political office as a base of power, with organization of a machine as the route of access.

The rise of the new elites based on skill derives from the simple fact that knowledge and planning — military planning, economic planning, social planning — have become the basic requisites for all organized action in a modern society. The members of this new technocratic elite, with their new techniques of decision-making (systems analysis, linear programming, and program budgeting), have now become essential to the formulation and analysis of decisions on which political judgments have to be made, if not to the yielding of power. It is in this broad sense that the spread of education, research, and administration has created a new constituency — the technical and professional intelligentsia.

While these technologists are not bound by a sufficient common interest to make them a political class, they do have common characteristics. They are, first, the products of a new system in the recruitment for power (just as property and inheritance were the essence of the old system). The norms of the new intelligentsia — the norms of professionalism — are a departure from the hitherto prevailing norms of economic self-interest which have guided a business civilization. In the upper reaches of this new elite — that is, in the scientific community — men hold significantly different values, which could become the foundation of the new ethos for such a class.

Actually, the institution of property itself is undergoing a fundamental revision, in a significant way. In Western society for the past several hundred years, property, as the protection of private rights to wealth, has been the economic basis of individualism. Traditionally the institution of property, as Professor Charles Reich of the Yale Law School has put it, "guards the troubled boundary between individual man and the state."

But in modern life property has changed in two distinctive ways. One of these is elementary: individual property has become corporate, and property is no longer controlled by owners but by managers. In a more subtle and diffuse way, however a new kind of property has emerged and with it a different kind of legal relationship. To put it more baldly, property today consists not only of visible things (land, possession, titles) but also of claims, grants, and contracts. The property relationship is not only between persons but between the individual and the government. As Professor Reich points out, "The valuables dispensed by government takes many forms, but they all share one characteristic. They are steadily taking the place of the traditional forms of wealth — forms which are held as private property. Social insurance substitutes for savings, a government contract replaces a businessman's customers and goodwill. . . Increasingly, Americans live on government largess — allocated by government on its own terms, and held by recipients subject to conditions which express 'the public interest.'"

While many forms of this "new property" represent direct grants (subsidies to farmers, corporations, and universities) or are contracts for services or goods (to industry and universities), the most pervasive form is claims held by individuals (social security, medical care, housing allowances) which derive from a new definition of social rights: Claims on the community to insure equality of treatment, claims legitimately due a person so that he will be able to share in the social heritage. And the most important claim of all is full access to education, within the limits of one's talent and potential.

The result of all this is to enlarge the arena of power, and at the same time to complicate the modes of decision-making. The domestic political process ini-

tiated by the New Deal, which continues in the same form in the domestic program of the Johnson administration, was in effect a broadening of the "brokerage" system — the system of political deals between constituencies — although there are now many participants in the game. But there is also a new dimension in the political process, which has given the technocrats a new role. Matters of foreign policy are not a reflex of internal political forces, but a judgment about the national interest, involving strategy decisions based on the calculation of an opponent's strength and intentions. Once the fundamental policy decision was made to oppose the Communist power, many technical decisions, based on military technology and strategic assessments, took on the highest importance in the shaping of subsequent policy. Even a reworking of the economic map of the United States followed as well, with Texas and California gaining great importance because of the importance of the electronics and aerospace industries. In these instances technology and strategy laid down the requirements, and only then could business and local political groups seek to modify, or take advantage of, these decisions so as to protect their own economic interests.

In all this, the technical intelligentsia holds a double position. To the extent that they have interests in research, and positions in the universities, they become a new constituency — just as the military is a distinct new constituency since this country has never before had a permanent military establishment seeking money and support for science, for research and development. Thus the intelligentsia becomes a claimant, like other groups, for public support (though its influence is felt in the bureaucratic and administrative labyrinth, rather than in the electoral system or mass pressure). At the same time, the technicians represent an indispensable administrative machine for the political office holder with his public following.

But while the weights of the class system may shift, the nature of the political system, as the arena where interests are mediated, will not. In the next few decades, the political arena will become more decisive, if anything, for two fundamental reasons: we have become, for the first time, a *national society* (though there has always been the idea of the nation) in which crucial decisions, affecting all parts of the society simultaneously (from foreign affairs to fiscal policy) are made by the government, rather than through the market; in addition, we have become a *communal society*, in which many more groups now seek to establish their social rights — their claims on society — through the political order.

In the national society, more and more projects (whether the clean-up of pollution or the reorganization of the cities) must be undertaken through group or communal instruments. In a tightly interwoven society, more decisions have to be made through politics and through planning. Yet both mechanisms, paradoxically, increase social conflict. Planning provides a specific locus of decision, as against the more impersonal and dispersed role of the market, and it thus becomes a visible point at which pressures can be applied. Communal instruments — the effort to create a social choice out of a discordance of individual personal preferences — necessarily sharpen value conflicts. Do we want compensatory education for Negroes at the expense, say, of places for other students when the number of positions is limited? Do we want to keep a redwood forest or provide a going industry to a local community? Will we accept the increased noise of jets in communities near the airports, or force the reduction of weight and payloads, with a consequent increased cost to the industry and the traveller? Should a new highway go

through old sections of a community, or do we route them around the section with a higher cost to all? These, and thousands more, are issues which cannot be settled on the basis of technical criteria; necessarily they involve value and political choices.

The relationship of technical and political decisions in the next decades will become, in consequence, one of the most crucial problems of public policy. The politician, and the political public, will have to become increasingly versed in the technical character of policy, aware of the ramifications, as systems become extended, of the impact of decisions. (The views of Adam Smith may have been popularly digestible, a sociologist has written, but not an econometric study of alternative public-investment programs.) And the technical intelligentsia must learn to question the often unanalyzed assumptions regarding efficiency and rationality which underlie their techniques.

In the end, the technocratic mind-view necessarily falls before politics. The hopes of rationality — or one should say, of a particular kind of rationality — necessarily fade. There may still be, in the language of Max Weber a *Zweckrationalität*, a rationality of ends that are intertwined with means and become adjusted to each other. But this is possible only when the ends are strictly defined and the means, then, can be calculated in terms of the end.¹⁶

Politics, in the sense that we understand it, is always prior to the rational, and often the upsetting of the rational. The rational, as we have come to know it, is the routinized, settled, administrative orderly procedure by rules. Much of life in a complex society necessarily has this character. In going by plane or train to Washington one does not haggle with the airline company or railroad over the fare, as one might, with a taxi driver in the Levant. But politics is haggling, or else it is force.¹⁷ In Washington one haggles over the priorities of the society, the distribution of monies, the burden of taxation, and the like. The idea that there is a "social decision" which can satisfy all is an illusion. On the theoretical level this has been annihilated by Kenneth Arrow who, in his "impossibility theorem" has demonstrated that there can be no group decision which can amalgamate the diverse preferences of individuals in any rational way. This, theoretical economies, in its denial of a communal welfare function which would be similar to the ordering principles of individual utility, undermines the application of rationality to public decisions.¹⁸ In a practical sense, this is a knowledge which every politician knows in his bones. What is left is not rationality as objective utilities but bargaining.

What is evident, everywhere, is a society-wide uprising against bureaucracy and a desire for participation, a theme summed up in the statement, already a catchphrase, that "people ought to be able to affect the decisions that control their lives." To a considerable extent the participation revolution is one of the forms of reaction against the "professionalization" of society and the emergent technocratic decision making of a post-industrial society.¹⁹ What began years ago in the

¹⁶ In the terminology of Weber, rationality is of two kinds, *Wertrationalität* and *Zweckrationalität*. *Wertrationalität* is the rationality of "reason" whose ends are to be considered by themselves as valid, independent of means. *Zweckrationalität* is the rationality of function.

¹⁷ I deal here with the politics of interest. There is, of course, the politics of passion, the politics of expressiveness and symbolism. Much of this is the politics of the New Left.

¹⁸ See the next chapter for an elaboration of this problem.

¹⁹ This is discussed in chapters below.

factory through the trade unions has now spread to the neighborhood — because of the politicalization of decision-making in social affairs — and into the Universities; and in the next decades it will spread into other complex organizations as well. The older bureaucratic models of hierarchically organized centralized organizations functioning through an intensive division of labor clearly will be replaced by new forms of organization.

Yet "participatory democracy" is not the panacea that its adherents make it out to be, no more so than older efforts at creating plebiscitarian political mechanisms 50 years ago, such as the initiative, the referendum and the recall. (In California, the referendum has been the chief means of defeating open housing and probably will be used to restrict the Universities.) With all the furor about "participatory democracy" it is curious that few of its proponents have sought to think through, on the most elementary level, the meaning of these phrases. If individuals are to affect the decisions that change their lives, then under those rules segregationists in the South would have the right to exclude blacks from the schools. Similarly is a neighborhood group to be allowed to veto a city plan which takes into account the needs of a wider and more inclusive social unit? But at that point one would have to say that the South is not an independent entity but part of a larger polity, and has to comply with the moral norms of the more inclusive society, and so does the neighborhood. In short, participatory democracy is one more way of posing the classical issues of political philosophy, namely: who should make, and at what levels of government, what kinds of decisions, for how large a social unit.

The conception of a rational organization of society stands confounded. Rationality, as a means — as a set of techniques for efficient allocation of resources — has been twisted beyond the recognition of its forebears; rationality, as an end, finds itself confronted by the cantankerousness of politics, the politics of interest and the politics of passion. Faced with this double failure, the adherents of rationality — in particular the planners and designers — are now in the difficult position of having to rethink their premises and to understand their limits. And yet, the recognition of those limits is, itself, the beginning of wisdom.

In the end there is the beginning, as T. S. Eliot wrote, and we return to the question that is the root of all political philosophy: What is the good life that one wants to lead? The politics of the future — within the society, at least — will not be quarrels between functional economic-interest groups for distributive shares of the national product, but the concerns of communal society, particularly the inclusion of disadvantaged groups. They will turn on the issues of instilling a responsible social ethos in our leaders, the demand for more amenities, for greater beauty and a better quality of life in the arrangement of our cities, a more differentiated and intellectual educational system, and an improvement in the character of our culture. We may be divided on how to achieve these, and how to apportion the costs. But such questions, deriving from a conception of public virtue, bring us back to the classical questions of the polis. And this is as it should be.

OBSTACLES AND REINFORCEMENTS OF DEVELOPMENT

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I

In this paper I would like to analyze some of the social and cultural conditions which tend to create obstacles to continuous development and which may develop in different types of societies in general, and in modern societies in particular.

The starting point of our analysis will be the assumption so often voiced in the relevant literature that one of the basic characteristic features of modern societies is that they have to cope with continuous processes of change and development.

This feature is rooted in the double origins or characteristics of modernity — in the revolutionary origins or impact of modernity which tends to break down the traditional legitimacy of socio-political and cultural systems, and in the processes of continuous socio-demographic development and structural differentiation which tend to generate continuous processes and forces of change.

But the fact that such a predisposition to change is in a way inherent in modernity does not mean that in modern societies there do not tend to develop obstacles to change.

Such obstacles tend to arise not only in the transition from traditional to modern societies, but also within modern ones and those in the process of modernization when they find themselves faced with new problems and challenges.

The very ubiquity of change in modern societies tends only to intensify the possible resistance by various groups and institutions in society, and in a way aggravates the problem of finding ways to regulate and overcome such obstacles.

II

In every society — modern or traditional — different groups and institutions faced with problems of change may indeed develop different attitudes to change or to the possibility of change — to the new opportunities inherent in a situation of change — and among them there may indeed also develop a negative attitude to change.

Such negative attitudes may be the result of the inherent inertia of groups, of the predominance of vested interests or of limited socio-cultural vision.

Such resistance to change can in principle be found, though in varying degrees, within all societies and within all political and economic systems.

In literature we can sometimes find attempts to identify the predominance of such negative attitudes to change with certain types of political and economic systems, and there can be no doubt that to a certain degree such may indeed be the case, but only to a certain degree.

It is not only that within each type of political or economic systems there exist forces of conservatism and inertia or even that each system tends to favour some change in preference to another.

Beyond this, it might be worthwhile to see whether there exist some components of social, psychological and cultural life, which may be found — albeit in different degrees — in all societies, and which tend to influence the respective attitudes of the various groups in society with respect to development.

In the following pages we shall attempt to analyze some such components and their increasing frequency of appearance, basing our analysis mainly on the experience of modern societies and of societies on the way to becoming modernized.

III

The starting point of our discussion will be an analysis of the obstacles to development of social and cultural conditions which within different societies influence development, and of different ways of coping with the changes due to the impact of the forces of modernization.

We may distinguish here, even if only in a very rough and tentative way, several aspects of such attitudes to change.

First, we may distinguish between a generally positive attitude to change and resistance to it, i. e. the positive and negative acceptance of changing situations and of their possibilities.

Second in importance in an analysis of reactions to change is the existence, within any given society or sector thereof, of some organizational and institutional capacities to deal with the problems arising from such changing situations.

Third, is the direction by some institution of any such response to change. Here we may first find a totally passive, negative attitude, often resulting in the disappearance or weakening of any resisting groups. Second, there may develop an active, organized resistance to change, an organized 'traditionalistic' response, which attempts to impose at least some of the older values on the new setting. Third, there may develop a high level of adaptability to change. Last, there may develop what we may call a transformative capacity, i. e. the capacity not only to adapt oneself to the new, changing internal or international conditions, but also to forge, crystallize new frameworks of institutions in general and centres in particular. This transformative capacity may be distinguished according to the extent of coercion which it involves.

Available data and analyses indicate that a few sets of variables and their interrelations are of paramount importance in influencing this attitude to change.

The first such set of variables, which seems to influence the extent of resistance to change or of adaptability to it, seems to be the extent of internal solidarity and cohesion of any group or social system. A second set of such variables is the rigidity and uniformity of the internal division of labour and of the social structure and cultural order of a group or society, the degree of autonomy of their various

components, and the openness or closeness of any given group towards other groups and towards the greater society and social and cultural systems.

The extent of the structural flexibility or rigidity of major spheres of institutions can be measured, first, by the extent to which the different institutional tasks are differentiated and performed in specific situations, groups, roles and frameworks of institutions and, second, by the extent to which each such group, role or situation is governed by some autonomous criterion of its own goals and values or, conversely, is dominated by those of another such group, role or situation.

The flexibility or rigidity of the symbolic orders of the cultural traditions of a society has to be measured first by the extent to which the contents of each of these spheres is fixed, closed and rigid or relatively open in a major social and cultural system — the cosmic system and culture, the social collective and social system and the socio-political centres. Second, it has to be measured by the closedness or openness of the participation of different groups in these different bodies and, third, by the nature of their symbolic — and to a certain extent also organizational and institutional — interrelations and interdependence.

In this connection, several possible constellations can be distinguished. First is the case, in which each such symbolic sphere is seen as autonomous, but closely interrelated with the others, in the sense that participation in one makes possible access to another, without however imposing its own criteria and orientations on it. The second possibility may be that of relative closedness of each such body and of purely adaptive 'power' relations among them.

Last — sometimes connected with the former — there may be the possibility of one of these predominating over the rest, by being able both to regulate access to them and to impose its own values and symbols on them.

IV

It seems that the general predisposition to change of a group or individual is influenced by a combination of these two sets of variables — namely, by the scope of solidarity of a system and the degree of flexibility of its institutions.

Most available data show that the lower such solidarity and cohesion of a given social system, the lower is also the adaptability to change of its members. It has been adequately documented in social and psychological research that the maintenance of the cohesion of primary groups, and to a certain extent of their solidarity links with wider social settings, is of crucial importance for the ability of their members to face new, even adverse, conditions. The destruction of this solidarity may greatly impair such ability.

Most of these studies, however, dealt with primary groups within larger formal organizations, and especially within the framework of modern societies. There arises, therefore, the problem of the relation of these variables to the other ones, which deal with more formal aspects of micro- and macro-societal structures. It is here that the importance of rigidity or of flexibility for the development of adaptability of different social systems to situations of change can be seen. In general, it seems that such adaptability is greatly facilitated by the greater extent of flexibility and autonomy of social, cultural and political institutions and of the major symbolic orders of a society. As we have seen, such autonomy of the cul-

tural and social spheres facilitates the development of a relatively high degree of general predisposition to change, of a positive attitude to change.

The greater the autonomy of interrelations among the various symbolic orders, the more non-ritualistic will also be the traditional precepts of a given society, the more flexible will be the status concepts tending to develop among its members who, therefore, may also evince a greater adaptability or predisposition to change.

Conversely, insofar as such autonomy is absent, and the social, cultural and political systems are closely linked with one another, the greater will be the development of resistance to change. The more close to each other the various symbolic orders are, and the more rigid and ritualistic their precepts, the more there will tend to develop ritual status concepts among their members who evince a lesser tendency to develop adaptability to change and, conversely, a greater resistance to change.

But obviously there are many more permutations among the various elements of cultural traditions, and they — as well as their influence on the processes of change — have to be more thoroughly and systematically analyzed in further research.

While it may well be true that, on the one hand, a low degree of solidarity and cohesiveness of a group tends to enhance its members' lack of ability to adapt themselves to situations of change, and while, on the other hand, relatively strong internal cohesion of such groups with some internal flexibility, status autonomy and openness toward the wider society tends to develop positive orientation to change, yet in between these two extreme types the picture is not so simple.

A relatively high degree of group solidarity may be connected with a relatively rigid internal division of labour, and need not necessarily denote the lack of organizational adaptability to change — although the adaptation which it may foster is of a rather special kind.

It seems that it is the extent of solidarity of a group or structure which tends to influence the degree to which individuals or groups with some organizational ability develop from within it, while it is the extent of flexibility of its structure that influences the nature of the general attitude to change that may develop within a given society or part thereof.

It is in this connection that the relative focusing of solidarity, cohesion of various groups and of their structural characteristic features in relation to the social framework of society, and especially the possibility of extending or converging this solidarity towards new fields of activities and of patterns of participation in new social spheres, becomes very important.

V

But neither of these sets of variables does as yet explain the extent to which there develops from within various societies or sectors thereof the ability to crystallize new effective frameworks of institutions, as well as the concrete contours of such frameworks.

Here, the crucial variable seems to be the extent to which there develop different types of entrepreneurial and charismatic elites and groups in different institutional fields.

The process of social change, or the undermining of existing patterns of life, social organization and culture — accompanied as it often is by structural differentiation — does give rise, by its very impetus, to a great variety of such new groups which, of course, differ greatly in their basic organizational features from the older ones, as well as among themselves.

By their very nature, most such new occupational, religious, political or social status categories or groups of elites undertake to perform new tasks, new types of activities, and develop orientations towards new organizational settings. These tasks and activities, of course, differ greatly in accordance with the respective characteristic features of the new emerging system; they, for instance, differ greatly between an Imperial system with a predominant agrarian base and some mercantile and manufacturing bases or a modern industrial and democratic base.

But beyond these differences, they also differ greatly as to the extent of their general organizational ability, their adaptive, innovative or transformative capacities in their own direct sphere of activities, and with regard to broader groups of society and its more central institutions.

What are, then, the conditions tending to influence the development of such different types of elites?

VI

One such important variable is the very structure of the situation of change, or the process of impingement of forces of modernity on 'traditional' societies.

Of special importance seem to be first the initial patterns of the establishment of central institutional modern frameworks, the relative rate of modernization, and the extent of structural flexibility of the strategic groups and elites in society.

The establishment and continuity of flexible political symbols and central and political and legal frameworks, of common symbols of political and national identification, or organs of political struggle, legislation and administration, is a basic prerequisite for the development of a sense of modern, differentiated political identity and affinity among different groups and strata, which are drawn into the context of a modern political community.

The failure to develop such frameworks may reinforce the closedness of the different modern elites, as manifested by their lack of ability to forge out new, cohesive symbols, and by the development of policies incapable of forging new interlinking mechanisms in society and of creating cohesive symbols and frameworks which may be of crucial importance in the development and establishment of adequate regulative mechanisms which can deal with the new emerging problems.

Of special importance in this connection has been the establishment — whether formal or informal — of certain rules of the political game, such as systems of election or less formal institutional devices of different types, which establish some consensus as to procedure in society.

Similarly, such a successful establishment of institutions is usually greatly dependent on, and related to, the development of a relatively flexible and differentiated legal system which, whatever its social or political underpinnings, can assure some basic rights to individuals and some protection against the undermining of long-term commitments and activities, and some minimum rights of the citizens.

All such developments greatly facilitate the development of a more cohesive and flexible modern institutional centre, which is capable of both promoting and regulating change, and which can be responsive to various needs and demands, without succumbing to them so as to become totally ineffective.

But the effectiveness and continuity of these central symbols and institutions as agents of political socialization is not granted or assured through their mere establishment, although their very establishment is, as we have seen, of great importance. Their effectiveness and continuity are greatly dependent upon several factors and conditions.

Among these, of great importance (beyond the structure of elites and the ideological transformation analyzed above) are several aspects of the general rate of modernization, and the differing rates of modernization in the different spheres of institutions become very important.

The importance of these variables lies in the fact that they may greatly influence the extent to which various groups become modernized in such a way that they are able to develop both various new regulative frameworks through which their problems can be dealt with and general positive orientations to wider modern frameworks and symbols.

First, of importance here is the continuity of economic development and progress. The greater this continuity, the greater will, naturally, be the positive adjustment of the different groups and strata to the new, modern settings. But this is only one indication of the general importance of the rate of modernization and of the relative rate of modernization in different spheres of institutions in particular.

VII

But of no less importance in influencing the process of modernization, its continuity and the concrete contours of societies undergoing modernization are some aspects of the traditional societies, upon which the forces of modernization have impinged, and out of which the new, post-traditional, modern societies and those that are being modernized, evolve.

Here we have first the general level of resources and of initial differentiation, which may provide the bases for modern institution-building. Thus, obviously, the lower this level — as is evident, for instance, in predominantly primitive or low-level agricultural economies, — the smaller will be the resources available for modern institution-building, and the greater will be the likelihood of developing an ineffective transition to modernity.

But it should be added that various structural and symbolic aspects of these societies — some of which have been mentioned above in our discussion of obstacles to change — are also of importance in shaping the course of transition to modernity.

It is the interrelation between the levels of resources, the degree of solidarity in the different groups and strata, the structural and symbolic autonomy of different social spheres (i. e. the degree of rigidity or flexibility of these spheres), the strength or weakness of the major centres of symbolic orders — i. e. the social, political and cultural (and usually in the case of traditional societies also religious)

centres that can best explain the development within a given society of elites and groups with different degrees of organizational, innovative and transformative capacities.

VIII

It would be beyond the scope of this paper to analyze all the possible permutations and variations among the various aspects of social and cultural structures susceptible to the development outlined above. It might, however, be not out of place to point out some practical implications of this analysis.

One such implication is that approach to development should not be based on a unidimensional conception of modernity or development, on the assumption that there exists any single road, pattern or model of development. Neither should it be based on the premise that development always takes place at the same rate in all spheres of a society.

It is just because of such possible heterogeneity of attitudes to development in any society that we are able not to view any situation as entirely foreclosed in its potential for development.

We should rather aim at identifying first those parts of any society, which are the most resistant to change and attempt to isolate and segregate them without making them necessarily hostile, and, second, those parts, which are more positively oriented and have the necessary resources, leadership and organizational abilities for furthering development.

The very complexity of the factors, which influence resistance to development or its acceptance, may indeed help the development of flexible and open policies and institutional planning, aimed at promoting development through the active participation of broad groups and strata.

A SHORT NOTE ON THE USES OF SOCIOLOGY IN DEVELOPING SOCIETIES

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During the past fifteen years the theme of development, industrialization and mechanization has received considerable attention by professional sociologists. Unfortunately, to the amount of attention do not seem to correspond equally impressive results. In the first place, one notices a serious linguistic confusion. Industrialization and modernization, development and expansion are currently used as interchangeable terms. Concepts in themselves already quite elusive tend to become so loose as to cover practically everything. On the other hand, due to the lack of an integrated theory of social change, social scientists seem prone to base their descriptions and explanations on purely personal options: sociologists belonging to economically depressed and technically backward regions of the world stress the importance of structural changes as a causal factor in development; writers belonging to developed countries tend to view development as a natural outcome of a change in values and attitudes of the population at large; in other words, they locate the causal factor for change in the mind of the people, in their "need of achievement", and so on.

It would perhaps be better to recognize that social development depends on a political decision. In this respect, the relevant questions to be asked by sociologists are: development for whom and against whom, for what and against what? Sociologists seem reluctant to ask such questions as they fear political involvement or practical contamination. However disturbing as it might sound, it is true that sociology as a science has never been a *pure* science. In other words, it has never been concerned with subject matters on the basis of idle curiosity. Since its very beginning sociology has always been an attempt to provide answers to real, immediate and pressing problems. In the writings of the official founder of sociology, Auguste Comte, we already find a clear definition of sociology as an operational science, that is to say a science which is not satisfied with pure abstract speculation but one that looks quite keenly for a link between ideas and practice. No wonder the motto of Comte runs as follows: *savoir pour prévoir; prévoir pour agir* (to know in order to foresee; to foresee in order to take action). Thus, the intention of Comte is both theoretical and practical. He tries to identify a platform for the building up of *social consensus*, that is a body of shared values and attitudes, and he thinks he has found it in the intellectual reorganization of society made possible by the application of scientific criteria to the study of social phenomena.

But this is far from being a purely scientific enterprise; it requires a political decision.

The use of sociology is linked with a certain political climate and a peculiar type of society. A society which decides to use sociology as a guiding tool to social action and in the course of implementation of public policy is a society which has abandoned tradition as a major factor of legitimacy and turned to rational criteria to shape its destiny. It is not by chance that sociology arises in concomitance with the advent of modern industrial society. Agrarian traditional societies do not need social research; to them tradition, the "authority of the eternal yesterday" to use the phrase of Max Weber, is quite sufficient.

But things are nowadays different. We live in a world of change. Modern societies are in a state of constant transition and transformation. Naturally any society at any time has been in a state of transition. But the distinctive feature of present-day society if compared with all previous epochs is the speed at which change takes place. Mechanization, industrialization, the advances of science and technology are the most obvious manifestations of these changes and of the accelerated evolution of societies. Production processes and communication media have developed on a gigantic scale, shortening work-time, abolishing distance, situating individual and groups in a network of relations more closely-knit than ever before and reducing the barriers between nations and civilizations. As profound changes have become normal for the individual, for institutions and for whole societies, so the need to organize more and more of human activity in more and more explicit terms has made itself felt.

In this changing world, where the keyword development has appropriated the importance and prestige formerly accorded to tradition in the societies of the past, the achievements and the promise of progress not unusually arouse feelings of unease and upheaval in the face of the future. The problem to be faced is not simply that of enabling people to adjust to new conditions, but of helping them to understand an increasingly complex society and to find their way in its norms and institutions. There is a growing realization of the increasing disparity between the technical resources of modern society, man's power over nature and his practical inventions on the one hand, and the new social structures in which he has to relearn the art of living, the resulting new needs, aspirations and values, on the other. Research in the natural sciences reaches beyond the present technological possibilities, which themselves are in advance of present realities. In the social field, however, not only does "social technology" lag behind but also, and above all, social research.

But what can be reasonably expected from social research as regards present-day social issues? To put it in different terms, what kind of contribution can we expect from sociology and related social sciences? Sociology is no magic. There are however some definite contributions sociology can make to modern society through systematic social research. Modern rapidly-growing societies must acquire scientific knowledge of themselves because the speed of change compels them to anticipate, plan and organize their undertakings, gauge the risks and predict and control the repercussions. This means that modern societies must plan and one way or another regulate their social processes. But planning is becoming more and more complex. Governmental and policy-making bodies are beginning to be

conscious of the fact that too many decisions are based on purely economic and demographic considerations.

The very notion of development has changed. Development can no longer be conceived in purely economic or productive terms. It is commonly accepted nowadays that development indicates in the last analysis a social objective and that it cannot be measured in purely economic quantities. It requires a system of values and criteria on the basis of which economic considerations can be weighed in the light of the human and social factors involved. This is not only the result of abstract speculation. It has been most forcefully brought home by the experience of development agencies in the underdeveloped countries. In such technically less advanced areas it has become apparent that development does not require only money, machines and techniques but first of all a change in values and attitudes in the population at large. To determine the traditional attitudes and values to be changed and to suggest ways and means to operate such an adjustment is certainly one of the major tasks of social research. There are powerful cultural barriers which call for analysis, understanding and eventual replacement.

In this perspective social research, that is the work of sociology and of the related social sciences, can offer a contribution on *three different levels*.

In the first place, research can be concerned and offer an analysis of the general character of social change already taking place in society or to be expected in the near future; it can study in particular the social and psychological background of resistance to this change and it can explore how to overcome it.

In the second place, research can be concerned with specific policy problems, but at a high level, usually national or even international; for example research with regard to national education policies, which can serve as the basis for the modernization of legislation on education; or research which could help to formulate the basic principles of a national policy for physical planning.

In the third place, research could be related to the practical execution of general policy. Such research may be of a regional character; for example, related to the implementation in a particular administrative unit of a national policy for public health. It may also be, in Europe, of a national character or, in the United States, of a federal character, when it aims at a systematic evaluation of the results of a certain policy.

These three levels are logically interrelated but it would be somewhat naive to expect to find them adequately and proportionally developed in practice. It would be ideal to have every specific policy decision fit into a general conception of the future development of a given society and in turn to link such a general conception to the findings of scientific social research at the most abstract level. But this is not the case and it should not come as a big surprise that most social research has been done and is at present done at the concrete executive level. In other words, most social research has an instrumental nature. Administrators and policy makers, both private and public, seem to be inclined to invest in it only to the extent that they can get immediate results, that is results susceptible of immediate application. This is understandable: the logic of administrators and policy makers has nothing to do with the logic of scientific discovery; they simply cannot wait; they must usually meet a deadline.

Despite these obvious limitations, sociology can be of great use to the policy maker both negatively and positively. Negatively, it can point out certain contra-

dictory aspects of a given policy as well as it can help clarifying the precise meaning of the words with which given policy goals are expressed, not to mention the necessary caution which it conveys through the analytic description of the complexity of the social process. Positively, sociology calls to the attention of the policy makers the interdependence of social variables which are usually thought of as distinct, if not separate, components of social reality. In this way it calls also attention to unanticipated consequences of social policy, suggesting possible middle and long range repercussions. Let us take, to illustrate our point, the case of industrialization. Most present-day policy makers, especially in developing nations, under the urge coming from below as a result of large mass aspirations, claim to be willing to start an industrialization process for their countries. But, in the first place, they usually make a blatant confusion between industrialization, that is a continuing and self-maintaining process, and mere expansion, connected with foreign factors and peculiar market situations. Moreover, when it comes to positive steps to be taken, they seem to believe in a kind of ready-made industrialization. This oversimplified view is reflected in the fact that technical intervention and financial investment are considered adequate factors to start the industrialization process. Needless to say, results are usually sad. Instead of becoming the birth place for a new industrialization process such economically depressed areas tend to become a "cemetery of infrastructures": roads leading nowhere; machinery in the hands of people who do not know how to operate it; products without a market; shortage of skilled labor; high labor absenteeism and turnover, and so on.

What can be easily shown by sociology is that industrialization is a global social process, that is to say, a process which has more than one or two dimensions because it involves values and attitudes of people as well as their technical know-how adequate financial and technical resources, outlets for production, a fairly good communication network, a core of trained personnel and the ability to train local people, not to mention the still mysterious gift of *entrepreneurship* that is required to get things moving and to keep them in motion. In other words, sociology can demonstrate that industrialization is a cultural break and that it marks a serious technical, economic and social separation from the pre-industrial rural type of society. This is a general and fairly glamorous example.

But nothing is easier than to list topics calling for further exploration and research support. They are, more or less explicitly, generally recognized as presenting problems of direct concern to society as a whole: education, traffic, town planning, public health, work and leisure, mass communications, criminal behaviour and its prevention, underdeveloped areas, international relations, and so on.

To tackle successfully any of these problems sociology by itself is not sufficient and an interdisciplinary approach is needed. Education, for instance, provides a good illustration of the diversity of issues in question, the significance for government action of a better understanding of the different factors involved and, at the same time, the interdependence of the various social science disciplines. In many countries governments are today preoccupied with the expansion of their systems of higher education — that is to say, with giving more boys and girls access to secondary schools and universities. This intention raises a number of problems for research: Are there untapped reserves of ability? Here, the psychologist has to join the demographer in studying and identifying unexploited talent. Why do

some parents of able children hesitate to send their children to institutions of higher education? While the social psychologist looks into the motives, the sociologist can correlate other features of social structure with educational motivation. What is the cost of educational expansion? And to what extent is educational expansion an individual, and a national investment? In addition, matters of the procedure of carrying out a policy of educational expansion have to be discussed by lawyers. Even the social geographers and the political scientists have their role to play. Given the basic political option for expansion, social scientists thus not only aid its implementation, but are indispensable to it, unless it is to be left to arbitrary opinion and scattered decisions.

The use of sociological research can lead to positive results not only as regards major public issues or government decisions; it can be fruitful both to public and private agencies also in the delicate phase of their definition of goals and of their programming. It is in fact clear that the nature of the responsibilities of public and private agencies has considerably changed in present-day industrial societies. While technical, medical, and economic factors play a dominant role, social and other non-economic variables become more and more important. Consequently social scientists are called upon increasingly to mount studies in order to clarify and facilitate the operation of such services. According to some American sociologists, the example of public health and social welfare programmes in the United States points to four major contributions of social science research, since it deals with:

- a) the goals of these services and their implementation;
- b) the public to which the services are directed;
- c) the personnel and the organization which administer these services;
- d) the evaluation of the effectiveness of their operations.

A few words for a more detailed comment might be in order here. While it is true that the definition of goals is the province of statesmen or philosophers or professionals experienced in a subject area, social research can sharpen this definition, can spell out alternatives so that choices are facilitated and identify unanticipated consequences which might lead the policy maker to modify his plans. For example, defining the poverty line is an old problem. The home economist must say what minimum amount of goods and shelter is physiologically necessary; the market economist must calculate how much money is necessary to reach this level, the labor economist must determine the minimum amount of education necessary to keep a man employable. But the sociologist has to consider questions relating to whether, at a given historical period, there are not other things besides food and shelter which can become an indispensable minimum: a certain standard of living. But even subsistence levels are socially defined. Sometimes policy goals cannot even be established without extensive social research.

One of the main findings of practical importance for all welfare operations is insight into the stratification of the population, mainly social. It has been observed that the low-income population can be divided into two groups, working class and lower class. The former is distinguished by relatively stable semiskilled or skilled employment, and by a way of life which centers on the immediate or extended family. The lower class is characterized by temporary, unstable employment in unskilled and menial manual tasks, and by a way of life equally marked by instability. Under these conditions, lower class people are activated to develop

mobility aspirations, but instead defend themselves against frustration by rejecting the rest of the world, and by searching for whatever gratifications are available, including such forms of self-expression and retreat as violence, alcohol and narcotics. The result is that the lower class tends to suffer from low aspirations and low opportunities and access to education and social institutions. These deprivation, in turn, create social-structural and cultural patterns which inhibit many people from developing the values and skills needed to take advantage of the opportunities that might be available. An understanding of the "mind of the poor" is crucial for the success of all general welfare programmes. It seems clear that, for the future, official health agencies must provide the lead in closing the gap that has developed between the modern bureaucratically organized practice of medicine and the traditional social organization of the low-income groups. In this respect the part played by social research can be important. It deals not only with the analysis of the sentiments of different social strata; it would also try to ascertain how these sentiments can be changed or how action programmes can be adapted to them in such a way as to lead to socially desirable ends.

There is however in this latter function of social research a danger of abuse which must be made explicit in order to avoid it.

Sociology can be used as a technique of conformity whenever the analysis of social data is not meant to help the transformation of objective social situations according to the needs of people but rather to convince individuals and groups to adapt and to accept things as they are *no matter what they feel about them*. In other words, whenever an objective social issue is translated by research and presented in purely psychological terms there is a danger of abuse of sociology on the part of the policy makers.

But it would be unfair to put the blame for such abuses only on the policy makers. The fact is that sociology and related social sciences still lag sadly behind the needs of our society. The demands made upon these sciences are perhaps too great not too embarrass them. It should be always kept in mind that, as we said earlier, sociology is no magic art. It does not grow on the basis of great expectations. Its growth and social use rather depend on the increasing awareness that society does not have to be accepted as a purely natural phenomenon, that something can be done, here and now, to make it more functional and more humane at the same time.

L'AMÉRIQUE ET LE SOCIALISME (QUELQUES SOURCES D'ERREUR DANS LES PRONOSTICS POLITIQUES)

PABLO GONZALEZ CAZANOVA
MEXIQUE

En supposant que dans quelques décades il n'y aura plus de capitalisme — pas même en Amérique — quelles sont les principales erreurs que peuvent commettre la sociologie et la science politique dans leurs pronostics?

La première consisterait à affirmer que l'hypothèse ci-dessus est impossible. De multiples antécédants y conduisent cependant. Aussi, en limitant nos investigations à la seule culture nord-américaine, nous trouvons aux Etats-Unis une faible tradition du capitalisme d'Etat et, surtout, l'absence d'une solide idéologie socialiste, idéologie que les jeunes générations ne font que commencer à créer ou à recréer depuis à peine les années soixante. Et l'on y trouve notamment l'assurance du *big business*, la sensation de sécurité illimitée que lui donnent ses propres succès, et son énorme attachement à la recherche empirique.

L'idéologie des gros hommes d'affaires du *big business* sur son propre rôle présente divers aspects importants susceptibles de nous aider à préciser le problème:

1. Le caractère politique qu'a acquis le *big business* et sa „politisation“ (son intégration au consortium „militaire-industriel“ dont parlait Eisenhower dans son fameux discours d'adieu), sa sagace manipulation des politiciens, de l'appareil administratif et militaire d'Etat;

2. Sa diversification (son intégration sous forme de conglomérats qui opèrent dans une grande variété de domaines, de façon simultanée et combinée);

3. Sa capacité de réadaptation dans le temps (tout au long de l'histoire des Etats-Unis et du monde, au sein des crises, des guerres et des révolutions; de transformations des régimes, des structures et des systèmes);

4. Sa capacité d'adaptation dans l'espace (son expansion mondiale et sa dispersion géographique);

5. Son efficacité (sa décentralisation administrative combinée à une intégration verticale; sa productivité élevée; son utilisation optimum des technologies; son potentiel de planification autonome à long terme, lié à une grande capacité financière et mis en œuvre dans une „orientation scientifique“).¹

Tous les éléments antérieurs constituent des motifs de satisfaction la plus profonde du *big business*, de sa certitude d'*expansion* et de *permanence*, et la justi-

¹ Cf. Robert T. Averitt — „American Business: Achievement and Challenge“, Daedalus, Winter, 1969 pp. 60-77.

fication qu'il se donne pour continuer à étendre ses activités dans divers secteurs et régions, et pour les prolonger indéfiniment.

Au sein du *big business* et de ses idéologies prévaut l'idée que ses agents doivent de plus en plus être nantis de „connaissances politiques“, qu'ils doivent accroître leurs activités dans le monde — en apprenant l'anthropologie et la „politique locale“, qu'ils doivent contribuer toujours davantage à affermir la sécurité intérieure et extérieure des Etats-Unis, qu'ils peuvent faire de plus en plus des combinaisons d'ensemble, entreprendre des opérations variées dans divers domaines, avec une marge presque illimitée de liberté.

Le *big business* est satisfait de l'usage qu'il fait de la technologie, de sa productivité élevée par personne occupée, de ses bénéfices et de ses ressources financières qui constituent la *preuve* traditionnelle du succès au sein de la civilisation à laquelle il appartient et qu'il contribue à créer.

Les éléments de sa structure mentale lui permettent de justifier n'importe quelle expansion, agression, guerre ou contre-révolution, en arguant :

1. du réalisme de la *power policy*;
2. des valeurs métaphysiques dont il se croit nanti (religion, morale, liberté, démocratie) et que ses membres pratiquent effectivement au sommet (dans les „top levels“) et chez eux („at home“);
3. de l'incapacité des autres, soit du secteur publique des Etats-Unis eux-mêmes, soit de l'ensemble des pays „sous-développés“.

Avec ces raisonnements, le *big business* s'est emparé progressivement de la production militaire et de l'investissement public, c'est-à-dire qu'il a provoqué une contraction du secteur gouvernemental des Etats-Unis, faisant transférer aux corporations et conglomérats des activités qui auparavant étaient du domaine public. Avec satisfaction et aplomb, il aspire à résoudre les „problèmes publics“ des Etats-Unis, ceux des faubourgs pauvres, des *ghettos* noirs, de l'éducation nationale, des services municipaux, de la sécurité personnelle, de la prévention du crime, de la pollution, de l'enseignement universitaire et supérieur, de la recherche scientifique, des services de restaurant dans les institutions officielles et bien entendu, les problèmes des pays sous-développés auxquels il propose le miracle économique de Porto Rico („the economic miracle of Puerto Rico“).²

A l'expansion et l'omniprésence fonctionnelle du *big business* il faut ajouter les idéologies du „capitalisme populaire“ et de la „grande capacité d'innovation et de développement“ qui légitiment dans tous les domaines une position de force économique, politique et militaire indéniable.

Force, technique et réalisations donnent au *big business* cette opulence qui lui permet facilement de faire face aux scientifiques („scholars“) qui „sous-estiment“ sa valeur et, bien entendu, à ceux qui „prophesy the decline of American business as a central institution“.³

Les hommes d'affaires (*businessmen*) et leurs idéologues sont indéniablement impressionnés par le fait que l'„American business has shown a remarkable ability to ride the trends of the times — to produce the instrument and tools of learning, loafing, calculation, reasoning, fighting, extending life and curbing fertility,

² Eli Goldston — „New Prospects for American Business“, *Daedalus*, op. cit., pp. 78—112.

³ L. S. Silk — „Business Power, Today and Tomorrow“, *Daedalus*, op. cit., p. 185.

traveling through space (inner and outer), or whatever it is the human race wants to do (italiques nôtres)⁴.

Ils soutiennent que „the-research revolution — has increased rather than reduced the capability of American corporations to survive and grow“ (ibid). Et ils prévoient en conséquence leur propre développement chaque jour plus efficace au cours du XXI^e siècle; plus considérable et plus autonome, bien entendu, que celui des „government departments“⁵, avec qui ils entretiennent un dialogue intransigeant: „One has the impression nowadays — écrit un de leurs apologistes — that the dialogue between the corporation and the state consists largely of a simple assertion by the former: — Anything you can do, I can do better“⁶. Et c'est ainsi que se maintient et se renouvelle l'impression solidement établie que la „business entity“, „possess immortality“⁷.

La conclusion a l'air évidente: au centre de la puissance nord-américaine se trouve une solide structure qui s'opposerait à l'histoire et à la logique d'une façon particulièrement violente et qui annonce une perspective tout aussi violente.

Voilà pourquoi les affirmations contraires sont-elles de si grande importance, comme celles de Bell qui écrit: „... if the business firm was the key institution of the past hundred years . . . the university will be the central institution of the next hundred years. . .“⁸. Il est très important que cet auteur bien connu pense: „To say that the major institution of the new society will be intellectual is to say that the production and business decisions will be subordinated to or will derive from other sources of society. . .“ Et ce qu'il souligne plus loin: „Eventually the entire complex of social prestige and social status will be rooted in the intellectual and scientific communities“⁹.

Il est également important que Galbraith soutienne qu'à l'avenir c'est un Etat éducationnel et scientifique qui gouvernera, „tandis que disparaîtront la communauté financière et les syndicats“¹⁰.

Il est important d'écouter ces voix qui se font entendre dans l'*Establishment* lui-même, mais cela demeure évidemment insuffisant, car en fait il faut poser le problème de l'opposition *big business* — universités de telle façon que la même culture empiriste et technologique rachète au moins un élément de la toute-puissance du *big-business*, qui est cette culture empiriste et technologique mise à son service, et qu'elle l'intègre dans un cadre théorique réellement global.

C'est là justement la lutte que mènent aujourd'hui les universités nord-américaines, leurs étudiants et leurs enseignants progressistes, et cette lutte se livre sous des formes naturellement violentes au cœur même de la culture de la violence; et ils luttent pour conserver et même pour accentuer son caractère rationnel, en ajoutant à la rationalité technologique, ou empiriste, celles historique et socialiste.

⁴ L. S. Silk — „Business Power, Today and Tomorrow“, Daedalus, op. cit., p. 187.

⁵ Andrew Shonfield — „Business in the Twenty-First Century“, op. cit., p. 195.

⁶ Ibid., p. 191.

⁷ Raymond Vernon — „The Role of United States Enterprise Abroad“, Daedalus, op. cit., p. 114.

⁸ Daniel Bell — „Notes on the Post-Industrial Society“, The Public Interest, 6, Winter, 1967.

⁹ Ibid.

¹⁰ J. K. Galbraith — The New Industrial State, Boston, 1967.

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Dans l'un ou l'autre des cas, le noyau de toutes les erreurs de la prédiction sociologique semble être solidement installé, de façon claire et saisissante, dans la culture et la conscience du *big business*. Mais ce qui augmente encore les dégâts, c'est la manière dont la recherche empirique accentue ce type d'erreurs, non seulement à partir d'une supposition existentielle — à savoir qu'elle travaille au service du *big business* de façon plus ou moins directe — mais encore à partir de certaines hypothèses techniques, de manipulation ou de contrôle qui effectivement existent et qu'elle projette en combinaisons infinies, ou en formes linéales, comme si le système possédait une liberté presque aussi grande que les permutations possibles de n variables, ou comme si les tendances ne débouchaient pas à un „cutting point“, à un plafond historique.

Ces erreurs sur une liberté presque absolue de manipulation technique et sur les variations quantitatives illimitées contribuent très sérieusement à obscurcir le problème de la fin et de la relève du système, de son caractère de phénomène naturel et historique, qui a une limite et qui n'est ni infini, ni éternel.

