

THE PLACE OF DEMOGRAPHY IN HEALTH AND WELFARE PLANNING IN LATIN AMERICA

JOSÉ L. JANER

AND

GUILLERMO ARBONA

Experience has most convincingly demonstrated that careful, comprehensive, intelligent planning is an essential tool in the social, economic, and cultural development of all human societies. The higher their stage of development the more complex they grow, and the greater their needs for the utilization of the planning process. Underdeveloped countries, on the other hand, because of their limited resources, and their aspirations for rapid development in order to catch up with the highly developed ones, have a still greater need for careful planning.

Planning may be defined as intelligent preparation for action directed at the attainment of specific objectives. It should assure their feasibility and effectiveness through a process which usually consists of the following steps:¹

1. Analytical investigation of the problem;
2. Consideration of available resources;
3. Definition of short- and long-range attainable objectives;
4. Formulation of action programs;
5. Formulation of procedures for the evaluation of their effectiveness.

All actions decided on as a result of planning must have clearly defined objectives, and these objectives should be based on as thorough a

knowledge and understanding of the situation provoking the actions as may be possible under the prevailing circumstances. This means that whenever the problems provoking the actions are of a collective nature involving human populations, the reliability of the planning process must depend heavily on the appropriate use of demographic knowledge. That this is so, and that the effectiveness of any actions aimed at the solution of problems involving the well-being of human populations can be seriously jeopardized by sheer demographic ignorance on the part of the planners, obviously follows from any of the accepted definitions of what "demography" is.

Demography has been defined in various ways by different authors. Wolfenden, for example, has defined it as "the statistical or collective study of human populations";² Barclay, as "the numerical portrayal of human populations";³ Hauser and Duncan, as "the study of the size, territorial distribution, and composition of populations, changes therein, and the components of such changes, which may be identified as natality, mortality, territorial movements (migration), and social mobility (change of status)."⁴ This last one seems to us the most satisfactory definition because it explicitly stresses the dynamic nature of populations by mentioning the study of their changes as one of demography's most important purposes. From it one may infer that there are at least three important roles which demography can play in any planning process motivated by the collective problems affecting any particular human population. Carleton has identified them as the *descriptive*, the *diagnostic*, and the *predictive* roles.⁵

In its *descriptive* role demography is capable of providing a reliable description of a specific population problem or situation. This may be considered as demography's most important role in planning, because the possibility and reliability of the diagnostic and predictive roles are largely dependent on the quality and extent of the descriptive findings. Demography performs its descriptive role through the collection, tabulation, and publication of the pertinent demographic data. For the collection of the required data different procedures may be used, as: census enumerations; special, periodic, or continuous registrations; special, periodic, or continuous surveys. The importance of the survey method is rapidly growing and the related methodology is thus being constantly developed. "This method includes ad hoc procedures and arrangements for collecting information not otherwise available."⁶ Usually, a survey has very specific purposes and its duration is limited. In some circum-

stances, however, surveys may be organized on a periodic or continuous basis and to collect a wide variety of information.⁷ Among the demographic items most frequently investigated through the survey method, the following may be mentioned: reproductive behavior, frequency of illnesses, frequency and cost of medical care, migration patterns, economic activity, nutritional habits.

In its *diagnostic* role, demography is capable of detecting any symptoms of social ills, their severity, and their respective probable causes. This is possible through the application of the proper analytical techniques to adequate descriptive material. Among the most important symptoms of social problems routinely watched in all highly developed societies, one may mention: unemployment and underemployment, mass migration from rural to urban areas, illiteracy, high mortality rates, high delinquency rates, high incidence of certain specific illnesses, excessively high or excessively low fertility. By being able to uncover such symptoms and establish their respective magnitudes, trends, and probable causes, demography's role in the planning process is considerably enhanced and becomes instrumental in the wise selection of appropriate corrective measures or actions.

In its *predictive* role, demography is capable of projecting the size and composition of any particular population to any selected past or future date. Such projections are made on the basis of some specific assumptions which establish for the growth factors involved their corresponding patterns of change throughout the time interval comprised between the base and projection dates. By carefully choosing the most reasonable assumptions about what the respective future trends of these growth factors are likely to be, population projections may assume a predictive role of indisputable usefulness in the intelligent planning of long-range, development programs. Of course, the reasonableness of the assumptions which can give population projections their predictive value will always depend on several factors among which the following must be mentioned: length of the time interval involved in the extrapolation which the projection represents; nature and reliability of the descriptive data on which the assumptions are based; ability to foresee the occurrence and magnitude of events capable of substantially affecting the influence of any of the growth factors involved.

Therefore, there should be no doubt about demography's important role in planning for the promotion of collective well-being in human societies. Let us turn now to its role in planning specifically for health

and welfare. The term "welfare" is defined as "a state of faring or doing well. It also means the "organized community or corporate efforts for social betterment of a class or group," as when it is said that somebody is engaged in child welfare. The term "health" has been defined in its constitution, by the World Health Organization, as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."⁸ This definition which has been increasingly gaining acceptance implies a recognition of the fact that health is not exclusively a medical or sanitary problem. It is true, nevertheless, that the extension to all peoples of the benefits of medical, psychological, and related knowledge and the provision of the appropriate sanitary conditions are essential to the fullest attainment of health; but no government can completely fulfill its responsibility for the health of its people unless it adopts adequate social and economic measures in addition to the medical and sanitary ones.⁹ Therefore, by practically equating health with happiness, well-being, and welfare, the World Health Organization's definition could be interpreted to mean that all problems affecting human populations must be considered related to health and of interest to every health worker. This logically derives from the fact that human problems, whether individual or collective, most frequently originate in man's actions in search of happiness.

In its functional relationship to aspirations, happiness is always the dependent variable. Whenever the fulfillment of his aspirations is seriously hindered, either by the prevailing sociocultural structure of the community of which he is a member, or by the physical or natural environment, man's happiness is jeopardized. But human aspirations are neither uniform nor constant. One must only here recall that diversity is one of the most prominent features of man's nature. That is why it has been said that "in the course of evolution nature has gone to endless trouble to see that every individual is unlike every other individual"¹⁰ and that to seek to standardize the human individual, no matter what the pretext, should be considered an outrage against man's biological nature.¹¹ Therefore, the requirements for the achievement of happiness must differ greatly from one individual to another. Furthermore, the aspirations from which these requirements derive are continuously changing in each individual throughout his lifetime. And, as if this were not enough, these individual aspirations and requirements can be made grossly incompatible with each other, from the standpoint of their fulfillment, by the sociocultural structure of the community. This means

that collective happiness or well-being must necessarily be a very elusive thing to deal with in practice. But it also means that maximum collective happiness or well-being is possible only under conditions of maximum compatibility of the different fulfillment requirements generated by the individual aspirational frameworks.

Thus, planning for any kind of improvement in the state of well-being or collective happiness of any community must always involve a promotion of changes in its framework of aspirational references capable of reducing in number and magnitude the conflicting elements which the individual requirements for the fulfillment of happiness or well-being may pose. The proper assessment of the nature and magnitude of the changes contemplated made at the planning stage, and, later on, the evaluation of the effectiveness of the actions finally taken to bring them about, involve, most frequently, considerable use of demographic analysis.

The actions finally decided on need not always be the most effective ones from an absolute standpoint. The sociocultural structure of the community in which they are to be applied must be taken into account. This must be so because both their practicability and effectiveness are going to depend to a large extent on it. In some places the prevailing sociocultural structure may be such as to preclude the success of any action aimed at substantial socio-economic improvement and general well-being. Where this happens it should be a primary objective of all enlightened planning to promote such changes in the prevailing sociocultural structure as are considered essential for the successful undertaking of the actions needed to reach the goals which may have been set.

Although there are many elements that contribute to shape any particular sociocultural structure, Merton, the distinguished sociologist, points out two which he considers most important: "The first consists of the culturally defined goals, purposes, and interests, held out as the legitimate objectives for all or for diversely located members of the society." They constitute the things worth striving for in life, and, therefore, the society's scale of values. The second element "consists of the regulatory norms which control the acceptable modes of reaching these goals."¹²

From the standpoint of these two most important elements of sociocultural structures, a healthy society may then be defined as one whose scale of values is consonant with the kind of individual aspirations that are entirely amenable to the regulatory norms establishing the means for

their fulfillment. They are societies in which satisfactions accrue to their members not only from the fulfillment of their respective aspirations, but from the use of the legitimate means available to attain them as well.¹³

Consequently, the degree of dissociation between objectives and means for their attainment may be considered a measure of social pathology or malintegration. This dissociation may range from any one of the following two oppositely extreme cases to the other.