Mais aucun de ses idéologues ne pense soutenir sérieusement que la *business entity* possède des propriétés métaphysiques, plusieurs d'entre eux partent de cette supposition — non formulée dans un sens ou dans l'autre — et, la reléguant à l'oubli ou à l'ambiguïté, s'acharnent à préciser ses hypothèses, ses descriptions, ses explications ou prédictions, faisant découler les éléments de décision du principe de la toute-puissance du *big business* et du système capitaliste en général.

Hermann Kahn est un bon exemple à cet égard. Avec sa méthode de „scenarios“, avec ses hypothèses d'„avenirs possibles“, il n'ignore pas qu'il peut y avoir des „surprises“, des „changements imprévus“, des „crises graves“, des „virages“, des „variables cachées“, *quelques chose* qu'en tout cas il présente au lecteur dans un langage mystérieux.

Le défaut fondamental de ses explorations provient non seulement du fait qu'il n'essaye jamais d'opérationnaliser la contradiction entre les relations de production et les forces de production — ce qui serait trop demander — mais encore du fait qu'il n'utilise même pas les modèles de déséquilibres de disfonctions multiples, etc., de Deutsch, Lerner, Johnson. Il étudie les contextes dans lesquels peuvent se produire des faits surprenants; par dessus tout, il offre à *choisir* des avènements possibles, il *sert* des avènements qu'il imagine afin que „ce qui est désirable soit davantage possible d'être réalisé et que ce qui ne l'est pas le soit moins“, toujours à partir de la supposition des *fonctions* que remplit le *Hudson Institute*¹¹.

A partir de ce lien, de cette servitude *constante*, il trouve tous les avènements possibles, des avènements d'une grande variété, et si parmi eux il signale au passage entre les autres *possibilités* au cours du XXI^e siècle, celles où „les entreprises privées ne soient plus les sources principales de l'innovation“ et où „par rapport aux secteurs public et social le commerce jouera un rôle moins important...“, celles-ci ne surgissent que comme une possibilité entre plusieurs autres et, étant indésirables, l'on peut toujours essayer de les rendre impossibles.

A partir de cette préconception d'une liberté de manipulation de l'avenir illimitée en ce qui a trait au système capitaliste, la recherche empirique précise et dé-

¹¹ Hermann Kahn et Antohny J. Wiener — L'An 2000, Paris, Laffont, 1968.

limite rigoureusement une grande variété de chemins possibles et probables, avec des méthodes particulièrement raffinées et qui lui permettent de corriger et de calculer les erreurs, au moyen de modèles théoriques ou mathématiques, dans des expériences numériques et politiques. Et ces expériences non seulement l'aident à affermir son erreur initiale, sa préconception, mais encore elles donnent lieu effectivement à des techniques fonctionnelles au système à des degrés divers et que cette même recherche tend à perfectionner de façon jusqu'ici inconnue, pour tâcher de contrôler n'importe quelle révolution ou subversion qui tende à altérer le système.

Voilà pourquoi la contre-révolution du XXe siècle, du point de vue technique, n'est pas égale à celle des siècles passés. Elle est techniquement supérieure. Elle participe à ce progrès linéaire — parfois exponentiel — et accumulatif, caractéristique du développement technologique. Le seul point où elle coïncide est celui de l'imprévision de la propre fin du système, de la vision de ce système comme un fait naturel-ahistorique.

Mais pour comprendre la toute-puissance émotionnelle du raffinement technologique et les erreurs substantielles auxquelles elle conduit, il est nécessaire de se rendre compte de la vigueur technique et de la rigueur empirique des méthodes de recherche. Sinon, il devient impossible de comprendre pourquoi et comment celle-ci contribue à la violence logique et réelle, confirmant face à la propre conscience du *big business* et des chercheurs la supposition que ses techniques contre-révolutionnaires peuvent freiner l'histoire et élaborer le „millénaire américain“.

Et pour ébaucher ces nouveautés technologiques, leurs possibilités politiques réelles, leurs limitations et erreurs *naturelles* et historiques, il faut entrer de plein pied dans le langage des *scholars*, et voir comment ils commettent et rectifient, eux mêmes leurs erreurs, jusqu'à arriver à un résultat final, où se trouve l'incapacité substantive de prévoir la fin du *big business* en Amérique.

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La recherche sur la contre-révolution, sur la „guerre interne“ et la „counter-insurgency warfare“ s'est épanouie de façon considérable au début des années soixante, lorsqu'à cause de la révolution cubaine fut élaboré le projet d'une contre-révolution préventive. Cette recherche se réalisa dès lors à partir de deux positions prédominantes; l'une structurelle-fonctionnelle et l'autre politico-militaire. Dans les deux cas, on tient compte de la dimension temporelle, mais dans l'un prédomine l'analyse des séries dynamiques et dans l'autre celui des cas et circonstances, des stratégies et des tactiques.

Dans le style du travail ou dans la mentalité des chercheurs se font jour la rigueur empiriste et le relativisme pragmatique, la prudence anglo-saxonne face à n'importe quelle proposition qui prétend être générale et définitive, et la révision dans la pratique des mesures proposées par les experts et dont l'application aurait été décidée dans les centres politico-militaires. Aussi, l'observateur considérant rétrospectivement cette recherche, se rend-il compte de la façon dont elle a corrigé progressivement ses propres erreurs, perfectionnant ses schèmes théoriques, ses analyses empiriques et approfondissant même ses contradictions dans le but de les dépasser; autant de choses qui contribuent à augmenter sa confiance dans son monde et ses méthodes.

La recherche structurelle-fonctionnelle est partie d'une notion de „guerre interne“, qui offrait des possibilités analytiques supérieures au concept de révolution, pour les fins d'une politique contre-révolutionnaire.¹² C'est un concept qui, de façon implicite ou explicite, cherchait à définir les techniques contre-révolutionnaires comme des facteurs ou comme des stratégies et tactiques qui contrecarrent les effets de certaines disfonctions propres à un système *inébranlable*. Il répondait à la nécessité d'analyser soigneusement les processus conduisant à des actes de violence non révolutionnaires, ou contre-révolutionnaires, et qui apparaissent dans des conjonctures et structures qui peuvent aussi être révolutionnaires, qui peuvent obéir à des causes ou facteurs lançant des mouvements révolutionnaires et que par une stratégie et une tactique contre-révolutionnaires, il est possible de remplacer, de *supplanter* par des coups d'Etat, des guerres civiles, des révolutions avortées, et de compléter par des contre-révolutions préventives, des guerres coloniales et des interventions étrangères.

La recherche fut menée en mesurant l'instabilité et la violence, en analysant les relations des différents indices de la violence soit en les comparant entre eux, soit avec les autres variables économiques, culturelles, géographiques. Aux études de section transversale (*cross-section*) se sont ajoutées des analyses longitudinales, dynamiques, des cycles longs et courts de la violence.

De cette façon et suivant les méthodes classiques de la sociologie de l'après-guerre, les corrélations et covariations devinrent plus spécifiques, tandis que se précisaient une série d'hypothèses généralement extraites du bon sens contre-révolutionnaire. Aux études antérieures on ajouta d'autres, sur les changements de contexte des révolutions — sur ce que dans le langage marxiste on appelle flux et reflux — qui supposent un type de spécification du comportement des variables, ou d'efficacité des techniques et tactiques. On découvrit ainsi une série de lois de probabilité, ou on précisa une série d'hypothèses relativement faciles à codifier, car — comme l'affirme un expert contre-révolutionnaire — „almost everything worth knowing is in the public domain“¹³.

La combinaison des corrélations de variables avec la connaissance des cycles et la spécification des unes et des autres par régions et contextes aida à préciser considérablement les tactiques contre-révolutionnaires antérieures, de même que la théorie qui leur avait servi de point de départ. Postérieurement, on appliqua plus souvent les modèles stochastiques et l'expérimentation numérique.

De prime abord les théoriciens de la contre-insurrection considérèrent qu'il s'agissait d'une guerre politique et non seulement militaire; de prime abord la contre-insurrection semblait être un problème de „sticks and stones, rifles and submachine guns“, de „foreign assistance“, de „cultural influence“, „mobs and words“¹⁴. Dès ses débuts il y eut une contre-révolution très conservatrice et une autre, réformiste — quoique avec timidité. Les expériences concrètes du processus contre-révolutionnaire se chargèrent de préciser par la suite la conscience des limitations du champ

¹² Harry Eckstein, ed. — *Internal War*, Glenoce, The Free Press, 1964, et „On the Etiology of War“, *History and Theory*, IV, No 2. 1965, pp. 133-163.

¹³ John J. McCaen — *The Art of Counter-Revolutionary War*, London, Faber, 1966, p. 20.

¹⁴ Cf. James Burnham — „Sticks, Stones and Atoms“, en F. M. Osanka ed. *Modern Guerrilla Warfare*, Glenoce, The Free Press, 1962, p. 423.

théorique original et l'amènèrent à de nouvelles hypothèses, où l'on remit en question simultanément et à des niveaux plus élevés les solutions militaires et réformistes, quoique les probabilités de l'une et de l'autre demeuraient les mêmes, favorables aux premières. Le cadre théorique posa dès ses débuts le problème en termes technico-politiques, et il se proposa de trouver, à partir de la prémisse de l'invariabilité historique du système, les variations techniques les plus adéquates à le rendre fonctionnel.

Les „covert operations“ contribuèrent efficacement à achever le Tiers Monde; la „civic action“ fonctionnera de façon à éliminer un bon nombre de noyaux *guerilleros*; cependant; comme les chercheurs enregistrèrent des limitations surgies sur le terrain à l'application de leurs techniques et des nouveaux problèmes qu'elles soulevaient, quelques-uns *encore plus graves que les antérieurs*, ils s'acharnèrent à rechercher de nouvelles mesures, de nouveaux paramètres et variables, de nouvelles combinaisons qui par la suite leur permirent de résoudre leur problème. L'aggravation de la situation n'altéra en rien le sentiment de toute-puissance et de sécurité à l'égard du système.

Les „covert operations“ ou les „interventions clandestines agressives“ contribuèrent à la chute de Mossadegh, de Lumumba, Sukkarno, N'Krumah et de beaucoup d'autres chefs d'Etat, dirigeants des mouvements de libération nationale, qui formaient en Asie et en Afrique un Troisième Bloc et qui représentaient en Amérique Latine les gouvernements réformistes, populistes et républicains d'Arbenz, Goulart, Frondizi. Son plus grand échec dans les pays pauvres, et le plus retentissant, fut celui de Cuba Socialiste, dans la Baie des Cochons. Ainsi les faits *semblaient démontrer* que la technique ne conduisait pas au „coming defeat of communism“ dont parlait Eisenhower, mais bien à la défaite du Tiers Monde et à l'alignement sous la politique nord-américaine des gouvernements qui manquaient de légitimité et n'arrivent pas, de nos jours encore, à se légitimer.

Comme, d'autre part, les „covert operations“ ne pouvaient pas toujours rester secrètes, elles avaient un autre effet: elles tendaient à prouver que les thèses les plus „radicales“ et „extrémistes“ étaient les seules correctes; que le Tiers Monde, la Troisième Voie, le populisme, les démocraties représentatives non seulement étaient vouées à l'échec, comme il était démontré à partir des positions théoriques de l'extrême gauche, mais encore que, de l'aveu public des gouvernements nord-américains eux-mêmes, les „interventions clandestines“ des Etats-Unis les faisaient échouer, ce dont ne faisaient pas état les discours successifs de ces gouvernements et de leurs porte-parole, mais bien une opinion très répandue dans le Tiers Monde et aux Etats-Unis même, jointe à une sensation de frustration qui représentait de fait une nouvelle force accumulée d'instabilité et de déséquilibre. La théorie contre-insurrectionnelleregistra aussi ces faits. Ainsi l'un des experts en la matière écrit avec une certaine justesse: „a short term or one short operation to thwart a Communist seizure of power are not enough. There is a growing consensus that United States efforts, either open or covert, to shore-up crumbling authoritarian regimen (simply because they are anticommunist and therefore „our friends“) have been counterproductive (as in South Vietnam) and have in fact helped keep the United States on the defensive in the Cold War. . .“¹⁵. Il y a plus: l'échec de la Baie des

¹⁵ Paul Blackstock — The Strategy of Subversion Manipulating the Politics of other Nations, Chicago, Quadrangle, 1964, p. 318.

Cochons fit penser que, pour des actions à grande échelle, les „covert-operations“ n'étaient pas efficaces; alors débuta une autre „escalade“ qui consistait à passer à des opérations ouvertes, comme à Saint Domingue en 1964, où la perte de prestige des Etats-Unis s'accroît encore, tandis que se confirment les thèses de l'extrême gauche. Le fait a été enregistré aussi par la théorie contre-insurrectionnelle, sans en modifier ses normes, mais, bien au contraire, en les raffermissant.

Ainsi, la méthode de dépassement des erreurs et de perfectionnement des techniques eut toujours un résultat double. D'un côté l'on observe la logique de l'*escalade*, de l'autre la logique qui essaye d'utiliser des méthodes plus *sophistiquées* et qui tend à dépasser le *boomerang* de l'*escalade*. Les deux s'appliquent de façon successive ou conjointe, mais toujours avec une prépondérance de „l'*escalade*“ de la force. Le reste se résume à des essais de persuasion qui transforment à peine la réalité afin de conserver le système.

„The United States Military establishment“ — dit l'auteur qui perçoit les limitations de l'„intervention camouflée“ et sent que celles-ci ont été dépassées — „has developed a far more sophisticated approach, a growing body of „counter-insurgency“ doctrine which calls for combined military and „civic action“ on the village level where it is needed most“¹⁶. Le problème est que cette manière plus raffinée de s'y prendre ne tardera pas à trouver ses limitations. La plupart d'entre elles résident dans le fait que l'action policière et militaire dépasse toujours l'effort de gagner les populations par des médicaments, des aliments, ou des „attitudes cordiales“ préméditées, et dans le fait que les mesures de réforme agraire locale, de réduction du taux de l'intérêt, de révocation de fonctionnaires impopulaires, qui, théoriquement, devraient gagner l'appui populaire, doivent s'opposer aux propres forces indigènes alliées (à „our friends“), dans le fait enfin, que les forces militaires, difficilement légitimées, corrompues, démoralisées, semblent incapables d'exercer leur influence sur „les gens“ au moyen de la „persuasion, l'exemple, l'aide directe“¹⁷ après avoir appliqué contre ces mêmes gens ou leurs parents les „force and sanctions“ qui sont nécessaires suivant le même „body of doctrine“¹⁸ et même la „torture and terror“ que techniquement on ne recommande pas, mais que dans la réalité historico-politique on met en pratique très fréquemment.

Mais là où la doctrine rencontre les obstacles les plus sérieux et les plus communément perçus par ses propres partisans, c'est dans l'application de cet autre précepte que l'un de ses exposants précise clairement: „On gagnera la population ou on se l'aliénera, dans la mesure où le gouvernement peut ou non résoudre les problèmes quotidiens, directs „des gens“¹⁹. Voilà où apparaissent les limites des techniques contre-révolutionnaires, limites d'autant plus importantes que la crise économique, sociale et morale du système politique augmente, et que se répètent les actes de répression contre une population qui a changé elle aussi de conscience politique. Car si les techniques contre-révolutionnaires sont supérieures de nos jours à celles du XIXe siècle, les populations d'Afrique, d'Asie, d'Amérique Latine et même des Etats-Unis gardent probablement une distance encore plus grande

¹⁶ Paul Blachstock — *The Strategy of Subversion Manipulating the Politics of other Nations*, Chicago, Quadrangle, 1974, p. 318.

¹⁷ McCaen, op. cit., pp. 59-60.

¹⁸ Ibid.

¹⁹ Ibid.

d'avec leurs aîeux: leur prise de conscience, leur organisation et leurs revendications sont bien supérieures.

Les vieilles techniques de manipulation coloniale ne fonctionnent plus, ni même l'„action civique“ qui essaye de les dépasser, donnant ainsi lieu à de nouvelles *réactions populaires*, à de nouvelles protestations et rébellions.

C'est dans ces circonstances que progressent la logique de „l'escalade“ et des corps de doctrine, chaque fois plus raffinées et qui dériveront dans la „Nation Building“ et — c'est bien possible — dans le „Pérou Modèle“. A partir des formes traditionnelles de manipulation, organisées dans l'espace d'internationale anti-communiste qu'est la CIA, avec l'application de théories sur les élites révolutionnaires auxquelles il faut opposer des groupes fort bien organisés et articulés; à partir des „interventions camouflées“ qui placent à la tête des gouvernements vulnérables du Tiers Monde des castes militaires; de l'assistance aux corps militaires locaux en vue de la contre-insurrection; du dépassement des politiques antérieures par le corps de doctrine de la „civic-action“, qui suppose la reconstruction de l'Etat à partir des points ou zones paysannes où opéraient les *guerrillas*; de la persécution militaire des *guerrillas* et l'affermissement des autorités locales, civiles et militaires, avec des essais de légitimation des leaders contre-révolutionnaires, au moyen d'„elections“; d'essais frustrés de petites réformes agraires, du développement de la communauté et du développement régional; de l'époque riche en éloges militaires, „facteur de développement“ — avec Lucien Pye, John Johnson, Robert Alexander, Kennedy, et son „Brain Trust“ — de la littérature „desarrolliste“, et abondante de „l'Alliance pour le Progrès“ qui plus tard mettra l'accent sur l'intégration latino-américaine; de toutes les expériences — succès et échecs — des années soixante, le complexe militaire-industriel construira un nouveau „corps de doctrine“ que le costarricain Saxe-Fernandez étudia avec la plus grande minutie, en se basant sur des sources directes, amplement connues et diffusées.

La „Nation Building“ est le *sumum* du programme, de la politique et de la philosophie du complexe militaire-industriel nord-américain et du nouveau niveau réel et de conscience qu'atteignent les problèmes qu'elle affronte dans la construction de l'Empire nord-américain et dans son désir de récupérer l'initiative contre-révolutionnaire en vue d'une très ample consolidation du système.

Les „nation builders“ travaillent dans une perspective de grandes dimensions et, en maintenant leur philosophie empiriste, ils maintiennent leurs préjugés. Les grandes ressources dont ils disposent (les trois quarts de toutes celles qui se rapportent à la recherche et au développement), bien coordonnées, leur permettent de s'allier par contrat les meilleurs techniciens et instituts, de recueillir une ample information historico-militaire, documentaire et directe, de la traiter aux moyens de modèles mathématiques, de simulations et de „jeux de conspirations“.

Leurs cadres théoriques proviennent de la *Rand Corporation* et de beaucoup d'autres chercheurs qui se sont occupés de l'instabilité de la violence et du développement déséquilibré, et, bien entendu, la théorie de la *Nation Building* accepte avec bienveillance la philosophie sociale du *big business*, dans sa version républicaine.

Dans ce sens, les „nation builders“ recueillent beaucoup d'idées et d'expériences antérieures et en apportent de nouvelles qui tendent à aggrandir leur champ d'action, la perspective politique globale et la perspective millénaire des militaires

et des corporations. Leur nom même révèle le degré d'orgueil technologique et de complexe de supériorité qu'ils ont atteint.

Le corps de doctrine de la *Nation Building* part des suppositions suivantes:²⁰

1. Dans les prochaines années, et particulièrement durant les années quatre-vingt „le sordide conflit“ entre la corporation internationale et l'Etat national sera beaucoup plus notoire. Durant cette période les pouvoirs de l'Etat national continueront à se détériorer. . . et l'organisation d'un pourcentage substantiel de l'activité économique mondiale reviendra à un nombre relativement réduit d'immenses corporations internationales.

2. Dans de telles conditions, la politique de la *Nation Building* consistera à maintenir et à étendre sur ces deux piliers: les armées et les grandes corporations, l'„hégémonie mondiale nord-américaine“. Selon la *General Electric*, ce processus se réalisera au moyen de la régionalisation de nouveaux marchés internationaux qui seront contrôlés par les mêmes corporations multinationales, auxquelles se superposera un système politico-militaire, régional lui-aussi, afin de les contrôler.

3. Le processus qui débouchera à la *Nation Building* suppose la diminution de l'aide économique aux nations, jointe à une augmentation de l'aide militaire, et une amplification des droits et responsabilités des entrepreneurs privés nord-américains quant à l'assistance économique aux pays sous-développés.

4. La *Nation Building* suppose aussi la „destruction nationale“ des institutions républicaines des pays sous-développés et la substitution à celles-ci d'institutions militaires dirigées par des officiers entraînés dans des écoles nord-américaines, sous l'égide d'un programme plus ample d'Assistance Militaire.

5. La *Nation Building* suppose enfin l'adoption des modèles théoriques sur le développement en tant que facteur d'instabilité, de déséquilibre, de révolution des aspirations, de troubles psychologiques et démographiques, qui impliquent une politique militaire de développement équilibré. „Aussi, écrit Saxe Fernandez, la Force Aérienne, la Marine et l'Armée nord-américaine font-ils montre d'un intérêt vif à mesurer le changement social dans les pays sous-développés, afin de déterminer les niveaux de modernisation sociale et économique, acceptables du point de vue militaire. . .“²¹

La politique de développement militaire équilibré de la *Nation Building* cherche ainsi à contrôler le développement des forces productives (contrôle de la natalité, contrôle de la scolarité, contrôle de la croissance de l'infrastructure, contrôle des communications) augmentant du même coup le développement des corporations et conglomerats de forte densité de capital et augmentant le rôle, l'efficacité et les ressources des forces répressives.

La *Nation Building* signifie ainsi la diminution de la croissance des forces productives du secteur non monopoliste et des zones périphériques, la croissance des forces répressives, des régimes post-républicains et de la dépendance des ex-nations et une plus grande concentration de capitaux et de richesses entre les mains des conglomerats.

Le schéma antérieur cependant tient dans des modèles beaucoup plus complexes et qui incluent un plus grand nombre de dimensions et de variables ayant trait à l'espace, au temps, à l'égalité, à la liberté et au gouvernement.

²⁰ Cf. John Saxe-Fernandez — „De Nation Building à Empire Building. Hacia una estrategia militar hemisferica“, IX Congreso Latino-americano de Sociologia, Mexico, 1969. (Publication prochaine de Siglo XXI Editores, México).

²¹ Ibid.

Ainsi que nous l'avons esquissé plus haut, le schéma ne représente pas suffisamment le monde pratique et moral que perçoit la culture dominante et qu'a précisé dans ses recherches l'empiriste politique et sociologique. Il est par conséquent très incomplet face à l'univers pratique et, de plus, très élémentaire dans ses aspects barbare-techniques, au point de ne pas tenir compte dans ses alternatives — en voie d'expérimentation, ou comme simple rationalisation — d'autres combinaisons ayant trait à certaines découvertes empiriques sur les fonctions de la légitimité d'un gouvernement et répondant à certaines traditions „libérales“.

Sans doute, la *Nation Building* se base-t-elle sur la construction de modèles „d'expansion équilibrée“ et se sert-elle de „l'équilibre“ comme de „la règle de sécurité contre l'exacerbation des contradictions et contre le risque politique d'une croissance extrême de la lutte des classes“²². Avec cela elle continue la tradition technique dans l'usage des modèles économétriques et essaye de l'appliquer au domaine de la construction d'un empire post-national, dans une perspective contre-révolutionnaire, où elle s'efforce de récupérer l'initiative historique sur de vastes espaces et à longues échéances. Dans l'ensemble des connaissances de la science politique et de la sociologie nord-américaine elle trouve beaucoup d'observations et de suggestions au sujet du „mélange approprié des différents indices de modernisation, pour que le potentiel d'instabilité politique ne soit pas trop élevé“ (Deutsch, Lerner, Lipset)²³.

Mais la *Nation Building* recourt à beaucoup d'autres découvertes sur le comportement des variables autant dans le temps que dans l'espace, et cherche dans ses corrélations et covariations les éléments à utiliser pour construire et créer sa propre expansion et pérennité. Des lois de probabilité que les chercheurs ont découvertes, des normes tactiques et stratégiques que les experts ont établies et de leur corrélation, la *Nation Building* extrait les variables les plus significatives.

Mais si la recherche met en relief les dangers d'une „dysfonction multiple“²⁴ elle essaye aussi de trouver le modèle qui tend le plus à isoler les dysfonctions qui n'engendrent pas la dangereuse „métastase“, le „pourrissement“ du système et la menaçante „révolution simultanée“. Si la recherche découvre dans le développement des moments de plus grande stabilité — cycliques, linéaires et curvilignes — elle cherche les combinaisons de valeurs qui, à ces moments ou avant, annulent les effets prévus et engendrent la conduite attendue²⁵. Si la recherche découvre qu'un des facteurs d'instabilité et de révolution est „l'intransigeance de l'élite“, ou la débâcle du gouvernement dans une guerre étrangère (Ch. Johnson)²⁶, ou

²² Alain Badion — *Le Concept de Modèle*, Paris, Maspero, 1969, p. 16.

²³ Cf. Karl W. Deutsch — „Social Mobilization and Political Development“, *American Political Science Review*, Sept. 1961, 3, p. 493-514; Daniel Lerner — *The Passing of Traditional Society*, Glencoe, The Free Press, 1958; Seymour Martin Lipset — „Some Social Requisites of Democracy. Economic Development and Political Legitimacy“, *American Political Science Review*, March 1959, p. 74.

²⁴ Chalmers Johnson — *Revolution and the Social System*, Stanford University, 1964, p. 9.

²⁵ Cf. par exemple Frank H. Deuton and Warren Phillips — „Some Patterns in the History of Violence“ (Mimeo) RAND No P-3609; Frank H. Deuton — „Some Regularities in International Conflict 1820-1949“, *Background*, Feb. 1966, No 4, 283-296; D. P. Bwy — „Political Instability in Latin America; The Cross Cultural Test of a Casual Model“, *Latin American Research Review*, pp. 17-66.

²⁶ Johnson — op. cit. Ibid.

l'insatisfaction mentale (Stone)²⁷, ou les différences marquées entre la société réelle et la société idéale²⁸, ou un développement soutenu auquel suit une forte dépression (Davies)²⁹, la *Nation Building* n'opère pas sur une seule variable, mais cherche, au contraire, les différentes combinaisons qui puissent l'em mener au même résultat.

Ainsi, si parmi les hypothèses confirmées se trouvent quelques-unes relatives à la morale égalitaire et libertaire — qui constitue sa vieille tradition — elle (la *Nation Building*) les inclue aussi dans ses variations et combinaisons. Ainsi on peut même concevoir un modèle de *Nation Building* où l'on fasse jouer les effets non seulement d'une réforme agraire confiscatoire, mais même d'une nationalisation des biens nord-américains.

Entre les hypothèses empiriquement confirmées se trouvent, en effet, diverses corrélations: instabilité-inegalité (Russet)³⁰, ou révolution réussie-inegale, distribution de la terre (Tanter et Midlarski)³¹, ou entre „levels of Strife“ et dépendance économique (Ted Gurr)³², et des hypothèses de techniciens hautement qualifiés, à savoir que „l'impérialisme est une source de disfonction (Chalmers Johnson)³³. A celles-là s'ajoutent beaucoup d'autres qui viennent des intellectuels libéraux, des parlementaires démocrates, des latino-américains même — plus ou moins liés aux gouvernements, aux finances et à l'économie — qui indiquent la redistribution de la terre comme une condition du développement et la *dépendance* comme clef du sous-développement. Entre ces solutions proposées il y a beaucoup qui se rapportent aux échecs de „l'Alliance pour le Progrès“, à „l'anti-américanisme“ croissant en Amérique Latine, à la nécessité de ce que les Etats-Unis „n'imposent pas“ un nouveau système social à ces pays, à la nécessité de remplacer les oligarchies traditionnelles par des élites modernes, enfin, à „la grande expérience du Mexique“. Le but de toutes ces propositions est une combinaison plus raffinée, une politique qui laisse les oligarchies latino-américaines seules face aux forces qui veulent leur enlever leurs terres et moderniser les systèmes sociaux. Le problème consiste à ne pas trop risquer et, concrètement, à agir de façon à ce que ces prévisions ne produisent pas „a big turmoil“, comme dans le cas de la révolution mexicaine; mais qu'elles produisent un système et un développement pareil à celui du Mexique.

Et d'un autre côté? Pourquoi ne pas altérer les variables de „l'impérialisme“ dont parle Chalmers Johnson? Changer les combinaisons de valeurs de l'impérialisme où la dépendance peut donner une „sum total“ plus favorable au développement des conglomérats et contribuer à réduire les valeurs d'autres variables

²⁷ Lawrence Stone — „Theories of Revolution“, *World Politics*, Jan. 1966, 2, 195-176.

²⁸ Frank H. Deuton and Warren Phillips, *op. cit.*, p. 23.

²⁹ James C. Davies — „Toward a Theory of Revolution“, *American Sociological Review*, Feb. 1962, p. 5-19.

³⁰ Bruce M. Russet et al. — *World Handbook of Political and Social Indicators*. New Haven, Yale, 1969; „Inequality and Instability: The Relation of Land Tenure to Politics“, *World Politics*, April 1964, p. 442-454.

³¹ Raymond Tanter and Marius Midlarsky — „A Theory of Revolution“, *Conflict Resolution*, Sept. 1967, 3, 264-280.

³² Ted Gurr — „A Casual Model of Civil Strife: A Comparative Analysis Using New Indices“, *American Political Science Review*, Dec. 1968, 4, 1104-1124.

³³ Chalmers Johnson — *op. cit.*, p. 5.

génantes (comme l'anti-américanisme, la „civil strife“) et à augmenter d'autres, tels le marché et les investissements rentables, etc.

Il y a des impérialismes qui sont disfonctionnels à l'impérialisme, des dépendances qui sont interchangeable et peuvent être remplacées par d'autres dépendances. Pourquoi ne pas explorer ces autres possibilités (bien entendu, sur la base d'un „solide appareil politico-militaire“) si l'on peut ainsi obtenir un des principes de la contre-instruction qu'exige „the establishment of an effective administration with the welfare of the people at heart“³⁴.

Ainsi on esquisse une supposition — et ce n'est qu'une supposition — qu'on pourrait appeler: „le Pérou Modèle“. Elle ne propose pas une politique pour tout le monde sous-développé, mais uniquement pour les pays où se trouvent réunies les conditions nécessaires; où les peuples „veulent et peuvent“. La politique des *Nations Builders* n'a pas „a tendency to lump all the countries together“, ni à cause de son empirisme pratique, ni à cause de l'académique, qui en suit les normes.

„Le Pérou Modèle“ n'est qu'une scène possible, auquel nous avons donné ce nom, parce que dans la remarquable expérience que vit le peuple péruvien aujourd'hui, se trouvent beaucoup d'exemples d'un modèle. Sans pousser l'imagination logique jusqu'à affirmer que ce qui se passa dans ce pays en 1969 fut le produit d'un modèle élaboré par le complexe militaire-industriel nord-américain, et sans cesser de considérer avec sympathie le processus de changement de structures, appuyé par les forces révolutionnaires du monde et *produit* par les mêmes qui agissent au Pérou, nous n'écarterons pas la possibilité de l'existence d'un modèle de ce type parmi les *Nation Builders*, d'un modèle qui ait même prévu devant la surprenante combinaison l'appui des forces révolutionnaires.

Mais si notre supposition est correcte et si les *nations builders* ont poussé leur escalade et leur raffinement jusqu'à ce terrain d'intelligence „suprême“ que nous décidons de leur accorder pour des raisons heuristiques, afin de connaître les limites d'une techniques utilisée avec un développement maximum de sagacité et de pouvoir, quelles sont les limites des *nation builders*, celles qui empêchent leur empire d'acquérir un caractère œcuménique et éternel? Quels sont les „levels of disfunctional conditions that transcend the adjustment capabilities of this system?“ (Chalmers Johnson). Et à quel point ces limites déboucheront-elles sur une révolution („purposive political violence“) unless the elite acts first and declares its bankruptcy by abdication, resignation or by otherwise terminating the old order non-violently“³⁵?

Evidemment, la *Nation Building* constitue le plus haut degré de l'escalade et du raffinement de la science politique des classes gouvernantes des Etats-Unis. Elle correspond à la toute-puissance d'un *businessman* qui croit avoir la possibilité de diriger le destin des peuples et les hommes, s'il applique les techniques adéquates, et alors sa liberté acquiert dans sa propre conscience un caractère illimité. La rigueur technique à son service — indéniable mais partielle — tend à augmenter sa force et sa métaphysique. Elle engendre une technique de la *réaction* surprenante, comparée à celle des époques passées qui renforce bien sa notion d'une liberté sans limites.

Le phénomène se reflète, avec tout son poids et toutes ses limitations, dans les *modèles* de ses recherches qui sont „l'image *technique intégrée* de ses intérêts“.

³⁴ McCaen — op. cit., p. 326.

³⁵ Chalmers Johnson — op. cit., p. 8.

l'expansion de son ordre, l'objectivation de son objet, et qui précisément n'expliquent pas son origine (car elle en a une), ses limites sociales et géographiques actuelles (qui font partie de son être), le processus d'effritement de ses possibilités (par où elle passe), et sa fin qui arrivera car, en tant que système naturel, elle n'est pas une entité métaphysique, mais une structure historique, une classe d'hommes en relation avec d'autres hommes, en lutte contre d'autres classes d'hommes, dans un monde où l'ordre du conglomérat n'est qu'une partie du monde.

L'autre partie du monde se situe hors du modèle, mais se trouve aussi en Amérique et croît en tant qu'impossibilité du capitalisme et en tant que possibilité propre. Comme impossibilité du système elle apparaît dans plusieurs domaines. L'un des plus importants est celui du développement technologique qui nous indique, par des données empiriques dont on ne saurait douter, comment à l'avenir on n'aura plus besoin de travailleurs pour la production, ou bien on en aura recours dans une mesure insignifiante³⁶. Une autre partie, très liée à l'antérieure, est celle qui se rapporte à la tendance structurelle d'élimination de l'exploitation³⁷; elle correspond visiblement à une „basse asymptote du taux d'utilité“ et montre qu'au XXI^e siècle la société devra être nécessairement distincte de l'actuelle.

Comme possibilité propre, le monde qui se situe hors du modèle, c'est-à-dire qui tend à le rompre et à le dépasser, correspond à l'exploité classique et au nouveau chômeur. Il s'agit de l'humanité inutile pour l'exploitation et la production capitaliste. Zbigniew Brezezinski — un idéologue de l'establishment — pense qu'ils sont les „déchets historiques“ de la révolution technotronique³⁸; mais ce qu'il appelle „déchets historiques“, dans une vision conservatrice, sont les hommes politiques du XX^e siècle, dont la différence avec ceux des siècles antérieurs constitue, en ce qui a trait à la préparation et la politisation, l'autre surprise de l'histoire contemporaine, sans doute plus surprenante encore, quand on l'analyse en détail, que toutes les surprises technotroniques des nation builders.

Cette humanité a ses propres projets techniques et politiques, du Vietnam à Cuba, et existe de plus en plus aux Etats-Unis même, avec des visages noirs et blancs. Les étudiants de la Columbia University — à qui Brezezinski faisait allusion — sont une partie de cette même humanité qui essaye de changer les structures, les institutions et le système lui-même.

En effet, le monde croissant qui échappe à la „technologie sociale“ du big business de façon insistante et systématique, tantôt ici, tantôt ailleurs, présente des hausses asymptotiques de processus révolutionnaires, ou de rébellions d'essai qui surgissent au dehors, en Asie, en Afrique, ou en Amérique Latine, et au dedans aussi, en „Amérique“. Ces processus politiques ont lieu au sein des tendances antérieures, du développement technologique, de la substitution de l'énergie humaine sur le plan du travail et de l'expulsion des „déchets“; ils se préparent et font de

³⁶ Radovan Richta et al. — La Civilisation au Carefour, Paris, Anthropos, 1968; B. B. Seligman — Automation und Technischer Fortschritt in Deutschland und der USA. Frankfurt am Main, 1963; E. R. F. W. Crossmann — Automation, Skill and Manpower Predictions. Conférence présentée au Brookings Institute, 15 avril 1965 (Cités par Richta).

³⁷ Pablo Gonzalez Casanova — Sociologia de la Explotacion, México, Siglo XXI Editores, 1968.

³⁸ Zbigniew Brezezinski — „Revolution and Counter Revolution (But Not Necessarily About Columbia)“, cité par Henry David Aiken — The New York Review of Books, July 11, 1968, p. 30.

telle sorte que le projet politique qu'ils sont, soit très différent des projets des „jacqueries“ et des rébellions millénaires. Ce sont des hommes avec une culture et une force politique qu'on n'a pas étudiés suffisamment par rapport à ceux des révolutions passées.

Les phénomènes gigantesques qu'ils préparent sont incompréhensibles en termes de *power policy*, ou avec des images de „malades“ ou de „conspirateurs“ : pour les comprendre, on a besoin de quelque chose de plus qu'une analyse structurelle-fonctionnelle, ou que d'une simple étiologie.

Mais comment mettre au jour ces faits et processus, ces formations sociales et ces luttes de classes — tellement élémentaires — pour les possesseurs d'un cadre théorique solidement établi? Comment les défaire de leurs gigantesques „obstacles“ épistomologiques, en empêchant qu'ils ne demeurent dans leurs modèles, et qu'ainsi „ils renoncent au savoir“?

L'entreprise a l'air pratiquement impossible, et c'est pourquoi l'escalade et le raffinement paraissent les conduire inexorablement à une solution de violence, où la probabilité même qu'ils appliquent leurs modèles réformistes, type „Pérou“ — s'ils existent — est précaire, aussi précaire à niveau global que l'a été l'application des réformes préconisées par „l'Alliance“, ou de celles postulées par la „grande société“.

Mais ceci n'empêche pas que, dans la lutte idéologique, philosophique et scientifique, l'on signale les sources d'erreurs qui ne permettent pas de préciser scientifiquement l'avènement du socialisme en Amérique, non seulement par l'analyse plus rigoureuse de la forme dans laquelle l'automation et le développement technologique vont rendre quantitativement impossible la subsistance du système capitaliste, ou de l'humanité sous le système d'économie de marché, mais encore par l'analyse historico-politique des grandes formations sociales et de la lutte de classes en Amérique.

Aujourd'hui un problème sans doute primordial pour les sciences sociales consiste à préciser, avec toutes les ressources intellectuelles disponibles, le caractère de chose infinie du capitalisme et à créer une conscience de plus en plus ample et rigoureuse sur la *fin* et la *relève* inexorable du système. Laisser à la pure persuasion politique ou idéologique la solution de ce *problème évident* ne paraît pas indiqué du point de vue de la connaissance, non plus que de celui de la persuasion elle-même, surtout si l'on considère que cette dernière doit intéresser les chercheurs et les étudiants en sciences sociales, à des niveaux techniques et de langage propres au travailleur intellectuel. Beaucoup d'entre eux ont été entraînés à la recherche empirique et à des styles d'analyse qui doivent et peuvent être utilisés. Avec leur participation, il sera possible de développer les méthodes de simulation et d'expérimentation numérique pour l'investigation de nouveaux systèmes sociaux et pour „l'accomplissement d'utopies“, comme le sollicite de Buenos Aires Varsavsky³⁹. Si le travail est réalisé en insérant les nouvelles méthodes dans celles classiques de l'histoire sociale et politique, cette tâche aura à établir un lien indispensable à la compréhension de notre temps.

Mais le problème mérite d'être posé dans toute son ampleur. On ne peut plus retomber dans les erreurs „simplistes“ du passé, où, vers les années trente, on ne

³⁹ Oskar Varsavsky — *Ciencia. Política y Cientificismo*, Buenos Aires, Centro Editor de América Latina, 1969.

pressentit pas la *réponse* Keynesienne — l'étendue de la politique anticyclique — ou quand, durant le deuxième après-guerre, avec l'automatisation, „beaucoup d'observateurs prédisaient une suppression massive d'emploi“, sans prévoir les possibilités de redistribution de la force de travail ou l'inclination artificielle à la consommation⁴⁰, ou quand il fut question — vers le début des années 60 — d'imiter la révolution cubaine, sans considérer les changements du contexte — de contre-révolution — ou les situations concrètes des différents pays, ou les changements de conjoncture⁴¹.

Le problème exige de comprendre que la *réponse* ou la *réaction* d'un système n'est pas seulement un phénomène idéologique, mais technique, et que, en tant que phénomène technique, sa capacité d'innovation est très supérieure à celle d'une réaction idéologique qui maintient une série de caractéristiques constantes. En fait, le problème exige une analyse de la capacité — technique, structurelle et conjoncturale — de l'*establishment* de contrôler l'espace et le temps du système capitaliste.

Car, si la technique de *réponse* du capitalisme revêt le caractère progressif et accumulatif de toute technique (ce qui différencie ses ressources de celles du siècle passé), la structure du capitalisme monopoliste d'aujourd'hui non seulement est différente de celle de type classique, mais aussi de celle qu'étudia Lénine à la fin du XIXe siècle⁴², ce qui *altère* ses tendances et ses conjonctures. Non seulement il dispose sur le plan macropolitique des tactiques de la compétence monopoliste, mais encore des tactiques de manipulation de sous-ensembles, propres aux conglomérats, et des structures qui caractérisent le néo-capitalisme comme développement inégal, concentré, avec des classes ouvrières *métropolitaines*, et le néo-capitalisme comme *réformiste* de quelques zones et régions *métropolitaines* qui se trouvent enclavées même dans les pays dépendants⁴³. Cette structure est celle qui permet à la technique du *statu quo* de perdre maintenant pour gagner ensuite, ou de perdre dans une unité du conglomérat pour gagner dans une autre, ou avec quelques travailleurs pour gagner avec d'autres, avec un résultat total qui favorise le *statu-quo* dans l'„immédiat“ : dans le temps économique-politique „immédiat“ et dans l'espace économique-politique „immédiat“. Mais l'*immédiat* de la structure des conglomérats possède une envergure beaucoup plus grande sans doute — spatiale et temporelle — que l'*immédiat* du capitalisme classique.

Ainsi une étude globale du changement de système doit inclure les variations techniques du capitalisme dans l'espace — monopoliste, métropolitain — et dans le temps — linéaire, cyclique — dans les pays ou zones avec ou sans réformes de structure et au dix-neuvième et vingtième siècles, jusqu'à avoir une vision compréhensive et spécifiée de l'espace et du temps du capitalisme, de sa conservation, de ses variantes et de sa disparition, de ses limites techniques et structurelles, qui au moins constitue un ensemble d'hypothèses plus proche à celui qu'aujourd'hui l'on possède. Sans cette vision globale des limites réelles des techniques et des structures dans l'histoire politique prévisible, les sciences sociales qui se développent

⁴⁰ J. P. Vigier et G. Waygand — „Revolucion Científica e Imperialismo“, Pensamiento Crítico, Feb. 1969, 13, p. 87.

⁴¹ Cf. Ernesto Che Guevara — „Guerra de Guerillas: un método“.

⁴² J. P. Vigier — op. cit., p. 92-97.

⁴³ Cf. Pablo Gonzalez Casanova — op. cit.

dans les centres de recherche dépasseront de très peu ou pas du tout les réflexions de la *praxis* ou de l'activité militante et contribueront difficilement à la perfectionner.

Mais c'est seulement en donnant à la réponse technique et structurelle du capitalisme toutes les possibilités réelles et prévisibles qu'on pourra le comprendre comme idéologie greffée à un monde qu'il ne saisit pas globalement, avec des différences et des chaos de plus en plus grands, avec des peuples et des personnes qui à leur tour réagissent avec une force et une conscience de plus en plus efficaces, passant dans sa lutte de la périphérie au centre de „l'Amérique", dans un flux qui, encore, n'est pas surprenant.

México, Janvier 1970

FRANCIS BAKIN

CONCEPTION AND SOCIAL PROGRESS

The sociologically most significant problem of futurology is the future of man in society. This is, at the same time, the basic question of social progress. I want to derive, to substantiate and to establish in my paper three theses, which are based on the experiences gained in recent years in my country, the German Democratic Republic, in the field of social progress.

1. A scientific program of man demands a scientific program of science.
2. A scientific program of society demands a subject and system conception.
3. A scientific sociological system conception demands a scientific theory of society as a whole and is thinkable only as an aspect of this theory.

Any social program has — directly or indirectly — human action as its basis, condition and content. The basis of any social program is human action in the following sense: the author, the subject of progress, has, objectively and subjectively, certain social relations. His thoughts, his expectations with regard to the future start from a certain social point of view; they articulate in a certain way social needs, needs and interests. All auxiliary means and prerequisites of material and intellectual kind, which the program-makers use in their work, have developed in a historical way; they are a product of human action. The understanding of these objective social prerequisites in programmatic work is of decisive significance for the objectivity and reliability of progress. The main or, finally, the social program — the danger of unconsciously projecting the present, the present, into a future situation is inherent, necessarily, in the author of social progress. He does not always experience himself the very moment in which these programmatic steps to be either reality or illusion and, finally, the social action in the period between the making of a program and its realization — i. e. that kind of action which in the interim decides upon the realization of the program — becomes less characteristic and develops new abilities and possibilities. This applies already to the social relation. Human action is a prerequisite of progress, since it is realized through human action — from the great number of the manifold aspects of this relation only two shall be mentioned here. There is, firstly, the well-known fact that the formulation of programs has always an essential effect on social consciousness, which exceeds its actual content, the actual programmatic content. Men's

SOCIOLOGICAL SYSTEM CONCEPTION AND SOCIAL PROGNOSIS

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GERMAN DEMOCRATIC REPUBLIC

The sociologically most significant problem of futurology is the future of man in society. This is, at the same time, the basic question of social prognosis. I want to derive, to substantiate and to explain in my paper three theses, which are based on the experiences gained in recent years in my country, the German Democratic Republic, in the field of social prognosis.