The first extreme case is that in which "the success-goals extolled, virtually above all else, for the population at large, are beyond the reach of the great majority of the people because the prevailing social structure restricts or completely closes to them any access to the approved modes by which they could be reached."

The second and opposite extreme case is that in which "the institutionally prescribed means or instruments for striving toward the goals are transmuted into self-contained practices lacking further objectives." In other words, in these cases the malintegration results from having converted into goals what should have been the means to reach them.¹⁴

It is Merton's central hypothesis that aberrant behavior may be regarded sociologically as a symptom of dissociation between the culturally prescribed aspirations and the socially structured avenues for realizing these aspirations. And he is well aware of the fact that although "no society lacks norms governing conduct," there may be great differences from one society to another in the degree to which the folkways, mores, and institutional controls are effectively integrated with the goals which stand high in the hierarchy of cultural values.¹⁵

Although the perfectly integrated society is something that no sizable portion of mankind has yet been able to achieve, there should be no doubt that underdevelopment is most often the logical consequence of long-persisting gross sociocultural malintegration. This means that the efforts to pull a country out of a state of underdevelopment and raise it to the highest levels of living made possible by modern civilization, must necessarily bring about great changes in its traditional sociocultural structure in order to be successful. But there is always the danger that, in trying to accomplish such a feat through piecemeal planning, the result of such efforts will be a worse case of malintegration than the previously existing one. It was precisely an awareness to this danger and a clear understanding of what the ultimate purpose of all human actions should really be that led Puerto Rico's Governor, Luis Muñoz Marín, to

formulate his Operation Serenity Program soon after having successfully launched the well-publicized Operation Bootstrap.

According to Muñoz-Marín, Operation Serenity is "an attempt to give to the economic effort and political freedom, objectives that can commend themselves to the spirit of man in its functions of leader of, rather than of servant to, the economic processes. . . .

"A society in which Operation Serenity had been successful would use its economic power increasingly for the extension of freedom, of knowledge, and of the understanding imagination rather than for a rapid multiplication of goods; in hot pursuit of a still more vertiginous multiplication of wants. . . .

"Although priority must obviously go to fighting the old-fashioned poverty that consists of vast masses of people being ill fed, ill housed, ill clad, ignorant, insecure in illness, orphanhood, and old age; there must be an awareness of a newfangled poverty, that of the feverish production inventing new desires that must go for many unfulfilled."¹⁶

It is clearly evident from Muñoz-Marín's words, that it should be the main task of underdeveloped societies, in trying to pull out of their state of underdevelopment, to bring about as rapidly as possible those radical changes in their respective sociocultural structures that are essential for a reduction of their degree of malintegration to levels more compatible with their aspirations for progress and well-being.

In planning for such changes great care must be exercised to avoid the dangers, already mentioned, of improper or dissociated piecemeal planning, which may lead to a waste of all efforts dedicated to such a good cause by accomplishing only a simple exchange of one type of gross malintegration for another equally as bad or even worse.

One way this can happen is by mistaking the true goals of economic improvement and medical and paramedical actions, and converting into ends what under appropriate integral planning would have been only the means for their achievement.

Furthermore, the true situation with respect to what the real changes in the state of well-being of the population in general may have been, are also easily concealed by an equally piecemeal or improper evaluation of accomplishments. Among the more abused piecemeal indicators of progress one may mention mortality rates, expectation of life, and per capita income. One needs only to remember the many things that an increase in per capita income may mean in terms of well-being, when accepted *prima facie*. For example, in many a case an increase in per

capita income represents only a mere lifting of the upper boundary of poverty or a wider gap between poor and rich.

Thus the promotion of the general health or state of well-being of a community or society stands the greatest chances of successful accomplishment by planning all action programs along the lines dictated by the following two broad objectives:

1. An efficient production of both material and spiritual goods. This can be achieved only through the exaltation of man's creative potentialities, and the provision of equal opportunities to every individual for the fullest development of whatever his natural gifts for the production of useful material or spiritual goods may be.
2. An equitable distribution of the material and spiritual goods referred to above, based on the formation of rational consumption patterns.