1. A scientific prognosis of man demands a scientific prognosis of society.
2. A scientific prognosis of society demands a substantiated system conception.
3. A scientific sociological system conception demands a scientific theory of society as a whole, and is thinkable only as an aspect of this theory.

1.

Any social prognosis has — directly or indirectly — human action as its basis, condition and content. The *basis* of any social prognosis is human action in the following sense: the author, the subject of prognosis, has, objectively and subjectively, certain social relations. His thoughts, his expectations with regard to the future start from a certain social point of view, they articulate in a special way social trends, needs and interests. All auxiliary means and prerequisites of material and intellectual kind, which the prognosticator uses in his work, have developed in a historical way; they are a product of human action. The understanding of these objective social prerequisites of prognostic work is of decisive significance for the objectivity and reliability of prognosis. The more so as, firstly, in social prognosis the danger of unconsciously projecting the present, the given, into a future situation is inherent, secondly, the author of social prognoses does not always experience himself the very moment in which these prognoses prove to be either reality or illusion and, thirdly, the social action in the period between the making of a prognosis and its realization — i. e. that kind of action which in the essence decides upon the realization of the prognosis — assumes new characteristics and develops new abilities and possibilities. This applies already to the second relation. Human action is a *prerequisite* of prognosis, since it is realized through human action. From the great number of the manifold aspects of this relation only two shall be mentioned here. There is, firstly, the well-known fact that the formulation of prognoses has always an orienting effect on social consciousness, which exceeds its actual content, the actual prognostic meaning. Men's

actions are — consciously or unconsciously — ruled by what the prognosticator says with regard to the future. The fact that on the soil of state-monopoly capitalism a great number of prognoses have been turned into an instrument of manipulation is no secret and was discovered not by Marxists only. From this follows that, secondly, prognostic statements on social processes are not only statements on possible or probable future events, but have always — during their entire 'life-time' — a big influence on certain actions. Thus, the period between the making and the realization of the prognosis is 'bridged' by human actions which are not independent of this prognosis. The person, who makes prognoses as to society will, therefore, be continuously confronted with the fact that his statement regarding the future is, at the same time, an objective for present and future human actions. Even more, a specific feature of social prognosis is that the prognosticator is able to exert a certain influence on those conditions that effect the realization of the prognosis.¹ In other words: In the same way as social prognosis has, objectively seen, an important function in the conscious, purposeful, practical shaping of the future, so does the prognosticator have a great responsibility.

The third relation is the most obvious one. Social prognosis is related *per definitionem* to human actions; its statements *contain* future human actions or their results.

2.

Social prognosis is related to *human* actions, however not directly to individual ones. It does not directly forecast the individual and infinitely multifold actions of individuals but the general, the essential, the typical actions of different groups, above all of social *classes*.² The development and the behaviour of social classes establish the relationship between human actions and social prognosis. Social prognosis is a component part and an essential factor of the ideology of classes.

The significance of social classes compared to that of other social groups, strata, ethnical and national groupings or other ones characterized by age, sex and other factors becomes evident above all through three facts. Firstly: Classes are formed on the basis of the essential conditions and characteristics of the decisive human activity, the material social production. Secondly: Classes or their concrete forms of expressions are the decisive subject, the decisive driving force of the historical process. Thirdly: Classes are — from a quantitative point of view — the decisive elements of social structure. It is, therefore, impossible to subject the development of present-day futurology itself to a scientific sociological analysis or to make a well-founded social prognosis without taking into consideration the decisive social driving forces of the last third of our century or those of the beginning of the second millenium, without understanding our epoch as what it is, the epoch of the tran-

¹ See Wolfgang Eichhorn — Prognostik und Planung als philosophisches Problem, 'Deutsche Zeitschrift für Philosophie', XVI, 1968, 1, pp. 38—73.

² I use the definition of social classes, given by Lenin in his essay 'Die große Initiative': „Als Klassen bezeichnet man große Menschengruppen, die sich voneinander unterscheiden nach ihrem Platz in einem geschichtlich bestimmten System der gesellschaftlichen Produktion, nach ihrem... Verhältnis zu den Produktionsmitteln, nach ihrer Rolle in der gesellschaftlichen Organisation der Arbeit und folglich nach der Art der Erlangung und der Größe des Anteils am gesellschaftlichen Reichtum, über den sie verfügen.“ Lenin, Werke, Bd. 29, Berlin, 1961, S. 410.

sition from capitalism to socialism. And it would be illusory to shut one's eyes to the fact that the analysis of the future from the standpoint of the working class or from that of the bourgeoisie is the pivot on which the problem of futurology is turning today.

In this connection the following historical facts should be remembered. Marxist-Leninist futurology has never made a secret of its being anchored and deeply rooted in the living conditions, the interests and the struggle of the working class. Even more. For Marxism-Leninism the bounds between theory and prognosis are very relative. For all times a prognostic function has been inherent in Marxism since it developed explicitly and expressively as the scientific theory of the prospective transformation of a given social reality, of capitalist society. In this connection I might mention quite a number of definitely prognostic statements contained in the works by Marx, Engels and Lenin, statements that meanwhile became a reality or for the practical realization of which the socialist countries are concretely and intensively working at present.³

In 1967 Herman Kahn and Anthony Wiener published their book "The Year 2000". In this book they enumerate a series of events which took place during the first two thirds of our century and which, as they say, would have been "startling and almost unexpected" for any futurologist in the year 1900 if there had been ever such one at those times.⁴ Among them are such events as the rise of communism, the intensification of international competition among the capitalist countries and the shifting of power connected with that rivalry, the gradual abolition or break-down of the colonial system etc. Anybody will easily come to the conclusion that it was especially these processes which Marx, Engels and Lenin did partially forecast, already during the 19th century.

Special interest, however, deserves the fact that until recently bourgeois ideology branded this very prognostic claim, this prognostic function of Marxism as Utopia, as 'eschatology', as, on principle, unreal and the same it did with regard to the idea of planning or the possibility of planning economic and social processes, which was derived from the prognostic function. In the last few years, however, bourgeois sociology and theory of society have gone through a decisive change in both respects. This correction in the intellectual life of late capitalist society is a reflexion of new economic, political and historical conditions of existence of state-monopoly capitalism, which have been analysed in detail during the last few

³ To them are to be counted among many others:

a. Marx—Engels — Werke: Vol. 4, Berlin, 1969, p. 368 (World-wide development of the great industrial production).

b. Marx—Engels — Werke: Vol. 20, Berlin, 1968, p. 288 (Economic guidance of the calculations and distribution on the basis of achievement in socialism).

c. Marx—Engels — Werke: Vol. 23, Berlin, 1968, p. 507/508 (Polytechnical education).

d. W. I. Lenin — Werke: Vol. 21, Berlin, 196, p. 26 (Origin and development of the socialist community of states).

e. W. I. Lenin — Werke: Vol. 29, Berlin, 1969, p. 416 (Economic competition between socialism and capitalism for higher productivity of labour).

⁴ Herman Kahn and Anthony Wiener—The Year 2000, New York — London, 1968, p. 16.

⁵ See Dieter Klein — Zur wissenschaftlichen Gesellschaftsprognose spätkapitalistischer Entwicklungen — Kritisches zur bürgerlichen Futurologie, Forum, 1969, 14/15/16/17/18.

years in different Marxist publications.⁵ I consider this relationship as a rather important evidence of the assertion that futurology is always imbedded in the ideology and practice of social classes.

3.

It is, above all, for two reasons that the character of the theory by which a research worker is ruled as well as the laws of social development formulated in this theory play such an eminent role in making prognoses on future social events and processes. *Firstly*, the character of social prognosis — i. e. to be a program of action — involves the danger of subjectivism, the danger of projecting a wishful thinking on the future, this even more since the characteristic feature of this kind of programs of action consists in their being based on statements about events which cannot be examined empirically in the respective reality. *Secondly*, many prognoses are based on the extrapolation of trends in the present social reality which do not in all cases represent laws of social development. This second error is especially obvious and at the same time especially disastrous. At any time and in any social reality, you can establish any number of chains and series of events. It is especially in his prognostic work that the research worker is inevitably confronted with the necessity of discriminating — out of the wealth of series of events offered — between accidental and essential, superficial and basic, secondary and important ones. Its temporal duration, the frequency of the occurrence of the respective phenomenon constitute a deceptive basis when making this decision. The research worker will always be forced to ask for the factors and conditions which determine the occurrence of the mass phenomenon concerned. Be it that they have the function of attendant circumstances or that they are the ultimate cause. It is quite obvious that this problem cannot be solved without taking into consideration that basic structure of social life which subdivides the wealth of social phenomena into material and ideal ones. This subdivision is, of course, only a first approach, which cannot substitute a more differentiated classification of the multifold elements of the social whole. It marks, however, an unavoidable methodological phase of transition in the analysis and assessment of any social phenomena, since it is the only factor which allows to relate the most striking social fact, the by far most extensive social basic element, human actions, not to their direct, individual, psychic determinative elements, but to their basic, social, material factors.

From this follows, first of all, the supreme significance of a scientific system conception of society for the making of reliable social prognoses. There is hardly any field of objective reality where the interrelation of the different parts and the whole is as direct as in social life. And secondly, this results in essential requirements and criteria for such a conception. It cannot be limited only to enumerating and putting in line the elements of the system of 'society'. On the contrary, it has to expose the relationship — which is governed by certain laws — between these elements in its internal motion and dynamics. From this follows at the same time that the system conception can be nothing else but an aspect of the theory of society, that it must be based on the latter and not vice-versa, in other words that the system conception must emanate from the theory of society and not vice-versa. This statement can be clarified by showing the contrast between the Marxist theory of the socio-economic formation on the one hand and the two main variants of the present-day bourgeois sociological system theory — the structural-functionalistic one and

the 'action-theoretical' one — on the other hand. As a matter of fact, a detailed explanation of this alternative would go beyond the scope of this paper.

In the last time, the deficiencies of these two main variants of the bourgeois sociological system theory have been criticized to an ever increasing degree, and that not only by Marxist authors.⁶ I see the decisive difference between these approaches and the Marxist conception in the fact that in the one case the system theory is given priority over the theory of society and, in the second case, the Marxist one the system conception is a consequence of the theory of society. Parsons as the main representative of the structural-functionalistic variant enunciates this programmatically as methodological postulate⁷ and defines the decisive terms of his conception from the very beginning in such a manner that they can function as elements of the constructed system. The action-theoretical as well as the interactionistic models⁸ have in common that they base their points of view with regard to the system on an element which is taken out of the totality of social reality and isolated against this reality, i. e. action, behaviour or interactions. They rest on the conception of a "social relation of purely interpersonal activities, that is founded on itself".⁹ The Marxist conception of the socio-economic formation has taken from the very beginning an opposite course. Its starting point is that social activity of man which is determined by his objective conditions of existence, the material social production. This one designates the ways and means of facing up nature, which is essential and at the same time specific for the maintenance of human life. In this conception, man and society are never antagonistic but form a unity, the original and determining reality being social production. Therefore, this conception includes, without any break, the idea of history, the idea of change. In any given epoch is the material social production not only the ultimately determining basis of all other social spheres of life (social structure, politics, intellectual life, state etc.), but, at the same time, the decisive social driving force of the historical development and transformation of social practice. What the conception of the socio-economic formation singles out of the continuous historical process is that situation, that stage of the development of social life, in which the character of the material productive forces and of the production relations imparts, for a certain period, a relatively constant quality to all aspects of the mode of life of society. Within such a stage of development the different spheres of social life constitute a systematic whole, a social system with certain elements which must be defined according to the then prevailing historical circumstances, whose structure and relations are subject to certain laws.¹⁰ From these considerations emerge conclusions for the making of prognoses. The point is, *firstly*, not only to take into consideration — when making prognostical statements on any subdomain or element of society —

⁶ See K. H. Tjaden — *Soziales System und sozialer Wandel*, Stuttgart, 1969.

⁷ See Talcott Parsons — *The Present Position and Prospects of Systematic Theory*; Gurvitch, Georges, and Moore, Wilbert E. editor — *Twentieth Century Sociology. A Symposium*, New York, Philosophical Library, 1945.

⁸ See E. D. Chapple, C. St. Coon — *Principles of Anthropology*, New York, 1942; R. F. Bales — *Interaction Process Analysis*, Cambridge, Mass., 1950; G. C. Homans — *The Human Group*, London, 1951; John Rex — *Key Problems of Sociological Theory*, London, 1961; R. M. Mac Iver and Charles Page — *Society*, New York 1954.

⁹ K. H. Tjaden — *Soziales System und sozialer Wandel*, Stuttgart, 1969, S. 294.

¹⁰ See Marx/Engels — *Werke*; Vol. 3, Berlin, 1958, p. 30; Vol. 13 Berlin, 1961, p. 9; Vol. 27, p. 452.

their connection and interrelation with other elements but to proceed from the fact that at any time all individual elements have qualitative criteria and characteristics, which have their origin in the system as a whole. This has nothing to do with the so-called holistic standpoint. The qualitative special features of a given society, of a socio-economic formation are no mystic properties with unknown origin. On the contrary, they are the objective social consequence of the character of the productive forces and of the production relations. The efforts of bourgeois sociology to produce counter-conceptions and terms (industrial society, post-industrial society) — which, no doubt, are likewise meant to characterize a qualitatively determined social system, but do not care for, or disguise the decisive significance of production relations for its qualitative determination — show how seriously this Marxist system conception has been taken by that bourgeois sociology in the recent decades. *Secondly*, it is necessary to consider prognostic statements on the position of man in society, on the character of human ways of acting and thinking, on human convictions, moral systems, ideologies and other moments of intellectual life always as expressions and embodiments of social relations. A prognosis regarding man, which confronts this man as an isolated individual with other elements of social life, will not be in a position to take into account the temporal prospect, the historical dimension, the changeableness of man. The qualitative characteristic feature of social prognoses in comparison to psychological or biological ones must not be disregarded. And when I said at the beginning of this paper that future human activities decide upon the correctness of a social prognosis, this has to be extended so far as any prognosis on the future of man, which disregards the objective changes, the changeableness of social relations, excludes the decisive factor on which the historical quality of human action depends. And vice-versa, the humanistic meaning, the task and responsibility of futurology in our present time consist in the elaboration of scientific prognoses on the future of man in order to support the necessity and possibility of purposefully shaping the social relations of our time.

When I try in the following to show how these theoretical and methodological starting points are being realized in our prognostic and planning activities, then I will not do so with a claim to completeness but only in order to illustrate some converging points of the complex of problems.

4.

The decisive starting point for making the idea of social planning, which is deeply rooted in Marxism, a reality, was the establishment of the political power of the working class under the leadership of its party and in close alliance with the farmers, the intelligentsia and other strata of the working people.

In our days the working class is motive force of social and historical progress and at the same time social subject of a scientific and consequently humanistic social prognosis. With its political power the working class disposes of the prerequisites to justify this responsibility and obligation. The realization of this responsibility is to be seen in the fact, that the marxist-leninist parties of the working class in the socialist countries do an important scientific theoretical work in the field of social prognosis. Besides they direct the total prognostic work to those problems, which are decisive for the actual and future practice. The creation of the material

basis of the working class-rule, i. e. of socialist economy, was initiated by transferring the most important means of production into social property. This was in conformity with that basic and long-term prognosis of the founders of Marxism-Leninism according to which the contradiction between the productive forces, developed in the framework of capitalist society and on the basis of big industry, and the character of the production relations of this society does not only obstruct production to an ever increasing degree but leads to ever more disastrous impacts on social life as a whole. The present aggravation of this contradiction as well as its present outward forms are mainly conditioned by the new stage of concentration of capital and by the immense scope of the process of socializing labour, which are the results of the scientific-technical revolution. "The centralization of the means of production and the socialization of labour reach a point, where they become incompatible with their capitalist exterior."¹¹

The social character of the productive forces demands as obviously as never before the possibility of the social control of the means of production, and the social management and planning of production.

It is, therefore, not by chance that the conception of the 'post-industrial society' shirks just these decisive questions of the class content of political power, and of the character of the ownership of the means of production. Neither the well-known 15 characteristics of the so-called post-industrial society nor any commentaries and explanations suggest in some way in whose interests the political power of this society is being exercised and which fate the capitalist ownership of the means of production will go through.¹² An article by Daniel Bell says only that the "important political decisions... will be made by the government".¹³ That policy is decided upon by governments is not very original indeed. At least with regard to this question there does not seem to be any essential difference between the 'post-industrial society' and the present capitalist reality. The problem of the ownership of the means of production is not even mentioned. Obviously, such conceptions for the future aim at diverting people of today from thinking about these decisive questions of their present and future mutual relationships.

The establishment of the political power of the working people and the formation of socialist production relations in the entire national economy — processes that cover a longer period — make it possible to set the task of developing a total system of socialist society and to accomplish it in practice. To set this task is no mere result of the necessity to raise the different spheres and partial systems of social life to the same level and to create harmonious proportions between the needs of the economic and technical development, the educational system, the system of the management of social development, the system of education and training, culture and other elements. Of course, this aspect of the problem is important enough. The very point is to eliminate the disproportions, left behind by the capitalist class society, in the development of the relations of not only the spheres mentioned but in addition to that to overcome such disproportions and

¹¹ Marx—Engels — Werke: Vol. 23, Berlin, 1962, p. 791.

¹² Herman Kahn and Anthony Wiener — op. cit., p. 25.

¹³ Daniel Bell — Die nachindustrielle Gesellschaft, in: Das 198. Jahrzehnt, Eine Team-Prognose für 1970—1980, Claus Grossner, Hans-Hermann Münchmeyer, Arend Oetker, Carl Christian von Weizsäcker (editors), 10.—13. Tausend, Hamburg, 1970, p. 358.

inequalities as those existing between economically and culturally advanced and backward, neglected territories and areas, between the contradictory working and living conditions of different population groups. Such a coordination of the social partial systems, the functioning of a political system as social total system is a decisive prerequisite for the achievement of a high effectivity.

However, more is at stake. The practical task of developing a total system of socialist society is derived in the essence from another prognosis made by Marx on the inner dynamics of this society.

"However, in the same measure as big industry develops, the creation of the real wealth will depend not so much on the working time and the quantity of labour applied but on the power of the agents, which are being set in motion during the working time and which in its turn. . . is out of all proportions with regard to the direct working time, which is necessary for their production, but depends upon the general state of science. . . In this transformation it is neither the direct work, done by man himself, nor the time, he is working, but the acquisition of his own general productive force, his understanding of nature and his domination of the same through his existence as member of the society — with one word, the development of the social individual, which appears as the big keystone of production and wealth."¹⁴ Marx wrote these words in 1857. And he left no doubt that the implementation of this law which is based on the development of the productive forces within the framework of the capitalist society is reserved to the socialist society. One of the contradictions of state-monopoly capitalism which today becomes more and more obvious is that capital on the one hand "calls to life all powers of science and nature as well as of the social combination and the social relations in order to make the creation of wealth independent of the working time, applied for it." But on the other hand, capital is making the direct working time "the only measure and source of wealth."¹⁵ Capital subjects these factors to its utilization conditions.¹⁶ And vice-versa. The development of that "social individual" demands the creation of social conditions which enable all members of society to unfold their creative abilities and potentials not for the interests of an exploiting minority and which prevent that minority from acquiring the product of society and from using it contrary to the interests of the vast majority for the purpose of incapacitating and subjugating it. The exploitation of this historically new "keystone of production and wealth" requires an educational policy and a cultural conception for the total society, which guarantee not only equal opportunities to all members of society but aim at developing self-confident personalities with an all-round education covering natural and social sciences as well as technology and the humanities. Experience has shown that not only these objectives but also the means necessary for their realization, and their purposeful utilization are broadly restricted by the interests of profit which dominate everything.

5.

From this follows that the formation of the socialist total system of society involves more than the construction of a smooth organism. From Marx's prognosis,

¹⁴ Karl Marx — Grundrisse der Kritik der politischen Ökonomie, Berlin, 1953, p. 582 f.

¹⁵ *Ibidem*.

¹⁶ See Dieter Klein — *op. cit.*

the primacy of the total system over the partial systems can be deduced in the sense that the objectives of the social partial systems as well as the relations between them are derived from the higher objectives of the social total system. This becomes especially obvious when we consider the relations between the total system and the economic system. The objective of socialist production — the satisfaction of the material and intellectual needs of society to an ever increasing degree, the unfolding of socialist social relations and of the personality — can be understood only when taking into consideration the total character of the socialist society. On the other hand, the continuous realization and re-setting of this economic objective means to exploit exactly those factors of wealth, which have their roots not only in economy. This relation is transferred through the socialist state and such a structure of social relations which permits to utilize the product of common work in the common interest and on the basis of the prospective needs of the development of the productive forces and of the production relations. That means, expressed in the language of economy: Compared with capitalism, socialism has better prerequisites for consciously bringing to bear the present and future changes in the system of the factors of development.

This is why Daniel Bell makes a basic mistake when he says that in "socialist philosophy" all "other objectives" except the "norms of efficiency, productivity, and effectivity of costs. . ." had disappeared from the range of vision.¹⁷ The norms of "efficiency, productivity, and effectivity of costs" are never, in no economic system isolated values; they are always subject to social objectives, in capitalism to the gaining of profits, in socialism to the satisfaction of social needs. In so far, the target function of the socialist social total system, which is superior to all social partial systems, is identical with the task to realize the socialist image of man. In these endeavours, however, we are governed by an image of man which is in harmony with the objective laws of the productive forces and production relations and which is being realized not beyond their development but in the course of a hard struggle for the development of the new society. This image of man brings into prominence the ability to participate responsibly and self-confidently in the common work, to actively shape and comprehensively master the natural and social environments, to be glad and satisfied in view of collective achievements. The realization of such an image of man is, on the basis of socialist production relations, an objective prerequisite for, and consequence of, the future development of the productive forces. The meaning and the art of developing such a socialist social total system consist in the very fact that the social soil for active action and for the free, all-round development of self-confident personalities is being prepared, that the social relations are being shaped as a product and condition of human action, and that step by step all those conditions are being done away with, which prevented the realization of the humanist aspirations and interests of the working people in all those centuries of class society. This includes the satisfaction of the material necessities of life of the people on a level which corresponds to the present advanced development state of the productive forces, as well as the acquisition of the scientific and cultural achievements of our time by the individual, the harmonious development of human living conditions in work and leisure time, in the factory and at home, and the elaboration and implementation of a democratic

¹⁷ Daniel Bell — *op. cit.*, p. 363.

and rational system of the planning and management of social development, a system that is based on the latest findings of electronic data processing and automation. A high economic and technical effectivity in itself cannot ensure the realization of humanistic ideals. But a low economic and technical effectivity will not do this at all.

6.

Let us now consider some consequences of the prognoses regarding man's relationship with technology. If it is correct that — in connection with long-term planning of the future, and social prognosis — the prognosis of the relevant social total system has priority over the prognosis of the development of partial systems, the ascertainment and the determination of those factors will gain utmost significance upon which the development of the total system mainly depends and which for this reason have to be included into the prognosis regarding the total system. Experiences gained in the course of our prognostic work made us quickly realize that the total prognosis is neither a plain aggregate of partial prognoses — on the contrary, it constitutes a quality of its own compared with partial prognoses — nor can it be made independently of the development and prognosis of partial systems. It has rather to proceed from the "decisive and structure-changing partial systems and their impact on the social system concerned."¹⁸ With regard to this point, Marxist-Leninist social prognosis is governed by the theory of the socio-economic formation, according to which the law-governed relations between the productive forces, the production relations and the superstructure constitute the decisive elements of the total system. As a matter of course, these relations have — dependent on the character of the productive forces and the production relations — in every historical epoch a certain quality. That means, under the conditions of today, to start from the prospective possibilities of the social utilization of science and technology, from the new quality of the productive forces of man¹⁹ as social being. "From the role of science as productive force and its significance for the development of the material-technical basis of the fully developed socialist society follows that the assessment of the prospective development of science and technology, and of the possibilities of their productive utilization is the main subject of prognosis."²⁰ We formulate purposefully and expressively that we proceed from the "social utilization of science and technology". Social prognosis must neither shirk or disregard the scientific-technical revolution nor simply concentrate on its "social consequences". The scientific-technical revolution implies, undoubtedly, thorough consequences, and exercises a great influence on all spheres of social and individual life. But of what kind these influences are, in which direction they go depends to a high degree on the character of the social system. And the decisive possibility of socialist society is to draw conclusions from the "consequences" of the scientific-technical development for which the prognosis was made, already now and thereby to develop, to create, to organize all subjective and objective,

¹⁸ Herbert Edeling — *Prognostik und Sozialismus*, Berlin, 1968, p. 30.

¹⁹ Herbert Edeling — *op. cit.*, p. 29.

²⁰ Protokoll des VII. Parteitag der Sozialistischen Einheitspartei Deutschlands, Vol. 1, Berlin, 1967, p. 114.

human and social conditions of the scientific-technical revolution for the time to come to embark upon the development of the social relations and conditions on this basis, not only to "facilitate" the confrontation of society and man with science and technology in these days and in the future but to make use of science and technology as a powerful means of increasing human liberty, as a productive force.

Our leading prognosticators, therefore, distinguish between the social total prognosis and prognoses of social partial systems, which are continuously "corresponding" with each other.²¹ The statements of the prognosis of the total system refer to "the main directions and main factors of the social development of the total system concerned, and to the potential and necessary content and scope of the interrelations between the individual partial systems of the total system."²² The correspondence between the prognoses of the total and the partial systems is expressed in the fact that on the one hand the prognosis of the total system is based on statements gained from prognoses of partial systems in the spheres of the productive forces, the production relations and the superstructure; that from the development within partial systems possible changes concerning the total system are deducted. On the other hand, the prognoses of the partial systems get direction and objective through the prognosis of the social total system; it is from the function and the motion of the total system that the necessary structure and the interrelations between the partial systems in the interest of the total system are deducted.²³ One important task of the prognosis of the total system is the decision on the most important prognoses of partial systems which must be elaborated, is the fixing of the number and the subjects of the prognoses of partial systems. It goes without saying that this decision represents again a reflection of the whole socio-economic specific feature, of the essential target function of the social total system in a concentrated form. The interrelations between total system and partial system shall be taken into consideration not only in prognostic theoretical or research work. On the contrary, they set up important standards for the practical development of any partial system of socialist society.

I would like to explain this statement by giving an example. An important trend in the development of the economic system is, no doubt, the increasing degree of automation. As far as the extensive automation projects are concerned upon which we have embarked, we are ruled by a prognosis of leading automation theorists of our country, who have made this prognosis by utilizing the latest experiences gained in socialist industrial enterprises; this prognosis differs materially from prognoses by bourgeois theorists. This is not astonishing since the formulation of this prognosis implies the very experiences gained on automation processes under socialist production and living conditions. The prognosis consists in the statement that the increasing objectification of the production and management processes, which is connected with the extension of automation, simultaneously conditions an increasing significance of the subjective factor in social development.²⁴ The influence of socialist production relations manifests itself in the fact that these

²¹ Herbert Edeling — op. cit., p. 27.

²² Herbert Edeling — op. cit., p. 27 f.

²³ See Herbert Edeling — op. cit., pp. 28, 29.

²⁴ Harry Nick — Probleme komplexer sozialistischer Automatisierung, in 'Einheit', XXIV, 1969, 11, pp. 1283—1294.

two trends do not contradict each other but condition each other, and that the bodies which are responsible for the management of the social development can and must take prospective measures in order to come up to this prognosis.

Increasing objectification means that production is determined more and more directly by technical and economic parameters of the systems of plants as well as by technological methods. And this objectification includes also several elements of the management and planning processes. For different reasons, this, however, does not result in a decrease of the importance of the subjective factor, of the role of human activities, but in its increase. *Firstly*, automation demands a higher degree of forecasting than preceding development stages of production did. The consequences of economic decisions become more important. *Secondly*, this automation demands a greater sense of responsibility, a higher degree of qualification, which consists above all in mastering the scientific fundamentals of complex processes. These qualitatively new tasks of living labour are no longer realized directly as in mechanized enterprises but indirectly through the parameters of the systems of plants etc. But these "indirect effects of living labour on the result of the production of the enterprise are much *bigger* than under the conditions of mechanized production."²⁵ And *thirdly*, automation makes the connection between worker and means of work more elastic, more flexible. A material stimulation of the attitude towards work on the basis of the concrete result of work becomes increasingly complicated because of the very fact that this result of production is determined to an ever higher degree directly by the technical and economic parameters of the systems of plants. That is why the significance of the inner attitude towards work, of the ideal motives why one should work, increases. There is a series of investigations into prospective problems of the organization of scientific research in the field of industry, which arrive at similar conclusions and which likewise clearly forecast an *increasing* importance of the subjective factor in the sense explained.

Hence it follows that quite a number of conclusions can be drawn since this optimistic prognosis is no solution of the practical problem itself to prepare the subjective factor for these new objective requirements for a long term and basically. The range of the prospective measures is from the further perfection of the planning and management system of the total society, the national economy and the enterprises, the formation of the working and living conditions, the educational and cultural policy to measures which concern the inner attitude, the convictions, the standpoint, the needs and interests, the values, and norms of action of the individual.

In conclusion, I would like to make some remarks in connection with the latter point. There is a great number of prognoses by bourgeois futurologists who directly or indirectly forecast an increasing significance of intellectual life — though with pronounced negative signature Herman Kahn deduces from the loss of traditional values such as religion an intensified "search for sense and purpose"²⁶. As he says, this 'search' will not be very successful. The prospects of the post-industrial society in this sphere are decidedly bad. Kahn and Wiener argue from

²⁵ Harry Nick — op. cit., p. 1287.

²⁶ Herman Kahn, Computer als Babysitter und Spielkamerad, in 'Die Welt', 10, 11, 1969, nr. 262, p. 8.

the increase of the gross national product, the increase of the per-capita-income, the shortening working-hours and other factors to the 'alienation in wealth', i. e. to the loss of interest in administration and policy, to the intensification of egoism, to the development of anti-social forms of the care of one's self, to a policy and culture of cynicism, to an emotional distance and hostility in the relations of men.²⁷ Even the legitimate father of the conception of the 'post-industrial society' concedes only a very small attractivity to his product in this connection, and aggravates the problem by pointing to the expected intensified interaction between people, to the increasing communication etc.: If ever more people with such an intellectual and cultural habitus, with a new "apocalyptic and nihilistic mood which backs violence"²⁸ more and more frequently meet more and more other people, then our future is, indeed, not very promising!

With regard to this point, quite a series of remarks would be necessary. I might refer to the very weak arguments and the very deficient reasoning. I could draw the attention to the continuous mistake that here aspects of today's reality of state-monopoly capitalism are being clearly extrapolated to the year 2000. This happens for instance when Kahn and Wiener trace back the increasing estrangement between youth and society to the fact that this youth has no responsibility within society.²⁹ The practice and empirical investigations in socialist countries have shown that there are definitely ways and means to change this situation! I think the methodological and theoretical basic defect is that in these visions of the future a man — richly provided with all negative attributes of intellectual life of the late capitalist order and seen as an invariable being — is confronted with the technology of the 21st century, a technology that is solely conceived as dynamic and variable. And this man is indeed not up to this confrontation! In this sense a prognosis of this kind constitutes a verdict on the society that offers mankind such a prospect.

And vice-versa. The necessity of the transition to the socialist society is — besides all other considerations — to an ever higher degree a result of the fact that only this order is in a position to create not only the objective but also the subjective prerequisites for a decent confrontation of man with technology and science of the future. This demands and means not only the transformation of the political and economic positions of power, not only the formation of a system of the state structure, and of the handling of social matters on the principles of democratic centralism, not only the care of society for the material working and living conditions or the creation and imparting of knowledge. It also means — and that is very important to me in this connection — that society assumes the responsibility for the development of an inner attitude of the individual which is directed towards the needs of the future, for the development of a system of expectations, hopes, demands and needs, of moral standards and maxims of action. From the objective characteristics of future technology, of the future organization of science and economy — characteristics that are visible already today as trends — concrete demands on the action and behaviour of the individual are emerging, the taking up, the acceptance of which by the individual is to a high degree determined by the inner attitude. Socialism is in a position to accomplish such a task in a humanist

²⁷ Herman Kahn and Anthony Wiener — op. cit., pp. 193-220.

²⁸ Daniel Bell — op. cit., p. 363.

²⁹ Herman Kahn and Anthony Wiener — op. cit., p. 201.

way and in the interest of man, since the influence of private or profit interests on intellectual life has been eliminated, since the political power of the working class under the leadership of its party guarantees that the content of intellectual life, the ideal content of the future morale is deduced from the objective laws of social development, and the objective of this social responsibility does not consist in the adaptation and subjection of man to hostile interests and to an alien will, but in man's qualification to self-confidently and actively confront his natural and social environment. The superiority of socialism over all previous socio-economic formations is expressed to an ever increasing degree in the fact that socialism offers each individual not only all possibilities of purposeful work of the full development of all his creative talents but enables him, at the same time to take advantage of these opportunities. And also here we act in accordance with a prognosis made by Marx in 1843: "Only when the really individual man. . . recognizes his own forces as *social* forces and has *organized* them. . . only then human emancipation will have come true."³⁰ (Underlining of the words by the author — E. H.)

³⁰ Marx — Engels — Werke, Vol. I, p. 370.

YOUTH AS A FACTOR IN CHANGE

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Introduction

I have "bad taste of living beyond forty" (Dostoevsky), and thus belong to "beyond thirty generation" despised by Berkeley youth and their kind. However, it is primarily in the capacity of being relatively a young sociologist from the democratic and industrially young though traditionally old country of India that I have been privileged to present this paper in this Plenary Session before you — the August audience of the World Sociologists. I am beholden to President Szczepansky and his colleagues for extending me their kind invitation. I thank them and you most heartily for this proud privilege.

The Age of Youth's Conspicuous Visibility

In this Congress as in many others which have recently taken place, in voluntary associations and institutions, the emphasis has been made to attract relatively young people. In India, young psychologists have recently formed a professional association of their own and call themselves 'Young Turks'. We find similar accent on youth in various parts of the world for diverse reasons. The present age has been variously characterized as the "age of anxiety", "the barbitural age", etc. I feel prompted to call it "the age of youth's conspicuous visibility" which has been invading most fronts of our thoughts and actions. Various forms of mass media as well as scientific literature provide ample testimony for these.

Youth and Change in the World of Today

Millions of youths are being involved in multifarious activities that contribute to change in various parts of the world. The change sought to be brought about by them may be infinitesimally small or a political revolution. Youth have brought about overthrow of governments in a number of countries. They are found to be in the vanguard of revolutionary movements in some others. They clamour for end of war here, elimination of discrimination there, removal of despicable poverty here and of ruthless repression there. They may be issue-directed or non-directed, concerned with a campus issue or an international problem. In the world of today youth have conspicuously emerged as one major force in change.

The Terms 'Youth' and 'Change'

The term 'Youth' has been defined in diverse ways by social scientists. Its specific chronology is a controversial issue; any one between the age of 10 and 35 has been called as youth by one or another social scientist. The term 'Youth' as used by the present author includes what has been called 'adolescence'. It also denotes youth of college age in general and college youth in particular. College youth are the ones who have been studied the most; they are most vocal, sophisticated youth who have dynamically influenced the currents of social change. Usually the transition between end of childhood and beginning of adulthood is referred to as youth. The primary concern of this paper is with social change specifically and not with change as such. Thus, changes ushered into by youth in the field of aesthetics, science, and technology would not receive our primary attention though at times they may be passingly alluded to. The term 'social change' denotes here change in social institutions, viz. the family, the school, the church, the state and the economy. It thus signifies change in prescriptions and proscriptions, symbolic expressions and concrete activities of individuals and groups involved in these institutions; it is this change in the social institutions which is brought about or sought by youth solely or an association with others, that is our focal concern.

Plan of This Paper

The present paper is not based upon the author's research project. It is neither an exhaustive survey and a critique of empirical studies in the field nor an ambitious integration of various theoretical approaches now extant in this problem area. In this paper it is proposed — (i) to review a segment of available literature published in English regarding youth in relation to social change, (ii) to develop a conceptual framework by formulation of a typology of transition, a scale of involvement in social change and a classification of world cultures on selected criteria in order to explore nature of youth's involvement in social change and its determinants and illustrate these with special focus on the Indian and American youth, (iii) to discuss certain trans-cultural determinants of youth's activism* and in this process offer hunches and hypotheses, (iv) to assess globally the impact of youth on social change, (v) and also evaluate studies in this area, (vi) to predict trends of youth's activism, (vii) to make a plea for cross-cultural research and for Humanistic Sociology.

The Trans-Cultural, Trans-Historical Approach

One approach for understanding this problem of youth's activism can be characterised as trans-cultural and trans-historical.** According to this approach youth are the same all over the world today (trans-cultural) and have always been the same (trans-historical). To illustrate this point of view, quotations regarding certain aspects of personality of youth and their behaviour — particularly their

* For economy of space and time the term 'activism' will be used for youth's involvement in social change.

** The term 'trans-cultural' signifies here "universal" "beyond cultures" and is opposite of 'culture-specific' while the term 'trans-historical' means "throughout the ages" and is opposite of "specific to a particular historical period".

restlessness, defiance of adult authority etc. — quotations from the Bible, Plato, Aristotle and others are — approvingly referred. It may be stressed that quotations and not empirically established generalisations are marshalled in evidence. Statements regarding restlessness of youth, their exuberance, turbulence, suspiciousness, rebelliousness etc. appear to us more nebulous and generalised than definitive and specific and appear to rest on a very tenuous base. Can we say empirically today that youth are more restless or more impetuous than early adults, middle aged adults or old men or is it that their presumed restlessness characterised by more visibility forcing its attention because of group expressions? Is adult restlessness more individually felt, particularistic-private? Are its overt expressions more subject to impulse control? Are youth more trusting or more suspicious, rebellious or withdrawn? Perhaps, one can make out a case for both. A brief historical perspective is in order to understand a few approaches to youth and examine their relevance for change.

Storm and Stress Hypothesis

Demos and Demos (1969) examining "Adolescence in historical perspective" consider adolescence as almost "an invention" of the last two decades of the nineteenth century before which it was hardly taken note of in U. S. A. One approach that emerged as a result of 'discovery' of adolescence was to refer to it as a period of 'Storm and Stress'. This period was characterised by resurgence of intense erotic drives accompanying puberty changes. As these drives were socially controlled, restlessness and turbulence were felt by youth. Youth were also subjected, it was believed, to inconsistent parental prescriptions and proscriptions. At times they were treated as children and at times as adults. Thus, they were like 'marginal men' — no longer belonging to the group of children and not yet belonging to the group of adults (Lewin 60, Menheim 45). Rebelliousness was presumed at times as one of consequences of storming of impulses and strong social controls and marginality of status. Margaret Mead's work (51) referred to relative absence of storm and stress for Samoan Youth. As these youth were not subjected to adult control of hetero-sexual drive expression, cultural specificity of storm and stress hypothesis gained wide scale professional acceptance.

However, the psycho-analytical theory regarding youth continued to reflect this trans-cultural, trans-historical approach. According to this theory, no matter where youth are, no matter what historical period they belong to, youth are bound to pass through reactivated oedipal phase of rejuvenated impulses — conscious and unconscious, aggressive and erotic. Repressed hatred for father on the part of the boy during youth becomes directed against father, and/or displaced in rebelliousness outside the family. With this continued emphasis of psycho-analytical theory once more trans-cultural, trans-historical approach to this phase of youth gained increasing acceptance. However, various psycho-analytically oriented writers differ in their actual conceptualisation of various dynamic facets of the personality of youth. This has been demonstrated by Blum (63). Thus, personality-society interaction presumed by the storm and stress hypothesis in the present state of our knowledge, does not adequately explain the factors that predispose and precipitate youth's activism.

Empirical research on samples of adolescents from U. S. A. does not provide firm evidence for the storm and stress hypothesis. (Bandura 69, Brown 69, Dollard et al 39, Elkin and Westley 55, Friedenberg 59, Kiell 59, Kittay 40, Tryon 44). The 'stormy decade' of youth is considered more 'a fiction' than 'a fact' and a part of 'mythology about adolescence' played up by mass media and believed by parents. These beliefs, according to Bandura (69) have the character of self fulfilling prophecy, an illustration for which is provided by Erikson (63) who quotes from "West-side Story": "We're cruddy juvenile delinquents, so that's what we'll give 'em'" (P.XII). Trans-cultural, trans-historical approach is also reflected in postulation of phases through which youth all over the world pass. Ritchie and Koller (64) have classified three phases for youth in their journey to adulthood. These are: (1) separation from parents of orientation ("no longer a child"); (2) transition ("not yet an adult"); and (3) incorporation ("now quite an adult").

Youth as a Transitional Phase

We will focus on diverse approaches to the middle phase 'transition' as we consider them relevant for understanding activism in various cultures. Cultures differ in their recognition of period of youth as a transitional phase prior to attainment of adulthood. Cultural differences in their recognition of period of youth as transitional phase prior to attainment of adulthood may now be considered for their relevance for activism.

Imperceptible Transition in Traditional India

In some cultures, no separate symbolic/ritual significance is attached to this period. It is expected that with the passing of time a person will almost imperceptibly and gradually embrace adult status and play adult roles. Socialization for these roles has been provided from childhood in diverse ways.

Traditional Hindu culture approximates the above model. A son of a farmer, an 'untouchable', a Brahmin would be gradually introduced to his traditional occupational role from diversity of exposures to adult role playing situations; he would be running errands and helping his family elders from early years. According to the traditional family system in India, marriages were arranged by family adults during childhood of their wards. After marriage, girls continued to stay with their parental family. Strict sex segregation was enforced. In early or middle teens girls were considered 'fit' for starting conjugal life with their husbands and ceremoniously sent to their in-laws. With a mate arranged and an occupation earmarked on traditional lines, both in early teens, the male and female youth would play adult roles of being productive and reproductive members of the society without suffering any cultural discontinuity or taking initiative themselves. One wonders about the nature of identity crisis and of psycho-social moratorium (postulated by Erikson 68) in such a society. For the traditional Hindu female youth an ego ideal would be fostered in her through scriptural exposure, verbal and non-verbal communication as by observation of actual role models. According to this she should be husband-devoted, home-child centered, familistically oriented woman.

As adequate preparation for adult male and female roles becomes primarily the responsibility of the family, no ground for development of a distinct youth

culture arises. It may be mentioned that the above model still operates for million of Indian youth — particularly rural youth (Kapadia 66, Khatri 62, 65 A-B, 69; Prabhu 63). The above model illustrating almost imperceptible transition would perhaps be also applicable to relatively homogeneous cultures in which familism dominates individual and group behaviour and in which social change is very gradual. In our study (Hsu et al 63) Chinese American adolescents in Hawaii were compared with White American adolescents on the mainland of U.S.A. According to the authors "the most striking difference is the absence of overt rebellion against authority. The 'big fight' with parents is lacking". This has been attributed by the authors to relatively unchanging traditional Chinese culture pattern. Cormack's finding on Indian students is similar (Cormack 61, Manheim 45), stresses the insignificance of youth in static societies and refers to ancient China as an illustration.

Initiation Rites—Abrupt Transition

Certain cultures give explicit recognition to youth's attainment of adult status by way of prescribing initiation rituals ("rites de passage"). This ritualistic recognition of the end of childhood and flowering of adulthood — by subjecting usually male and sometimes female youth to various 'tests' and 'tortures' cuts short the childhood-adulthood transition and bestows adult privileges and duties to youth who pass 'tests' successfully. These initiation rituals have attracted explanatory schema of sociologists and other social scientists with diverse theoretical commitments. (Brown 69, Eisenstadt 63, Muensterbergher 64, and Ritchie and Koller 64.)

Prolonged Transition of Youth Culture

In technologically developed cultures particularly, transition from culturally prescribed childhood to culturally prescribed adulthood is quite prolonged and lasts for a decade or so. Here we find spontaneous emergence of youth 'cultures' by way of formation of primary groups of peers, evolution of peer-group specific modes of dress, language, etc. with a social, pro-social, and anti-social goal orientations. Thus, these youth groups assume a distinctive character of their own, distinguishable from childhood or adult groups.

In both types of cultures — one with imperceptible transition and the other with abrupt transition, youth's attainment of adulthood becomes the primary responsibility of his family. According to Eisenstadt (63) and Parsons (63), when a culture moves from the tradition-ascriptive to bureaucratic achievement social system, ability of the family to prepare the child and youth adequately for assuming an adult role becomes attenuated and "a sharp disjunction between the values and expectations embodied the traditional families in a society and the values and expectations in the occupational sphere" (Flacks 67) takes place.

When youth begin to doubt the legitimacy of adult values and thus rebel what is called "contra-culture" (Yinger 60) develops. Both Parsons and Eisenstadt view the development of youth cultures in positive light. Grinder (69) considers reduction of the extended family with grand parents and uncles to the nuclear family as a contributory factor to the development of youth culture. Controversy rages whether the youth in America is in conflict with their parents and their culture is

definitely a contra-culture. According to investigators like Coleman (61) a distinctive "adolescent society" exists (a conclusion considered as an artifact of Coleman's methodology by Epperton 63) while workers like Friedenberg (59) and Elkin and Westley (55) refer to "The vanishing adolescent" and "The myth of adolescent culture", respectively.

Once more we are confronted with conflicting approaches and contradictory findings. Just as empirical evidence does not reveal equivocal evidence about the storm and stress hypothesis, it does not do so for youth 'culture'.

Relevance for Social Change

We may now consider relevance of the above treatment for youth's activism. It is hypothesised that in societies where youth "cultures" emerge, social change becomes an explicit concern of some youth groups. The role that these youth play in social change in various parts of the world, antecedent conditions thereof etc. would receive extended treatment later. Conversely, youth without conspicuous transition or with ritually ordained abrupt transition are not likely to play significant role in ushering social change *as a group* though individually they may do so. Keeping in mind the cultural differences in recognition of youth-adult transition, other hypothesis can also be developed for understanding youth's activism. Suffice it to say at this stage that the broad division of world cultures into the three fold typology above is likely to facilitate further analysis of diverse problems in this field.

Another Classification of World Cultures and Youth's Activism

Another attempt at further understanding the role of youth can be made by evolving a chart of world cultures classified on the basis of (i) level of technological development (developed, developing, under-developed), (ii) nature of authority investment in the State (pervasive, delimited*), (iii) perspective regarding social change adopted by the State (*laissez faire*, reformist, revolutionary**). Rationale behind adoption of these categories lies in an assumption that each of these determines to a significant extent youth's involvement in social change.

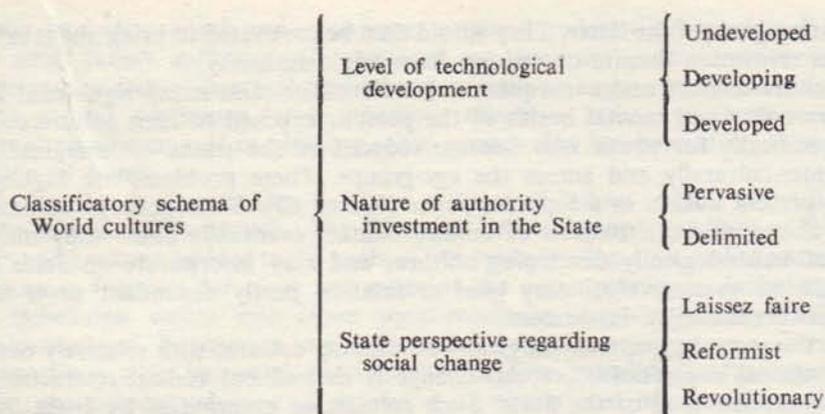
This chart is now presented as a heuristic model on p. 89. With the use of these categories of classification, 18 type of cultures are theoretically possible though in actuality all the 18 types may not be found.

Before we illustrate the usefulness of this mode of classification, we posit on p. 89 a scale of involvement of youth in social change.

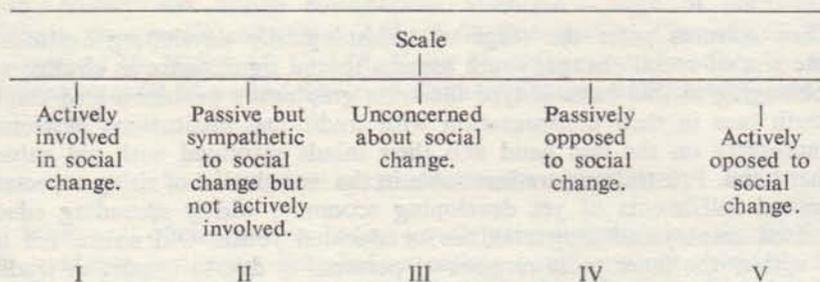
Each of the scale positions lends itself to a further breakdown in terms of the degree of social change, reformist or revolutionary. Thus, a youth can occupy any one of ten scale positions.

* The terms "pervasive" and "delimited" are used to describe the areas in which the State authority in practice is exercised and not in the legal or constitutional sense.

** When change aimed at is in a small section of the social order, when basic cultural goals and means are wholly or mostly accepted, this change is termed a reform. The term 'revolution' denotes that change is desired in most or all the social institutions and that all or most of cultural goals and means are rejected. When both cultural goals and means are accepted and no change is desired, the term '*laissez faire*' is used.



We will now proceed to understand the role of youth in social change in each of the three types classified on the basis of technological development, viz. technologically under-developed, developing and developed cultures.



The first type is that of technologically under-developed cultures with simple modes of production and distribution and political structure with easily comprehensible hierarchy and rules. The type denotes predominantly pre-literate cultures.

Youth in Pre-literate Cultures

These relatively simple, homogeneous, pre-literate cultures are characterised by absence of explicitly stated social change goals and consequent laissez faire orientation. Youth here are likely to play very insignificant role in social change.

As mentioned earlier, these are cultures with either imperceptible or abrupt transition in which attainment of adulthood is facilitated by family adults. Socialisation process primarily promoted by the family has ensured the internalisation of cultural goals as well as means. In such a situation motivation for social change is likely to be minimal.

However, the above situation is subject to an exception in cases where these cultures come in contact with technologically developed and developing cultures, in which a growing section of population, usually youth, embrace some of values

and pursue goals of the latter. They would then be motivated to bring about reforms or even revolution despite opposition from adult authority.

Culture contact and consequent culture conflict raise many significant issues for personality and mental health of the persons exposed to such culture conflict and specifically for youth who become reduced to the status of 'marginal men' both inter-culturally and across the age-groups. These problems are highlighted by the present author in a separate paper (Khatri 63). Homogeneous cultures referred above, under situations of culture contact eventually enter willy nilly the stage of technologically developing cultures and may incorporate on State level, reformist or even revolutionary goal orientation partly dependent upon nature of political authority investment.

In the second type, technologically developing cultures with relatively complex socio-political organisations, social change is desired but radical restructuring is not the explicit goal of the State. Such cultures as exemplified by India permit limited investment of authority in the Government and leave large areas of autonomy to their social institutions like the family, business-industry, religion etc.

The Youth in India

When cultures enter the stage of technologically developing cultures with the State aim of social change, youth assume special significance as change agents. India belonging to this cultural type illustrate graphically problems and challenges that youth face in their confrontation with traditional institutions buttressed by adult authority on the one hand and their minds saturated with old values, on the other hand. Frustrations are inevitable in the "revolution of rising expectations" and limited fulfilments of yet developing economy, widely spreading education and limited employment opportunities for educated youth. Old norms are internalised within the inner most recesses of personality due to impact of traditional child-rearing practices and other socialisation influences. New norms are absorbed at youth stage due to educational and peer-group influences and State-sponsored programmes. Autonomy strivings co-exist with dependency strivings as one enters youth. Intensity of their conflict is heightened by youth's considerable zeal for change and equally great need for emotional security in the context of family warmth and support. Basic personality structure (Kardiner-Linton 39) which provided a 'fit' with simple agricultural economy and the joint family has not come up to the requirements of technologically developing culture and 'Personality Lag' appears to have resulted (Khatri 62). We have referred earlier to familial arrangement of mates and pre-marital sex segregation. One of major frustrations felt by Indian youth springs from this social institution. Physical propinquity of boys and girls in the high school and college setting is conducive to concupiscence and undischarged erotic tensions. In a few cases, clandestine contacts develop and prompt autonomous mate selection strivings. These at times cause inter-generational and intra-personal conflicts (Khatri 61, 63). Even without actual development of hetero-sexual relations during youth need for autonomy in mate selection has been increasingly felt (Khatri 65-B).

This area of mate selection and nuclear family formation (neo-local residence) provides a target for social change predominantly desired in the direction of auto-

nomy by Indian youth and vehemently opposed and at times grudgingly accepted by adult family authority. Generational gap becomes quite conspicuous in attitude in this area as parental preference for family arrangement for marriage collides with youth's preference for autonomous selection. Indian youth appear to have played significant role in bringing social change that has been effected in the institution of family.

Another institution that has been a target of Indian youth's effort for change is the educational institution. The State has been bent upon welfare of its population and has been wedded to the goals of free primary education, and to provide higher education facilities for more and more of the under-privileged, including millions of 'scheduled' castes with lower socio-economic status previously called "The Untouchables". Population in schools and colleges has now grown to astronomical proportions with increased participation of economically disadvantaged groups. This phenomenal advance in provision of educational opportunities encouraged by the State and private efforts has brought in its trail a number of problems. Incompetent teachers, lowering of educational standards, rise in employment expectations and restricted job opportunities are but a few of the many problems that have emerged. They have created student unrest by way of protests — violent and non-violent. Overt expression of Indian youth's problems particularly college youth's 'revolt' has drawn considerable attention — both of politicians, social scientists, mass media and others (Altbach 68, Bousquet 69, Cormack 61, Deshmukh 69, Gusfield 68, Hallen 67, Giri 68, Kabir 58, Kakar and Chaudhry 70, Khatri 61, Krishnakumar 69, Mitra and Khatri 65, Shah 69, Sharma 69, Shils 68, World Assembly of Youth 63).

Nature of Youth Rebellion in India

What sort of changes are Indian youth attempting to bring about? From available evidence it appears that Indian college youth are not primarily bent upon "revolution" in the society or in the educational institution which has been their assault target. The spontaneous, sporadic and segmental protests are unconnected with any nation-wide movement; they appear to be rather expressive of frustrations. These are felt as a result of socio-economic conditions, loosening hold of traditional norms, loss of respect for authority figures in general and/or university/college administrators in particular, observation of adult corruption and opportunism, hiatus between profession of high sounding values and corrupt practices on the part of adults and such disillusioning facts. Idealistic fervour that characterised pre-independence youth involved in struggle for political freedom from the British rule and enthusiasm of youth inspired by *Weltanschauung* of free, democratic, egalitarian India has given way to regionalism, parochialism, casteism and petty linguistic squabbles on the part of the adults. These adults thus have lost respect and cease to provide venerated role models for emulation. There are other specific features of the educational system in India which have frustrated the Indian youth. It is mainly degree oriented and curriculum-restricted. It is provided in piece-meal fashion by a number of instructors with whom personal contact is peripheral in the context of vast impersonal organisation with its prescriptions and proscriptions. Students in India as in some other parts of the world are dissatisfied with their educational institution. These, inter alia, generate in them conflicting expectations

and frustrate them in diverse ways. They react to it by expression of aggression, by way of strikes, reckless destruction of public property, stone throwing, disrespecting and calumnizing university authority figures, disparaging teachers etc. Though felt frustrations play a significant role, political parties also reap a rich harvest by exploiting often the youth craving publicity from the press, seeking prestige among students and gaining economic support from political party coffers. No fundamental social change is explicitly sought by these expressions of aggression. Campus or local issues rather than ideals or revolutionary ideology prompt most of them.

As political power invested in the Indian Government is limited due to commitment to predominantly British brand of democracy, as the Government's policies and Five Years Plans have not yet formed part of an explicit clear cut ideology, as there are scores of political parties, as Indian youth have neither been adequately mobilised as in Soviet Komsomol type of organisation (Shermar 63) nor stirred by an ideological fervour, their role in social change has been rather limited.

Nature of Youth's Activism

Though by and large youth have been involved in radical leftist movements, this is not so invariable. Conservative movements in U.S.A. have also attracted youth. In India, communal political organisations have been successful to enlist the support of even educated college-going youth. College students much to the distress of liberal academicians, participated in communal frenzy and were involved in violent acts of aggression against the person and property of another religious group in Ahmedabad.

We may also mention here that systematic empirical studies of involvement of Indian youth — school/college going and educationally unattached — in social change activities including protests are very few. Most of reported literature in this field consists of non-empirical impressionistic opinion-statement by Indian and non-Indian social scientists, educationists, politicians and enlightened laymen.

A situation similar to that of India in terms of inability of the economy to fulfil rising expectations and job opportunities for African youth and associated marginality of status has been described by McQueen (68).

Space considerations prevent us from discussing problems of African youth as well as activist Japanese youth (classified as transformationists, restorationists and accommodationists by Lifton 63, 64).

The third type of technologically developed cultures is that of complex socio-political organisation but with delimited authority and reformist orientation of the State. U.S.A. illustrates this type. Here though social change is desired in certain institutions, radical transformation is not the explicitly expressed objective of the State.

American Youth

Problems of American youth, their conflict or concord with parents, development of youth sub-culture, their activism, and alienation, their unconcern and retreatism etc. have received attention from many investigators (Bandura 69, Bay 67, Bettelheim 63, 69, Brown 67, Coleman 61, Coles 63, 64, Denney 63, Elkin and

Westley 55, Epperton 63, Erikson 63, 64, 68, Fishman and Solomon 64, Flacks 67, Friedenberg 59, 69, Gelineay and Kantor 69, Gesell et al 56, Gold 69, Goldberg 63, Gottlieb 69, Gould 69, Kauffman 63, Keniston 63, 67, 69, Lederer 69, Parsons 63, Sampson 67, Schiff 64, Schwartz 69, Solomon and Fishman 64, Steinberg 69, Trent and Craise 67, Whittaker and Wattz 69). The occupants of scale position — I (activists), III unconcerned ('alienated' or 'uncommitted'), and V ('obedient rebels') deserve special mention in the American context. Among the activist youth, two broad types loom large. One type is that of the white youth with universal approach from middle and upper strata who are often altruistically and idealistically moved. They have nothing to gain for themselves by fate of issues they fight for. What they want for themselves are rights as adults (expressed in struggles for decision making in university and other spheres and lowering the voting age to 18 years). The second type is that of Negro youth mainly concerned with civil rights, racial discrimination and social justice, who aim at economic, social and personal benefit for the Negroes. A recent survey of student protests on American college campuses has shown that "215,000 students participated in 292 major protests on the 232 campuses (which have about one third of college students' enrollment in U. S. A.). Forty-nine percent of the protests concerned demands by black students for concessions such as black students, more black faculty and students and better facilities. Forty-four percent were for more student power, and 22 percent concerned issues related to the Vietnam war such as military training recruiting, and the war itself."* Usually studies dealing with student activism have based their estimates on those who were actively involved in protest activities — civil rights, Vietnam war, demonstrations etc. Incidence figures have varied from 5% to 20% (Fishman and Solomon 64, Keniston 67, Sampson 67, Thent and Craise 67). Thus large number of college students are not actively involved and many of whom would be unconcerned. The unconcerned also includes youth called 'Hippies' who show their disdain for the present social order (referred by them as 'Establishment' or 'System') by retiring in it. They do not consider social change in the 'System' worth bothering about. They predominantly are out to seek experiences usually from non-promiscuous sex experimentation with persons who are "good to them", psychedelic drugs, exotic music and other art forms and express defiance by other ways like idiosyncratic dress, hair styles etc. Many who have been willing subjects of studies have been found from upper class, sophisticated homes with liberal and permissive parents. Extremely unconcerned and alienated youth would refuse to be subjects of any study (Friedenberg 69). They find goals of family formation, white collar careers, comfortable living as unworthy of their endeavour. Most of them have been born into these creature comforts; their parents have provided models of 'family' men, of white collar prestigious professional or businessmen. The Hippies have rejected them as role models. They do not know what to strive for; so they dig deep into themselves and live in a world of illusions and hallucinations than in the world of dreams for a better world for themselves and others. This small but expanding group has received our attention because of their unique position on the Scale of involvement in social change. They are ideologically and not ego-centrally

* Reported in Newsletter, Feb. 2, 1970, U. S. Information Service, Bombay.

unconcerned about social change. They do not like to support the status quo. They reject it emotionally but are also emotionally precluded from undertaking concrete steps to modify it, or revolutionise it. Detachment, withdrawal from participation in the social order by way of productivity and reproductivity, psychological rejection of 'the establishment' yet forming part thereof has its paradigm in the Hindu stage of *Vanaprasthashram* which follows (and not precedes) *Crahasthashram* — the stage of adulthood, of productivity and reproductivity and rearing of children upto adulthood to carry on the roles prescribed by Hindu culture. The first stage of life upto about 25 years called *Brahmacharyashram* is characterised by pursuit of learning and gaining of wisdom with the help of a preceptor (Guru) while the fourth stage of *Sanyasashram* means complete relinquishment of the world and seeking union with the absolute (Prabhu 63).

The Role of the Family

Activism of American students and retreatism of the Hippy youth have prompted a number of studies. Among the variables that have been invoked to explain attitudes and behaviour of these youth are included a constellation of family variables. Reference has been made, sometimes by more than one investigator to discontinuity between permissiveness and democratic inter-personal relation of the family and impersonality and authoritarian attitudes of the university (Flacks 67), severity of parental discipline and formality and superficiality of children's notions of moral norms (Malewska 61), family-engendered security and freedom from anxiety to develop capacity for political rationality and independence (Bay 67), impact of model of the permissive, humanitarian mother of the activist and over-controlling and intrusive mother of the retreatist (Keniston 63), frequency and severity of parental punishment and radicalism (Watson 34), emotional freedom and deep sense of selfhood resulting from parental permissiveness and retreatist 'Hippi' sub-culture (Friedenberg 59), ordinal position and alienation including retreatism (Gould 69), lack of parental guidelines and prohibitions (Wylie 63) interpreted by children as lack of concern and love and sense of worthlessness and self doubt found among the retreatist (Lederer 69), repressed hatred of dominating parents and youth's placation expressed through participation in conservative movement (Schiff 64).

As will be seen from above that variables under study are many but replicating studies employing the same variable are relatively few. As such, firm conclusions about the family influence on activism and retreatism cannot be drawn. We have, of course, still a long way to traverse for cross-cultural confirmation of the role of these family variables.

The Role of the Educational Institutional Setting

A number of workers (Astin 69, Cowan 66, Brown 67, Keniston, Peterson 66, Sampson 67) have also referred to possible operation of environmental variables of the educational institution in the youth's activism as well as retreatism. College youth become subjected to stress due to discrepancy between their expecta-

tions (sometimes conflicting) and reality, to impersonality and anonymity of the university and also of unclarity of goals of higher education (Brown 67). This stress then is expressed in sympathy to and active support for protests. Academic support and specifically active participation of the faculty including frustrated teacher assistants are also referred as factors in the protest-promoting environment (Keniston 67). Peterson (66) found that student activism was found more in large universities and institutions enjoying high level of prestige and was relatively absent in teachers colleges, technical institutions and demonional colleges. Astin's study (69) based on questionnaire data from 35,000 students at 226 different institutions revealed that it is the type of students attracted by institutions that account for variations in student activism and not factors like size, administrative policy etc. In India, scattered evidence suggests that students protests are relatively absent in medical, engineering colleges and church-run small institutions with firm and consistent policies and extensive faculty-student contact (Altbach 68).

The Concept of Satiation Boredom

We may posit here two additional factors which, in our opinion, explain to some extent nature of activism of American youth. In the opinion of the present author, material comforts lose their potency for pleasure and are soon taken for granted. Youth from middle and upper class in U. S. A. for whom these comforts are available in abundance seem to suffer from what may be called 'satiation boredom'. This satiation boredom may either lead to abandonment of the usual cultural goals, drain off motivation to be one more cog in the technological organisation that can offer only these creature comforts in the cold context of impersonality and exploitative inter-personal attitudes. Eventually they may be driven either towards activism, protest against the exploiting, alienating society or retreat into fantasy world of drug-induced hallucinations and deliberate seeking out of other experiences.

Individualism, Technological Development and Alienation

Another factor is alienation defined as inability to form warm and intimate relations with significant persons in one's life space and exploitative inter-personal orientation generally. In one of his papers (66) the present author has dealt in details (i) how pursuit of individualism and individual happiness as values were responsible for rapid technological and overall economic development resulting in easy availability of material goods, (ii) how this pursuit precipitated ego-centric and exploitative inter-personal orientation and incapacitated a large number of individuals caught in the whirlpool of this technological development from forming intimate personal relations. In other words, a ruthless businessman in the market also continued to be so with his friends and the family. Perhaps this type of American youth — ego-centric and socially unconcerned 'silent generation' — provided predominantly the sample of subjects of studies in which the image of "highly complacent, status-oriented privatised uncommitted" is borne out with perspicacity (Flacks 67, Gillespie and Allport 55, Jacob 57, Goldsen et al 60). A signi-

ficant section of American youth today is likely to come from such alienated parents. Bettelheim (69) narrates cases of youth who were exploited and equated objects of parental narcissism rather than as persons. These youth seem to have reacted to their alienated and alienating parents by repeated references to "rotteness" of the present technologically complex mass society, wide spread exploitation, hiatus between professed values and immoral practices. Their reaction takes the form of fight or fright.

If the above hunch of relationship between individualism and personal happiness and (i) technological development on the one hand and (ii) alienation on the other is valid, it has definite implications for youth as well as others interested in human welfare, from technologically developing societies. It can be said that wide spread alienation and its associated abnormal behaviour is too much a price to pay for achieving an affluent society through technological development. Answer does not lie in crying a halt to technological development but to consider steps for social planning and guided development that do not lead to alienation as a resultant of technological development.

We have so far described three types of cultures and role of youth in social change with specific reference to Indian and American youth. It appears that in cultures with pervasive state authority and revolution as the State goal, youth as a group are involved almost totally as social change agents. However, social change goals that govern them are in harmony with goals set by adults in authority and no overt conflict or youth's contra-culture is likely to develop. Communist countries—particularly new communist countries—belong to this type.

In the four types described above, we have noted differential involvement of youth in social change—almost no involvement as a group of youth in pre-literate cultures, the almost total group involvement of the youth in communist countries, the peripheral involvement of the sporadic Indian youth groups and diversified involvement of the American youth as groups and individuals. We may add here that categories of classification adopted in our schema (level of technological development, nature of authority investment and perspective regarding social change) have explanatory potential provided hypotheses relating these dimensions can be formulated.

Trans-Cultural Determinants of Youth Activism

Now, we would endeavour to explore whether we can postulate trans-cultural determinants of youth's activism. When we seek to grasp the determinants of youth's attitude to social change and their actual involvement in it, we are confronted with an array of problems. It has been pointed out earlier that goals of social change that receive explicit recognition from activist youth differ from culture to culture. Earlier, we have briefly dealt with culture-specific determinants and even intra-cultural variations. Can we postulate a set of trans-cultural (and hopefully trans-historical) determinants that may also be operative at a certain level of abstraction? It is to this task that we now turn with utmost caution and hesitancy.

We begin by stating our formulation of culture as follows:

"Culture of a given group may be said to consist of — (a) Ideology: systems of beliefs including view of reality (cognitive); (b) Activities, modes of doing things including modes of impulse-gratification; (c) Attitudes and values (likes, dislikes, preferences, feelings); (d) Expectations from self and others about above (social norms creating expectancy sets); (e) Material aspects. (a) to (e) being shared by the group, sanctions being provided for deviance from the permitted range." (Khatri 63)

Every culture by way of child-rearing practices and other socialisation practices seeks to implant ideology, to develop certain modes of behaviour and predispositions to such behaviour, to mould attitudes, values and self-expectations by a network of diverse rewards and punishments. It thus evolves a culturally approved range of behaviour patterns and accompanying attitude-values complex out of perhaps infinitely varied behaviour and attitudinal potential. In this process of moulding the child after its cultural image, frustrations of impulses ('drives', 'urges', 'needs', 'desires', 'motives') is inevitable as also gratification of some of these.

The Concept of Frustration-Gratification Balance

The present author has postulated that every culture has its broad range of frustrations and gratifications in various developmental stages and therefore it has different frustration-gratification balance during each of these stages. By the time, an individual in a given culture enters youth, he has been exposed to a cumulative frustration-gratification balance within the broad range developed by his culture. Cultures vary in frustrations they impose and gratifications they provide in different stages of life. It is further hypothesised by this author that vulnerability to social change and resistance to social change is a function of frustration-gratification balance of culture in general and of its youth in particular, when it comes in contact and conflict with values and ways of life of other cultures. In the present world situation, increasing cultural contacts have been taking place through efforts of U. N. O. and its various organisations, commerce, industry, educational and other exchanges, exposure to mass media and educational materials. All these influences widen, along with culture contact, also conflict of values and norms of behaviour. Role of frustrations, and conflicts — intra-personal and inter-personal both for mental health and social change—has been discussed in detail by the present author elsewhere (Khatri 63, 65).

As we have seen, a number of factors have been posited by various authors to youth's activism. Marginal status of youth (Lewon 60, Manheim 45), reactivation of the oedipal struggle and displacement of hatred to extra-familial authority figures (Pearson 58), societal control of intense erotic and aggressive impulses, frustration of these impulses and their aggressive potential (Dollard et al 39), identity crisis of youth (Erikson 68), heightened sensitivity to frustration in the context of idealistic orientation, modern youth not being 'needed' economically by their parents and subjected by them to achievement pressures to outdo them (Bettleheim 63, 69) — these are some of postulated determinants. These attempts at understanding youth share one common element viz. frustrating aspects of youth's life. We may add that any of these, if valid singly or in combination in any given culture, increase the frustration quantum of youth in his frustration-gratification balance, lower his resistance to social change and increase his acceptance of new ideas and norms of behaviour.

The present author's formulation of frustration-gratification balance and its presumed consequences in the present stage are more in the nature of hunches utilizing concepts of high order and not even testable hypotheses put in operationally defined terms. Investigative efforts need to be devoted to the task of ordering/rectifying the present conceptual chaos, conflicting theories, diversity of approaches, plethora of speculations and paucity of systematic research.

Mental Health of Youth as a Trans-Cultural Determinant

Mental health of youth in given culture which is related to frustration-gratification balance described above can also be considered as a trans-cultural determinant of youth's activism. Two broad approaches to relationship between mental health of youth and their activism have emerged. One approach referred earlier is that extreme frustrations, conflicts, inter-personal and intra-personal create dispositions which may prompt youth to be involved in social change movement. A person suffering from intense feelings of worthlessness and thus vulnerable to mental health disturbances may identify himself with a social movement, lose himself in the collectivity and gain his self-esteem by such identification. Here social change movement prevents him from falling a prey to private psychopathology. In other words, his psychopathology instead of being expressed symptomatically provides motivation for social change forces. Again retreatist youth have provided group support to one another by developing a sub-culture. It appears, a significant section of these youth without this group support would be found flooding the mental health clinics.

Fishman and Solomon (64) have described short term effects of student activism by referring to reduce referrals to the campus mental health clinics. These referrals, however, shoot up later indicating that activism can only temporarily drain off psychopathology. These authors in their empirical study (Solomon and Fishman 64) of participants in a peace march found that feelings of isolation, helplessness, anxiety and uncertainty about future were among the factors that motivated a number of students to participate.

Another approach is that of investigators who have related positive mental health to involvement in social change activities. According to Bay (67) inspired by Camus (58), secure, bright individual tends to be sensitive to social justice due to his expanded consciousness. He rebels as he empathises with the under-privileged and the unjustly treated. Studies of white American youth activists have revealed personality traits which go more with positive mental health (Bay 67, Keniston 67). Keniston (67) refers to "empathy, superior intellectual attainments, capacity for group involvement, strong humanitarian values, emphasis on self-realisation, etc." of activists and to "economic security, committed parents, humanitarian, liberal and permissive home environments, good education" as antecedent conditions.

Perhaps the seemingly contradictory approaches referred above may not be so mutually exclusive. Both types may be involved in change activities. In other words, different motives may prompt individuals to undertake similar activities. Certain characteristics of youth have been referred by one or another author which can be posited to provide a fragment in the explanatory framework for their activism. Among such characteristics the following deserve special mention: youth's altruistic orientation (Bay 57, Keniston 67, Khatri 57), their cognitive growth (Ausbel 63, Peel 69), specifically growth of political ideals (Adelson and O'Neil 69), their craving for locomotion and need to give and receive fidelity (Erikson 68).

By now we have dealt with a variety of explanatory concepts and hypotheses — some tangentially and some centrally — with a view to understand culture-specific and trans-cultural determinants of youth's involvement in social change and without endeavouring to integrate these diverse concepts and hypotheses, we present on the next page a map of determinants of activism. This map has been adapted with modifications from "A Map for the analysis of personality and politics" worked out by M. Brewster Smith (68).

Impact of Youth on Change—A Global Evaluation

A panoramic glance at events reflected in mass media as well as a sample of literature in this area can reveal how in diverse ways and differing intensity, social change is sought and often brought about in various cultures of the world. What are the social institutions in which youth have been seeking or brought about change? Youth have become involved in seeking autonomy in mate selection and monogamy in those parts of the world specifically on the Orient and polygamy where predominantly familial arrangement of marriage have dominated. Though adults have been playing their role in spreading ideas and ideology in this sphere, it appears, the major burden for effecting change has fallen and would continue to remain on the shoulders of youth. In countries where autonomy in mate selection and monogamy have been achieved radical transformation appears to be taking place in hetero-sexual relations of male and female youth. Virginity and expectations of virginity prior to marriage are being replaced by ideological acceptance of and voluntary participation in sex relations and tolerance of unwed motherhood and 'illegitimate' children. Life long monogamy per se seems to be losing ground and increasing acceptance of divorce and extra-marital relations has been taking place.

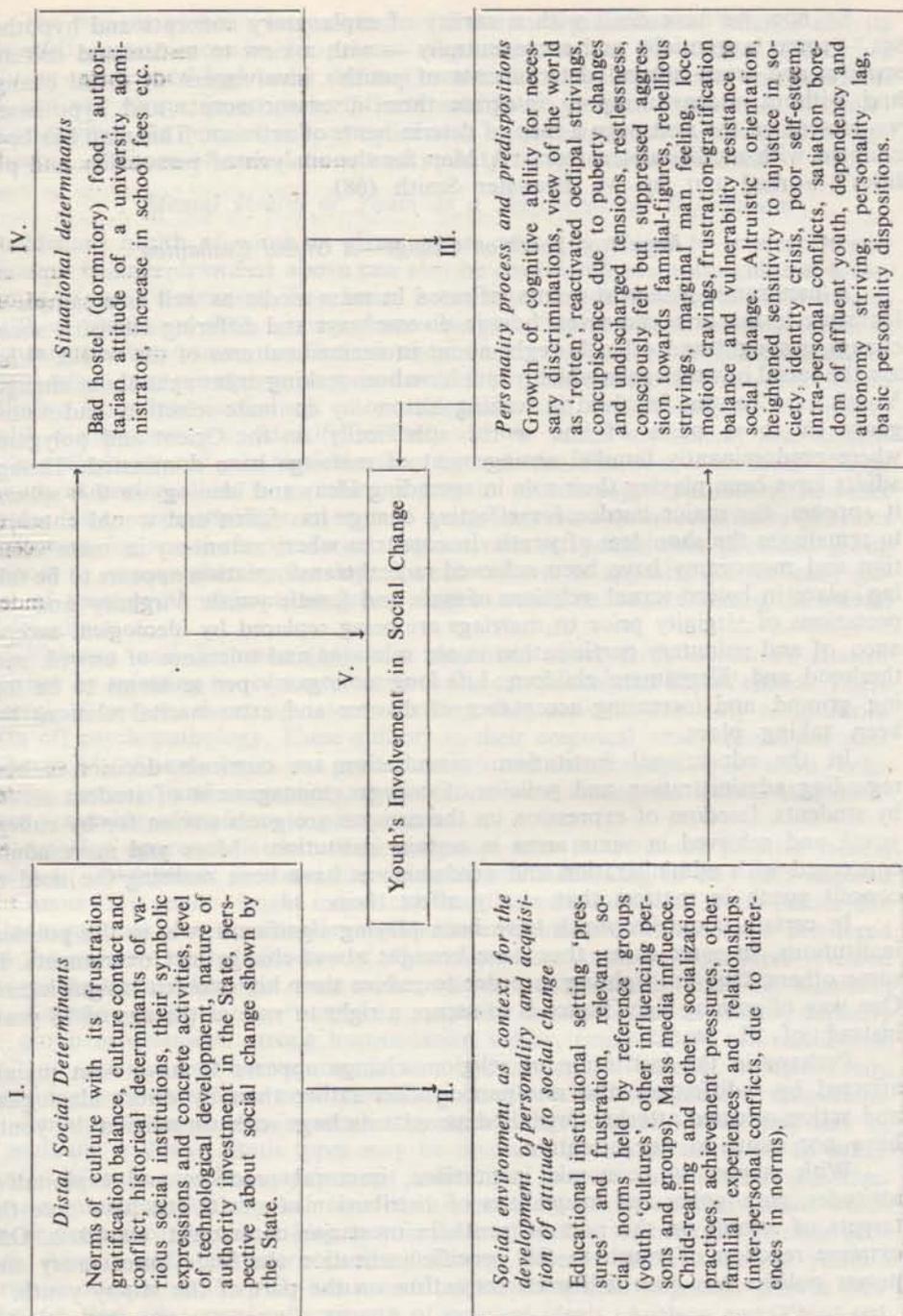
In the educational institution, consultation on curricula, decision-making regarding administration and policies of colleges, management of student affairs by students, freedom of expression on the campus are goals striven for by college youth and achieved in some areas in certain institutions. More and more adults concerned with administration and academicians have been realising the need to consult youth in matters that vitally affect them.

In certain countries youth have been playing significant role in the political institutions. In some cases, they have brought about change in Governments. In some others, they are fighting in order to reduce their hitherto felt insignificance. One way of gaining significance is to secure a right to vote at the age of 18 years instead of 21 years.

Perhaps in the institution of religion, change appears to have been mainly affected by indifference and non-participation rather than by direct ideological and action-oriented attacks. Organised assaults on large scale on religion by youth have not come to our attention.

With respect to economic institutions, immoral practices and exploitative attitudes, monopolies and inequalities of distribution of wealth etc. have been the targets of assault on the part of youth in most non-communist countries. One extreme reaction of youth to this specific institution the State bureaucracy and power politics has been deliberate retreatism on the part of the Hippy youth.

I. A MAP FOR ANALYSIS OF POSSIBLE DETERMINANTS OF YOUTH'S INVOLVEMENT IN SOCIAL CHANGE



This is a global evaluation of change in various social institutions like the family, the school, the church, the polity and the economy. Wide differences in nature and direction of change and modes adopted for bringing them would be found in various countries.

Though usually violent and/or large scale youth demonstrations and revolts have attracted concentrated attention to youth's activism, we may mention in passing tremendous work in bringing about gradual social change in diverse social institutions by youth in groups and individually. American peace corps (Kauffman 63) and mental health volunteers (Gelineu and Kantor) youth groups covered by the Soviet Komsomol (Sherman 63), various social service organisations exclusively of youth like Junior Chambers or those enlisting services of youth in different parts of the world contribute significantly to processes of social change.

Images of Youth as Change Agents

In the context of change, images of youth reflected by various authors can be broadly classified as (a) youth initiating change, (b) youth being used as change agents by interested adults. In the latter overt goals of adults may be shared by youth due to adult socialisation-indoctrination or goals of youth may be accepted overtly by supporting adults but for ulterior ends (e. g. a strike by students supported by political party elders to win over allegiance of youth). In understanding determinants of youth in relation to change, above distinction may be kept in mind.

Limitations of This Paper

There are many limitations of this paper. Two, however, deserve special mention. I have committed the same 'sin' that most authors have perpetrated in this area of youth. It is the 'sin' of omission of treatment of the female youth as a separate subject. Are there specific problems of the female youth in understanding their role in social change? Just as adults took youth for granted and hopefully expected them to follow them in their trodden path, just as men on the whole subordinated women and created the world congenial for men, the discussion of the role of youth in social change has tended to ignore the specific role of female youth and shunned study of their sex-specific problems. Among the social scientists who have realised significance of the specific role of the female youth are Erikson (68), and Bettelheim (63). Offering apologies but not rationale for this 'sin' of omission, may I express my hope that the working group dealing with this problem area will take it up for extended discussion?

Another limitation of this paper is as follows: Throughout this discussion we have treated youth as providing a set of independent variables and (attitude towards and action for) social change as a set of dependent variables. It is also realised that social change can be conceptualised as a set of independent variables and youth — his personality and mental health as a set of dependent variables. This area also has received significant attention of social psychologists. For purpose of analysis, this treatment of youth as a set of independent variables and social change as a set of dependent variables may be justified but we may point out that intimate interaction appears to take place between these sets of variables.

Youth affects social change as social change affects youth in various ways. One can even posit a hypothesis that possibility of social change per se may attract certain types of youth.

Research in the Area of Youth's Activism — A Global Evaluation

At a number of points in this paper, we have offered critical evaluation of studies undertaken in a specific area of the broad field of youth's involvement in social change. Small samples limit generalisability of findings. Relative lack of replication reduces our confidence even in small sample findings. Again some findings on different samples and investigative methods are contradictory. Diverse conceptual frameworks have been used. All these and other methodological handicaps which characterise the problem area of youth's activism have grossly reduced our ability to generalise within bounds of one culture. At the same time, we also need rigorously planned cross-cultural studies.

Cross-Cultural Research

A welcome trend that has emerged in recent years, and which is also evinced by I. S. A. research committees is of interest in cross-cultural research. Though a few cross-cultural studies shed light peripherally or centrally in this area, a study by Gillespie and Allport (55) deserves special mention. Gillespie and Allport found that cooperative cross-cultural research was feasible and fruitful. Many difficulties attend cross-cultural research undertakings, some of which are highlighted by this author elsewhere (Khatri 69). However, extensive cross-cultural research needs to be actively fostered.

Inter-Disciplinary Research

One modest attempt towards attainment of order and maturity in the field can be by employment of insights not only from sociology and cultural anthropology but also from psychology, psychiatry and related social sciences. In this connection, along with the usual methods of questionnaires, interviews and such face-to-face techniques, we can also fruitfully utilise the qualitative and quantitative content analysis of literature — imaginative and other. Themes related to youth and social change that can be discerned and captured in a pre-prepared category system from fiction and non-fiction, historical and present documents can provide rich substantive and ancillary data for generation and eventual testing of our hunches and hypotheses. Kiell's "The Adolescent through fiction" (59) and his "The Universal experience of adolescence" (64) illustrates the qualitative aspects of this method. The present author has gained fair degree of insight regarding mate selection, marriage and family relations in his qualitative and quantitative content analysis of fiction in Gujarati — a regional Indian language.

Youth's Activism and Future

Keeping in mind the theme of the Congress a few words may be offered about youth and the future.

Can we predict on the basis of available evidence trends of activism of youth? Can we hazard evaluation of the operation of social change forces operating in the life space of youth today and forecast its possible shape in not very distant future?

It needs hardly any mention that modern science and technology with well developed communication system have brought the world closer physically. Events happening far away in Vietnam forest are known — and are often seen in millions of homes all over the world. Increasing formal education with broad exposure to physical sciences and humanities and widely shared literature and arts have their indirect impact on the sacrosanct character of narrow sub-cultural norms and values and tend to develop though gradually commonly shared cognitive orientations and Weltanschauung with scientific moorings. In years to come, this process will be increasingly speeded up.

Through a network of exchanges and exposures, youth of the world have begun to share, on the emotional plane, a feeling of unity. For increasing number of youth, barriers of geography appear artificial and common concern for human beings seems to be *felt*. A threat of nuclear war may also be acting towards feeling of common fate to be 'shared' by youth.

Values of equality (racial equality, equality of opportunities for all etc.) and justice (expressed as disgust for inequalities for distribution of goods), and freedom (doing away with unnecessary restrictions on the individual) — more and more youth are likely to share these values.

If these trends take more and more concrete shape, they are likely to court opposition from people with vested interests who gain in various ways from narrow regional affiliations and from traditional people who believe in continuance of the status quo.

We may, at this stage, refer to two studies which shed light on some of the points referred above. Majority of youth of 9 out of 10 countries found to be ready for and desirous of more racial equality (Gillespie and Allport 55).

According to Keniston (67), both the Hippie youth and the radicals in U. S. A. consider world as their reference group and feel intensely internationalist. A sample of Indian youth felt that it was youth's responsibility to demolish the present system and substitute it by "a better order based on justice, freedom and equality" (Krishnakumar 69).

Youth in Future Societies

In contrast to the past, when age mainly yielded increased crop of knowledge and wisdom, suzerainty of the old was accepted and institutionalized, now, with wide-spread and spreading education in almost all sectors of society, expanded avenues of professional training instead of sheer reliance on experimental learning by age, being open for youth, easy availability of knowledge through mass media, ground for geronocracy no longer exists. Already youth in many contemporary societies have shown sophistication, sensitivity to world wide events and pointed out inadequacies and injustices in the world created by adults and gross contradiction between professed values and actual behaviour. In a number of countries, youth have shown leadership and brought about major social changes. In future societies youth are likely to play more and more significant role both in

ushering change and establishing gains thereof. Youth have started revolting against what they perceive to be, on the whole, our "rotten" world. Though a few like the American Hippies have washed hands, started 'dropping out', most of the sophisticated and sensitive youth will continue to play significant role in social change. Though a few are pessimistic about the world of to-morrow, most of the world youth are likely to be optimist in orientation and positivist towards social change.

The Epilogue

The present author though realising the value of scientific techniques for understanding and solving problems of society believes in Humanistic Sociology, not in value-free sociology. Humanistic Sociology should aim at studying conditions which can foster the development of a future world society that would be based both on technological advancement and also individual self-realisation. It can be a complex organization characterised by mass production of goods but should also be conducive to personal fulfillment and creative expression of its members. Instead of implicit acceptance of values in our professional pursuits and creative products, time is now ripe for explicit formulation of values, subject them to anvil of group discussion, attempt to arrive at consensus and evolve social planning which may help create a better, happier and war-free world.

Summary

In this paper we have discussed the trans-cultural, trans-historical approach and examined relevance of the storm and stress hypothesis for understanding youth's activism in general. We have evolved (i) typology of transitional phase of youth, (ii) a classification of world's cultures on certain criteria and (iii) a scale of involvement in social change. We referred to four out of 18 possible types of world cultures according to our schema and dealt in somewhat details activism of youth in India and U. S. A. and its culture-specific determinants. We then developed a concept of frustration-gratification balance of a culture in general and of youth in particular in our search for trans-cultural determinants of youth's activism. We also dealt with youth's mental health both in its positive and negative aspects. We briefly but globally referred to the role of other variables of personality and assessed the impact of youth in social change.

Towards the end, we pointed out limitations of our paper and offered an evaluation of studies in this area. We further pointed out need for cross-cultural research with multi-disciplinary orientation and made a plea for the use of a variety of techniques including qualitative and quantitative content analysis. A few words were offered about youth's activism in future and role of youth in future societies. The paper ends with epilogue in which plea for Humanistic Sociology is made.

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LA SOCIOLOGIE ET LE PRONOSTIC SOCIAL

JIVKO OCHAVKOV

I. Prévission sociale et pronostic social

1

Le présent rapport est consacré à quelques problèmes méthodologiques du pronostic social envisagé sous son aspect sociologique.

Il est nécessaire tout d'abord de différencier deux sortes de prévission sociale scientifique: la prévission sociale théorique générale et la prévission sociale concrète. L'une et l'autre ont pour fondement la connaissance des lois objectives du fonctionnement et du développement de la société. La différence principale entre elles réside dans le fait que dans la prévission théorique générale on prend en considération ces lois et les changements futurs de la société en vue de leur détermination qualitative, tandis que dans la prévission concrète ils sont considérés non seulement dans leur détermination qualitative mais aussi quantitative.

En ce basant sur la prévission sociale théorique générale, on élabore d'ordinaire un programme qui a lui aussi un caractère théorique général. Dans ce programme les changements sociaux prévus et les activités sociales des individus, nécessaires à leur réalisation, sont exposés selon une suite logique sans marquer de délais concrets et d'autres indices quantitatifs. De telles prévissions, de tels programmes peuvent servir naturellement d'orientation ou de gestion méthodologique générale des activités sociales des individus en vue de la réalisation de changements sociaux prévus.

Pour l'élaboration d'un pronostic social concret basé sur la connaissance des lois sociales objectives non seulement dans leur détermination qualitative mais aussi quantitative, il est nécessaire de recueillir par des études particulières une information concrète et d'analyser cette information en utilisant des modèles mathématiques convenables.

A partir de cette prévission sociale concrète il devient possible d'élaborer un plan social qui aura aussi un caractère concret. Les changements prévus dans ce plan ainsi que les activités sociales des individus, nécessaires à leur réalisation, s'exposent dans une suite chronologique avec des indices quantitatifs et des délais fixés. Il est naturel que de telles prévissions et de tels plans puissent servir à la gestion scientifique concrète des activités sociales des individus pour la réalisation des changements sociaux prévus.

A titre d'exemple de prévission sociale théorique générale on peut citer la prévission scientifique de Marx et Engels concernant la révolution socialiste, le passage

de la société du capitalisme au socialisme et ensuite du socialisme au communisme. Cette prévision est devenue une réalité dans un certain nombre de pays du monde. Il s'agit des pays où la révolution socialiste et le passage du capitalisme au socialisme ont été accomplis. A titre d'exemple de prévision sociale concrète on peut citer les prévisions dans ces mêmes pays, à partir desquelles s'élaborent et se réalisent des plans sociaux annuels, quinquennaux et à plus long terme.

En tenant compte des distinctions qui viennent d'être exposées, nous utiliserons le terme de *prévision sociale* pour la prévision sociale théorique générale et le terme de *pronostic social* pour la prévision sociale concrète.

Il est évident que la prévision sociale et le pronostic social, ayant un caractère scientifique, doivent être liés organiquement entre eux. Il est très important de noter ici que la prévision sociale peut et doit servir de base scientifique méthodologique au pronostic social et ce dernier — de base concrète scientifique pour la précision et l'enrichissement de la prévision sociale. Ce rapport est consacré plus particulièrement au pronostic social.

II. Aspect sociologique du pronostic social

2

La sociologie marxiste dès sa création envisage la société humaine comme un système total.

La société humaine n'est pas apparue et ne s'est pas développée jusqu'à présent en tant que système total à l'échelle mondiale. Elle s'est créée et s'est développée sous la forme de rassemblements humains distincts réels et stables, occupant un territoire déterminé dont chacun représente plus ou moins un système total basé sur un mode de production matérielle donné. A notre époque ce sont les différents rassemblements d'Etat composés d'une ou de quelques nations. Chacun de ces rassemblements humains réels et stables constitue *une société concrète distincte*. Le terme *formation sociale* désigne ce qui est commun à tous les rassemblements humains réels et stables distincts à chaque étape fondamentale de leur développement historique; il désigne surtout ce qui est commun dans leurs rapports de production; la formation sociale représente donc un *type déterminé de société humaine concrète*. Le terme *société en général* signifie ce qui est commun à toutes les sociétés humaines concrètes de toutes les formations sociales.