Among all the regions of the world which are at present desperately struggling to do away with underdevelopment probably no other commands more world-wide attention than Latin America. The tremendous significance which the economies of the Latin American countries have for the stability and growth of the domestic economy of the United States, as well as to world trade and political developments, makes imperative a thorough understanding of its problems and a constant reappraisal of the improvement programs involved.¹⁷

Although Latin America is far from representing a homogeneous group of nations, Toynbee has observed the presence of what he considers two important unifying elements which tend to counterbalance in some way their diversity, and which should undoubtedly facilitate the proper planning of effective, broad-scope, development programs: "1. a common language and a common background of habits, ideas and ideals, inherited from their mother country; 2. they are marching together in the procession of underdeveloped countries striving to catch up with North America and northwestern Europe in mankind's social and economic advance."¹⁸

That many Latin American leaders are fully aware of the true plight of their respective countries as a consequence of their traditional social malintegration has been clearly demonstrated by several meetings they have held in recent years to discuss the problem of how to deal most efficiently with their condition of underdevelopment. The most important documents produced by these meetings are perhaps the Act of

Bogota,¹⁹ drawn up in September 1960, and the Charter of Punta del Este,²⁰ drawn up in August 1961. Both of these documents contain a series of recommendations which really represent a most comprehensive approach to the problem of overcoming underdevelopment. In them, there is clear evidence of an awareness of the absolute necessity of attacking the problem simultaneously from all its different angles. As would be expected, among the recommendations made in both documents there are some directed specifically at the improvement of public health. But these specific recommendations must always be viewed as part of a more comprehensive whole. Otherwise they may lead to actions that would eventually boomerang against the general well-being of the community in which they are applied, as has in fact already happened in many a place.

Unfortunately, the type of multifrontal attack so essential to the success of any efforts to pull an underdeveloped country out of such a condition is a most difficult task to accomplish, for obvious reasons. The well-entrenched privileged minorities, which frequently connive with profit-seeking foreign interests, must be held accountable for the gross socio-cultural malintegration in such countries, control their political, economic, and social lives, and their military forces so effectively, and with such shortsightedness, as to render the implementation of any of the long-due progressive measures proposed by their more enlightened leaders a most difficult, if not an impossible, task, should there be the slightest evidence that it could in some way jeopardize their privileged power position. The logical consequence of such an attitude is always an unbalanced action program which is more likely eventually to intensify the prevailing sociocultural malintegration problems. This attitude really represents a suicidal shortsightedness on the part of these minority groups. In most cases it may be attributed to their sheer ignorance of the inevitable long-term sociodemographic consequences of an unbalanced approach to a problem of general underdevelopment in any human society.

Among the few progressive measures not objected to by these powerful, influential minorities, medical and sanitary actions directed at the improvement of public health conditions, and certain minor welfare actions, stand out most prominently. The general acceptance of these measures is easily explained in terms of their tangible immediate beneficial effects to the population in general, and their apparent innocuousness to the privileged power position of the ruling classes. But many

of the most enlightened of Latin American leaders, and well-meaning foreign experts, have also contributed to the adoption of effective piecemeal public health action programs completely detached from the demographic and socio-economic framework of the community by having repeatedly, and vehemently, stressed the importance of health to economic development and productivity, while expressing only mildly, if at all, the importance of economic development, education, and social justice to health. This tendency to talk most frequently in terms of health's importance to economic productivity and development rather than in terms of the socio-economic and educational requirements of health, actually implies a transmutation of economic productivity and development, which in any well-integrated society would have only represented means for their achievement, into the ultimate goals of human endeavor. This naturally leads to the postponement of all the long-due socio-economic measures to concentrate first on medical and sanitary programs, under the pretext of priority considerations, absolutely ignoring the fact that education and socio-economic well-being constitute perhaps, nowadays, the basic components of sound individual health, both physical and spiritual, and the most important requirements for modern economic productivity.

Thus health in these underdeveloped countries becomes a most elusive objective, capable of challenging all efforts at its attainment through the application of solely medical and sanitary actions, by fruitlessly draining in the long run whatever resources are made available for such specific purposes.