Les différentes sociétés concrètes, au cours de leur développement historique, se lient de plus en plus entre elles, leurs interactions se renforcent progressivement et s'étendent territorialement. En réalité c'est un processus historique de formation graduelle de la société en tant que système total à l'échelle mondiale. Ce processus historique n'est pas encore terminé. *Le fait essentiel c'est l'existence de deux types de sociétés humaines concrètes — capitaliste et socialiste — qui sont radicalement différentes les unes des autres; elles coexistent et élargissent leur relations mutuelles, mais ne sont pas et ne peuvent pas être organiquement unies.*

Ainsi, de nos jours encore, le fonctionnement et le développement de la société humaine en général et des différents types de sociétés se réalisent, de fait, sous forme du fonctionnement et du développement relativement autonomes de sociétés humaines concrètes distinctes. Ainsi on arrive à une exigence méthodologique générale que l'on peut formuler de la manière suivante: *il est nécessaire*

que le développement social soit considéré tout d'abord en tant que développement relativement autonome des sociétés concrètes distinctes et ce n'est qu'après que l'on doit examiner les relations réciproques entre ces sociétés concrètes en tant que processus historique progressif de la constitution d'un système social total à l'échelle mondiale. Il est évident qu'une société concrète donnée peut servir de modèle.

Cette exigence méthodologique a été consciemment appliquée par Marx dans son œuvre «Le Capital» où l'Angleterre — alors le pays capitaliste le plus développé — sert de modèle (1, p. 6; 2, p. 468—469; 3, p. 8; 4, p. 54).

La prévision sociale est possible à l'échelle de la société concrète distincte aussi bien qu'à l'échelle mondiale, tandis que le pronostic social, jusqu'à présent, n'est réellement possible qu'à l'échelle de la société concrète distincte. La raison essentielle en est que pour la prévision sociale il suffit en principe de connaître la détermination qualitative générale des lois objectives du fonctionnement et du développement de la société, tandis que pour le pronostic social il s'avère nécessaire d'avoir en plus une information concrète scientifique sur la détermination quantitative de ces lois. Une telle information, en quantité suffisante, peut être recueillie au moyen d'études particulières de chaque société concrète distincte, effectuées par ses instituts scientifiques et ses organismes gouvernementaux. Voilà pourquoi les essais de certains sociologues d'élaborer des pronostics sociaux d'ici à l'an 2000 non seulement de leur propre pays, mais de presque tous les pays du monde, quelque audacieux qu'ils puissent paraître, en réalité sont privés d'un fondement méthodologique scientifique (5).

Bien sûr, après avoir élaboré des pronostics sociaux distincts pour un certain nombre de sociétés concrètes, il s'avère en principe possible en coordonnant ces pronostics d'élaborer un pronostic et respectivement un plan uni pour toutes ces sociétés. Cette possibilité se réalise à un degré toujours plus élevé dans les pays socialistes participant au Conseil d'Entraide Economique.

3

A chaque société humaine concrète sont inhérentes des sortes de *besoins fondamentaux* se renouvelant constamment et aussi des sortes d'*activités sociales* des individus humains, destinées à satisfaire ces besoins, à savoir:

1. La production matérielle;
2. La reproduction et la formation des individus humains en tant qu'êtres sociaux;
3. La production spirituelle et la gestion sociale;
4. Les communications.

Ces différentes sortes de besoins et d'activités sociales des individus représentent les *sphères fondamentales de chaque vie sociale ou bien de la vie sociale en général*. Chaque sphère joue un rôle différent pour le fonctionnement et le développement relativement autonome de la société, le mode de production ayant une importance déterminante. Mais toutes ces sphères sont nécessairement inhérentes à chaque système social total; la vie sociale n'est pas possible si n'importe laquelle de ces sphères manque.

Chacune des sphères fondamentales de la vie sociale dans la société concrète des différentes formations sociales est différenciée en un nombre plus ou moins grand d'éléments qui représentent *les domaines principaux de la vie sociale*. Aujourd'

hui ce sont: a) les forces productives, les rapports de production et d'autres domaines principaux de la production matérielle; b) le mode de vie, la santé publique, la culture physique, l'éducation et d'autres domaines principaux de la reproduction et de la formation d'individus humains comme êtres sociaux; c) la politique, le droit, la morale, la science, l'art et d'autres domaines principaux de la production spirituelle et de la gestion sociale; d) la langue, la presse, la radio et d'autres moyens principaux de communication.

Le développement de chacun des sphères fondamentales de la vie sociale est liée au développement des domaines principaux de la vie sociale dont elle est différenciée. Les interactions des sphères fondamentales de la vie sociale s'accomplissent aussi sous la forme des interactions des domaines principaux de la vie sociale, chaque domaine principal portant en soi «la nature de tout de la nature», c'est-à-dire la nature de la sphère fondamentale de la vie sociale à laquelle elle appartient.

Les actions réciproques, conformes aux lois, entre les sphères fondamentales et entre les domaines principaux de la vie sociale sont justement l'objet de la sociologie en tant que science.

A ce propos on peut dire que les actions réciproques entre les sphères fondamentales et entre les domaines principaux de la vie sociale constituent *la structure sociologique fondamentale de chaque société concrète*. Cette structure est déployée et non déployée. Par structure sociologique fondamentale non déployée on entend les interactions conformes aux lois des sphères fondamentales de la vie sociale. Par *structure sociologique fondamentale déployée* on entend les interactions conformes aux lois des domaines principaux de la vie sociale.

4

Comme on l'a déjà dit, les sphères fondamentales et les domaines principaux de la vie sociale représentent en réalité certaines sortes de besoins sociaux et certaines activités correspondantes des individus humains. Il s'ensuit que, plus les sphères fondamentales de la vie sociale sont différenciées en domaines principaux distincts, plus il se forme, selon des modes différents, des rassemblements humains distincts, dits fonctionnels. Ils se forment surtout à partir du processus de la division sociale du travail et remplissent des fonctions variées, correspondant aux différents domaines principaux de la vie sociale ou bien à certains de leurs éléments. Pour notre époque, on peut citer: les classes, les groupes et les couches sociaux; la ville et le village; les différentes collectivités formées en vue de la production spirituelle et de la gestion sociale; la famille, les établissements scolaires et les autres collectivités ayant pour fonction la reproduction et la formation d'individus humains en tant qu'êtres sociaux, etc.

Dans chaque société humaine concrète il existe aussi d'autres sortes d'ensembles sociaux d'individus humains qui représentent des rassemblements humains réels (par exemple les différentes nations dans les rassemblements d'Etat multinationaux, etc.) ou bien des catégories sociales, ayant un caractère statistique.

La structure sociologique fondamentale est inhérente à chacun des ensembles sociaux désignés plus haut de la société humaine concrète, mais elle l'est de façon différente et aux degrés variés.

Il importe de souligner tout d'abord que la socialisation de l'individu humain, c'est-à-dire sa formation en tant qu'être social, n'est rien d'autre qu'imprégnation ou accumulation par lui de la structure sociologique fondamentale de la société concrète donnée d'une formation sociale déterminée. Ainsi les individus humains distincts portent en eux la structure sociologique fondamentale de la société, mais évidemment à des degrés variés. C'est ce que Marx a exprimé par la formule: «l'entité de l'homme dans sa réalité représente l'ensemble de tous les rapports sociaux» (6, p. 3). Inhérente à des individus humains distincts en tant qu'êtres sociaux, il est naturel que la structure sociologique fondamentale soit inhérente comme *caractéristique statistique* à tout ensemble social distinct.

Mais en outre la structure sociologique fondamentale est inhérente à certains ensembles sociaux d'une manière différente. Plus exactement cela signifie, que dans la société humaine concrète dans les différentes nations des rassemblements d'Etat multinationaux, dans la ville et le village, les parties intégrantes de la structure sociologique fondamentale déployée et non déployée existent *réellement* aux degrés variés; ils fonctionnent et se développent *réellement* plus ou moins indépendamment et agissent l'un sur l'autre, en conditionnant le fonctionnement et le développement relativement autonome de chaque rassemblement humain correspondant ainsi que ses interactions avec les autres rassemblements. C'est à cause de cela qu'on dit que ces rassemblements humains réels représentent des *structures sociales plus ou moins totales*. Puisqu'ils sont différenciés territorialement et interagissent en tant que structures sociologiques plus ou moins totales, ils représentent des parties intégrantes de la *structure régionale sociologique de la société*. La ville et le village, les différentes nations dans les rassemblements d'Etat multinationaux, etc. sont des *parties intégrantes de la structure sociologique régionale de chaque société concrète distincte*. D'autre part, les sociétés concrètes distinctes deviennent de plus en plus des parties intégrantes de la *structure sociologique régionale de la société en tant que système total à l'échelle mondiale*.

Il est évident, que quand on élabore un pronostic social scientifique, il faut tenir compte de la structure sociologique fondamentale et de la structure sociologique régionale de chaque société concrète. Il est nécessaire de tenir compte aussi des deux aspects de la structure sociologique fondamentale — réelle et accumulée par les individus humains en tant qu'êtres sociaux.

La différenciation de ces deux aspects de la structure sociologique est d'une grande importance. Ce ne sont pas deux structures sociologiques différentes, mais deux aspects d'une même structure, organiquement liés entre eux. Lors du processus de socialisation des individus humains, ceux-ci accumulent la détermination qualitative de la structure sociologique réelle typique d'une formation sociale et spécifique d'une société concrète donnée (ainsi que de la ville ou du village et des autres rassemblements humains réels). La structure sociologique réelle ne peut pas fonctionner indépendamment de la structure sociologique accumulée par les membres de la société concrète donnée. On peut même dire que la structure sociologique réelle fonctionne dans la mesure où elle est accumulée par les membres de la société et dans la mesure où elle sert à la régulation consciente ou involontaire de leurs actions sociales. Par exemple, le contenu des différents résultats objectifs de la production spirituelle (travaux scientifiques, œuvres d'art, etc.), sont d'autant plus précieux et opérants pour le fonctionnement d'une société concrète donnée que les créateurs ont accumulé d'une façon plus complète et plus exacte la déter-

mination qualitative de la structure fondamentale réelle typique de la formation sociale et spécifique à cette société et que cette structure accumulée est mieux reflétée dans leur activité créatrice. Il s'agit surtout du type de rapports de production. Les produits objectifs (notamment, les livres rangés sur les rayons de la bibliothèque, les tableaux et les statues dans une galerie d'art, etc.) ne jouent en eux mêmes aucun rôle dans un processus social, par exemple, dans la production matérielle, ou dans le fonctionnement et l'autodéveloppement d'une société concrète donnée en tant que système total. Ils peuvent avoir un rôle seulement dans le cas où ceux qui accomplissent un certain processus social ont accumulé le contenu des produits de la production spirituelle et encore seulement si ce contenu dirige leurs activités sociales. En rapport avec cela, on peut conclure que la structure sociologique accumulée par les individus humains joue un rôle important parmi les mécanismes d'interaction des parties intégrantes de la structure sociologique réelle de chaque société humaine concrète. C'est justement à cause de cela que lors du pronostic social scientifique il faut tenir compte des deux aspects de la structure sociologique fondamentale—réelle et accumulée par les membres de chaque société humaine concrète distincte.

5

Le plus essentiel pour la sociologie marxiste en tant que science sociale est qu'elle a découvert les lois objectives du fonctionnement et l'autodéveloppement de la société humaine comme un système total. Il s'agit des lois sociologiques qui expriment les interactions essentielles, nécessaires et se répétant entre les sphères fondamentales et entre les domaines principaux de la vie sociale. Elle a relevé trois sens principaux de ces interactions. Par rapport à la structure sociologique fondamentale non déployée ce sont: a) le rôle déterminant du mode de production à l'égard des autres sphères fondamentales de la vie sociale; b) l'interaction entre ces autres sphères fondamentales de la vie sociale; c) la rétroaction de ces dernières sur le mode de production. Par rapport à la structure sociologique fondamentale déployée ce sont: a) le rôle déterminant des forces productives à l'égard des rapports de production et également — par l'intermédiaire d'eux ou plus ou moins directement — par rapport aux autres domaines principaux de la vie sociale; b) l'interaction entre ces autres domaines principaux de la vie sociale; b) la rétroaction de ces derniers sur les rapports de production et — par l'intermédiaire d'eux ou plus ou moins directement — sur les forces productives.

Le premier de ces trois sens a une importance fondamentale pour le fonctionnement et l'autodéveloppement de la société et sa découverte constitue un des plus grands mérites des créateurs de la sociologie marxiste. Voilà pourquoi ils se sont concentré surtout sur l'éclaircissement de ce sens principal. En tenant compte des formations sociales de classe, Marx définit brièvement ce sens comme suit:

«Dans la production sociale de leur existence, les hommes entrent en des rapports déterminés, nécessaires, indépendants de leur volonté; ces rapports de production correspondent à un degré de développement donné de leurs forces productives matérielles.

L'ensemble de ces rapports de production constitue la structure économique de la société, la base réelle sur quoi s'élève une superstructure juridique et politique, et à laquelle correspondent des formes de conscience sociale déterminées.

Le mode de production de la vie matérielle conditionne le processus de vie social, politique et intellectuel, en général. . . A un certain degré de leur développement, les forces productives matérielles de la société entrent en contradiction avec les rapports de production existants, ou ce qui n'en est que l'expression juridique, avec les rapports de propriété au sein desquels elles s'étaient mues jusqu'alors. De formes de développement des forces productives qu'ils étaient, ces rapports deviennent des entraves pour ces forces. Alors s'ouvre une époque de révolutions sociales. Le chagement de la base économique bouleverse plus ou moins lentement ou rapidement toute la formidable superstructure» (7, p. 8—9).

Lors de la transition d'une formation sociale à une autre, la structure sociologique déployée et non déployée subit des changements essentiels en qualité. Le plus important lors de cette transition c'est le profond changement de qualité du contenu et du rôle des rapports de production et des domaines principaux de la superstructure de la vie sociale, qui deviennent successivement: primitifs — esclavagistes — féodaux — capitalistes — socialistes et puis communistes. Ces changements essentiels qualitatifs de la structure sociologique fondamentale déterminent les changements qualitatifs respectifs des différentes sortes d'ensembles sociaux mentionnés, plus particulièrement — de la structure régionale sociologique.

Certains critiques du marxisme lui reprochent de considérer l'économie comme facteur presque unique du développement social. En réalité Marx, Engels et Lénine soulignent aussi les deux autres sens des interactions sociologiques. Il suffit ici de citer la formule suivante d'Engels:

«Le développement de la politique, du droit, de la philosophie, de la littérature, de l'art, etc. est basé sur le développement économique. Mais ils exercent l'influence les uns sur les autres et aussi sur la base économique. Les choses ne se passent pas de façon que la situation économique soit la seule cause active et le reste ne soit qu'une conséquence passive. Non, ici nous sommes en présence d'une interaction basée sur la nécessité économique qui finit toujours par se frayer le chemin» (6, p. 579).

Encore il est nécessaire d'ajouter que Marx, Engels et Lénine, dans ces analyses et généralisations sociologiques, ont toujours tenu compte des trois sens principaux des interactions indiquées (6, p. 559).

La sociologie marxiste fait ses prévisions et ses pronostics sociaux sur la base de la connaissance des lois sociologiques du fonctionnement et de l'autodéveloppement de la société humaine.

Les critiques du marxisme ne reconnaissent pas de telles lois. R. Aron par exemple a dit que la sociologie marxiste a «l'ambition de connaître les lois générales du développement», tandis que la sociologie «non ou antimarxiste» affirme implicitement ou explicitement, «qu'elle ne connaît pas de telles lois ou qu'éventuellement celles-ci n'existent pas» (8, p. 3). Mais alors comment cette sociologie «non ou antimarxiste» pourra faire des prévisions et des pronostics sociaux scientifiques?

6

La sociologie comme il a été déjà souligné, a pour objet les actions réciproques conformes aux lois entre les sphères fondamentales et entre les domaines principaux de la vie sociale. A la différence de la sociologie, les autres sciences sociales ont généralement pour objet la structure spécifique, les lois spécifiques

du fonctionnement et du développement relativement autonome d'un domaine principal de la vie sociale — économie, politique, art, morale, mode de vie, etc. L'information concrète, recueillie par chacune de ces sciences et surtout les lois spécifiques du fonctionnement et du développement relativement autonome du domaine correspondant de la vie sociale, révélées par elle, sont nécessaires au pronostic social aussi bien pour ce domaine distinct, que pour la société en tant que système total. Mais cette connaissance scientifique ne suffit pas pour l'élaboration du pronostic social. Il est nécessaire d'avoir encore une connaissance scientifique sociologique. Cela est valable non seulement pour le pronostic social de la société en tant que système total mais aussi pour le pronostic de chaque processus social distinct. Chaque domaine principal de la vie sociale comme un processus social est lié, conformément aux lois, aux autres domaines principaux de la vie sociale et à la société concrète distincte en tant que système total. Ce domaine principal fonctionne et se développe donc non seulement selon ses lois spécifiques, mais aussi selon ses interactions avec les autres domaines principaux de la vie sociale, c'est-à-dire selon les lois sociologiques du fonctionnement et du développement de la société concrète comme un système total. Cela explique l'aspect sociologique non seulement du pronostic social de la société en tant que système total, mais aussi l'aspect sociologique du pronostic de chaque processus social distinct.

III. Problèmes du pronostic de la société en tant que système total

7

Les conditions et les possibilités de l'élaboration des pronostics sociaux scientifiques, de l'élaboration et surtout de la réalisation des plans sociaux correspondants sont différentes dans les différents types principaux de société concrète, plus particulièrement dans les deux types principaux de société concrète actuelle — socialiste et capitaliste.

Ces conditions et ces possibilités différentes de pronostic et de planification sont déterminées par les différences essentielles entre les deux types de sociétés concrètes, plus particulièrement par la détermination qualitative différente de leur structure sociologique. Plus l'objet du pronostic est d'une échelle ample et complexe, plus les différences sont considérables. Il n'y a presque pas de différences, quand le pronostic social a pour objet un processus particulier de la production matérielle (par exemple la quantité et la qualification de la main-d'œuvre) dans une entreprise isolée, même dans un groupement d'entreprises. Mais quand le pronostic social a pour objet une société humaine concrète en tant que système total, les différences atteignent la dernière extrémité. Le pronostic scientifique concernant une société humaine concrète en tant que système total, l'élaboration et surtout la réalisation d'un plan social correspondant s'avèrent en principe impossibles, s'il n'existe pas dans cette société une condition fondamentale — la propriété collective de tous les moyens de production. Mais cette condition fondamentale ne se crée que dans la société concrète de type socialiste et même, pas tout de suite après la victoire de la révolution socialiste dans le domaine politique, mais seulement lors de la transition du capitalisme au socialisme. Cette transition se termine justement avec l'établissement complet des rapports socialistes de production et surtout avec l'établissement de la propriété sociale socialiste.

Ici on doit souligner, que la prévision sociale mentionnée plus haut des classiques du marxisme-léninisme a été précisée par la suite sur la base de l'expérience récente de sa réalisation pratique. Après la victoire de la révolution socialiste dans le domaine politique l'édification de la formation sociale communiste passe par quatre étapes principales: a) transition du capitalisme au socialisme ; b) édification de la société socialiste développée; c) transition graduelle du socialisme au communisme; d) édification de la société communiste développée. Dans chaque pays où triomphe la révolution socialiste dans le domaine politique cette prévision sociale se précise selon ses conditions spécifiques et on élabore un programme théorique pour chacune des étapes principales. De tels programmes servent de guides pour la gestion scientifique générale des activités sociales des individus humains pour la réalisation des changements sociaux prévus lors de l'étape principale correspondante. Ces programmes sont aussi la base théorique générale pour l'élaboration des pronostics et des plans sociaux. Au cours de la période transitoire du capitalisme au socialisme il est possible d'élaborer des pronostics et des plans de développement économique ou sur d'autres processus sociaux distincts. C'est au cours des étapes principales suivantes que l'on peut faire des pronostics et des plans sur la société concrète en tant que système total.

Il est notoire que la propriété sociale, instituée complètement à la fin de la première étape principale, existe sous deux formes — étatique et coopérative. De là proviennent certaines difficultés concernant le pronostic et la planification du développement de la société concrète socialiste en tant que système total. Mais ce pronostic et cette planification sont déjà possibles en principe pour les raisons suivantes: a) la propriété d'Etat et la propriété sociale coopérative ont un caractère *socialiste*, ce qui détermine la coïncidence entre les intérêts principaux des groupes sociaux liés à eux et le fait qu'il n'y a pas et ne peut pas y avoir une base objective de conflit entre eux; b) la propriété d'Etat prédomine et sa part relative dans la formation du produit social et du revenu national croît de plus en plus; c) cela représente une possibilité pour le gouvernement de régler les relations mutuelles entre les deux formes de propriété et d'orienter l'utilisation du produit social et du revenu national vers l'intérêt commun en vue du fonctionnement et du développement de la société socialiste donnée représentant un système total, etc.

D'ordinaire on commence à élaborer des pronostics et des plans du développement de la société en tant que système total à un niveau donné de l'édification de la société socialiste développée après que d'autres conditions nécessaires soient créées.

Dans la République Populaire de Bulgarie, la transition du capitalisme au socialisme se termina en 1958 et à partir de là a commencé l'édification de la société socialiste développée. Au cours de dix ans ont été prises et réalisées un nombre de mesures exceptionnellement importantes, notamment: des modifications structurales dans l'économie nationale (fusion des entreprises de production industrielles et agraires, création de groupements correspondants importants, etc.), élévation du niveau scientifique de la gestion de l'Etat et de la politique et de la gestion de l'économie nationale, accroissement des moyens pour le développement de la science, et plus particulièrement — des sciences sociales, etc. Ici il faut dire qu'en 1969, la participation des entreprises d'Etat dans la création du produit social et du revenu national est 74,94 et 68,05%, la participation des entreprises coopératives est respectivement 19,14 et 22,38%; des fermes auxiliaires appartenant à des

personnes occupées dans les entreprises étatiques et coopératives 5,52 et 9,15%. La participation des entreprises et des fermes privées n'est que 0,40 et 0,42%.

C'est dans ces conditions justement que dans notre pays a été posée la question du passage du pronostic et de la planification du développement économique et des autres processus sociaux distincts *au pronostic et à la planification de la société en tant que système total*. Après une préparation théorique scientifique correspondante, cette question a été examinée au mois de juillet 1968 lors de la session plénière spéciale du Comité Central du Parti Communiste Bulgare.

C'est dans le rapport du Président du Conseil des Ministres de la République Populaire de Bulgarie Todor Jivkov qu'on trouve une motivation théorique détaillée de la nécessité du passage dont il s'agit et de ses conditions préalables (9). La session plénière mentionnée et le Conseil des Ministres ont pris à ce sujet des décisions importantes: pour certaines modifications de la structure et des fonctions des organes d'Etat, pour l'accroissement de la qualification des cadres des différents domaines du système de la gestion sociale en relation avec les tâches nouvelles, pour la création d'un système unifié d'information sociale et pour l'utilisation de modèles mathématiques récents et de technique de calcul électronique pour son traitement, pour l'accélération du développement des sciences sociales par la réalisation systématique de recherches concrètes sociales-sociologiques, économiques et autres. (En liaison avec cela, la Direction Statistique Nationale a été transformée en Direction d'Etat d'Information). Le Comité Central du Parti Communiste Bulgare et le Conseil des Ministres de la République Populaire de Bulgarie ont consacré aussi d'autres séances à la question du pronostic et de la planification de la société en tant que système total. Particulièrement importantes à cet égard sont les décisions prises concernant la concentration ultérieure de la production matérielle et des études scientifiques, l'édification de système automatique de gestion sociale, etc. (septembre 1969), la création de grands complexes de production agraires-industriels (avril 1970), etc.

Sur la base de toutes ces décisions à présent s'élaborent des pronostics et des plans du développement de notre société en tant que système total jusqu'à l'année 1975 et, l'année 2000. Lors de l'accomplissement de cette tâche assez complexe et difficile, l'utilisation de la riche expérience antérieure du pronostic et de la planification sociaux du développement économique et des autres processus sociaux distincts dans notre pays, ainsi que dans les autres pays socialistes, sera d'une grande importance.

En rapport avec cela la sociologie se posa des tâches et des problèmes nouveaux.

8

Jusqu'à présent on a effectué des études sociologiques concrètes des processus sociaux distincts. Une des nouvelles tâches les plus importantes de la sociologie est d'effectuer aussi des études sur le fonctionnement et sur le développement de la société en tant que système total. Il s'agit de la sociologie marxiste-léniniste dans les pays socialistes. Les études de ce genre sont si difficiles, qu'il ne serait pas étonnant, que certains sociologues les considèrent comme irréalisables. Mais elles sont vitalement nécessaires aux sociétés concrètes socialistes, et dans ces dernières existent des conditions et des possibilités pour leur réalisation.

Le recueil d'information concrète scientifique sur la structure sociologique totale est nécessaire:

a) pour pouvoir établir avec une exactitude quantitative, dans un temps donné, l'état de chaque domaine principal et surtout déterminer dans quelle mesure il s'est transformé, a mûri, ou bien a disparu en tant que partie intégrante de la société socialiste concrète donnée;

b) pour réaliser une mesure quantitative des interactions directes et indirectes conformes aux lois entre les parties intégrantes de la structure mentionnée et pour révéler éventuellement des lois sociologiques nouvelles, plus particulièrement des lois qui soient spécifiques à la société socialiste;

c) pour pouvoir à partir des indices quantitatifs, concernant l'état des parties intégrantes de la structure sociologique et leurs interactions conformes aux lois, élaborer et expérimenter sur calculateur électronique, en utilisant de modèles mathématiques correspondants, des variantes différentes du futur de la société concrète donnée.

En plus, l'information scientifique concrète doit être recueillie périodiquement à intervalles égaux selon un programme et une nomenclature uniques. Il est évident que plus les études effectuées seront nombreuses, plus les pronostics du développement de la société socialiste concrète, en tant que système total, seront précis. Se rendant compte de cela, l'Institut de sociologie auprès de l'Académie bulgare des Sciences a effectué une telle étude entre décembre 1967 et avril 1968. Cette étude a été appelée «Etude sociologique de la ville et du village dans la République Populaire de Bulgarie».

En réalité elle a pour objet la structure sociologique fondamentale presque totale de notre société accumulée par les individus. On a étudié les parties intégrantes suivantes: forces productrices, rapports de production, politique, droit, science, morale, art, religion, mode de vie, santé publique, culture physique, instruction, autodidactie, langue, radio, télévision et autres.

A partir des exigences de la méthode représentative stochastique nous avons choisi d'étudier 18 994 personnes au-dessus de 16 ans dans 130 villes, 36 habitats de type urbain et 1248 villages.

La question concernant l'assurance de l'authenticité de l'information concrète accumulée se révèle d'une grande importance. Puisque lors de l'étude de la structure sociologique totale on recueille une information concrète très étendue (lors de notre étude on a recueilli une telle information d'après 205 questions), les méthodes de recherches doivent être soigneusement examinées. Il n'est pas question d'utiliser les méthodes courantes d'une manière traditionnelle. Notre expérience montre que les résultats sont plus sûrs *si pour une même question on utilise de différentes sources d'information en appliquant en combinaison plusieurs procédures — études de documents écrits, observations pendant au moins deux-trois mois, libre entretien avec l'entourage de la personne à son domicile et à son travail, libre entretien et interview avec la personne elle-même, etc.* (10, p. 239—257). Les personnes qui effectuent l'étude doivent être choisies assez minutieusement et bien instruites. A notre étude ont participé 293 maîtres de recherches, 3443 chercheurs sur place (ici le mot enquêteur ne convient plus) et 1274 médecins. Nous avons reçu une aide très précieuse des groupes sociologiques départementaux, qui représen-

Tableau I

Population selon le sexe	Données statistiques (11)		Données de l'étude sociologique de la ville et du village		Différence %	Erreur maximum en unités absolues de pourcentage (Δ)
	Population du pays au-dessus de 16 ans		Personnes étudiées			
	Nombre absolu	%	Nombre absolu	%		
Hommes	3105012	49,61	9,558	50,32	+0,71	$\pm 1,02$
Femmes	3159963	50,39	9,438	49,68	-0,71	$\pm 1,02$
Total	6528915	100,00	18,996	100,00		

Tableau II

Adhérence au Parti	Données statistiques (12)		Données de l'étude sociologique de la ville et du village		Différence en pourcentage	Erreur maximum en unités absolues de pourcentage (Δ)
	Nombre absolu	% envers le nombre total de la population au-dessus de 16 ans	Nombre absolu	% envers le nombre total des personnes étudiées		
Membres du Parti Communiste Bulgare	621846	9,94	1,972	10,38	+0,44	$\pm 0,62$

tent une base exceptionnellement importante pour la réalisation des études sociologiques à l'échelle de tout le pays.¹

L'analyse statistique ordinaire ainsi que l'analyse multivariée (sur ordinateur) montrent que l'information concrète recueillie lors de notre étude est scientifiquement représentative et fidèle. De cela témoignent les comparaisons des données de cette étude avec les organes statistiques d'Etat d'après une suite d'indices. Les deux tableaux comparatifs ci-après en donnent une idée.

Sur ces tableaux, on voit, que les données de notre étude sociologique et les données statistiques concernant deux caractéristiques de la population coïnciden

¹ L'idée de créer cette base d'organisation a surgi au cours de la préparation de notre étude sociologique de la ville et du village. Pendant les années 1966 et 1967 dans tous les chef-lieux de départements ont été créés des groupes sociologiques, membres collectifs de la société sociologique de la République Populaire de Bulgarie. Les membres de ces groupes réalisent eux-mêmes deux ou trois études par an à l'échelle de leur département et prennent part comme maîtres de recherches dans les études sociologiques réalisées à l'échelle de tout le pays par douze centres d'études sociologiques qui résident à Sofia. Au cours de 1969 les groupes sociologiques départementaux sont devenus des sociétés sociologiques distinctes auxquelles adhèrent individuellement 806 sociologues en tout.

parfaitement dans les limites des erreurs maximum de représentativité en unités absolues de pourcentage (Δ). Des résultats analogues peuvent être obtenus en comparant d'autres caractéristiques pour lesquelles on dispose de données statistiques sur toute la population du pays. Ce fait est une raison suffisante pour conclure que, pour les caractères étudiés à l'égard desquels nous ne disposons pas de données statistiques sur toute la population, l'information recueillie est aussi scientifiquement représentative et fidèle.

9

Les problèmes de l'application de méthodes mathématiques lors de l'analyse de l'information sociologique et lors de l'élaboration du pronostic social, à partir de cette information, au moyen de technique calculaire électronique sont exceptionnellement importants.

Mais la solution théorique et pratique de ces problèmes, surtout quand il s'agit du pronostic sociologique, se trouvent toujours à un stade initial.

On sait que les phénomènes sociaux sur lesquels on recueille une information sociologique concrète ne sont pas généralement quantifiés eux-mêmes, ou en d'autres termes sont de nature qualitative. En liaison avec cela, les sociologues et les mathématiciens font des efforts dans deux directions principales:

a) rechercher des méthodes et des modèles mathématiques qui conviennent à l'analyse de l'information sociologique sur des caractères de nature qualitative;

b) rechercher des moyens de transformer les caractères qualitatifs en caractères quantitatifs, pour pouvoir appliquer des méthodes et des modèles mathématiques disponibles qui conviennent aux analyses de corrélation et de régression. Pour le moment on ne peut pas dire avec certitude dans quelle direction sera obtenu le résultat le plus convenable. A partir de l'information concrète de l'étude sociologique de la ville et du village nous faisons actuellement une expérimentation en utilisant quelques propositions des sociologues et des mathématiciens, faisant des recherches dans les deux directions, en vue non seulement de l'analyse de cette information, mais aussi de l'élaboration des pronostics sociaux correspondants. Cette expérimentation ne peut pas naturellement être examinée à fond avant qu'elle soit terminée. Mais il convient, peut-être, de noter ici, que, en relation avec l'analyse des données de la vaste étude sociologique concrète de la religion, réalisée en Bulgarie en 1962, on a appliqué une nouvelle méthode de transformation des caractères qualitatifs en caractères quantitatifs. C'est une méthode d'élaboration des échelles combinatoires pour chaque partie intégrante de la structure sociologique fondamentale déployée. La même méthode est appliquée actuellement pour analyser aussi l'information concrète de notre étude sociologique de la ville et du village.¹

10

Jusqu'à présent l'information concrète sur la structure sociologique accumulée par les individus humains est recueillie en principe par des recherches sociologiques concrètes et l'information sur la structure sociologique objective réelle est

¹ Un bref exposé de cette méthode et des résultats de son application est donné dans mon rapport, présenté à ce congrès dans le groupe de travail „De modèles et de méthodes mathématiques pour le pronostic social“.

recueillie par les organes statistiques d'Etat. Chacun de ces deux genres d'information concrète scientifique est analysé séparément. Sans doute, le niveau scientifique des pronostics sociaux et l'efficacité des plans sociaux correspondants s'accroîtraient-ils considérablement s'ils s'élaboraient à partir de l'information scientifique concrète sur la structure sociologique réelle et accumulée par les individus humains, recueillie et analysée en tant que système uni et selon un programme unique.

C'est un problème théorique et pratique très important qu'on doit résoudre. Ce qui fait d'ailleurs surgir une série de tâches spéciales.

Il faut souligner avant tout, que le modèle théorique de la structure fondamentale et régionale — plus particulièrement de la structure sociologique fondamentale déployée — exposé brièvement dans le présent rapport — ne représente pas un modèle définitif. Il doit être précisé au cours d'un travail théorique et par des recherches scientifiques concrètes.

Lors de la programmation des études sociologiques on rencontre de grandes difficultés, car généralement des modèles théoriques précis de la structure spécifique fondamentale et régionale de chaque domaine principal distinct de la vie sociale ne sont pas encore élaborés. L'élaboration de tels modèles est encore plus nécessaire, quand il s'agit non seulement d'étudier l'état actuel de la société concrète donnée, mais aussi de pronostiquer son développement dans le futur. Il est évident, que c'est un problème spécifique non pas de la sociologie, mais des autres sciences qui ont pour objet l'un ou l'autre des domaines principaux de la vie sociale. Il serait peut-être plus rationnel que des collectivités spéciales scientifiques constituées de sociologues et de représentants de chacune des autres sciences sociales s'en occupent. L'élaboration de modèles plus exacts de la structure spécifique intérieure de chaque domaine principal distinct de la vie sociale se révèle d'une grande nécessité pour l'étude de la structure sociologique fondamentale déployée de la société. Cela permettra de voir avec plus de justesse et de précision combien d'éléments de chaque partie intégrante sont nécessaires au minimum et combien de ces éléments suffisent au maximum pour qu'on puisse déceler les interactions déterminées entre ces parties intégrantes en tant que formations totales. Cela facilitera aussi la formulation de questions précises et de cadres pour les réponses, correspondant à chaque question, concernant les éléments de chaque domaine principal de la vie sociale, embrassé par les études sociologiques. Ainsi on arrivera à résoudre un autre problème de grande importance au point de vue pratique et théorique. C'est le problème de l'élaboration d'une nomenclature unie pour le recueil d'une information sociologique concrète et d'une information sociale concrète générale. Cela permettra d'unifier l'information concrète recueillie par les différents groupes de recherches scientifiques sociales (instituts, chaires et autres) et par les organes statistiques d'Etat à des dates différentes et sur différents thèmes, et de l'utiliser d'une manière prolongée dans les analyses et les généralisations en vue la direction scientifique aussi bien des processus sociaux distincts que la société en tant que système total.

Il faut souligner encore, que jusqu'à présent des interactions suffisantes et une collaboration satisfaisante entre les instituts des sciences sociales d'une part, entre ces instituts et les organes statistiques d'Etat d'autre part, n'ont pas été réalisées.

Un grand nombre d'instituts de sciences sociales ne recueillent pas d'une manière autonome toute l'information concrète qui leur est nécessaire, d'autant qu'ils

peuvent utiliser l'information correspondante recueillie par les organes statistiques d'Etat. Mais ces organes ne recueillent et n'élaborent pas toujours l'information concrète selon un programme susceptible de convenir aux sciences sociales. Dans cette situation il est à peine possible de recueillir et d'analyser l'information scientifique concrète de la structure sociologique réelle et accumulée par les individus humains membres de la société concrète distincte selon un programme uni convenant à un système uni. Cela justifie la nécessité d'unir les instituts des sciences sociales avec les organes statistiques d'Etat et de fonder ainsi une Académie des sciences sociales, nantie d'une base assez puissante de technique électronique, et d'autres techniques calculatrices récentes. Cette unification est nécessaire d'une manière vitale et réalisable effectivement dans chaque société socialiste concrète, quand surgit la tâche d'élaborer des pronostics et des plans scientifiques pour son développement en tant que système total. Malgré cela, il n'est pas toujours facile de surmonter la tradition séculaire solidement enracinée.

Dans le présent rapport on a traité certains problèmes méthodologiques concernant le pronostic social scientifique et plus particulièrement son aspect sociologique. Ces problèmes ont été examinés au point de vue de la sociologie marxiste-léniniste. Il ne subsiste aucun doute, que le VII^e Congrès Mondial de Sociologie contribuera non seulement à l'éclaircissement de l'état actuel de la théorie et de la pratique du pronostic social dans son aspect sociologique dans les différents pays, mais aussi à résoudre avec succès les problèmes de cette théorie et de cette pratique.

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SOCIAL PREDICTION AND PLANNING IN THE URSS

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The Soviet Union is the first state in the history of mankind to have successfully realized allround social prediction and planning of social processes. The basis to provide and maintain this kind of nationwide activity came in form of prevalent public property of production means. Thereby proved true Engels' suggestions, who a century ago argued that it was the transition of production means from private into public possession that allowed for public production run by an advance plan.

We have since acquired a vast planning experience. Whatever rich it may seem, however, there is still much to be done about it. The objectives of scientific management in areas of economy, technology and various spheres of social and political life have turned to be very complex these days. In substantially different fashion is seen the necessity of allround plan verification, long-term in particular, with primary emphasis upon *the effects science and technology have for social realms*.

Contemporary scientific-technical revolution makes people confront problems which in the nearest yesterday seemed to be a matter of remote to-morrow — in a sense more idealistic than actually are.

In socialist settings production relations and social connections between individuals apart from being a critical factors of societal development are as much a subject to planning phenomenon on the part of society. If this impact of planning strictly fits into objectively realized needs and necessity, it accelerates societal advancement very progressively. By the same token aggravate the effects of error. Therefore marxist sociological research comes to be of extreme significance both for their theory and empirics. Under the existing conditions of nationwide involvement and adequate organization this reasearch is seen in perspective as a basis for social prediction and planning.

"We happened to obtain a pretty genuine in history opportunity, — V. I. Lenin wrote, — to determine time necessary to initiate and effect critical social changes; and we have clearly seen what may be done within 5 year-term of development and what may be done within much bigger time period." It is in "the effect of social change" that a quality of public development, new and in a most congested form, is characteristically displayed, — a quality which does not come all by itself just like a "Lord's gift". This quality is fought for, internalised, demanding clearly postulated theory and creative search as well as thourough verification of every step by test, analysis and scientific study.

Specifically, social prediction and planning in socialist development are not only a branch of knowledge, a perspective for marxist research and state bodies activity. They are, as well, to a growing degree — *public matter*. Nowadays, they constitute one of the most critical and most developed forms of *public participation in management* to control basic processes of social life and, also, one of the basic forms of *mass self-development*, of every member of society. Therefore, in contrast to the sociological practice of bourgeois world, we see the logics of marxist sociological research not in that we must through scientific method incorporate an individual into a system of allround and tough manipulation, but, on the contrary, in that we should resort to scientific achievement aiming to extend the possibilities of allround development of all members of society.

General Problems of Social Prediction and Planning

Some scholars allege the subject of historical processes prediction to be a domain of a recently emerged discipline — futurology. O. Flechtgeim, a westgerman sociologist, who as far back as in 1943 while in USA emigration introduced the term to refer to seemingly “new science of future”, “philosophy of future”, “new constructive approach to the problems of present and future”, — thereby opposing it both, to “Utopia” which, as the author said, “negates the present”, and “ideology” — justifying the present. Moreover, scientific prediction as such is claimed to have appeared in the middle of XX century while Marxism is labeled correspondingly as “Utopia” when referring to the past, and “ideology” when present is in analytical focus.

The analysis of actual process of category formation in area of scientific prediction involving the whole an abundance of world thinking proves these conceptions inconsistent. In fact, the history of scientific prediction is not by origin a matter of yesterday, its basics are to be found in works of forefathers of Marxism. In the writings of K. Marx, F. Engels, and V. I. Lenin these basics of theory, methodology as well as the issues of practical application were elaborated.

By fixing close relationship between social structure and economic structure of a society, by elaborating and formulating the concept of social-economic formation as a complex social organism with a specific origin, functioning and development, K. Marx and F. Engels thereby built up a basis for scientific social prediction.

However, the greatest contribution Marxism made in terms of social prediction was the prevision of those qualitative changes which await a society in future and which are devoid of whatever precedence in other societies. The aboration and definition by Marx of the surplus value law brought him to conclude that surplus value would up to a certain historical moment serve as a motive power for capitalist economy development. Futhermore, the ultimate effect of the law would be an aggravation of contradictions between public nature of production and private form of possession of production means. To settle these contradictions there is but one way — to bring the relations of production in conformity with the production forces, that is — by way of substituting public property form for private capitalist form of property — socialism for capitalism.

The analysis of the economic structure of a society allows one to determine both the stage a given society reached in the continuum of historical development and the direction it would follow. To take an example, the analysis by V. I. Lenin of production relations in Russia of post-serfdom-abbrogation period led him to the conclusion that capitalism would naturally follow in this country to replace serfdom-type society. This basic conclusion availed him with the prediction of forthcoming changes, specifically — restructuring of Russia society in the next decade, further differentiation of the rural class, the growth of the blue color urban segment of population, intensification of class struggle etc. Social prediction of the kind mentioned, i. e. foreseeing the ways a society would follow by the analysis of states with higher level of development, — was of great empirical and theoretical significance.

Supported by findings of the analysis of the laws of bourgeois society development K. Marx, F. Engels, and V. I. Lenin predicted and defined the basic features of future socialist society: elimination of private property and of exploitation of man by man, annihilation of whatever class antagonism, reduction of the opposites, and substantial differences between rural and urban cultures, between mental and manual labour, etc. The phenomenon of prediction in marxist sociology has come to constitute a self-maintained discipline referred to as "scientific communism".

Special emphasis should be stressed on defining by marxists the role prediction plays in socialist society. "In capitalist state — wrote Marx, — public production runs by offer and demand law. Socialism implies public production governed by public prediction."

To create a material-technical basis for communism, to determine the ways of the most effective exploit of capital investment, to determine what types of production enterprise are to be built, what goods and services are to be produced and to what amount — socialist state has to start with scientific prediction of a probabilistic consumer behavior.

The factors of expediency and amount as to the goods to be produced vary in dimension greatly depending upon the utility of the goods for a projected consumer. Therefore, one needs to determine to a sufficient degree of accuracy which are the needs for various social groups in different residential areas, to what extent these needs are being met, in what way and by what factors and in what direction these needs are affected and modified, which goods seem to be selling for every strata of to-morrow consumers.

Thus we confront the necessity to study not only objective, economic factors, but a number of subjective as well: those of tastes, fashion, preferences, etc. However, a perspective plan deriving from scientific prediction of population needs offers to be much more effective and adequate than plans neglecting the factors mentioned. In view of that one can hardly overestimate the significance of sociological research and perspective scientific elaboration of prediction theory for a socialist country settings.

It is also to the credit of Marxism that it did not confine itself solely to the prediction of future, but, in fact, contemplated over the ways of practical construction. While fully recognizing the objective nature of societal development laws and their total independence from a human mind, Marxism, however, argued insistently against a fatalistic conception of historical processes. History is a product

of man, therefore some of the regularities may and do prove evident earlier or later, to a fuller or lesser extent depending on a great variety of social factors as well as behavior of different social groups and classes. Being firmly grounded on the knowledge of objectively regulated societal development Marxism suggested as basic both a principle of scientific prediction of future and a principle of creative and purposeful activity of man with the objective of the earliest and rational realization of that future.

Marxism as a science, Lenin argued, tests the issues of societal development by putting them in terms of "historical frame of reference to attempt not only the explanation of the past, but an unbiased prediction of the future as well followed up by resolute practical activity to realize that future".

It takes no effort to see this thesis as connoting a unity of predictive and constructive approaches to the problems of future — a feature inherent in marxist philosophy and sociology. Indeed, in the period of XIX to the eve of XX centuries a constructive approach had not yet acquired the contemporary terms of formulation, it was conceptualized as working class program; the essence, however, remaining the same — planning of active, purposeful human activity with the aim of realization of the projected future.

Working class came into power to promulgate his formulations and actualize a new stage of advancement in area of prediction and planning. The unity of predictive and constructive approaches has, therefore, for the first time been effected in terms of state activity to result societal reconstruction along socialist lines. It is now involving all the "niches" of social structure. It is effected both, *from above* — by means of legislation, economic, social and cultural policies of the state, and *from the bottom* — through a variety of forms of spontaneous activity on the part of the toiling masses on the whole. A new and extremely complex problem has emerged — specific for socialism — what are the ways to merge both kinds of activities under a single, rational as well as democratic body of social planning.

No doubt, such body must observe common, shared fundamental principles, whatever the circumstances. And these are the *principles*. . . by letter and logic — principles allowing for an abundance of forms, a variety of specific versions. That founders of Marxism would insistently argue against whatever attempts at speculative, detailed "reglamentation" of future — a fact worth remembering.