Commenting acridly on the unfortunate absence of wise, comprehensive, well-balanced planning in most Latin American countries, for the promotion among their people of that "state of complete physical, mental, and social well-being" now recognized as "health," Professor Preston James, head of the Department of Geography at Syracuse University, in a recent interview granted to one of the most widely circulated news magazines of the United States, bluntly accused as irresponsible all the piecemeal medical and sanitary action programs which have been carried out in those countries since the 1930s with complete indifference to the much more vital problems of adequate food and economic production, and social justice.²¹

The only achievement which the application of such public health measures can really claim to date is a reduction in death rates, which has not necessarily represented improved health but has produced in

Latin American countries the highest rates of population growth ever recorded anywhere in the world. A dubious achievement after all, for such rates of population growth now constitute the greatest obstacle to their socio-economic development, and to the well-being of their respective populations, and has thrown them into one of the most dangerous of vicious circles. It is a well-known fact that undue population growth tends to hinder socio-economic development and debase all aesthetic and spiritual values, while socio-economic underdevelopment and the debasement of aesthetic and spiritual values foster further population growth.²² In a recent report by the National Academy of Sciences, its president, Dr. Frederick Seitz, expresses his conviction that the rapid, uncontrolled population growth affecting most of the underdeveloped areas of the world at present, as the logical consequence of the type of piecemeal health programs already mentioned, is considered one of the most critical issues of our time; it affects the welfare and happiness of all the world's citizens, and should command the attention of every nation and every society no matter whether technically advanced or underdeveloped. To meet this challenge he believes that use must be made of all knowledge that science and technology can bring to bear not only on the biomedical questions involved but on the sociocultural and economic ones, as well.²³

This single unfavorable consequence of unbalanced planning for the collective well-being of human populations should constitute evidence enough to justify the necessity of well-integrated, comprehensive planning programs in trying to pull any country out of its state of underdevelopment. This comprehensive planning should be based on a clear statement and understanding of what the ultimate goals of the social, economic, and spiritual development of the community are really going to be, and on an awareness of the sociodemographic consequences that could reasonably be expected from the application of the actions decided in the planning process in order to evaluate properly their compatibility with such objectives. Comprehensive planning is undoubtedly a much greater need in underdeveloped societies than in the more advanced ones. This is easily explained in terms of the simultaneous progress which is continuously taking place in the latter societies in almost every aspect of their social, economic, and spiritual lives, the results of which generally add up to what would have happened if all the actions involved had been the result of comprehensive planning. However, in underdeveloped societies, improvement of conditions in certain areas of

their sociocultural, economic, or spiritual setups are not likely to be accompanied by corresponding simultaneous action programs in the other complementary areas of their social life. This necessarily produces the kind of unbalanced action programs that are likely to generate problems which may in the long run turn out to be much more serious than those whose solution had provoked the actions applied.

Comprehensive planning for the promotion of the general well-being of human populations should never be left entirely in the hands of economists or of any other specialists in fields which represent only the means for achieving that goal, as has been the general rule until now. Sociologists, social anthropologists, educators, and social demographers should play most prominent roles, especially in deciding what the ultimate goals of their society are really going to be and how to co-ordinate the different areas of specialized planning involved, so that their specific action programs will conform to the main objective of the more comprehensive plan. There are three easily recognized broad areas of specialized planning, which are:

1. Medical services and sanitation;
2. Education and recreation;
3. Economic development.

In all of these three areas of specialized planning, demographic knowledge is most essential for the very specific reasons already mentioned when explaining demography's descriptive, diagnostic, and predictive roles in planning for actions involving human populations and directed at the promotion of any aspect of their general collective well-being.

From what has been said about demography's place in health and welfare planning it should be evident that it has become imperative to include social demography among the required subjects in the curriculum of any course leading to the preparation of individuals for any professional field specializing in the solution of any specific type of human problems of a collective nature. This requirement is still more pressing in the case of professionals who will work in underdeveloped areas.

In approving the Act of Bogota, to which we have already referred, the Delegations to the Special Committee expressed their conviction that the people of Latin America can achieve a better life only within the democratic system, and reaffirmed their determination to assure the

fullest measure of well-being to their people under conditions of freedom and respect for the supreme dignity of the individual.²⁴

In what has been considered "a startlingly blunt and almost painfully honest book" on Latin America, Dr. Milton Eisenhower expresses his conviction that revolution is inevitable in those countries and that "the real alternatives are between justice and injustice, freedom and enslavement, poverty and plenty—between peaceful revolution leading to social progress and violent revolution leading to tyranny."²⁵ Whether the former type of revolution will prevail over the latter type will, most certainly, depend on the consideration given to the sociodemographic factors involved in the planning of the action programs directed at the promotion of justice, freedom, and plenty, to avert the violent solution leading to tyranny, for "hunger has no conscience,"²⁶ and will not wait much longer.