Basic regularities in the mankind advancement to future vary with every country and every specific historical period. Society development may accelerate or decelerate as a function of a magnitude of factors. Social prediction is, therefore, called upon to take stock of the factors involved, to comprehend the mechanism of societal advancement in every area, every aspect, every plane — as a complex of relationships and interdependencies. Its objective, thus, is to predict the ways changes in one segment of society may apparently affect the others and society as a whole; it should as well make an adequate assessment of the occurrence probability of these changes.

This is why we attach so much importance to the problem of integrity in sociological research the solution of which is seen directly related to the element of historicization of sociology, focusing on the origin of phenomena and processes studied. Since grasping them "in the totality of their relationships and factor inter-

play" seems possible only provided you take them in dynamics, i. e. approaching them dialectically and historically. We think it is just the case for system analysis application referring thereby not to a limited set of methods, but to a much broader approach resting upon materialism and materialistic dialectics as a theoretical and gnoseological background. It is due to that system approach that marxist social prediction is distinctive for its high degree of accuracy and reliability.

Since prediction is one of the rational components of human action and behavior it proves to be an integral function of scientific knowledge. Prediction, however, takes form varying with a specific science and a specific area of human activity. The subject-matter of social prediction comprises all that is a domain of sociology as science. The difference that there is is that "routine" sociological research attempts at understanding a contemporary state-of-affairs in its multiple and diverse aspects whereas social prediction is summoned to grasp the perspectives of short- and long-term social advancement. A special emphasis is to be put on that lack of adequate knowledge and comprehension of recent society situation destined such prediction to failure. Therefore, we are on a wrong track when referring to social prediction as a "self-sustained" science—"futurology"; the former is an integral part of sociology, being an organically incorporated element.

Social prediction constitute a composite part of the socialist planning system. The analysis of the development level achieved, the research into the dynamics of social processes and tendencies emerged permit formulation of specific goals and plans of social development within a fixed time period; elaboration of a detailed program for social management to add to the effectiveness of goals achievement; foreseeing the tendencies fraught in the processes of the forthcoming period in view of necessary corrections. And it is due to the fact of public property of production means and planned development that social prediction acquires so great significance.

The difficulty with predicting social realms derives from the very nature of social processes due to the magnitude of factors, complexity of interplay between them involving an element of probability. "The more we move off the economic area into the one we study, the nearer we are to abstract and ideological realms — F. Engels wrote, — the more we confront accidental things in its development, the more of zig-zag shape its curve of development acquire." As the theoretical basis of research getting more solid and fundamental, the broader extends the scope of problems involved, and the bigger the accumulation of experimental data of macro- and micro-processes — the more effective turns to be social prediction.

Social prediction embraces, theoretically, all the social processes. So far it served the longest to — demography, social aspects of science and technology, economy. Recently, it paves way into socio-political, socio-legal and moral-ethnic spheres; into the aspects of urban building construction, education, health and culture.

If viewed along the dimension of time it is helpful to distinguish between long-term, short-term, and ad hoc prediction. Long-term prediction involves basic, most substantial elements and, by nature, approximates to theoretical kind. Short-term prediction is called upon to explain the nearest perspectives of society development most inclusively. As to the class of ad hoc prediction it is the one which closes up with concrete social research.

The effectiveness of marxist theoretical postulates for the practice of social prediction and planning stood the test by life experience, by practice of societal reconstruction in the USSR and other socialist countries.

2. *Social Prediction and Planning — Basic Elements of Socialist Society Management System*

Communism is a first public-economic formation in the history of mankind having developed on the basis of scientific prediction and planning. Hence the early days of the Soviet power ruling brought it, undoubtedly, to confrontation with entirely novel management problems for which thus far there had never been adequate precedence in whatever culture.

The victory of October Revolution marked the dawn of the public property prevalence in production means; alongside came critical changes in production relations and societal structure. However, further rearrangement of society along socialist lines could not be exercised spontaneously, in a moment. Theoretical, predictive propositions suggested by the founders of scientific communism needed detailisation as to time and means of their actualization.

In our society *social prediction* is not a utopia, but—a reality. The basis whereon socialist society “determines the time needed to effect critical social changes” is a planned public economy which, in turn, stems from the socialization of the means of production.

The subject of social prediction is public relations. Yet since an individual is a product of certain public relations as such, social prediction, therefore, involves the issues of channeled transformation of man both through the change in his social environment and through educative and ideological mechanisms. The goal of social planning is to solve specific social problems, the achievement of optimal social homogeneity, to secure social equality and freedom, to distrust whatever obstacles in the process of harmonic personality development, to contribute to an optimal combination of individual interests, collective interests, interests of society on the whole. This is why social planning is not confined to economic planning likewise public relations are not limited to, by definition and logics, public relations in economic production.

Social research is of great importance for *predicting* social processes.

This is just an instance where an empirical and well differentiated — along basic class strata and distinctive social groupings — research affords one an opportunity to formulate prediction taking into account most critical factors, apart from extrapolating known tendencies into the future. Seemingly, more complicated task for social prediction is to *control* social processes, i. e. manipulating specific factors to bring change into process, thereby effecting preplanned settlement of contradictions evinced. The effectiveness of social prediction is primarily a function of economic, non-economic as well as socio-psychological factors: values, motivation, aspirations, and needs. All that abundant information may prove a waste-paper-basket stuff unless an efficient use is made of statistic, mathematical, modelling, and computer technique.

The first Soviet state plan — the so-called GOELRO — formulated and elaborated in 1920 pursued the goal of nation-wide electrification and energy resources extension thereby making up the basis for heavy industry development. It was

designed for 10-15 year term of fulfilment and was, in fact, a plan-prognosis defining primary objectives of and potential for economic development. In 1928 the first five-year plan was adopted in this country to imply both the eve of directive state planning and continuity of the line taken by GOELRO, the objective being an utmost increase of nation industrialization rate. As is well-known this objective had been reached with the resultant material-technical basis allowing consequently for the cooperation in petty peasantry group and collectivization of agriculture economy.

Evident as it is planning of distinctive social changes derived not only from purely theoretical predictions, but from specifically historical predictions as well; the latter, by definition, dealing with a total complexity of world situation thus allowing for an unerring choice of the trend potential of further rearrangement in society along socialist lines.

A feature intrinsic of the USSR practices is that social prediction and planning are effected in tune with and grounded upon economic prediction and planning. Although five-year plans showed primary concern for public economic development they, however, contained — apart from economic indices — a number of social indices, such as cultural, educational, of health, social security, etc. The first Soviet five-year plans resulted not only in the emergence of a number of new industries, in an unprecedented growth of industrial production, but, as well, in the creation of new social institutions and radical changes in socio-economic status of an individual. Industrialization and collectivization proved conducive of qualitative shifts in occupational and demographic structures of Soviet society, the formation of new social strata, and transformation of world outlook and skills in the rural population.

To assume the prediction practices in the USSR to be devoid of whatever errors is a mistake. Prediction and planning, indeed, strictly follow an objective law of balanced and proportional production development. However, the law, by itself, by no means guarantees a harmonic development, by itself it does not preclude instances of spontaneous changes, nor does it serve a safeguard against disproportion. What is there in it inherently is possibility of such development; and to turn this possibility into opportunity one needs to comprehend and observe in practice the logics of it.

Moreover, it is imperative that an organization embodying an integrity — from top to bottom — of *mass activities* should exist. Broadly speaking, masses should show interest for that balanced and proportional development, — an interest expressed in economic terms and maintained in terms of economic reward. This should be an interest reinforced by values and beliefs of the toiling mass culture, by individual involvement into politics, and decision-making on major social issues.

Indeed, mistaken are those who would alienate and, the more so, oppose economic and idealistic incentives. To be sure, an optimal combination of the two is not a matter of fact issue. There is not once and for all given formula for it. Every new stage of human development comes with rediscovery and search. And it is there that one of the major objectives for social planning is conceived with its weight sharply increasing these days.

In this connection an issue of prediction and planning at the so-called macro-level is of primary emphasis. This is the level wherefrom a totality of social rela-

tion in society is viewed, and prospects are made for their improvement. Specifically, such is the case with the present Economic Reform carried out in this country and in a number of other socialist states. The Reform aims at improvement of production relations, at instilling in each worker and workers collective a stronger identification with public property. In other words, the solution of economic problems is to be paralleled with a spate of social studies focusing on employee local and societal positions respectively: extensive search is underway to elaborate a much more adequate technique of drawing those from the floor in matters of total control over enterprise production.

Simultaneously, planning is carried on at the micro-level, in terms of an individual enterprise. It is effected either indirectly — through economic planning behavior (where certain aspects of social relations are viewed as a function of respective production, science, culture, and education funds allocations), or directly.

An industrial enterprise setting has constituted the broadest area for micro-level planning. Here is found the locus of problems which are of concern for worldwide community of sociologists.

Complex mechanization and automatization lead us to situations, where an external control over an employee performance proves to be losing in effectiveness. For that matter, the emphasis has been increasingly on the inner discipline, the awareness by an employee of the goals and present situation of his enterprise. Therefore, a factor of perceived responsibility bears directly on performance efficiency.

In conditions of socialist production where self-awareness and self-control are dominant production factors, individual personality comes to be of primary concern. Attempting at new ways of employee involvement into realms of management, on the other hand, necessitates some channelling of his activity, i. e. creating prerequisites to stimulate him.

Employees, indeed, lay claims to an enterprise organization — economic, first and foremost (e. g., wages level, operation programs, etc.), and non-economic as well, the latter share progressively increasing these days. Specifically, much frequent have become claims on higher education, new skill acquisition, organized leisure, housing conditions improvement, medical services, etc. Therefore, an enterprise should design and formulate its policy in the way that embraces basic indices of production, social and socio-psychological indices.

However, for certain category of social problems resulting from scientific-technical revolution micro-level planning may prove feeble. And this is naturally so. A factory or a plant, for example, may find it beyond capacity to employ the segment of labor ejected due to new technology and rationalization. This task thus becomes a society concern, namely, the competence of state bodies dealing with issues of transference and retraining of labor; their policy, in fact, is to observe both the societal needs and individual capacity and aspirations. To take another example, may degrade or appear to be insensitive to whatever changes in personnel recruitment policy if it neglects changes in environment — say, new developments in the region, town, and area. Finally, the policy pursued by an enterprise may, on a number of aspects, run counter to the interests of the region and nation as a whole.

To conclude, coordination of social plans is imperative to meet ends. Social planning at an enterprise must be a link of the nation-wide social planning chain.

For all that, economic-production planning and social development planning are by no means totally independent phenomena, they make up, indeed, an organic fusion since being interrelated very closely.

To sum up, social planning in socialist society settings is a most developed form of institutionalized control over social processes — a means thereby to effect prediction and solution of social problems on a fundamental scientific basis.

3. *Towards the Methods in Sociological Research*

The more planning in the USSR advanced in width and depth, the more it was getting differentiated. Proceeding from nature of the phenomenon involved planning is dismembered along distinctive branches and spheres of economy. If viewed along the dimension of scope and degree of abstraction planning may be classified as applied to macro- and microsystems, as the one with big margins and the one greatly detailed. If viewed along the dimension of time — as long-term, short-term, and ad hoc. Likewise is drawn differentiation with prediction processes.

Main directions for social prediction in the USSR are complex developments in distinctive areas of societal structure and social aspects of these areas (science and technology, urban and rural development, in international relations, etc.), as well as changes in the social structure of society as a whole. Gnoseological and logical aspects of scientific prediction, methodology, and methods of predicting — i. e. philosophical and methodological issues of social prediction — comprise a distinctive group of problems to be solved. The core of prediction and planning is the study of recent tendencies. However, evidence shows that social prediction should by no means confine to extrapolation of these tendencies; it should, as well, involve concrete social research technique and recent methodological developments in prediction.

Scientific cognition of social phenomena with a view of prediction, planning, and management demands an integrity of qualitative and quantitative analysis. This demand is as much acute for the sociological research in a socialist society. The demand postulates that a research has, first, to reach an appropriate degree of *concreteness*, and, secondly, to observe *time factor*, otherwise, fails to provide for adequate decision-making for the practice of communist construction.

The above mentioned suggests the necessity of adequate assessment of quantitative methods available for sociological research so far. Recently, the use of mathematical methods and computer technique has extended over a multitude of areas of scientific knowledge reaching its peak in physics and technical sciences, chemistry, and biology. The same is to a great degree true for areas of economy and planning. Nowadays, that the country is solving the problem of elaborating an integral — covering the whole range societal activities—system of information, that centres are being projected and organized for processing this information, and mathematical methods for optimal planning are sought, and computers of vast capacity appeared, — an opportunity has presented itself for a most impressive exploit of quantitative means in economic and social realms. Therefore, the expediency of the optimal application of modelling and computing in sociological research proves obvious.

For all that, one should not neglect the fact that a sociologist is dealing with a very complicated matter. First of all, he has to take account of apparent discre-

pancy between what is perceived in the subject and what is actually there, and the statistical fact and social fact are not one and the same thing. It is here that one of the central issues for sociology lie — an issue of quality, authenticity of information obtained. Secondly, a sociologist, by and large, faces not only objective but subjective facts as well. Whereas the problem of authentic information concerns both classes of factors, the latter class — of subjective factors — presents a sociologist with a plenty of troubles due to poor lending itself to translation in qualitative terms.

It is a mistake, however, to discount the objective reasons that now and then induce sociologists to exploit quantitative methods in as broad a scale as in, say, physics. Specifically, the reason is twofold: a specificity of social phenomenon and the level which the science of sociology has reached in its development so far. Social phenomena, by nature, do not only impinge whatever experimental discrimination in influence of one group of factors from the other, they do not only preclude experimental treatment in some cases but lend themselves poorly to measurement. Therefore, the use of contemporary mathematical technique and computers in sociological research is dominantly a function of measurement problem solution.

To reach an appropriate stage of maturity is a prerequisite to an efficient application of quantitative methods and mathematical models. Indeed, the construction of "purely analytical" models does, in fact, contribute to the cognition process, since they help to determine which information and in what form is necessary for the study of a process, i. e. what is to be studied, measured and quantified. One cannot but see that a great number of social processes is studied poorly, that sociologists are not even aware of the vector interconnections and known tendencies. Hence, the hope to apply effectively complex mathematical models for purposes of control is thin unless maturation stage is reached.

A sociological research may resort to various models and methods. Moreover, a model may contain information as to spoken norms, customs, traditions, values which are distinctive sociological terms. This leads to a suggestion that accumulation of experience in that field may consequent in the construction of a chain system of interrelated models. However, at the present level of science development the construction of such a system of models to describe a society as a whole can hardly be of significance.

A mechanism of optimal planning is seen in this respect very promising for sociology. The optimum principle, as referring to computation of extreme values for a given function, is an approach to settlement of contradictions and conflicts arising in the process of studying social phenomena. The ignoring of them is a characteristic limitation of the methods and models used in sociology. Optimal planning as a method of oriented search for an optimal alternative in a specific situation is, undoubtedly, a promising means of planning and control.

To take an example, a common optimum criterion in the mechanism of eliminating present deficit has the form:

$$\Delta\Pi = \int_t^{\infty} (\Pi'(t) - \Pi(Q, t)) dt = \min,$$

where $\Delta\Pi$ — integral measure of deficit;
 $\Pi'(t)$ — ideal needs as a function of t ;

$\Pi(Q, t)$ — actual needs as a function of production structure Q and of time t .

It is one of the approaches to the problem of socialist economy development which makes it possible to ensure, eventually, welfare of all members of society and allround personality development.

Another, no less important problem for management and planning comes about the so-called amplification coefficient. The problem is extremely serious. On the one hand, a low value of amplification coefficient is to an advantage since it is indicative of decreased fluctuations in economy. and, on the other hand, this same low value indicates to an openness of the system, therefore, denying automatic corrections into minimal total costs. Hence it becomes necessary to determine an appropriate value level and factors involved.

An extensive development in the areas of computer technology brought to life new forms of planning and management organization. The effectiveness of the system functioning depends primarily upon scientific assessment and validation of findings obtained through social and economic studies.

We may distinguish three arbitrary periods in the history of computer development and application:

The first period (1950-1960) is characterized by the solution of specific problems of socio-economic life and the elaboration of mathematical methods to effect this solution.

The second period (1960-1967) is a period of analysis of *multidimensional* economic models describing the development of a production sector.

The structure of this kind of model is translated into a formula:

$$U_k = d_k H_k + W_k,$$

where U_k is a total product within a period of "k" years;

d_k, H_k, W_k — investment, potential, and free product matrices.

The third period (1967-) attempts to formulate general goals of planning and management. The point is that state bodies and experts are formulating a vector of "common goals", i. e. $p(p_1, p_2, \dots, p_n)$. To reach these goals number of operations is needed which are interrelated and which, in the end, condition the goal effects.

The operation demands availability of certain resources which are limited. This condition is translated into formula:

$$\sum k_{ij}(k)_{qij} \leq z_k,$$

where q_{ij} are resources necessary to carry out the operation P_{ij} ; K_{ij} is a segment of operation p_{ij} to be completed within the period. A common goal is defined and a number of operations is determined thus. The next procedure is timing these operations into definite periods. There are methods available to effect the procedure. We must, naturally, select among them those which might carry out the procedure with the minimal time costs.

The model described above is, dominantly, of economic type. This, however, does not imply that this type of models involves only economic factors. Indeed, a chain of models is needed to account for the process of economic and social factors interplay.

Further effective usage of mathematics in sociology suggests a fundamental study of measurement and quantification problems on the part of sociologists

and an elaboration of specific tools fit for modelling of complex, dynamic, probabilistic and conflicting situations and processes. A prerequisite of progressive advancement of the science of sociology lies in that close cooperation between mathematicians and sociologists. And this armament of tools and technique for sociologists should be no less powerful and versatile as it is in hands of their brothers in arms — in natural sciences and economy. A statement by K. Marx is true in this instance: it is only when science makes an adequate exploit of mathematics that it gains total perfections.

Moreover, our practices evidence that whatever elaborate such methods of mathematics are and whatever perfect are computers designed — critical factors for social prediction are that of a human being referred to by V. I. Lenin as will-power, readiness to act and skills of masses. This is where actual developments in areas of social prediction and planning suggest fundamental changes in socio-economic structure, wide and rapid advancement of social sciences, optimal exploit of the achievement of scientific-technical revolution, allround progressive development of an individual personality as a critical factor for a societal development.

ACCELERATION AND SOCIAL CHANGE IN THE NEW STATES
OF TROPICAL AFRICA

W. J. BOENHILL

PROBLEMS OF SOCIOLOGY AND DEVELOPMENT IN THE COUNTRIES OF THE THIRD WORLD

PROBLEMES DE LA SOCIOLOGIE ET DU DEVELOPPEMENT DANS LES PAYS DU TIERS MONDE

The concept of the sociology of development is a relatively new one. It is a discipline which is concerned with the study of the social and cultural changes which are taking place in the newly independent states of the Third World. It is a discipline which is concerned with the study of the social and cultural changes which are taking place in the newly independent states of the Third World. It is a discipline which is concerned with the study of the social and cultural changes which are taking place in the newly independent states of the Third World.

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MODERNIZATION AND SOCIAL CLASSES IN THE NEW STATES OF TROPICAL AFRICA

K. H. HOERNING
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The rising disappointment and impatience of many Western "developmentalists" both about the explanatory failures of their theoretical exercises, and about the actual paucity of socio-economic development taking place in the "Third World" countries and the dramatically increasing gap between them and the "developed nations", is not unrelated to an emergent "political sociology of societal change". But the concern of this sociology often runs the risk of overestimating the "power of power". While power is a necessary condition for today's politicized modernization processes, it is not a sufficient one. Increasing inequality, rapid stratification of power distribution and class crystallization put in question the relevance for Sub-Saharan Africa of the "primacy of policy" thesis. Several characteristics of this "development-distribution variable" in the African class context will be discussed.

I.

As it becomes increasingly apparent that the system-evolutionist perspective of "universalist modernization" (i. e., teleological and equilibrated, ahistorical transition toward "modernity") leads much current Western social science into a severe theoretical and ideological *impasse*, attempts of reorientation emerge. However, it is important that these efforts not be directed towards simple relativistic categories of development, either in institutionalist-empiricist or cultural-conservative terms of uniqueness and infinite variability; this pre-occupation being equally divorced from reality.

Surely, in *late modernizing* countries the process is significantly different from what it was for the early modernizers.¹ The world in which the "developing societies" find themselves today is in most regards distinct from the "primary" modernization" situation of those which "took off" during the 19th and 20th centuries. The expansive and imperialist consequences of this "primary" process determined the contemporary oligarchic international structure of economic and political power and dependency, and became, thus, a crucial variable with decisive qualitative

¹ Reinhard Bendix — «Tradition and Modernity Reconsidered». *Comparative Studies in Society and History*, 9 (1967), pp. 292-346.

impact on the factors, goals, sequences, and effects of today's "secondary modernization" processes.² Although the more autochthonous and isolated modernization of the West cannot be replicated simply because of its earlier occurrence, the various processes in the "Third World" countries are not among themselves unique or incomparable; they are all international, induced, and dependent, and, thus general. *Secondary modernization*, therefore, refers to structures and processes which occur in countries of the "Three Continents" that were formerly and, for the most part, continue to be colonial and quasi-colonial hinterlands of the industrialized West, and which deviate from the sequences of these Western centres.

The specific relationship between the *internal* structural characteristics and constraints of the societies of Tropical Africa and the predominantly controlled, selectively transmitted, and adopted "external" conditions, shapes the particular development syntheses. Certain types of "modernization by design"³ are considered characteristic due to the African governments' roles in promoting planned and forced socio-economic development. It is said that a "new" governing elite attempting to build a "new" type of society should make the issue of *power* into a question of socio-political strategy, control, and guidance. However, actually, political classes, traditional and/or new, direct or sponsor "dynastic", defensive, gradual or revolutionary modernization as an explicit goal or as a means for protection and enhancement of their power positions, both intra-societally and internationally. But what are the preoccupations of the ruling classes in concrete situations? What are the relevant and significant modernization interests and values, norms, and goals? Goals are *relevant* insofar as they reflect actual evaluations and interests held by power groups, and are *significant*, when social groups exert most of the power for molding societal policy.⁴ A goal-oriented development process can be *explained* as goal-intended and goal-directed: change only of the actual goal priorities of the governing groups and the actual power relationships influencing the implementation of interests are known.⁵

But how can we analyze, for example, the real goals, motivations and power positions of the many ruling military groups in African countries and, in contrast to the structural-functionalists' and cultural diffusionists' concern with the presence or absence of certain kinds of "objective" indices or summated "states", e. g. standard of living, literacy rate, urbanization, media exposure, political participation (which, in fact, do not constitute modernizing tendencies as such, but may gain modernity significance in the particular usage contexts of specific modernization goals and strategies): we might ask, *how* and in *what way* are those "objective states" with modernity status shaped by interests, actions, and implementation under specific social structural conditions?

It seems that neither the *elite* and *leadership approach* nor the *communication* and *nation-building approach* can adequately answer these questions. The domi-

² Cf. Karl H. Hoerning—*Secondary Modernization: Societal Changes in Newly Developing Countries*. Denver, Col., Monograph Series in World Affairs, in print.

³ Chandler Morse, et al.—*Modernization by Design. Social Change in the Twentieth Century*. Ithaca, N. Y., Cornell University Press, 1969.

⁴ Cf. Gunnar Myrdal—*Value in Social Theory*. New York, Harper and Bros., 1959, pp. 157 f.

⁵ Cf. Richard Bevan Brainhwaite—*Scientific Explanation*. New York, Harper and Row, 1960, p. 325.

nant *leitmotiv* of the first approach (especially in *Shils*), is the "gaps" between modernizing elites (national, intellectual, etc.) and the static "traditional" masses (rural, parochial, illiterate, etc.), gaps which create the "problems of development"—crises and conflicts of values (legitimacy, consensus and trust). However, in this approach, intra-elite conflict, social bases of power and form of dominance are disregarded. The developmental scheme of the second approach is valid only *after* definition of goal priorities and *with* due recognition of the power distribution structure. Then communication patterns can be related, if in a somewhat complex manner, with certain modernization processes. Both approaches overstress the integrative functions of political institutions, neglecting their repressive character. Their analyses often develop an elitist tendency, which intends to legitimize the ruling internal and/or external interests. To adopt, uncritically, the rhetoric of governing groups (such as "African socialism"), would be to consider verbalized goals and planning devices on a voluntaristic level and to disregard the national and international structures of socio-economic and political power stratification.

To warn against this seems particularly important in view of the wave of disillusion with African developments (military coups, bureaucratic parasitism, rising social inequality, neglect of infra-structure in favor of display projects, conspicuous consumption, unemployment, etc.). This disillusion gives rise to either moral indictments⁶ or characterizations of African political life as an "almost institutionless arena of conflict and disorder"⁷, reactions which are blind to social structure. It tends to encourage explanations of *non-development* which stress problems and assumptions other than those emphasized by "theories of development." These explanations focus upon absent or weak *desiderata*, requisites or prerequisites, and list "obstacles" or "pathological deviations". They are often, in the final analysis, tautological.

The intensification of the macro-political perspective ("nation-building", national elites, national parties) has created an exaggerated impression of the power of leadership groups to mold the structure of African societies according to their own goal horizon. The socio-political interests of power groups (e. g. in *Aper's* typology, oriented towards "mobilization", "reconciliation" or "autocratic modernization") are, in fact, mediated by social organization in a two-fold way: they emerge within and rest upon the basis of the organisation of social production, and they can only be realized within and by means of it. The developmental functions of the ruling African military or of certain African "middle class" groups not only vary according to their interest direction and realization, but also according to their positions in the social structure; the latter affords the bases and resources for power appropriation and exertion. These arguments against the uncritical and partially ideological stress on the "primacy of politics" (either as a precondition or a corratel of modernization in contemporary Africa),⁸ have to be elaborated and exemplified.

⁶ Cf. René Dumont et Marcel Mazoyer — *Développement et Socialismes*. Paris, Seuil, 1969, pp. 124, 161, 311.

⁷ Aristide Zolberg — «The Structure of Political Conflict in the New States of Tropical Africa». *American Political Science Review*, 62 (1968), p. 70.

⁸ See also James S. Coleman — «The Resurrection of Political Economy». *Mawazo*, 1 (1967), p. 37.

II.

Type, degree, and changes of *social stratification* are among the most important factors bearing on successful development politics, as can be seen, for example, in the different development potentials of certain patterns of distribution, absorption and use of "surplus". "Modernization" can be conceived as a complex struggle for power to further material and ideal interests. It affects the distribution of power and resources in society and opens up new channels of access to positions of power. Thus, explanatory and predictive attempts with respect to the "secondary modernization" processes in Sub-Saharan Africa should concentrate upon the correlation between changes in social stratification structure and the political roles of certain social groups and classes in such societal transformations. The reactionary or revolutionary ways in which these groups react to the challenge of modernization is determined by the actual and expected benefits from ruling, from changing, or from overthrowing the existing system.⁹

Are there, in fact, explicit social stratification systems in new African nations? If we assume that the *principles of stratification* (that is, the concrete structural criteria that differentiate and regulate the unequal distribution of social advantage and opportunities), "are basic to the political order", and that "the character, congruence, and inclusiveness" of these principles are strongly interrelated to the degree of societal consensus and tolerance of social inequality,¹⁰ then a political sociology can study social stability and change on the basis of the *principles of stratification* with the modes of integration, which are the organizational reflections of these structures. Can we relate the complex diversity of groupings in contemporary African societies (large peasantry, small groups of commercial and rural entrepreneurs, skilled workers, large bureaucracies, groups of artisans, petty traders, armies, clerks, teachers, professionals, and the "political elite"), to these questions of stratification and class formation? We will not consider all the strategic denials of the existence of classes and class conflicts by the ideologists of "African Socialism" on the basis of a traditional solidarity. Nor will we rely on an equally problematic overemphasis upon class antagonisms, which wishes for the "second independence" (and designates either the peasantry, proletariat or "national bourgeoisie" as the revolutionary class). A certain succession of pre-colonial, and post-independence conditions and developments accentuated the processes of class differentiation in Africa.¹¹ The conventional schema is (still) difficult to apply to the present situation, because certain antagonisms and cleavages are not sufficiently crystallized or softened. The continuing dependence of the economy upon expatriate agencies severely impedes the socio-economic class mechanisms.

The notion of "modern elite(s)" pervades much of current literature on Africa. "The African elites are not for one thing directly comparable as *modernizing elites* to their counterparts during the eighteenth and nineteenth centuries in Eu-

⁹ For ahistorical study of comparative modernization in these terms of *cui bono* see: Barrington Moore, Jr.: *Social Origins of Dictatorship and Democracy*. Boston, Beacon, 1966.

¹⁰ Michael G. Smith — «Pre-Industrial Stratification Systems», in: Neil J. Smelser and Seymour M. Lipset, eds., *Social Structure and Mobility in Economic Development*. Chicago, Ill., Aldine, 1966, pp. 174 f.

¹¹ Cf. Georges Balandier — «Problématique des classes sociales en Afrique Noire». *Cahiers Internationaux de Sociologie*, N.S., 12 (1965), p. 132.

rope and Britain, or even in twentieth-century Russia. Having emerged in a colonial situation, the African elites are significantly lacking in capital, and in managerial, technical, scientific, and other modernizing skills. Most of these are still monopolized — as it were, neo-colonially — by expatriates; the African elites have acquired mainly political, administrative, bureaucratic, and intellectual skills." But does that mean that the "governing function of African elites may not be much more than a political holding operation?"¹² Are not these elites engaged in independent class behavior and action?

The difference between the principles of stratification and elite groups can be conceived as institutional structure versus the dynamic networks of social actors in spheres, where, because of rapid social change and mobility, appropriate principles and norms for social relationships have not yet been clearly defined.¹³ These interstitial groups (politicians, senior civil servants, intellectuals, army officers) monopolize principal types of influence, privilege, and social prominence. Elites are defined as imitable groups of the superior members of a society, who influence the behavior of the masses by defining and promulgating new sets of values and by mediating between Western traditional influences, and so on. But do the "masses" consider elites as innovating and admirable (reference) groups, or do they see them more as bodies of affluent individuals, which hopefully comprise some of their own kin? The frequent evidence of negative and hostile evaluations of the current ruling African elites (as corrupt, money embezzling, authority abusing groups) by many members of their societies,¹⁴ makes the term "elite" inappropriate. Are not the divisions causing elites gradual generators of class divisions? "African elites may be regarded — at least to a certain degree — as vanguards of the ruling classes, and at the same time as fountainheads from which these ruling classes originate, although the elites may grow up outside the sphere of classes."¹⁵

The creation of a strong, centralized state machinery meant and means, that the crucial source of wealth, status, and career possibilities for ambitious groups is the political sphere. The more the over-production of the educational system collides with decreasing bureaucratic expansion, the more vested interest to maintain the status quo grows. Thus, the *etatist* conditions of the access to political power and the struggle around it contributed to a rather well-established and conscious new, privileged political class (embracing civil servants, administrators, and political leaders). This class becomes in the African context an increasingly homogeneous group (by education, style of life, social interactions, associations, etc.). The interests of this "bureaucratic bourgeoisie" (*caste bureaucratiques dirigeantes*)¹⁶ with high incomes and privileges are jealously guarded and secured

¹² Martin Kilson — «African Political Change and the Modernization Process». *Journal of Modern African Studies*, 1 (1963), p. 439. See also Immanuel Wallerstein — «Elites in Frenchspeaking West Africa: The Social Basis of Ideas». *Journal of Modern African Studies*, 3 (1965), pp. 13-23.

¹³ Cf. A. W. Southall — «The Concept of Elites and their Formation in Uganda», in: Peter C. Lloyd, ed., *The New Elites of Tropical Africa*. London. Oxford University Press, 1966, pp. 342-366. Peter C. Lloyd, Introduction, *ibid.*, p. 57.

¹⁴ See the empirical study of F. O. Okediji and Opeyemi Ola: «The Formation of New Elites in Tropical Africa». *ODU University of Ife Journal of African Studies*, 10 (1967), pp. 78-84.

¹⁵ Szymon Chodak — «Social Classes in Sub-Saharan Africa». *Africana Bulletin*, 4 (1966), p. 41.

¹⁶ Raymond Barbé — *Les classes sociales en Afrique Noire*. *Economie et Politique*, 1964, p. 111.

through exchanges of (political) resources with powerful groups (e. g. army, expatriates). Furthermore, the educational system, endogamy, and patronage, strongly tend to ensure that this class becomes a predominantly hereditary group. The decline of ethnic differentials along with a steeply rising class selectivity within the education system in several African countries increasingly lowers the distance of social mobility. Therefore, for example, "the emergent class divisions within the expanding modern sector are already an important determinant of the life chances of individuals and are indicative of the direction of social change in Ghana."¹⁷ As the second and subsequent generations lose touch with the rural communities of their origin, cohesion and class-consciousness toward preservation of *special interests* of the "bureaucratic bourgeoisie" and against ethnic loyalties will increase.¹⁸

Does the political class form the upper class? Is there no indigenous *bourgeoisie* proper, autochthonous with respect to the foreign capitalist sectors, which plays a *national* role?¹⁹ The *rural bourgeoisie* of modern farmers, which emerged under certain favorable conditions (political, social-structural and population) in several areas of West and East Africa (especially Ivory Coast, Nigeria, and Uganda) is made up of economically rational entrepreneurs. Their commercialized production is, however, often limited by internal and external market conditions, financial and technical capacities, and political exigencies. They invest their capital increasingly in relatively small enterprises such as transportation, construction and taxi-services, and their children incline toward urban education and bureaucratic positions. The *urban bourgeoisie* is comprised of several commercial and industrial groups. Even when the *traditional trader* in West Africa turns to modern commerce, his success is limited and his financial capacity insufficient. Petty market-traders are limited to small local commerce; only the "ethnic" trading "castes" (the Indians in East Africa, the "Syrians" in West Africa) are able to accumulate sufficient capital. If the state actively promotes private national commerce, a new and rich *commercial bourgeoisie* may emerge (Congo-Kinshasa).

In the absence of adequate local financial resources the development of a modern *industry* (particularly in Senegal, Ivory Coast, Ghana, Nigeria, Congo-Kinshasa, Kenya) is, to a large extent, exclusively in the hands of foreign capital. Most of the independent African entrepreneurs concentrate on small production (food and light industry, transportation, service stations, construction, etc.). The possibilities of capital accumulation are severely hampered by credit barriers, by the entrepreneurs' conspicuous consumption standard, and by tribal and kinship demands.

Despite the national political and socio-economic conditions which differently delimit or further the opportunities of capital accumulation, in the average (despite its partial and individual successes), the general class position of the *African bourgeoisie* is characterized by economic weakness, social and ethnic fragmentation, and political ambivalence. The bourgeoisie has in many African countries no distinct class profile.

¹⁷ G. E. Hurd and T. J. Johnson — «Education and Social Mobility in Ghana». *Sociology of Education*, 40 (1967), p. 79.

¹⁸ About the normative career orientations toward high status bureaucratic positions, the access to which is virtually dependent on high education qualification alone, see Joel D. Barkan, «What makes the East African Student Run?» *Transition*, 37 (1968), pp. 26-31.

¹⁹ See for the following Samir Amin — «Le développement du capitalisme en Afrique Noire». *L'homme et la société*, 6 (1967), pp. 107-119; idem: «La bourgeoisie d'affaires Sénégalaise». *L'homme et la société*, 12 (1969), pp. 29-41.

An analysis of the modern African stratification structure cannot adequately grasp the "masses": the peasantry; the unskilled worker, the peri-urban, unemployed sub-proletariat, who, for the most part, retain their membership in tribal communities and thus their right to the land; the embryonic proletariat of privileged qualified factory workers; and certain fractions of the "middle classes", such as petty market-traders, artisans, taxi-drivers, shop-keepers, clerks and school teachers, occasionally described as "petty bourgeoisie".

Our attempt to delineate several divisions of groups and classes with possible specific "objective" interests, must neglect both the questions of the subjective awareness and consciousness of class, and of concrete class alliances and reciprocal interests in class politics. For example, how far do the factual "politics of modernization" respond to the class interests of the bourgeoisie? Considering the socio-economic priorities established by the military government after the 1966 coup in Ghana, one might deduce that the class politics and alliances of a relatively large and strong Ghanaian bourgeoisie, which has been opposed to Nkrumah's politics for a long time, has been successful. In contrast, in seeking the possible interests (whether class, regional, corporate, or individual) of the "putsching" military in Ghana, Nigeria, etc., the literature mostly indicates regional and corporate interests. "But it does not follow from the fact that a coup is precipitated by these interests that it is supported only by these interests, nor that it benefits only these interests."²⁰ Furthermore, in statist situations the path to economic power is conditioned either directly by the political power position or for the private entrepreneur through political influence. How far is the ruling bureaucracy linked with private property (e. g. by government contracts, land speculation, government loans) and to the means of production?²¹ To what degree is the large "parasitical" "bureaucratic capital" transformed by private investment into productive capital, creating direct identity of interests (besides or despite kinship bonds)?

In the African context, all these questions put by a class approach are necessary, although difficult to answer in terms of the existing patterns of social stratification, which is somewhat more potential than actual, or rather, which indicates more social inequality than institutionalized stratification. Thus, there is no simple solution to the question whether and to what degree African states and their politics are a "mere reflex" or subsidiary organization of the social structure of power and interests.

III.

What are these "politics of modernization" which should correspond to or express the social interest structure supposedly constituted in pre-political spheres of the society? For interventionist states with strong political classes, however, this classical question of a "political economy" approach is more complex than

²⁰ Robert E. Dowse — «The Military and Political Development», in: Colin Leys, ed., *Politics and Change in Developing Countries*. Cambridge University Press, 1969, p. 224.

²¹ Cf. F. N'Sougan Agblemagnon — *Mythe et réalité de la classe sociale en Afrique Noire: le cas du Togo*. *Cahiers Internationaux de Sociologie*, N. S., 12 (1965), p. 166.

James O'Connell — «Political Class and Economic Growth». *Nigerian Journal of Economic and Social Studies*, 8 (1966), pp. 129-140.

for the liberal bourgeois society with strict exemption and political protection of state-free spheres for the sake of autonomous private capitalist activities. With respect to different forms of *étatisme* the study of the concrete *mechanisms of mediation*, i. e., control and regulation, between the politics and socio-economics are of particular relevance. The class and power characteristics of an interventionist system of political institutions are instrumentalized in the socio-political filter-mechanisms which distribute the chances of political recognition and executive participation to the conflicting categories of social interests and demands by pushing them off into non-political or ideological media of processing (e. g. African political tribalism, "African Socialism"). These selective mechanisms, such as allocation, (re)distribution, subvention, licensing, taxation, delegation, and cooptation, can be built into institutions ranging from single parties to development planning, schemes, budgets, and administrative implementation,²² all supposedly designed for securing the "political goods" of "system stability" and "mass loyalty". The allocation of scarce resources among competing interest groups (organized e. g. in commercial lobbies, trade unions, regional and ethnic organizations) can be brought about by different distributive, regulative or redistributive measures. The redistributive motives of expanded government expenditures may be directed towards shifting resources from less to more productive uses or towards the enrichment of the government itself and the buying of political support (social services, job creation, government purchases via marketing boards, imposition of price, credit and import controls). Through government allocation of highly profitable import licenses, for example, large Congolese trading firms have developed since 1960.²³ While the Uganda government tries to create a "rich peasant" class by certain agricultural policies, the Kenya government supports the development of an African entrepreneurial class. To the extent that civil servants direct economic policy under military rule, conservative measures seem to be taken against comprehensive planning (e. g. Ghana). In contrast, the post-Arusha policy of Tanzania has introduced certain equalization and nationalization measures.

The existence or emergence of a stratification structure may generally enhance or constrain development and structural transformation. The pattern of rising inequality in many African nations tends increasingly, however, to constrain the productive potential of these societies. The "surplus" absorption in the modern sectors, particularly by means of the export of profits of the capital-intensive investments of overseas firms and by means of high wages and conspicuous consumption of the "new minorities" (political class and skilled workers), discourages the generation of a larger surplus by a mobilized peasantry.²⁴

²² See e. g. Reginald H. Green — «Four African Development Plans: Ghana, Kenya, Nigeria, and Tanzania». *Journal of Modern African Studies*, 3 (1965), pp. 249-279. Aristide Zolberg — «The Political Use of Economic Planning in Mali», in: Harry G. Johnson, ed.: *Economic Nationalism in Old and New States*. Chicago, Ill., University of Chicago Press, 1967, pp. 98-123.

²³ Cf. Crawford Young — «Congo and Uganda: A Comparative Assessment». *Cahiers Economiques et Sociaux*, 5 (1967), p. 397.

²⁴ Cf. Giovanni Arrighi and John S. Saul — «Socialism and Economic Development in Tropical Africa». *Journal of Modern African Studies*, 6 (1968), pp. 141-169.

The emergence of a class structure and the tensions resulting from this become increasingly politically relevant. "Distribution crises" will become more important in shaping national politics;²⁵ even the lessening fundamental ethnic cleavages can become tools for politically exploited and reinforced reactions to strains in the stratification structure.²⁶

²⁵ See e. g. Anthony R. Oberschall — «Rising Expectations and Political Turmoil». *Journal of Development Studies*, 6 (1969), pp. 5-22.

²⁶ Cf. Tatiana Yannopolous — «Luttes de classe et guerre nationale au Nigéria». *Revue Française de Science Politique*, 18 (1968), pp. 508-522. Ulf Himmelstrand — «Tribalism, Nationalism, Rank-Equilibration, and Social Structure. A Theoretical Interpretation of Some Socio-Political Processes in Southern Nigeria». *Journal of Peace Research*, 2 (1969), pp. 81-103.

DIFFUSION OF INNOVATION AND COMMUNITY LEADERSHIP IN EAST AFRICA

ASTRID NYPAN
NORWAY

In this paper I attempt to analyse some problems of economic development and social change through data from a study on the diffusion of an innovation in an agricultural community in Northern Tanzania. As usual in the study of diffusion of innovations in contemporary sociology the aim is to trace the spread of an innovation throughout a social unit such as a local community. Diffusion is seen as a process of acceptance, or adoption, over time, of some item by adopting units such as individuals or groups which are linked to specific channels of communication, to a social structure and to a social system or culture.¹

Diffusion studies focus as a starting point on one or a few innovations. In the tracing of the diffusion of the innovation, the time dimension, however, is an essential variable, and the central theme is the process of diffusion itself. The members of the local community do not all play the same role in a process of social change. Variations in active participation in the diffusion process are reflected in early or late adoption of the innovation. Individual members of the community and social groups may be classified according to the time of adoption, or according to the rates of diffusion within the groups, and further analysed with reference to variations in social characteristics and position within the community. By analysing individuals and groups with reference to social characteristics as well as to variations in time of adoption, it is possible to locate in time and social space the groups which take an active part in the diffusion process and to gain additional insight into the process of change itself.

Even though the point of departure is restricted to one or a few innovations, the problem becomes far reaching and comprehensive when the possible factors affecting early or late adoption, and even variations in rates of diffusion are taken into account.

The following will be limited to a discussion of the process of diffusion as a product of the communication about the innovation and of the influence which follow the channels of communication in the local community. Early or late adoption of an innovation may vary according to type of innovation, norms and values in the local community, or personal characteristics of the adopters. The rate of

¹ E. Katz, M. L. Levin and H. Hamilton — «Traditions of Research of the Diffusion of Innovation», *American Sociological Review*, XXVIII, 1963, p. 237.

diffusion, however, may depend upon where in the social structure the innovation is introduced. Members of the community differ not only in their relative readiness to adopt an innovation. The extent to which various members of the local community by adopting the innovation may contribute to further diffusion of the innovation is related to the extent to which they are connected to local communication networks and to the degree of influence which they are able to exercise over others. Consequently, early or late adoption is also related to degree of connectedness to local communication networks.

The following includes a discussion of the basis for the importance of formal leaders in processes of change in rural communities in developing countries, and an analysis of the participation of formal leaders in a diffusion process and their position in the communication structure in a rural community in Tanzania.

Authority, Influence and Formal Leadership

The actual situation in developing countries today supplies one of the main reasons for focusing attention on the role of formal leaders in the process of diffusion of innovations.

In rural communities in developing countries social change and diffusion of innovations occur often as a result of requests, suggestions and demands from various outside change agents. The initiators of such directed change are moreover often representatives of central government authorities and local administration. That directed change which is part of official development plans and policies is based on the assumption of local co-operation, local initiative and innovativeness. It is essentially the formal leaders of a local community who are expected to play such active roles in development and to be able to create a favourable orientation to changes and innovations in the community and in addition mobilize both human and material resources for development. Under these circumstances, the success or failure of diffusion of innovations and development in general depends greatly on the attitudes of the formal leaders and on their position in the local community.

Earlier studies of diffusion of innovation, which have mostly been undertaken in the developed and industrialized countries, provide few clues to an understanding of the possible role of formal leaders. Such studies, however, emphasize the importance of informal opinion leaders who, without any formal basis of authority, influence the adoption of innovations by other members of the community.² The opinion leaders exercise their influence through informal networks of communication in which they have a central position.

It is possible that formal leadership in general does not provide a basis for influencing others in innovation diffusion in societies with a high degree of economic differentiation and occupational specialization. Such functional differentiation and specialization tend to be generalized to all aspects of formal organizations. Authority is related to competence within narrow spheres where the holder of a given position is limited in his exercise of authority and influence. Authority is vested in the position and not in the person of the formal leader. The kind

² See for example E. M. Rogers — *Diffusion of Innovations*, The Free Press, New York, 1962, and J. S. Coleman, E. Katz and H. Menzel — *Medical Innovation. A Diffusion Study*. The Bobbs-Merill Company Inc., New York, 1966.

of formal leadership found in the industrialized countries may be characterized as a leadership whose authority is based on legal, rational principles in Max Weber's terms.³ The interaction between leaders and followers becomes restricted in scope and based on competence, and the nature of the relationship may be characterized as secondary as distinct from primary and close or intimate relationships. The formal leaders as leadership will have no general authority and influence in a process of diffusion, but may exercise influence when an innovation falls within their sphere of competence.

Formal leaders in a rural community in developing countries exercise authority in a different manner from that which has been outlined above in the case of formal leaders in industrialized countries. The formal leaders in rural communities in developing countries not only appear to have authority and influence in several spheres, but the boundaries for their authority also appear vague and diffusely defined.⁴ One attempt to clarify the distinctive features of formal leadership in such communities has taken recourse to Max Weber's definition of traditional authority.⁵ In Max Weber's terms it is the belief in the sanctity of a traditional status which constitutes the basis for legitimation of the authority of a traditional leader. Moreover, obedience and loyalty to the position of a traditional leader is also owed to the person who holds that position.⁶ As regards the wide and diffusely defined boundaries of authority this feature is of special importance in the present context. The limits of obedience and loyalty towards a person cannot be so clearly defined as when the exercise of authority and a corresponding obedience and loyalty refers to rules connected with a formal position.

In the case of traditionally defined authority, the formal leader has some freedom to define the spheres within which he will exercise his authority. Equally, there will be expectations towards the formal leader to exercise of authority and influence widely. Thus formal leadership based on traditional authority occupies an important position for social change and adoption of innovations.⁷ Because of the relative degree of freedom in their exercise of authority and influence, the formal leaders may choose to support certain changes and innovations, to overlook or even oppose them. The importance of such formal leadership for innovation diffusion and social changes in general is great, but indeterminate.

In communities where such a wide conception of formal authority has been common, the expectations among members towards the formal leaders of even newly established and functionally specific organisations also conform to the old pattern of a wide and comprehensive authority. It has been noted that leaders of a political party or of administrative agencies often are consulted on matters that are not defined within their sphere of activity or competence.⁸ Thus traditional

³ Max Weber — «Legitimate Order and Types of Authority» in T. Parsons et al.; *Theories of Society*, The Free Press, New York, 1961, p. 235.

⁴ Daniel Lerner — *The Passing of Traditional Society; Modernising in the Middle East*, The Free Press, New York, 1958, p. 26.

⁵ Asghar Fathi — «Leadership and Resistance to Change: A Case from an Underdeveloped Area», *Rural Sociology*, 1956, 30. June, p. 209-210.

⁶ Max Weber, *op. cit.*, p. 235.

⁷ Asghar Fathi, *op. cit.*, p. 210.

⁸ Goran Hyden — *Tanu yajenga nchi: Political Development in Rural Tanzania*, Scandinavian University Books, Lund, 1968, p. 195-196.

authority may carry over to more functionally specific organisations and leaders, at least for some time, in rural communities in developing countries.

Max Weber's definitions of different types of authority and leadership are ideal types. Still, it is possible to find formal leaders in Africa, whose exercise of authority corresponds fairly well to the traditional leader in Max Weber's terms. But in most cases, the obedience and loyalty owed to the person of the leader is not unlimited. Leaders may be dismissed or removed from office.

Nonetheless, I hypothesize that *the authority and the spheres of activity of formal leaders in rural communities in developing countries often are comprehensive, and diffusely defined*. This may, however, be due to the fact that the spheres of activity and authority of organisations and leaders in a relatively undifferentiated community are in general wide, and diffusely defined. But the boundaries for the exercise of authority are still defined by rules and regulations vested in the position. An indication of this is found in those cases where the persons in the position change relatively often although the exercise of authority continues to be comprehensive and diffuse.

There are at present in the rural communities in developing countries circumstances which affect the wide authority of the formal leaders and their importance in the diffusion of innovations. The contact between the local community and the representatives of central and local government authorities, who suggest and recommend various changes and innovations, makes it necessary for the members of the local community to articulate an attitude regarding such changes and innovations. It becomes necessary to interpret and evaluate the various projects and innovations within the framework of already established guidelines for action and attitudes. This constant and continuous process of interpretation and evaluation of the new in the light of the old and established ways provides the formal leaders with an opportunity to influence the community reaction to change and innovation. They are called upon, by the members of the local community to interpret and evaluate the new situations and events. The leaders have authority to legitimize information and innovations. The ordinary members of the community have a need for this legitimation from the local leaders.

To an already stated hypothesis, I add that: *the authority of formal leaders in a rural community may even become more extensive during a period of contact with outside change agents, and decisively affect the community orientation to innovations and social change*. So far the hypotheses state nothing about the conditions under which the formal leaders will support, ignore or oppose innovations and social changes. A leadership with such wide authority and influence may become a double-edged sword in processes of social change.

In the following, the role played by the formal leadership in the diffusion of an innovation in an agricultural community on Mt. Meru in Tanzania will be analysed with special emphasis on some aspects of the internal communication structure and the position of the formal leaders within this structure in order to uncover some of the conditions for an active participation of formal leaders in the process of innovation diffusion.

A short description of the local community and the data, on which the analysis is based, is given.

The Local Community

The research was conducted in a rural community, or village, on the southern slopes of Mt. Meru, about 8 miles from Arusha town in Northern Tanzania. This area is heavily populated with a density of around 1000 inhabitants per square mile.⁹ The village itself has around 2500 inhabitants.

There are two main groups of people in Arusha District, the Arusha and the Meru. The village is situated in the Meru area of the mountain. The Meru had traditionally a centralized political organization with a chief at the apex of this organization, which also included a council of elders who were the leaders of the various clans and age-grades around which Meru society was organized. After Tanzania became independent in 1961, the position of chief was abolished in Meru as elsewhere in the country. However, both the age-grade and the clan organisation exist in Meru today. The clan organisation especially has a strong position. The traditional organisations are hierarchically organised with top leaders, and councillors. These formal leaders are elected and may be removed from office. Each clan is organised into local subunits, which have the same structure as the whole clan itself: one top leader and some councillors. There is also a clan co-ordinator, who occasionally calls meeting for leaders from all clans.

In addition to these traditional organisations, what may be called modern organisations have been established over a period of years. The oldest of the modern organisations is a church organisation which was established by missionaries. The organisation has a relatively wide membership. Approximately half of the population in the village are christians.

A local co-operative society was established in 1958, when a larger co-operative association for Meru, which had been in operation since 1954, was divided into three separate local societies. The local co-operative society in the village is associated with the Meru-Arusha Co-operative Union, to which it elects representatives.

The political party, Tanganyika National Union (TANU), which was established in 1954, has a local branch in the village and several "10 house cell leaders". The local branch of the party has responsibility for the Village Development Committee. On this committee there are a few elected members and representatives of the Party Branch and the central and district administration within agriculture, health and development. The latter representatives are usually people who have their field of activity in the village.

The village is situated in a predominantly agricultural area, characterized by a low degree of economic differentiation and occupational specialization. In the village about 550 adult men live by farming.¹⁰ In addition to these there are between one or two per cent of the adult population who live entirely by occupations outside of agriculture, in fields such as education, health services, office work

⁹ Paul Puritt and Lionel Cliffe — «Responses to Penetration of the Arusha and Meru of Arusha District, Tanzania», Workshop on Penetration. Nairobi, September 1967, p. 1.

¹⁰ Neither the number of inhabitants, nor the number of people occupied in agriculture or other occupations can be stated exactly. The village is for purposes of population census divided into several enumeration areas, and is part of a larger administrative subdivision. The number of adult men farming in the village is estimated on the basis of the membership list in the local co-operative society and checked against the number of tax payers and inhabitants in the larger administrative areas. Apart from a negligible number of women, all farmers are men.

and crafts. Of the 550 farmers, about two per cent combine farming with other occupations such as those just mentioned.

Coffee is the dominant crop in the area. Coffee cultivation was introduced by the missionaries. From around 1930 on coffee has gradually become more important in the economy of the village. To-day all farmers cultivate coffee. The coffee trees are usually grown together with banana trees. The banana trees provide shade for the coffee, and bananas constitute the staple food. Maize, beans, some millet and other vegetables are cultivated on a small scale, mainly for consumption within the household. Some cattle, goats and sheep are kept, but bananas, vegetables and animal husbandry play only a minor role in the cash economy compared to coffee.¹¹

The coffee then represents one of the main sources of income in the village. Because of the conditions on the world market, it is mainly by improving the quality rather than increasing the quantity of the coffee yield that the farmers may increase their income. Quantitative increases in the production of coffee without qualitative improvements will under the present circumstances result in an insignificant increase in income, and may even lead to difficulties in marketing.

Insects and diseases may damage the coffee trees and the coffee berries. Such damages reduce the yield of coffee and result in deterioration of the quality. The local co-operative society, which receives, grades and forwards the coffee for marketing, also sells various chemical sprays to be used in order to prevent and cure diseases and attacks from insects. In the season 1959/60, the local co-operative society made available a copper oxide to be sprayed on the coffee trees in order to prevent leaf rust, a fungus which attacks the leaves of the coffee trees, damages the quality and reduces the yield of coffee. Copper oxide should be sprayed before the fungus has attacked the leaves, and should according to official recommendations be applied five to six times during a season.

The use of the copperspray was strongly recommended to the farmers by the local staff of the Ministry of Agriculture in the first period after its introduction. The extension agents in the area, whose task it is to give information and advice on agricultural methods to the farmers, did most of this work. Special meetings were held in the local co-operative society in order to spread the information about the advantages of the copperspray and advice on how to use it. Such special meetings have been discontinued now. Only the extension agents of the Ministry of Agriculture continue systematically to give information and advice to the farmers. On the occasion of the annual general meeting in the local co-operative, farmers may be reminded of the importance of using copperspray. The use of copper oxide is the innovation covered by this study.

Data-collection

The analysis of the diffusion of copperspray is based on the number of farmers in the village who in a given season used copperspray for the first time in order to combat leaf rust. The dates of first use, or adoption, of the innovation are re-

¹¹ The importance of coffee in the economy of the village may be said to hold in general. The economic structure of the Meru area appears to undergo changes in the direction of increasing diversification. Dairy cattle is getting increasingly popular, and some farmers cultivate bananas for marketing. In some cases the income from bananas may exceed that secured from the sales of coffee.

corded from receipt books in the local co-operative society over an eight years' period from 1959/60 till 1966/67. The receipt books cover all sales to the farmers from the local co-operative whether cash or on credit. The receipts state the name of the farmer, date of purchase and kind of purchase made by the farmer. Except for a few farmers who live on the periphery of the local community and closer to other co-operatives, all farmers are members of the co-operative society, deliver their coffee and make certain purchases in the local co-operative. Now and then a farmer may buy items he needs in Arusha town or in other co-operatives. Such purchases elsewhere, however, would affect the accuracy of the date of the first use of copperspray only to a negligible extent, because the farmer is allowed to buy the copperspray on credit only in the local cooperative where he is a member. All farmers make use of the opportunity to buy on credit.

A list of all farmers in the village was constructed on the basis of the membership file in the local co-operative society. This information was checked by several local people and should constitute a relatively reliable estimate of the total number of households and active farmers in the village. Interviewing was conducted orally according to a standardized questionnaire with farmers whose name was on the list. Data from this questionnaire include information about size of farming operation, type of crops and animal husbandry, size of household and available sources of labour, use of various information sources, attitudes to modern agriculture and to development in general. The questionnaire furthermore contains several sociometric questions. The respondents were asked to mention by name other farmers he asked advice of or discussed agricultural matters with. In order to get these sociometric data it was necessary to interview all farmers. Of the 550 farmers on the list 92 per cent were interviewed. Some of those not interviewed were ill, very old, mute in jail, temporarily absent or in school elsewhere. Some farmers on the list live on the outskirts of the area covered by the project. They are now members of more recently established co-operatives in the neighbourhood. These farmers were rare and constitute less than one per cent.

Information about the organisations which exist in the village and the formal leadership positions connected with them, was collected from many sources. Some information was collected from administrative offices in the area, from the party branch office, and the local co-operative society. Information was also given by the leaders of the clan and age-grade organisations. The informations from these various sources were put together in order to make a list of the formal leaders in the village. These formal leaders were interviewed according to two standardized questionnaires. They were, as other farmers, interviewed according to the above mentioned questionnaire. In addition, they were interviewed according to a second questionnaire which was intended mainly to give information about the career of the leaders, the patterns of co-operation between organisations and leaders in the village and with some of the administrative officers in the district, and the orientation of the leaders to development needs of the village. Eighty leaders, that is about 98 per cent of the leaders on the list, were interviewed.

The standardized questionnaires were written in swahili. The interviewers were recruited from the local population. They were young farmers and other young people on vacation from secondary schools and universities. The interviewers were given a short training course in interview techniques. The fieldwork was conducted during part of 1967 and the first half of 1968.

Diffusion and Leadership

From the very first beginning in 1959/60 till the end of 1967, copperspray had become generally accepted in the local community. Somewhat more than eighty per cent of the farmers had adopted the copperspray by the end of this period.

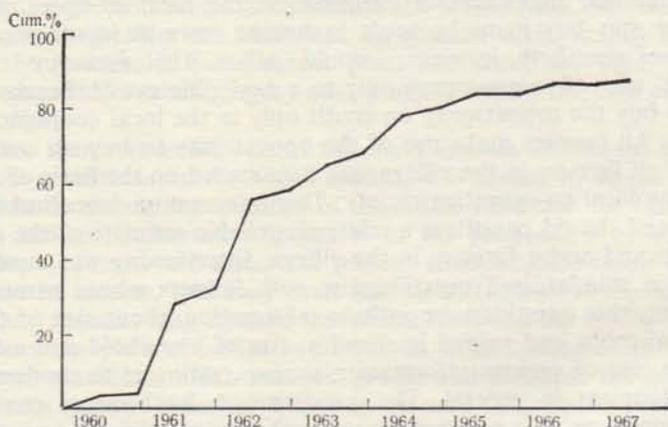


Figure 1. Diffusion Curve for Copper Oxide
Cumulative per cent of adopters by season
(Farmers who started farming after 1960 have been omitted
in this figure and the following figures of diffusion curves.)

Figure 1 shows the diffusion curve for the community as a whole. The curve is based on the cumulative per cent of first user or adopters for each season during the diffusion process.

The curve exhibits characteristics often found in social diffusion. The proportion of adopters is small in the first season. The proportion of adopters, however, increases in subsequent seasons until it decreases later in the diffusion period. The curve appears to level off at approximately 85-90 per cent adopters. The increasing rate of diffusion in the early period and the subsequent decreasing rate in the later period is characterized as snowball effect or chain reaction.¹² The chain reaction indicates the effect of interpersonal communication on the process of diffusion. The nature of this communication is assumed to be such that information about the innovation and influence towards adoption gradually reach an increasing number of the members in the local community as a result of the increase in the number of adopters who can exercise influence on others who have not yet adopted. The rate of diffusion decreases again as the number of members, who have not yet adopted, gradually decreases.

If the hypothesis of the wide and diffusely defined authority of the formal leaders and their possibility to influence a process of social change is tenable, it

¹² J. S. Coleman, E. Katz and H. Menzel — op. cit., p. 95-112.

is reasonable to expect, given the successful process of diffusion shown in Figure 1, that the formal leaders have been favourably oriented to the innovation and that they even may have played an active role in the diffusion of the innovation. It is unlikely that they have actively opposed the adoption of copperspray, or ignored it.

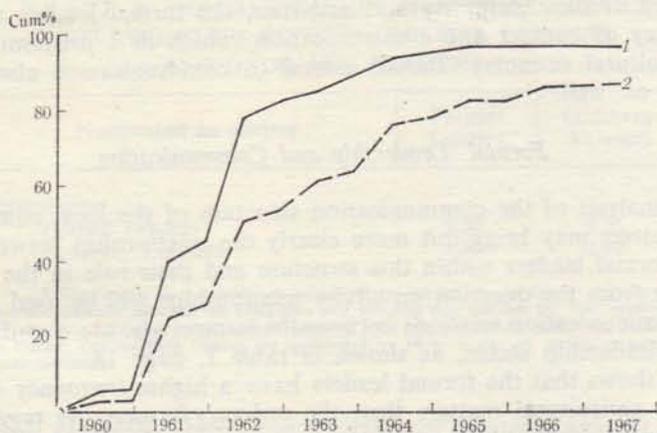


Figure 2. Diffusion Curves for Copper Oxide
Formal Leaders and Ordinary Farmers

It is possible to establish the role which the formal leaders as a whole have played in the process of diffusion by inspecting the diffusion curves for the leaders as a group and compared this diffusion curve to that of the ordinary farmers. The extent to which a combined leadership of both traditional and modern organisations have actively participated in the diffusion of copperspray is clearly indicated in the difference between the diffusion curves for the formal leaders and the ordinary farmers shown in figure 2.

The diffusion curve for the group of formal leaders is situated above that of the ordinary farmers at all points in time during the diffusion period. A comparison of the curves indicated that the formal leaders tend to adopt the innovation earlier than the ordinary farmers. They have throughout the diffusion period a higher level of adoption than the ordinary farmers. The diffusion curve for the ordinary farmers reaches the seventyfive-eighty per cent level in 1965, while the proportion of leaders who have adopted already reached this level in 1962. The tendency to earlier adoption among the leaders may be related to personal characteristics which differentiate them from the ordinary farmers. However, the curves exhibit the characteristics of a chain reaction, indicating that internal communication and influence have been one of the essential factors in the diffusion process, especially among the leaders.

It may be assumed that the formal leaders are more strongly connected to the local communication networks than the ordinary farmers. Considering the wide authority of the formal leaders, they may because of their leadership positions alone have more extensive contacts and links of communication than others. Yet

such contacts which the leaders engage in because of their position as leaders do not necessarily connect them to networks of communication about agricultural matters to a higher degree than ordinary farmers. However, it is reasonable to expect that they will be relatively well integrated in communication networks about agricultural matters, since they are also farmers. Furthermore, given the diffuse boundaries of their authority and activities, the formal leaders will have a higher frequency of contact and communication, which in a predominantly undiversified agricultural economy should extend to communication about agricultural matters as well.

Formal Leadership and Communication

A closer analysis of the communication structure of the local community on agricultural matters may bring out more clearly the relationship between the position of the formal leaders within this structure and their role in the process of diffusion. Data from the question on advice relationships will be used as an indicator of the communication relations between the farmers who are classified according to formal leadership status, as shown in table 1, page 14.

The table shows that the formal leaders have a higher frequency of communication about agricultural matters than the ordinary farmers. As regards advice seeking, the formal leaders have mentioned on the average 1.68 advisors, while the ordinary farmers have mentioned of the average 1.33 advisors. The difference between the formal leaders and the ordinary farmers is even greater when the frequency with which they are nominated as advisors is considered. The formal leaders receive on the average 3.24 nominations as advisors while the ordinary farmers receive only 1.04 such nominations. Thus there is a greater tendency among the formal leaders both to initiate and to receive advisory relationships than amongst the ordinary farmers.

TABLE 1. ADVICE RELATIONSHIPS BETWEEN FORMAL LEADERS AND ORDINARY FARMERS

Nominated as advisor :	Formal Leaders	Ordinary Farmers	Total choices made
Nominator :			
Formal Leaders	59	75	134
Ordinary Farmers	200	368	568
Total choices received	259	443	702
Total number of persons	80	427	507

The distribution of choices made and received among the two categories show that there is considerable communication between the leaders and the ordinary farmers. In fact, in absolute number of choices made — or communication initiated, the formal leaders direct a greater number to the ordinary farmers than to other formal leaders. The ordinary farmers seek advice to a great extent from the formal

leaders, although there is a higher frequency of choices within their own category. The table shows relatively extensive communication between formal leaders and ordinary farmers. There is little indication of in-group communication with gaps in the communication between the groups.

TABLE 2. COMMUNICATION STRUCTURE: ADVICE RELATIONSHIPS BETWEEN FORMAL LEADERS AND ORDINARY FARMERS *

Nominated as advisor :	Formal Leaders	Ordinary Farmers
Nominator :		
Formal Leaders	2.30	0.56
Ordinary Farmers	1.49	0.52

* The figures in this table are calculated by taking the absolute number of advice relations between the categories and dividing this number by the product of the per cent of persons in each category who can potentially make and receive a choice. The resulting figures are multiplied by 10 in order to avoid unnecessary decimals.

The figures presented above give a picture of the total amount of communication within and between the categories. However, in order to give a more meaningful picture of the communication structure, and the position of the leaders it is necessary to take into account the unequal number of leaders and ordinary farmers who can make and receive choices as advice partners. The actual number of choices made and received as a ratio of the possible number of contacts will indicate the relative strength of the communication relationships between the two categories. Table 2 shows the relative strength of advice relationships between and within the two categories of farmers according to the leadership status of the nominator and the nominee.

The communication structure and the position of the formal leaders within this structure now emerge more clearly. There is a strong tendency among the formal leaders to establish advice relationships with other leaders, in fact a tendency to in-group communication. The leaders may be said to constitute their own reference group as regards communication on agriculture. The communication link between the leaders is about four times as strong as the communication from leaders to ordinary farmers. Furthermore, the formal leaders to a large extent also serve as advisors to the ordinary farmers. The strength of the links between formal leaders and ordinary farmers, in advisory dyads established on the initiative of the latter, is about three times as great as in the links of communication between the ordinary farmers themselves. Communication between ordinary farmers is the weakest of all, although only somewhat weaker than that initiated by the formal leaders in the direction of the ordinary farmers.

The central position of the formal leaders in the communication structure on agricultural matters gives them access to information on such matters which the ordinary farmers do not have. The many communication relations which lead to and from the leaders create conditions conducive to early adoption of innovation. The greater the access to information in such informal communication

networks, the stronger will be the tendency to early adoption, *ceteris paribus*. In other studies of diffusion of innovations it has been concluded that strong integration in communication networks causes early adoption of an innovation.¹³ It is reasonable to conclude that the communication structure which is shown in Table 2 and the position of the formal leaders within this structure are among the factors which have contributed to the high rate of diffusion among the formal leaders.

Two aspects of the communication structure, the strong communication between the leaders and the tendency among the ordinary farmers to seek advice from the leaders, provide clues to the mechanism which give the formal leaders a strong influence on the diffusion process.

Firstly, when copperspray was introduced through the local co-operative society, a certain pressure to adopt the innovation was exerted by experts and agencies from outside the community, making it necessary to articulate an attitude towards the innovation. The strong communication links between the formal leaders provide them with an opportunity to consult with each other and to keep informed about the opinions and evaluations of others. It is reasonable to assume that the need to articulate an orientation to the innovation resulted in an increase in communication activity which followed the structural aspects of the communication network shown in Table 2. The strong links of communication between the leaders also made it possible for them to achieve some consensus as regards the innovation and thus to act as a leadership with a common orientation, in this case an orientation favourable to adoption of the innovation.

Secondly, pressure on the leaders to articulate an orientation towards the innovation also derives from sources within the local community. Given the strong tendency of ordinary farmers to seek advice from the formal leaders, it becomes essential for the leaders to form an orientation about the innovation.

The data show that the authority and influence of the formal leaders also extend to informal communication about agricultural matters in rural communities with a low degree of economic differentiation. Their influence is reflected in the many advice relationships on agricultural problems which related the leaders to the ordinary farmers. As leaders their interpretations and evaluations of the innovation and their actual behaviour will influence other members of the community. When formal leaders are found to such a large extent among the early adopters, their influence will, of course, favour further adoption in the community. The formal leaders may be said to have spearheaded the process of diffusion.

Formal Leaders and Opinion Leaders

The effect of informal communication on the diffusion of innovations is one of the main themes in diffusion research. Of special importance are the informal leaders — or opinion leaders — who are strongly connected to the informal communication networks, and in this way able to influence the behaviour of others. It is the central position in communication networks which characterize opinion leaders. Operationally opinion leaders are often defined by the relatively great frequency with which they are mentioned as advisors or discussion partners.

¹³ J. S. Coleman, E. Katz and H. Menzel — *op. cit.*, p. 104.

In a community with a low degree of literacy, informal communication networks play a significant role in the process of diffusion, if only because there are few other sources of information generally available to the members of the community. The above analysis indicates that the formal leaders have a central position in the communication structure and that they exercise influence in favour of the adoption of the innovation through the many relationships in which they are involved. The formal leaders as a group receive relatively many choices as advisors.

However, not all formal leaders receive many choices. There is a tendency for the choices to be concentrated on some of the formal leaders. This means that some of the formal leaders also have status as opinion leaders. They share this status as opinion leaders with some of the ordinary farmers who receive relatively many choices as advisors, but who have no formal leadership positions. By defining a farmer who receives three or more choices as advisor as an opinion leader, the absolute number of opinion leaders is approximately the same among the formal leaders as among the ordinary farmers. This means that about 50 per cent of the formal leaders, and 10 per cent of the ordinary farmers are defined as opinion leaders.

Opinion leaders will have, by definition, a relatively greater amount of influence than other members of the community have. In addition, also by definition, they are strongly connected to the communication network and have thereby access to a relatively greater amount of information. Accordingly, the rate of diffusion among opinion leaders will be expected to be higher than among those who are not opinion leaders.

The earlier analysis has established the high rate of diffusion among the formal leaders and also their central position in the informal communication network on agricultural problems. It is possible that the high rate of diffusion among the formal leaders is entirely due to their central position in the informal communication network. If this is the case, the rate of diffusion among the formal leaders would be expected to vary according to whether they are opinion leaders or not. Furthermore, the rate of diffusion among the formal leaders who may be regarded as opinion leaders should be of the same magnitude as that of other opinion leaders. The effect on the rate of diffusion of strong connectedness to informal communication networks versus the effect of contacts, information and influence which are associated with the formal leadership positions, may be analysed by an inspection of the diffusion curves for the four different categories: opinion leaders, with or without formal leadership positions, formal leaders who are not opinion leaders, and ordinary farmers. The diffusion curves for these four categories are shown in Figure 3.

The diffusion curves show that the rate of diffusion is higher among the opinion leaders than among those who are not opinion leaders. This emerges first by a comparison of the curves for those who are formal leaders, but who differ in their status as opinion leaders, and secondly by a comparison of the curves of those who are not formal leaders and who vary according to opinion leadership status. In both cases, the curves of the opinion leaders are above those of the other category. The rate of diffusion is higher among the opinion leaders than among those who are not opinion leaders.

The farmers who are neither formal leaders nor opinion leaders, in fact ordinary farmers, have the lowest rate of diffusion. This result is in accordance with

the assumptions made about the effect of varying degrees of connectedness to the local communication network. The farmers who have a few or no links to the communication network in the local community get information and orientation about the innovation at a late stage and are relatively little exposed to influence to adopt. Consequently, they adopt on the whole, at a late stage in the diffusion process.

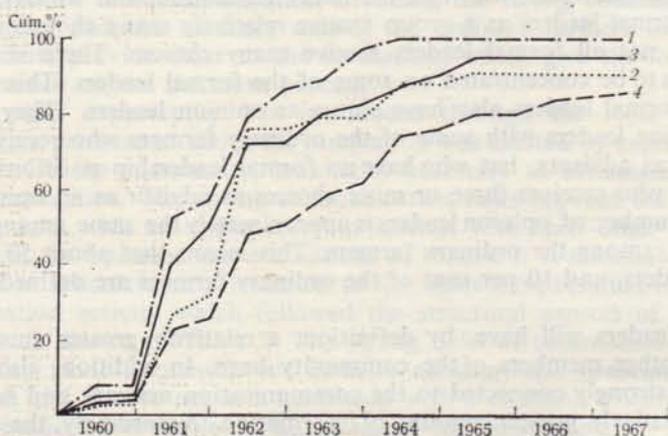


Figure 3. Diffusion Curves for Copper Oxide
Four Categories of Farmers according to Choices received
as Advisor and Formal Leadership Status
(Those who receive three or more choices are designated
opinion leaders.)

Formal Leaders: 1—3 or more choices — · · · · ·; 2—0—2 choices — — —
Ordinary Farmers: 3—3 or more choices — — —; 4—0—2 choices — — —

The rate of diffusion is highest among those who are formal leaders as well as opinion leaders. It is somewhat lower among those who are either only formal leaders or only opinion leaders. Even though it is evident that the connectedness of the opinion leaders to the local communication network contributes to a high rate of diffusion, the data also indicate that the high rate of diffusion among the formal leaders, who are also opinion leaders, is not only due to their opinion leadership. The diffusion curves for the two categories of opinion leaders show that the rate of diffusion varies according to whether they are formal leaders or not. Of these two categories of opinion leaders, those who are also formal leaders have the highest rate. And moreover, among those who are not opinion leaders, the formal leaders have a higher rate of diffusion than those who have no formal leadership status. The data show clearly that there are certain factors in formal leadership which affect the rate of diffusion and which are not accounted for by the connectedness to the communication network as defined in opinion leadership.

Opinion leaders are defined by the relatively greater number of choices they receive as advisors, and the distinction between an opinion leader and one who is not an opinion leader was made arbitrarily at three or more choices received. The distinction might equally have been made at two or more choices, or four or more choices. However, whatever the distinction made in terms of number of choi-

ces received, the measure is relatively inadequate as indicator of the position or integration within the communication structure. A more adequate picture of the the position of the various categories in the communication structure and the effect of communication and influence on the diffusion process may emerge through an analysis of the advice relationships between the various categories of leaders and ordinary farmers.

In Table 3 is presented the same type of advice relations as in table 2, which makes it possible to analyse the communication between the various categories of formal leaders and opinion leaders.

In brief outline, Table 3 indicates the following:

Opinion leaders, whether or not they are formal leaders, have a central position in the communication structure compared to those who are not opinion leaders. The communication in the local community is to a large extent concentrated around the two categories of opinion leaders. The formal leaders, who are also opinion leaders, nevertheless occupy a more central position than those who are opinion leaders only, even though there is no marked difference between the two categories of opinion leaders in this respect.

The data in Table 3 show a strong tendency to communication within the two groups of opinion leaders. This tendency to in-group communication is particularly pronounced among those who are also formal leaders. Moreover, the formal leaders within the opinion leadership category maintain extensive communication with those who are opinion leaders only. Within the opinion leadership category as a whole, the communication initiated by the formal leaders in the direction of those who are opinion leaders only, is greater than the opposite way. In fact, the formal leaders among the opinion leadership category have a stronger tendency to initiate communication with all other categories of farmers than those who are purely opinion leaders. There is thus a more extensive consultation on part of these formal leaders with others, and in particular with others who may be assumed to have great informal influence in the local community.

TABLE 3. COMMUNICATION STRUCTURE: ADVICE RELATIONS BETWEEN FOUR CATEGORIES OF FARMERS ACCORDING TO STATUS AS FORMAL LEADER AND OPINION LEADER*

Nominated Advisor :	Opinion Leaders		Not Opinion Leaders	
	Formal Leaders	Not Formal Leaders	Formal Leaders	Not Formal Leaders
Nominator :				
Opinion Leaders :				
Formal Leaders	4.76	3.89	0.64	0.22
Not Formal Leaders	2.74	3.03	0	0.19
Not Opinion Leaders :				
Formal Leaders	3.53	2.81	0.63	0.25
Not Formal Leaders	2.55	2.67	0.51	0.27

* The figures in this table are calculated from the absolute number of advice relations between the categories in the same way as the figures in Table 2.

It provides the formal leaders within this category with a means of ascertaining the opinions and attitudes of other influentials and ordinary members of the community. These links with the other opinion leaders furthermore provide the formal leaders within the opinion leadership group with indirect channels for exercising their influence.

The formal leaders who are not opinion leaders occupy a relatively weak position in the communication structure. Their position is markedly different from that of the two categories of opinion leaders. Moreover, the position in the communication structure of the formal leaders without opinion leadership status is only slightly different from that of the ordinary farmers without any leadership position at all.

On the whole the figures in Table 3 support the hypothesis of a positive relationship between connectedness to an informal communication network and the rate of diffusion. Within a group which occupies a central position in the communication structure the rate of diffusion will be high. However, the relatively weak position of the formal leaders without opinion leadership status, is not in accordance with this hypothesis. Among the formal leaders without opinion leadership status, the rate of diffusion is about as high as among the farmers who are opinion leaders only. Yet the formal leaders without opinion-leadership status have definitely a less integrated position in the communication structure. This is indicated in the total number of advice relationships in which they participate, and particularly in the few relationships which are initiated by others in their direction. To a small degree only, will communication flow to these leaders.

It is significant, however, that all formal leaders have a strong tendency to form on their own initiative advice relationships with others. This holds even for those who only have formal leadership status. These formal leaders to a large extent initiate advice relationships with the opinion leaders, and especially with those who are also formal leaders. In other words, those who are only formal leaders, expose themselves to strong influence to adopt the innovation from the categories who are among the earliest adopters and who may generally be counted among those who have great authority and influence in the community.

The relatively high rate of diffusion among the formal leaders without opinion leadership status may indicate that the tendency to initiate advice relationships, and the quality of such relationships, are among factors which affect the tendency to early or late adoption. Qualitative differences may be attached to advice relationships according to who the initiator is and who the recipient is. Such aspects of the communication structure have not been covered in the above analysis.

Some Conclusions

The analysis indicates that the formal leadership in the community has played an active and positive role in the diffusion of the innovation. They have a higher rate of diffusion than that found among the ordinary farmers and they occupy a central position in the informal communication network on agricultural matters. The strongest links of communication are found within the formal leadership group itself, a structural feature which may serve as a mechanism for a common orientation or consensus among the formal leaders as regards innovation and changes in general. Furthermore, the ordinary farmers tend to use extensively the formal

leaders as advisors on agricultural matters. The formal leaders in this way are able to exercise influence on the adoption of the innovation by other farmers. The conclusion is that the authority and influence of formal leaders in the community extend to agricultural matters and that they have actively contributed to the generally high rate of diffusion in the community.

It is, however, clear that the formal leaders are differentiated in so far as concerns the degree to which they are connected to the local communication network. Consequently the tendency to early or late adoption and rates of diffusion will vary. About half of the formal leaders may be characterized as opinion leaders. It is thus not the case that all formal leaders in the local community have the same amount of wide and diffuse authority. The importance of the formal leaders in the diffusion of an innovation will then vary according to the degree of informal influence which a formal leader is able to exercise through his status as opinion leader. However, a considerable part of the formal leadership may still be regarded as the corner stones of the diffusion process. The other part may be regarded as followers, but not as late adopters. This is indicated by the relatively high rate of diffusion among them and by their communication relationships with the other formal leaders who adopt at an earlier point in time, and who are generally influential in the local community.

In addition to the formal leaders who have opinion leadership status, there are informal opinion leaders who are frequently sought as advisors, although they have no formal leadership position. Those who are opinion leaders only have almost as strong a position in the informal communication network about agriculture as those who are also formal leaders. Among those who are opinion leaders only, the rate of diffusion is, furthermore, relatively high and they are in a position to exercise considerable influence during the diffusion process.

There are strong mutual communication links between the two categories of opinion leaders. Those who are also formal leaders have, however, a stronger tendency to initiate communication with those who are only opinion leaders than the opposite. These features of the communication structure indicate the manner in which an important group of formal leaders are able to secure information about the orientation of other influentials in the community and to influence the process of diffusion indirectly.

Although in general the diffusion curves for the various categories of formal leaders and opinion leaders tend to support the hypothesis about positive relationship between connectedness to communication networks and rate of diffusion, it is evident that the position of a category or group within the communication structure does not fully account for variations in the rates of diffusion. It appears that additional factors, related to formal leadership itself, are of importance.

The indicator of the position of various kinds of leadership within the communication structure used in the above analysis is simple. It is possible that further insight in the process of diffusion may be gained by taking into account other aspects of the communication structure, such as indirect connection, wider ramifications, closer groupings, and qualitative difference in communication relations.

MANAGEMENT NATIONALITY AND EMPLOYEE COMMITMENT TO INDUSTRIAL EMPLOYMENT IN NIGERIA*

OLATUNDE OLOKO
NIGERIA

The present study deals with one of the largely neglected variables in the vast amount of systematic research that has been carried out by industrial psychologists and other social scientists into the problem of worker satisfaction, worker morale and other similar topics. The omission of management nationality from among the variables usually related to worker satisfaction is due mainly to the fact that an overwhelming proportion of research into the subject has been carried out in the United States, Great Britain and other economically advanced countries where, by and large, the occupants of the various roles in industry belong to the same national societal communities.

In the present study the effect of non-Nigerian as against Nigerian nationality of factory managers on the level of commitment to and satisfaction with industrial employment of a sample of rank-and-file Nigerian factory workers is analysed in some detail. The specific hypothesis tested in the study states that:

Workers who enter the industrial system of production in settings which involve the least amount of discontinuity in authority for them will tend to experience a higher level of commitment to and satisfaction with the system than workers whose participation in the new production system entails a greater amount of discontinuity in authority.

In forms specific to the present study the foregoing hypothesis would lead us to expect that, other things equal, workers employed in factories in which there are Nigerian nationals occupying managerial roles would be higher on a commitment to factory work (CFW) index than would be workers in factories in which all the managerial roles are occupied by non-Nigerians, especially Europeans.

The data utilized in operationalizing the variables involved in the study are taken from the vast amount of data collected from 348 of a highly purposive sample of 520 rank and file industrial workers interviewed in Nigeria in 1963 and 1964 under the auspices of the Harvard University Project on Socio-Cultural Aspects of Development.

* This paper is based on a Chapter of the author's Ph. D. Dissertation submitted to the Department of Social Relations, Harvard University, Cambridge, Mass. U. S. A. The author is greatly indebted to Prof. Alex Inkeles for allowing him to analyse the data collected under his general direction in Nigeria and for helpful comments on an earlier version of the paper. The author is also grateful to the Rockefeller Foundation for generously financing his graduate training at Harvard.

The total sample workers were all male members of the Yoruba-speaking peoples of south-west Nigeria. They aged between 18 and 32 years, and had between 4 and 13 years of formal education. About 58% of them were Christians, and 43% Moslems. The factories in which about 90% of the sample workers were employed were located around Lagos, the political, commercial and industrial capital of Nigeria. About 80% of the workers were employed in factories owned and, to a great extent, managed by European, notably British, industrial concerns and nationals.

The dependent variable of the present study was operationalized by creating an index from the responses of the workers to five closed interview items which were designed to tap their preference for factory work as against other lines of employment; their degree of satisfaction with factory work and their particular jobs in the factories and their evaluation of the conditions of service in the factories in which they were employed as compared with conditions in other factories. On the basis of their scores on the commitment (CFW) index the subjects were separated into categories with *low*, *medium* and *high* levels of commitment and satisfaction.

In operationalizing the notion of continuity and discontinuity in authority in the factories in which the sample workers were employed those of them working in factories with slight to wholly Nigerian participation in management were coded as under *some-mostly Nigerian* management and those in factories with exclusively foreign management were coded as being under *non-Nigerian* management. The latter category of factories are these under European and/or Lebanese-European nationals. Authority is thought of as being relatively continuous in the case of workers in factories with *some-mostly Nigerian* managers and discontinuous in the case of workers in factories with *Non-Nigerian* managers.

In the analysis carried out in this study we have found it useful to adopt two of the perspectives suggested and used by Harbison and Myers (1959) for the analysis of the phenomenon of management in their series of cross-national studies. The perspectives that we have chosen to adopt are that which

(1) looks at management, and especially the management of foreign enterprise in developing countries like Nigeria, as a caste or class; and that which

(2) looks at management as internal system of authority over the working lives of the employees.

Some evidence in support of the hypothesis

Adopting these two perspectives of analyzing the phenomenon of management facilitates our perception of the relevance to those issues of the results of a number of systematic studies of work commitment and satisfaction carried out by industrial psychologists especially in Great Britain and in the United States of America. Of these studies, the ones most germane to, and which shed a great deal of light on the present analysis are, namely: (1) the study by Bagle (1954) of the relationship between supervisor "sensitivity" to the attitudes of their subordinates and the attitudinal favourability of the latter toward the employing organization and management; (2) the study of the effect of the authoritarianism of supervisors on the attitudes of their subordinates carried out by Vroom and Mann (1960);

and (3) the study by Fleishman and Harris (1962) of some relationships between various combinations of differing styles of supervision and the behaviour of employees.

The result of the study by Nagle is especially germane to some of the theoretical and other considerations which lead us to expect that commitment to and satisfaction with industrial employment will be higher among workers employed in factories in which Nigerian managers participate in the exercise of control and authority over the working lives of the workers than among workers in factories where the members of the managerial hierarchy are drawn exclusively from groups of persons who, partly because of their being members of different racial and national societal communities would, for reasons to be discussed below, find it relatively difficult to develop sufficient capacity for "sensitivity" to the attitudes, moods and temperaments of their employees. In his study of the relationship between supervisor sensitivity and employee attitude Nagle (1954) obtained results which support the rather trite observation made by Gage (1952) to the effect that "...the better you understand people the better you can get along with them." The ability of supervisors to predict the pattern of employee scores on a set of attitudinal items was found to be highly correlated to the degree of employee attitudinal favourability toward the employing organization and management.

Recast in the terminology employed by Karl Deutsch (1953) in his work on social communication and nationalism the supervisors high on Nagle's sensitivity to employee attitude scale can to some extent be said to belong to a "community of predictability from introspection" with their employees. According to Deutsch the most efficient level of social communication and therefore understanding between groups and individuals is reached when they belong to the same community of predictability from introspection.

Many expatriate managers of industrial establishments in Nigeria may believe themselves to "know just how these people (their Nigerian workers) think and feel" but it can be inferred from observations made by experts in industrial relations in Nigeria that the caste-like existence which the expatriate community live in countries like Nigeria makes any such claim they make of having the capacity to predict the behaviour of their employees by introspection exceedingly doubtful. Both Yosufu (1962) and Onyemelukwe (1966) have described the adverse effects on management-labour relations of some of the behavioural consequences of the voluntary social and residential separations which exist between the European managers and supervisors and the rank-and-file workers, on the one hand, and the members of the local (Nigerian) communities on the other.

The difficulty which the average European manager in Nigerian factories faces in an attempt at knowing and understanding of the average member of the group of Yoruba workers included in our sample is further complicated by the fact that the type of Nigerians with whom many expatriate managers have rather intimate contacts are usually non-Yoruba domestic servants and prostitutes.

Any degree of "predictability by familiarity" developed by Europeans in the course of their association with these classes of persons is bound to be of doubtful value as psychological prerequisites towards "understanding" and "knowing" their Yoruba workers.

From the foregoing discussion it is obvious that Nigerian managers who because of their common cultural origins and experiences with their workers have a great

deal of things in their minds which they share with the latter; and they should therefore find it easier than European managers to form one community of predictability from introspection with the workers under their authority. Since social communication and understanding are two way processes the Nigerian workers when in a dilemma about any orders or instruction can discover by introspection what the intentions of their Nigerian managers might be than they can the intentions of their European managers.

The last evidence to be cited in support of the hypothesis to be analyzed in this study consists of the observation of the authors of the highly authoritative report of the mission of the International Bank for Reconstruction and Development the World Bank — which visited Nigeria at the request of the government in 1953. After observing that Nigerian workers who occupy junior authority roles in modern industrial establishments handle the workers under them “capably and sympathetically” they concluded that: “It is notable that the private industrial enterprises which show the best worker productivity use a high proportion of Nigerian foremen and supervisors.”

Analysis and results

Most of the foregoing discussion has been focused on the usefulness for the present study of the perspective which looks at management as a caste or class. Before shifting our emphasis to the perspective which views management as an internal system of authority over the working lives of workers the result of a number of cross classifications undertaken as tests of the present hypothesis, under varying conditions of a series of control variables will be presented and discussed. In the course of the discussion the question will be raised as to the possibility that any differences found in the level of commitment to and satisfaction with industrial employment among workers under Nigerian and non-Nigerian management might be due to differences in the styles of supervision used by the different types of managers and not to the greater capacity for social communication and understanding between management and workers which on grounds of socio-cultural similarity we expect Nigerian managers to possess more than European managers.

In the meantime we can see from Table 1 in which management nationality is crossclassified with the CFW index that our expectation that workers employed in factories in which there are Nigerian nationals occupying managerial roles the workers would be higher on the CFW index than would workers employed in factories in which all the managerial roles are occupied by non-Nigerian, in this

TABLE 1. MANAGEMENT NATIONALITY AND WORK COMMITMENT

	Work commitment index				
	High	Medium	Low	Total	N
Some-mostly Nigerian	31.3%	41.9%	26.8%	100%	198
Non-Nigerian	20.7	33.3	46.0	100	150
Total	—	—	—	—	348
$X^2=14.270^{**}$	Sign. Level 0.001			Gamma=0.312	

case mainly Europeans, is confirmed. In factories in which all the occupants of management roles are Europeans or "Lebanese-Europeans" nearly half of the workers — 46.0 per cent — are on the low end of the CFW index with only 33.3% on the medium point and 20.7% on the low end.

In factories with "*some-mostly Nigerian*" management, however, only 26.8% of the workers are on the *low* category of the CFW index. The percentage distribution of the workers in latter type of factories on the medium and light ends of the CFW index is 41.9% and 31.3% respectively.

*Factory location, factory product, management nationality
and work commitment*

In order to establish that the relationship between management nationality and the level of commitment to and satisfaction with industrial employment is not in *fact mainly* accounted for by the effect of factory location or that of factory product the original relationship between the two variables will be examined by holding factory location and factory product constant, in turn.

In Table 2 we can see that the original relationship between the two variables persists among the workers in our sample irrespective of the places in which their factories are located. The probability that a worker is employed in a factory where there is *some-mostly Nigerian* management would be *high* rather than *low* on the CFW index is slightly lower among workers in factories located in *Lagos-industrial* areas. Comparison of the relationship between management nationality and the CFW index of the workers in factories located in *Lagos-industrial* areas with that of the workers in factories located in *Lagos non-industrial* and *Outside Lagos areas* yields a number of very interesting results which owing to space limitations cannot be gone into here.

All that need be said is that Table 2 shows that the original relationship between management nationality and commitment to and satisfaction with industrial employment is not due mainly to the effect of the types of places in which the factories are located. Having said that, attention must now be directed to an examination of the possibility that the relationship might be due to the presence of another possibly invalidating factor — this time, the kind of product manufactured in the factories.

Table 3 shows the results obtained when the relationship between management nationality and the CFW index are cross-classified with factory product held constant. The original relationship between management and the CFW index persists among workers in factories making *heavy* products, *light* products and *medium* products. The general increase in the level of CFW associated with *some-mostly Nigerian* management as compared with *non-Nigerian* management observed among workers in the factories manufacturing all the three categories of products is especially impressive among workers in factories making *medium products*. In this type of factories the percentage distribution of workers on the high, medium and low ends of the CFW index rose from 25.5%, 37.3% and 37.3% respectively among workers in factories with *non-Nigerian* management to 48.5%, 32.4% and 19.1% among those of them in factories with *some-mostly Nigerian* management.

TABLE 2. RELATIONSHIP BETWEEN MANAGEMENT NATIONALITY AND WORK COMMITMENT WITH FACTORY LOCATION HELD CONSTANT

Among Workers in Factories in LAGOS-INDUSTRIAL

	Work commitment index				N
	High	Medium	Low	Total	
Some-mostly Nigerian	25.8%	42.7%	31.5%	100%	124
Non-Nigerian	18.0%	37.8	44.1	100	111
Total	—	—	—	—	235
$X^2=4.474$		Sign. Level 0.107		Gamma=0.226	

Among Workers in Factories located in OUTSIDE LAGOS

	High	Medium	Low	Total	N
	Some-mostly Nigerian	23.5%	58.8%	17.6%	100%
Non-Nigerian	25.0	20.8	55.0	100	20
$X^2=7.057^*$		Sign. Level 0.030		Gamma=0.377	

Among Workers in Factories in LAGOS NON-INDUSTRIAL

	High	Medium	Low	Total	N
	Some-mostly Nigerian	45.6%	25.1%	19.3%	100%
Non-Nigerian	31.6	21.1	47.4	100	19
Total	—	—	—	—	76
$X^2=5.822$		Sign. Level 0.055		Gamma=0.385	

In the factories producing *light* and *heavy* products respectively, however, the superiority of *some-mostly Nigerian* management over *non-Nigerian* management is evidenced but in less pronounced degree. In the first type of factories *non-Nigerian* management is associated with the following percentage distribution of workers on the high, medium and low points on the CFW index 22.2%, 22.2% and 55.6%, while *some-mostly Nigerian* management is associated with a 20.6%, 50.8% and 28.6% distribution on the index. In factories making *heavy* products where the superiority of *some-mostly Nigerian* over *non-Nigerian* management in the least marked workers in factories with *non-nigerian* management are distributed as follows on the CFW index: 17.3%, 33.3% and 49.4% while in factories with *some-mostly Nigerian* management the distribution of the index is 23.9%, 43.3% and 32.8% respectively.

From the foregoing examination of the relationship between management nationality and commitment to and satisfaction with industrial employment when factory location and factory product are respectively held constant, we can con-

clude that the original relationship between the two variables is not invalidated by any of one these two control variables. It now remains for us to present some statistical evidence in support of our interpretation of the relationship between nationality of factory management and the CFW index from the two Harbison-Myers perspectives of analyzing the phenomenon of management which were discussed at the beginning of this paper.

In support of the interpretation that the higher level of CFW exhibited by the workers in our sample in factories with *some-mostly Nigerian management* than those in factories under *non-Nigerian* management is most likely due to the greater efficiency of communication and understanding between workers and management in the first type of factories than in the second type, the relationship between management nationality and the CFW index is examined with the following variables held constant: (1) percentage of the labour force in each factory who is Yoruba; (2) percentage of the labour force in each factory who are Eastern Nigerians; and (3) the size of the factories in which the workers in our sample are employed.

Employee ethnicity, management nationality and work commitment

It is expected that in factories in which there is a high percentage of Yoruba workers or conversely in factories in which there is a low percentage of Eastern Nigerian workers that the problem of communication between our sample of Yoruba workers and their non-Nigerian managers should be less than in factories where the percentage of Eastern Nigerian workers is *high*. Under this condition the inapplicability to the industrial sphere of some of the modes of communication developed in the domestic sphere by European managers in their interaction with their non-Yoruba domestic servants would tend to be very glaring and their use inhibited. It would be easier for the European manager in a factory in which the labour force is predominantly Yoruba to realize, for instance, that most of his employees do not understand pidgin English. Furthermore, it is easier for the European manager to develop a sense of predictability by familiarity in respect of the employees under him when the majority of them belong to the same major ethnic group than when they belong to many. What is expected to be true of the efficiency of social communication between workers and European managers in situations where there is a high percentage of Yoruba workers or a low percentage of Eastern Nigerian workers is expected to apply to situations where the size of the labour force in a factory is small. In a small or medium sized factory the pattern of contact between managers and their employees is likely to be of such intensity for the two sides in industrial relations, even when they belong to different racial and cultural groups, to develop a sense of predictability by familiarity of the behaviour of each other. The manager of a small or medium sized factory is more likely than the manager of a large factory to come to know his employees well and therefore to come to understand them.

In Table 4 where the relationship between management nationality and the CFW index is examined with percentages of the work force in the factories in which our sample of workers are employed who are of Eastern Nigerian origin, i. e. non-Yoruba, is held constant, it can be seen that the relationship between management nationality and commitment to and satisfaction with industrial employment persists for all the categories of the control variable. It, however, increases in strength

TABLE 3. RELATIONSHIP BETWEEN MANAGEMENT NATIONALITY AND WORK COMMITMENT WITH FACTORY PRODUCTS HELD CONSTANT
Among Workers in Factories making HEAVY PRODUCTS

	Work commitment index				
	High	Medium	Low	Total	N
Some-mostly Nigerian	23.9%	43.3%	32.8%	100%	67
Non-Nigerian	17.3	33.3	49.4	100	81
Total	—	—	—	—	148
	$X^2=4.143$	Sign. Level 0.126		Gamma=0.261	

Among Workers in Factories making LIGHT PRODUCTS

	High	Medium	Low	Total	N
	Some-mostly Nigerian	20.6%	50.8%	28.6%	100%
Non-Nigerian	22.2	22.2	55.6	100	18
Total	—	—	—	—	81
	$X^2=5.537$	Sign. Level 0.063		Gamma=0.297	

Among Workers in Factories making MEDIUM PRODUCTS

	High	Medium	Low	Total	N
	Some-mostly Nigerian	48.5%	32.4%	19.1%	100%
Non-Nigerian	25.5	37.3	37.3	100	51
Total	—	—	—	—	119
	$X^2=7.770^*$	Sign. Level 0.021		Gamma=0.409	

as one moves from factories with "Low Percent Eastern Nigerian Workers" (Gamma = 0.145); to factories with "High Percent Eastern Nigerian Workers" (Gamma = 0.472).

As we expected the nationality of factory managers matters most in factories where the problem of social communication and understanding is complicated by the stynic heterogeneity of the labour force. Working in factories that have "High Percent Eastern Nigerian Workers" in addition to their being under Non-Nigerian management exposes the members of our sample of Yoruba workers to two sources of socio-cultural discontinuities — a discontinuity in authority and a discontinuity in peer group membership — which it is submitted are at the bottom of the low level of commitment to and satisfaction with industrial employment revealed especially in the second sub-table of Table 4. Among workers in factories with *high percent Eastern Nigerian workers* the percentage distribution of the workers, under *some-mostly Nigerian* management, on the CFW index — 40.8%, high;

TABLE 4. RELATIONSHIP BETWEEN MANAGEMENT NATIONALITY AND WORK COMMITMENT WITH PERCENT WORKERS EASTERN NIGERIANS HELD CONSTANT

Among Workers in factories with LOW PERCENT WEST NIGERIAN WORKERS

	Work commitment index				N
	High	Medium	Low	Total	
Some-mostly Nigerian	21.1%	51.6%	27.4%	100%	95
Non-Nigerian	26.8	28.0	45.1	100	82
Total	—	—	—	—	177
	X ² =10.507**		Sign. Level 0.005	Gamma 0.145	

Among Workers in factories with HIGH PERCENT EAST NIGERIAN WORKERS

	High	Medium	Low	Total	N
	Some-mostly Nigerian	40.8%	33.0%	33.0%	110%
Non-Nigerian	13.2	39.7	47.1	100	68
Total	—	—	—	—	171
	X ² =16.090**		Sign. Level 0.000	Gamma=0.472	

33.0%, medium; and 26.2%, low; reflects a much higher level of commitment and satisfaction than the distribution on the index of workers in this type of factories but under *non-Nigerian* management. Under the latter form of management the distribution of workers on the high, medium and low points on the CFW index is 13.2%, 39.7% and 47.1%.

We also see in Table 4 that in factories with "Low Percent Eastern Nigerian Workers", where we expect the problems of social communication between workers and managers and between workers themselves to be minimal, we expect and in fact obtain a weak relationship between management nationality and commitment to factory work. In the first sub-table of Table 4 it seems that the workers in our sample are bothered by other problems to worry or care too much about the nationality of their managers. It must be pointed out that even under these conditions that *some-mostly Nigerian* management is still superior to *non-Nigerian* management in terms of the level of CFW experienced by our sample workers.

Factory size, management nationality and work commitment

Additional support for our interpretation of the relationship found between management nationality and commitment to and satisfaction with industrial employment as a function of the relative efficiency in social communication and understanding existing between the workers in our sample and the members of the managerial personnel under whom they are employed is provided at Table 5. There the relationship between management nationality and the CFW index is examined

with the size of factories approximately held constant. Among workers in *small factories* the relationship between management, nationality and the CFW index is not statistically significant. In the *medium factories* the obtained relationship between the two variables is only slightly stronger than the one obtained in *small factories*. Here, the relationship is significant at the 0.104 level and achieves a gamma strength of 0.282. In the *large factories*, however, the relationship between management nationality and CFW is significant at the 0.013 level and with a gamma strength of 0.438 it is slightly stronger than the original relationship obtained between the two variables.

Styles of supervision, management nationality and work commitment

Some evidence in support of the interpretation of the relationship between management nationality and the CFW index in terms of the perspective which leads one to view difficulties in management-labour relationships as problems related to styles of supervision will soon be presented. Before that, it is necessary to discuss briefly the approach to the study of the effect of the supervisory behaviour which as we indicated above is particularly pertinent to the present study. The approach in question is the one based on a framework of procedure and methods developed over the years in the Ohio State University Leadership Studies.

Some of these procedures and methods were employed by Fleishman and Harris in an investigation they reported in 1962. Dissatisfied with previous studies of the effect of supervisory styles on employee attitudes and behaviour which are generally based on the assumptions (1) that there is "one best method" of supervision and (2) that there is a linear relationship between the "one best method" of supervision and employee attitudes and behaviour, Fleishman and Harris (1962) set out to answer two novel types of questions. First, they wanted to know if there were critical levels of "considerate" form of supervision and/or supervision which stresses "Structure Initiating" for employees beyond which it did or did not make any difference in the level of employee satisfaction or dissatisfaction. Secondly, these investigators wanted to determine the interaction effects of different combinations of Considerate and Structure Initiating styles of supervision on employee attitudes. Fleishman and Harris found that employee dissatisfaction is highest among workers whose supervisors combine low Consideration with high Structure whatever the amount of Consideration.

From the descriptive accounts of management-worker relationship to be found in the works of such acute observers of the industrial scene in Nigeria like Yesufu (1962), Callaway (1964) and Onyemelukwe (1966) it can be inferred that Nigerian managers generally tend to combine Structure and Consideration in ways likely to promote high worker commitment than do non-Nigerian managers. For instance, in many large non-patrimonial establishments Nigerian managers in exchange for influence with "prominent outsiders" or solidary collectivities act as protector of some of their employees toward whom other managers might be disposed to initiate too much Structure. In contrast to the rather traditional mixture of these two styles of supervision practised in factories with Nigerian managers, some of the external evidence we have about the style of supervision in factories where the management is *non-Nigerian* suggests that the relationship between management and labour in these concerns is tall on Structure and short on Consideration.

TABLE 5. RELATIONSHIP BETWEEN MANAGEMENT NATIONALITY & WORK COMMITMENT WITH FACTORY SIZE HELD CONSTANT

Among Workers in SMALL FACTORIES

	Work commitment index				
	High	Medium	Low	Total	N
Some-mostly Nigerian	23.3%	40.0%	36.7%	100%	30
Non-Nigerian	18.6	37.2	44.2	100	43
Total	—	—	—	—	73
	$X^2=0.471$	Not significant		$\text{Gamma}=0.136$	

	High	Medium	Low	Total	N
	Some-mostly Nigerian	29.8%	44.7%	25.5%	100%
Non-Nigerian	22.2	33.3	44.4	100	81
Total	—	—	—	—	128
	$X^2=4.539$	Sign. Level=0.104		$\text{Gamma}=0.282$	

Among Workers in LARGE FACTORIES

	High	Medium	Low	Total	N
	Some-mostly Nigerian	33.9%	41.3%	24.8%	100%
Non-Nigerian	19.2	26.9	53.8	100	26
Total	—	—	—	—	147
	$XX^2=8.648^*$	Sign. Level 0.013		$\text{Gamma}=0.438$	

From Table 6 we can see that there is some statistical support for the interpretation of the original relationship between management nationality and the CFW index as a function of the different combinations of Structure and Consideration experienced by the workers in our sample in their different workplaces.

On the assumption that in factories where the primary technique of production control is bureaucratic, formal and impersonal, the rules and prerogatives of authority are quite separated from the person and personality of those who exercise authority, it is expected that the effect of management nationality of the CFW of the workers would be less than in factories where the technique of production control is non-bureaucratic, informal and personal. The latter type of production control leaves a lot of room for managers to adopt different combinations of nations of Structure and Consideration in their exercise of authority employees. Where the primary technique of production control is bureaucratic, formal and impersonal, the emphasis in management — worker relationship will, irrespective of management nationality, tend to be mainly on "structure".

The reaction of workers to this form of supervisory style would tend to be more or less the same. Where the technique of production control allows for the expression of socio-culturally determined differences in interpersonal behaviour, it is our expectation that Nigerian managers, for many of the reasons discussed above, are more likely than their expatriate counterparts to achieve a mixture of supervisory styles which will reflect itself in higher levels of CFW among workers under them than among those under non-Nigerian managers.

The results presented in Table 6 show that the preceding expectation is borne out. Although Nigerian management is associated with a higher degree of CFW among workers in factories where either *bureaucratic control technique* or *non-bureaucratic control technique* is used the relationship between management nationality and the CFW index is, at a gamma coefficient of 0.400, higher among workers in factories where non-bureaucratic control technique is used than among workers in factories where the control technique in use is bureaucratic. The gamma coefficient measuring the strength of association between management nationality and the CFW index among the latter category of workers, at 0.256, is even less than the original relationship (gamma 0.312) between the two variables suggesting that in factories where the primary technique of production control is bureaucratic, workers are probably more concerned with the informality and impersonality which characterizes management-labour relationship than with the nationality of the managers.

Perceived goodness of treatment, management nationality and work commitment

So far, the attempt to establish the validity of the original relationship between management nationality and the CFW index and to specify the behaviour of this relationship under varying categories of a number of their variables has been confined to the use of relatively objective variables in the employment situation as test factors will be presented. In search of support for the interpretation of the relationship between management nationality and the CFW index from the perspective which analysis management in terms of styles of authority exercised over the working lives of the employees an index of "*Perceived goodness of treatment by supervisors*" was used as a test factor. This index is constructed from three interview items intended to tap the degree to which workers perceived their interaction with their occupational role superiors as characterized by the display of helpfulness, consideration and fairness by the latter.

We expect the strength of the effect of management nationality on commitment to and satisfaction with industrial employment to vary inversely as the amount of "*Good treatment*" perceived by the workers in our sample. Among workers who perceive a *low* level of "*Good treatment*" it is expected that the relationship between management nationality and the CFW index will be relatively very strong and, conversely, among workers who perceive a *High* level of "*Good treatment*" it is expected that the relationship between the two variables will be very weak.

Table 7 shows that the foregoing expectations are confirmed. The strength of association between management nationality and the CFW index declines increasingly from a gamma coefficient of 0.417 among workers who are *low* on "*perceived goodness of treatment by supervisors*" to 0.295 and 0.088 respectively among workers who are *medium* and *high* on this variable. Assuming that the psycholo-

TABLE 6. RELATIONSHIP BETWEEN MANAGEMENT NATIONALITY AND WORK COMMITMENT WITH PRIMARY TECHNIQUE OF PRODUCTION CONTROL HELD CONSTANT

Among Workers in Factories where NON-BUREAUCRATIC CONTROL TECHNIQUE is used

	Work commitment index				
	High	Medium	Low	Total	N
Some-mostly Nigerian	41.7%	37.5%	20.8%	100%	72
Non-Nigerian	26.8	25.0	48.2	100	56
Total	—	—	—	—	128
	$X^2=10.718^{**}$		Sign. Level 0.005		Gamma=0.400

Among Workers in Factories where BUREAUCRATIC CONTROL TECHNIQUE is used

	High	Medium	Low	Total	N
	Some-mostly Nigerian	25.4%	44.4%	30.2%	100%
Non-Nigerian	17.0	38.3	44.7	100	94
Total	—	—	—	—	220
	$X^2=5.340$		Sign. Level 0.070		Gamma=0.256

gical state tapped by the "perceived goodness of treatment by supervisors" index is a response to the treatment experienced in the factories whose management nationality is crossclassified with the workers CFW index, the results shown in Table 7 seem to indicate that where the environment is considered noxious, the presence of familiar authority figures is perceived by the workers as reassuring. Where supervisors are perceived as lacking in consideration, helpfulness and fairness, the presence of *some-mostly Nigerian* managers is particularly strong in inducing *high* CFW and decreasing in *low* CFW as can be seen from the following distribution of the workers in our sample on the CFW index. Among workers who perceive *low* "good treatment" at the hand of their supervisors 31.7% of those of them under *some-mostly Nigerian* management as against only 13.0% of those under *non-Nigerian* management are on the *high* point on the CFW index while at the *low* end of the index the percentage distribution of workers under the types of management are 31.7% and 53.7% respectively.

The last sub-table of Table 7 gives some indication that under certain conditions *non-Nigerian* management may in fact compete very strongly with *some-mostly Nigerian* management in terms of ability to induce CFW. But as the sub-table now stands the overall superiority of *some-mostly Nigerian* management over *non-Nigerian* management persists though very weakly among workers who are *high* on "perceived goodness of treatment". At first blush, the change in the percentage distribution of workers on the high, medium and low points of the CFW from 28.6%, 44.9% and 26.5% respectively under *some-mostly Nigerian* management

to 36.7%, 20.0% and 43.3% under *non-Nigerian* management looks tantalizingly like a complete "wash-out" effect. A close look at the direction of the gamma coefficient suggests that whatever "wash-out" effect that might be operating here is not complete. Although the gamma coefficient indicating the strength of the relationship between management nationality is a very poor (0.088) it is still positive. If there has been a complete "wash-out" effect the gamma coefficient would have been negative.

— Be that as it may, the drastic decline in the strength of relationship between management nationality and the CFW index among workers who are *high* on *perceived goodness of treatment* by their supervisors and the consequent weakening of the supervisors and the consequent weakening of the superiority of *some-mostly Nigerian* management suggests that generally low level of CFW which on the average is found to be associated with *non-Nigerian* management has nothing to do with the fact that they are biologically or racially different from the Nigerian managers. But probably because they are members of different cultures *non-Nigerian*

TABLE 7. RELATIONSHIP BETWEEN MANAGEMENT NATIONALITY AND WORK COMMITMENT WITH PERCEIVED GOODNESS OF TREATMENT BY SUPERVISORS HELD CONSTANT

<i>Among Workers LOW on PERCEIVED GOODNESS OF TREATMENT</i>					
	Work commitment index				N
	High	Medium	Low	Total	
Some-mostly Nigerian	31.7%	36.5%	31.7%	100%	49
Non-Nigerian	13.0	33.3	53.7	100	54
Total	—	—	—	—	103
$X^2=7.876^*$		Sign. Level 0.020		Gama=0.417	
<i>Among Workers MEDIUM on PERCEIVED GOODNESS OF TREATMENT</i>					
	Work commitment index				N
	High	Medium	Low	Total	
Some-mostly Nigerian	30.9%	44.4	24.7%	100%	81
Non-Nigerian	21.7	35.0	43.3	100	60
Total	—	—	—	—	141
<i>Among Workers HIGH on PERCEIVED GOODNESS OF TREATMENT</i>					
	Work commitment index				N
	High	Medium	Low	Total	
Some-mostly Nigerian	28.6%	44.9%	26.5%	100%	49
Non-Nigerian	36.7	20.0	43.3	100	30
Total	—	—	—	—	79
$X^2=5.236$		Sign. Level		Gamma=0.088	

managers do not find it easy to behave towards their workers in some ways that their Nigerian counterpart do. If *non-Nigerian* managers can learn to behave in these same ways their workers the result in the third-sub-table of Table 7 suggests that they too could achieve the same success in terms of inducing higher level of CFW among their workers.

The implications of the foregoing and other findings in this study for policies of international economic and other forms of cooperation are interesting but do not need to be drawn out explicitly in the present study aimed largely to make empirical and theoretical contributions to our understanding of the determinants of commitment to and satisfaction with industrial employment in a developing nation

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BRAIN DRAIN AND STUDENTS FROM LESS DEVELOPED AND DEVELOPING COUNTRIES*

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Abstract

The study examined empirically the attitudes of 1,400 international students toward returning to the country of origin upon completion of their studies and training in the United States, and the effect of these attitudes on the loss of professional skills by the country of origin. The sample represented 31 less developed and developed countries of Asia, Africa, and Latin America based on Brian J. L. Berry's "technological and demographic scales." The sample was drawn from 20 American universities and colleges with a minimum enrollment of 400 international students. The investigation was needed both for the development of the scientific fund of knowledge and as some objective standard by which to assess the frequently stated notion that impoverished nations have been robbed of their talent and stripped of their human resources. The research evaluated the concept of "gain" or "loss", inherent in the international exchange of scholars, researchers, and students, which is ambiguously referred to as the "brain drain." It may more appropriately be considered, however, as "brain gain" or "brain exchange."

In general, most international students do not plan to return immediately to their home countries upon completion of their studies and training in the United States (41 percent planned to return home). However, most alien students do plan to return eventually after obtaining practical training and experiences in the United States (after 18 months subsequent to their graduation). Most of the African and Latin American students plan to return to their home countries. It is the Asian students, specifically the students from the developed countries, who wish to remain in the United States permanently. Asian students in fields where there is employment opportunity in the home country plan to return. This group includes doctors, engineers, agriculturalists, and scientists. Asian students in fields where employment opportunities are limited in the home country but more plentiful in the United States are more likely to plan to remain in the United States permanently. These students are mainly in the social sciences. Indigenous univer-

* The data reported here are taken from Man Singh Das, «Effect of Foreign Students' Attitudes Toward Returning to the Country of Origin on the National Loss of Professional Skills,» unpublished Ph. D. dissertation, Oklahoma State University, 1969.

sities in the developed countries of Asia may tend to produce surplus graduates that preclude the return of their nationals educated in the United States. That is, their sluggish economies are unable to absorb some kinds of graduates. The phenomenon of "brain drain" or "brain gain" or "brain exchange" varies from country to country, region to region, continent to continent, and less developed to developed countries.

The loss of highly qualified and trained manpower by the less developed to the more developed parts of the world has, in recent years, attracted national as well as international attention.¹ As in the past, politicians and education continue to protest to the effect that impoverished nations have been robbed of their talent and stripped of their human resources. There is increasing concern in many of the less developed and developing nations of Asia, Africa and Latin America that their promising students, scholars and researchers who go abroad fail to return. The original purpose of those who go to foreign countries is to undertake graduate studies and specialized training, but subsequent to their graduation they often postpone their return and decide to accept jobs with attractive salaries in the host country. A similar criticism of international students is commonly expressed in the United States that these students do not go back to their home countries. The purpose in this study was to examine empirically what these foreign students are actually planning to do on completion of their studies in the United States, and the effect of these attitudes on the loss of professional skills by the country of origin.

Hypotheses

The main assumption underlying this study follows an age-long tendency of men to migrate from one place to another in order to improve their conditions of life. Thus students who go to the more advanced countries with the declared intention of higher education and training will return to their countries subsequent to their graduation abroad only if they are convinced that the country of origin can offer them comparable professional opportunities. Otherwise they are likely to postpone their return. Those who remain in advanced countries for a longer period of time may find it more difficult to return home as they become accustomed to a higher standard of living. Their new basis for differential comparison of socio-economic rewards may tend to rigidify with the passage of time. The following hypotheses were formulated under the main assumption of this study:

H₁: Students who have studied in the United States for two years or more are less likely to plan to return to their home countries than those who have spent a shorter period of time.

H₂: Younger students are less likely to remain in the United States subsequent to their graduation than are the older students.

¹ See: The Asian Student, 24 February 1968, p. 3; Tulsa Daily World, 19 November 1967; The Asian Student, 5 October 1968, p. 1; The Asian Student, 22 February 1969, p. 3; Migration of Indian Engineers, Scientists and Physicians to the United States. New Delhi, India, Institute of Applied Manpower Research, 1968; U. S. Congress, House Committee on Government Operations, The Brain Drain of Scientists, Engineers and Physicians from the Developing Countries into the United States, Hearings, before a Subcommittee of the Committee on Government Operation, House of Representatives, 90th Cong., 2d sess., 1968.

H₃: Students from the less developed nations are more likely to return to their countries on completion of their studies than students from the developing nations.

H₄: Privately supported students whose wives and children are at home are more likely to return home subsequent to their graduation than those whose wives and children are living with them in the United States.

H₅: Students from lower socio-economic classes are more likely to plan to stay in the United States than students from upper socio-economic classes.

H₆: Privately supported students who have resigned their jobs in their countries are less likely to plan to return home than those granted leaves by their employers.

H₇: Students whose home countries provide them suitable employment opportunities are less likely to plan to stay in the United States than those students whose countries do not provide employment opportunities.

Sampling and procedures

The sample consisted of 1,400 male foreign students from less developed and developing countries of Asia, Africa and Latin America. These students were either enrolled in American universities and colleges during the fall semester of 1968-69, or were on F-1 (student) visas but had secured full-time jobs as a part of their practical training. The sample was drawn from twenty American universities and colleges with a minimum enrollment of 400 international students based on the annual census report of the Institute of International Education.²

The sample of 1,400 foreign students represented 31 less developed and developing countries of Asia, Africa and Latin America based on Berry's³ "technological and demographic scales." The scales, distinguishing highly developed countries from less developed countries, were the result of an inductive study of regionalization of economic development.

A questionnaire was pretested on 174 foreign students at Oklahoma State University in May 1968, and was mailed with a stamped return envelope to 1,500 foreign students between October and November 1968. At the same time another 155 questionnaires were sent to international students' organizations at two campuses where directories were not available.

After two mailed reminders to non-respondents, by January 1969, we received 1,293 or 86 percent returns out of a total of 1,500 questionnaires that we mailed to individual foreign students. Seventy-nine, or 5 percent of the questionnaires, came back undelivered as students had moved to some other places with no forwarding addresses. Three students or 0.20 percent returned blank questionnaires. Sixteen questionnaires or 1 percent did not have complete information. One hundred eight students, or 7 percent did not respond at all. Out of another 155 questionnaires mailed to international students' organizations at two campuses, we received 107 returns or 69 percent. A total of 1,400 returns or 85 percent, out of 1,655 questionnaires, were received that we were able to use for statistical analysis.

² Open Doors, New York, Institute of International Education, 1968, p. 4.

³ Brain J. L. Berry — «An Inductive Approach to Regionalization of Economic Development,» in Norton Ginsburg (ed), *Essays on Geography and Economic Development*, Chicago, University of Chicago Press, 1960, pp. 78-107.

Findings

The null form of Hypotheses One through Seven were tested for meaningful statistical associations. The chi-square test was used to reject or accept the null hypothesis of no difference between the proportions of those who plan to stay and those who plan to return. Data presented in Tables I through VII indicate that these two groups do differ significantly.

Table I shows that a large proportion of students, 65 percent, who have studied in the United States for less than two years plan to return to their countries whereas 35 percent wish to remain in the United States. Conversely, 33 percent of the students who have spent a longer time plan to return to their homes and 67 percent wish to remain in the United States. One must conclude that the period of time spent in the United States significantly affects the decision-making process of students.

Table II reveals that 66 percent of the students under 25 years of age plan to return to their homes whereas 34 percent of the students desire to remain in the United States subsequent to their graduation. On the other hand, 55 percent of the older students want to remain in the United States and 45 percent plan to return to their home countries. Age groupings and post-education plans are significantly associated.

Table III suggests that 51 percent of the students from the developed countries plan to return to their homes and 49 percent wish to remain in the United States. From the less developed countries, 71 percent want to return to their homes and only 29 percent plan to stay in the United States. The likelihood of return is significantly associated with the developmental state of the respondents' country of origin.

TABLE I. YEARS OF RESIDENCE AND POST-EDUCATION PLANS OF FOREIGN STUDENTS IN THE UNITED STATES*

Plans	In U. S. under 2 years		In U. S. over 2 years		Total
	No.	%	No.	%	
Return home immediately	515	65	55	33	570
Stay in U. S. permanently	282	35	110	67	392
Total	797	100	165	100	962

* 438 students had other plans such as temporary training period in the United States, tentative plans to go to other countries, or undecided relative to post-education plans.

$X^2=55.41$

df=1

$p<0.001$

Result : Reject the null hypothesis of no difference since $x^2_{cal}>X^2_{tab}$ at 0.001 level of significance.

Pearson's Contingency Coefficient : $C=0.233$

TABLE II. FOREIGN STUDENTS AND POST-EDUCATION PLANS BY AGE GROUP

Plans	Under 25 years		Over 25 years		Total
	No.	%	No.	%	
Return home immediately	424	66	146	45	570
Stay in U. S. permanently	216	34	176	55	392
Total	640	100	322	100	962
$X^2=38.79$		df=1		p<0.001	

Result: Reject the null hypothesis of no difference since $X^2_{cal} > X^2_{tab}$ at 0.001 level of significance.

Pearson's Contingency Coefficient: C=0.197

TABLE III. STUDENTS FROM DEVELOPED AND LESS DEVELOPED COUNTRIES AND POST-EDUCATION PLANS

Plans	Developed Countries		Less Developed Countries		Total
	No.	%	No.	%	
Return home immediately	289	51	281	71	570
Stay in U. S. permanently	276	49	116	29	392
Total	565	100	397	100	962
$X^2=37.21$		df=1		p<0.001	

Result: Reject the null hypothesis of no difference since the $X^2_{cal} > X^2_{tab}$ at 0.001 level of significance

Pearson's Contingency Coefficient: C=0.193

Table IV indicates that 64 percent of the married students whose wives and children are living in their home countries plan to return to their homes subsequent to their graduation and 36 percent want to remain in the United States. Married students whose wives and children lived with them in the United States are more home culture oriented than home culture oriented. Seventy-two percent plan to remain in the United States and 28 percent wish to return to their homes. The decision to return or remain is definitely related to the familial residence pattern.

Table V suggests that 55 percent of the students whose parents' annual income is under \$5,000 plan to return to their homes while 45 percent want to remain in the United States. On the other hand, 64 percent of the students whose parents' annual income is over \$5,000 plan to return to their homes and only 36 percent

TABLE IV. RESIDENCE OF PRIVATELY SUPPORTED STUDENTS' WIVES AND POST-EDUCATION PLANS

Plans	Residence Home Country		Residence United States		Total
	No.	%	No.	%	
Return home immediately	97	64	24	28	121
Stay in U. S. permanently	54	36	63	72	117
Total	151	100	87	100	238
$X^2=29.67$		df=1		$p<0.001$	

Result: Reject the null hypothesis of no difference since $X^2_{cal} > X^2_{tab}$ at 0.001 level of significance.

Pearson's Contingency Coefficient: $C=0.333$

TABLE V. PARTENTAL INCOME CATEGORIES AND POST-EDUCATION PLANS OF FOREIGN STUDENTS

Plans	\$0-\$4,999		\$5,000 and over		Total
	No.	%	No.	%	
Return home immediately	270	55	291	64	570
Stay in U. S. permanently	228	45	164	36	392
Total	507	100	455	100	962
$X^2=7.91$		df=1		$p<0.01$	

Result: Reject the null hypothesis of no difference since $X^2_{cal} > X^2_{tab}$ at 0.01 level of significance.

Pearson's Contingency of Coefficient: $C=0.090$

wish to stay in the United States. Low parental income does tend to inhibit the probability of return. The decision to stay, on the part of students from low income families, is probably augmented by the more favorably perceived economic opportunity structure of the United States.

Table VI shows that 20 percent of the privately supported students who resigned their jobs prior to their coming to the United States wish to return to their homes. Eighty percent of this category of students plan to remain in the host country. Conversely, of the students who were granted leaves, 84 percent plan to return to their homes and 16 percent want to remain in the United States. The promised continuity of employment does significantly affect the decision to return. In contrast, the severance occasioned by resignation of employment prior to leav-

TABLE VI. LEAVE STATUS OF EMPLOYED STUDENTS PRIOR TO THEIR COMING TO THE UNITED STATES AND POST-EDUCATION PLANS

Plans	Resigned from job		Granted leaves		Total
	No.	%	No.	%	
Return home immediately	25	20	132	84	157
Stay in U. S. permanently	100	80	25	16	125
Total	125	100	157	100	282
$X^2=115.78$		df=1		p<0.001	

Result: Reject the null hypothesis of no difference since $X^2_{cal} > X^2_{tab}$ at 0.001 level of significance.

Pearson's Contingency Coefficient: C=0.539

TABLE VII. PERCEIVED EMPLOYMENT OPPORTUNITIES IN HOME COUNTRIES AND POST-EDUCATION PLANS

Plans	Better Opportunities		Poor Opportunities		Total
	No.	%	No.	%	
Return home immediately	560	73	10	5	570
Stay in U. S. permanently	209	27	183	95	392
Total	769	100	193	100	962
$X^2=292.36$		df>1		p<0.0001	

Result: Reject the null hypothesis of no difference since $X^2_{cal} > X^2_{tab}$ at 0.001 level of significance.

Pearson's Contingency Coefficient: C=0.483

ing their home country does result in continued disassociation implicit in the decision to remain in the United States.

Table VII indicates the importance of perceptual differentials in employment opportunity. Seventy-three percent of the students who perceived that their countries will provide them better employment opportunities plan to return to their homes subsequent to graduation while only 27 percent wish to remain in the United States. Of the students whose countries had fewer employment opportunities, 95 percent desire to stay in the United States, and 5 percent plan to return to their homes. The perceived opportunity structure does significantly orient the stay-return decision.

Summary and discussion

The study was primarily concerned with the attitudes of international students toward returning to their countries subsequent to their graduation in the United States. Furthermore, we wanted to explore the presumed "brain drain" experienced by various developing nations, most especially Asian countries.

(1) It was assumed that foreign students who have stayed in the United States for two years or more would be more likely to remain. The empirical findings supported this hypothesis. When students first arrived in the United States, 61 percent stated their intention of returning home immediately after their graduation. But having lived in the United States for some months, the proportion of students who still planned to return home dropped to 41 percent. Most of the Asian, African and Latin American societies are primarily agrarian and exhibit a familial system of close-knit family ties. This strong familial identification was evidenced in their early pro-return attitude. However, after they live in the United States for several months they become assimilated in the host culture and are keenly aware of differential rewards of an affluent society. Moreover, the emergence of "the revolution of expectations and anticipations" commensurate with new statuses and the sensed deprivation that would attend many of the students, especially from the developed countries, curtailed their early desire to return to their home countries. In other words, their new self-concept would not be fulfilled by meaningful rewards as a result of their resocialization in the United States. These students do not want to take a risk by returning home and be without a job,⁴ or after receiving a master's degree in engineering, to be confined to a clerical-level employment.

(2) A second presumption was that younger students (students under the age of 25) are more likely to return to their home countries than the older students. The findings supported this hypothesis. It may be reasonably argued, using the classical literature from the "Polish Peasant",⁵ that a potent factor in the return of many of the international students is the emotional ties they have developed through years of socialization with their parents, relatives, and cultural institutions within their home society. The concept of territoriality, the longing for the soil of one's birth, also has historical precedence in sociological literature. Again, the returning students tended to be younger in age and had not been away from their families for as long a period as the non-returning students. This does not mean that the family ties are lacking among the non-returning students, but these ties were far from being a dominant factor in their deliberations about return. It was as though they had outgrown any emotional dependency which they might have had on their parents and close relatives.⁶ It may also be due to the fact that the younger students were most often single and wanted to get married in their home countries, and therefore planned to return. Most of the younger students hoped to accept prestigious government jobs on their return and felt it was necessary for them to return home before they reached the age of 35 years. In Asian and African countries,

⁴ See: Indian Witness, 25 January 1968; China News, 3 February 1968; and Hong Kong Standard, 8 February 1968.

⁵ William I. Thomas and Florian Znaniecki — *The Polish Peasant in Europe and America*, New York, A. A. Knopf, 1927.

⁶ Iraj Valipour — "Comparison of Returning and Non-Returning Iranian Students in the United States," Ph D dissertation, Columbia University, 1961, pp 116-117

inheriting the British civil administration system, most of the governmental positions are offered to younger people who are less than 35 years of age. The "socialization into independence" characterized the older students while the younger students tended to be more idealistically bound to their own native culture.

(3) It was hypothesized that students from the less developed nations are more likely to return to their countries than the students from the developed countries. Our findings supported this assumption. The data revealed that most of the students from the less developed countries wanted to return to their home countries. A very small proportion, 12 percent, of the students from these regions wanted to remain in the United States. Most of the students who wanted to stay in the United States were from the Asian continent. A similar conclusion is drawn from the annual report of the Immigration and Naturalization Service.⁷

Since most of the students from the less developed countries return to their homes, the allegation of "brain drain" seems tenuous. Most of the students from these countries are sponsored by their governments which require their return. Also, these students have very few unemployment problems in their home countries. They can easily be absorbed in their growing economies. The ones who decided to settle down permanently in the United States were those who were privately supported and those who specialized in subject matter areas of little functional consequence to their transitional societies. Examples of non-functional disciplines, from the traditional economic developmental model, would be humanities, social sciences, and such highly specialized areas as nuclear physics. Again, the posited "brain drain" thesis overlooks the fact that students who are increasingly immigrating to the United States every year are in large proportion from the developed countries and specifically from the Asian continent. The findings reveal that the students who wanted to remain in the United States were those who were unemployed in their home countries, those who were dissatisfied with their jobs and salaries, and those who had great difficulty in getting their travel documents. A large proportion of the students who decided to remain in the United States were from China, India, South Korea, Philippines, Iran, and Pakistan. All these countries were classified as the developed countries and are facing unemployment problems. Most of the good government jobs are filled in these countries and there are few places for the newer graduates. In some of these countries, indigenous universities already produce more highly qualified and technically-trained people in some occupations than the national economies can absorb now or in the foreseeable future. They therefore lose people to the growing immigration stream.

(4) It was assumed that privately supported students whose wives and children are at home are more likely to return to their countries than those whose wives and children are living with them in the United States. The responses supported this hypothesis. Obviously, many of the international students who are married and particularly if their wives and children are living with them in the United States, have added incentives to remain in this country, more so if they are married to American citizens. Their American wives may be reluctant to live in a non-Western country still lacking in many amenities of modern life. And even if the wives-

⁷ U. S. Department of Justice, Immigration and Naturalization Service, Annual Indicator of the In-Migration into the United States of Aliens in Professional and Related Occupations, Fiscal Year 1967, Washington, D. C., Government Printing Office, 1968, Chart 3

are favorably inclined to accompany their husbands back to their home countries, the husbands are still faced with the added burden of helping their wives adjust to an unfamiliar culture. Presence of children might further complicate the problem of returning for married students. Sudden transfer of young children to a new cultural setting can give rise to many educational and adjustment problems which some parents may face with reluctance. Students whose wives and children are at home may want to return home because of strong family ties. Also, they may not want to bring their wife and children to the United States due to the relatively less-disciplined patterns of American adolescents. Many of the normative styles current in the United States, such as dating freedom and filiarchial tendencies, are most incongruous with the family patterns of Asia.

(5) The hypothesis that students from lower socio-economic classes are more likely to stay in the United States than those from upper socio-economic classes was supported by the findings. It is obvious that people migrate to improve their conditions of life. Because of the unemployment situation in many of the developed countries, ambitious people from lower socio-economic classes see considerably more opportunity in the United States to raise their standard of living. For these students, returning home may involve risk-taking incompatible with their new Western norms and values. Conversely, students from upper socio-economic classes, due to their family names and connections, may have no problem in finding a suitable job. Most of the students who reported the upper income category for their parents may afford to be without a job in their countries since parents could provide them an acceptable standard of living. On the other hand, students from the lower socio-economic level may have to depend on their own resources.

(6) It was hypothesized that privately supported students, those resigning from their jobs in their home countries, are more likely to remain in the United States than those granted leaves by their employers. This was found to be true. Students who said that they resigned their jobs reported that they were dissatisfied with their jobs and salaries, and they felt there was little hope for upward mobility in their home countries. Since they perceived a better opportunity to raise their standard of living by remaining in the United States, they felt they should stay here and continue the severance begun with their pre-migration resignation. On the other hand, those who were granted leaves by their employers had good jobs and were earning attractive salaries. Also, they had some moral obligation toward their employers.

(7) The hypothesis that students whose home countries provide them employment opportunities are more likely to return to their home countries than those students whose countries do not provide employment opportunities was supported by the findings. It is true that most of the students who decide to stay in the United States are from the developed countries of Asia and Latin America. Students from African countries return to their homes where the utilization of specialized skills is commensurate with the functional requirements of a developing social milieu. Even if they have some problem at home they may not wish to live in the United States due to discrimination and prejudice exhibited by Americans, and African students are likely to experience humiliations because of their conspicuous racial visibility and attending discriminatory practices institutionalized in the United States host culture. This may suggest that students in developed countries feel greater economic restrictions at home, a push factor, whereas students

from less developed countries may perceive greater economic opportunities at home, a pull factor, which may attract these students to their home countries.

To evaluate the effect of foreign students' attitudes toward returning to the country of origin on the national loss of professional skills, one has to consider the phenomenon popularly known as "brain drain." The concept has been described as a loaded and emotional phrase.

If the migration of persons possessing certain minimum levels of qualifications and skills from one country to another is not bad for the individuals concerned and does not retard the economic development of their home countries, the authors suggest that the use of the phrase "brain drain" is rather ambiguous and misleading. The international migration of talents and skills (that is, "the trained brain"), and even of the students (the students coming for training — "the untrained brain") going to the highly developed countries for advanced education and later remaining in those countries subsequent to their graduation, may be eufunctional to both the sending and receiving countries as well as the individuals concerned. This positive function of the phenomenon may more appropriately be identified as "brain exchange."

However, if the migration of persons as stated above is disfunctional for the sending country in the sense it retards the development of a society, but it is eufunctional for the receiving country as well as the individuals concerned, the phenomenon may appropriately be characterized as "brain drain."

The research findings and the annual report of the Immigration and Naturalization Service, cited in the preceding pages, show that most of the scholars, researchers and students who come to the United States for advanced training from the less developed countries of Asia, Africa and Latin America return to their homes subsequent to their graduation.⁸ Only a very small proportion of Asian students from the less developed countries decide to stay in the United States permanently. The findings may suggest that at present there is no problem of "brain drain" for the less developed countries. This popular assumption needs further empirical study to include an analysis of the development potential of the individual, the effect of his emigration on the country of origin, and the effect on the country of settlement. In a shrinking world, perhaps the fulfilling life of the individual should be assigned the top priority. Theoretically, the trained individuals will increasingly make contributions that follow human-development orientations rather than narrow nationalistic orientations.

Under optimum economic and political conditions, a case of "brain exchange" rather than "brain drain" will occur in the developed countries. Since the economies of the developed countries cannot absorb all manpower, some are more likely to emigrate. Conversely, if governments want to control the emigration of certain categories of personnel, they can, and in such cases the problem of "brain drain" is less likely to occur.

No evidence has been found where the high-level manpower is in shortage in the developed countries and that their development programs have been negatively affected due to emigration. Quite the contrary, these countries have a surplus of human resources in certain categories which cannot be absorbed in their sluggish economies. It is the politicians and educators in the United States and abroad who

⁸ U. S. Department of Justice, *ibid.*

complain that the developed countries are being deprived of their high-level manpower.

It is not enough for the politicians and the educators to insist that foreign scholars, researchers and students, especially high-level talent, go back to their home countries. The real question is the absorptive capacity and on-going requirements of these countries for specific kinds of trained personnel. This may mean revolutionary changes within the society, economy, and the culture of the countries concerned making them sufficiently attractive for professionals to return home.⁹ One cannot categorize all the countries of Asia, Africa and Latin America under a single concept such as "brain drain". The phenomenon of "brain drain" or "brain exchange" varies from country to country, region to region, continent to continent, and less developed to developed countries. A greater specificity of terms, the development of more sophisticated research, and the net utilization and development of the individual should be accorded primary consideration.

⁹ U. S. Congress, House Committee on Government Operations, *The Brain Drain of Scientist, Engineers, and Physicians from the Developing Countries into the United States Hearings*, before a Subcommittee of the Committee on Government Operations, House of Representatives, 90th Cong., 2nd sess., 1968, p. 78