SUMMARY

Demography constitutes nowadays one of the most useful tools in planning properly for actions directed at the promotion of any aspect of the collective well-being of human populations. Therefore, it must be considered an essential tool in planning for health and welfare. Demography's role in planning is even more important when the object of the action programs involved is an underdeveloped country. Consequently, it has become imperative to include social demography as a required subject in any course intended to train individuals for professional work related to the promotion of collective well-being in human populations.

REFERENCES

1. Arbona, Guillermo, *Métodos para la Formulación de Planes Nacionales de Salud Pública*; a paper presented at the Ninth Meeting of the Executive Council of the Pan American Sanitary Organization in Antigua, Guatemala, September 1956 (mimeographed).
2. Wolfenden, Hugh H., *POPULATION STATISTICS AND THEIR COMPILATION*, Chicago, University of Chicago Press, 1954.
3. Barclay, George W., *TECHNIQUES OF POPULATION ANALYSIS*, New York, John Wiley & Sons, Inc., 1958.
4. Hauser, Philip M., and Duncan, Otis D., Editors, *THE STUDY OF POPULATION*, Chicago, University of Chicago Press, 1959, Chapter 1.

5. C. ———, *Centro Latinoamericano de Demografía*, Santiago, University of Chile, 1960 (mimeographed).
6. Expert Committee on Health Statistics, Seventh Report, Technical Report Series No. 218, Geneva, World Health Organization, 1961.
7. ———, *op. cit.*
8. CONSTITUTION CHRONICLE OF THE WORLD HEALTH ORGANIZATION, Geneva, World Health Organization, 1947, Vol. 1, no. 1-2, pp. 29-43.
9. ———, *op. cit.*
10. Huxley, Aldous, BRAVE NEW WORLD REVISITED, New York, Harper & Brothers, 1958, p. 26.
11. ———, *op. cit.*
12. Merton, Robert E., SOCIAL THEORY AND SOCIAL STRUCTURE, New York, The Free Press of Glencoe, 1962, Part 2, Chapters 4 and 5, pp. 121-194.
13. ———, *op. cit.*
14. ———, *op. cit.*
15. ———, *op. cit.*
16. Muñoz-Marín, Luis, Remarks at Harvard University on Commencement Day, Thursday, June 16, 1955 (mimeographed).
17. Economic Development in South America; report of the Sub-committee on Inter-American Economic Relationships of the Joint Economic Committee, the Congress of the United States, Washington, D. C., Government Printing Office, 1962.
18. Toynbee, Arnold J., The Present Revolution in Latin America, Second Weatherhead Lecture at the University of Puerto Rico, February 7, 1962 (mimeographed).
19. Act of Bogota, Measures for Social Improvement and Economic Development within the Framework of Operation America, Washington, D. C., Pan American Union, 1961.
20. Alliance for Progress, Official Documents Emanating from the Special Meeting of the Inter-American Economic and Social Council at the Ministerial Level, Punta del Este, Uruguay, August, 1961, Washington, D. C., Pan American Union, 1961.
21. A New Look at Latin America; interview with Professor Preston James, *U. S. News and World Report*, July 8, 1963, pp. 72-83.
22. Spengler, Joseph J., The Aesthetics of Population, *Population Bulletin*, Vol. 13, 61-75, June, 1957.
23. The Growth of World Population; report of the Committee on Science and Public Policy of the National Academy of Sciences, Washington, D. C., National Academy of Sciences-National Research Council, 1963.
24. Act of Bogota, *op. cit.*, p. 14.
25. Eisenhower, Milton S., THE WINE IS BITTER, New York, Doubleday & Company, Inc., 1963.
26. ———, *op. cit.*

DISCUSSION

Dr. James S. McKenzie-Pollock: First of all, it is a pleasant task to comment on Dr. Arbona's paper. After all, Dr. Arbona is the man who has implemented so effectively the regionalization of the concept of health planning which is helping at long last to bring the many specialties which make up total health into some unity and fit them within the general economic picture.

I have only recently taken over the Office of National Health Planning in the Pan American Health Organization. This term, "Office of National Health Planning," is contentious, but if Dr. Silver can call his a "Department of Social Medicine," we can call ours "Office of National Health Planning."

Actually, it was in a previous existence that I first got to know and appreciate Dr. Arbona, when I was trying to teach international health at Harvard, where the Reed family is holding the torch of demography very high through Dr. Reed's son, Dr. Bob Reed. At that time I could not illustrate the concept of comprehensive health analysis, the thing I like to call the grand strategy in health, even in the great Boston medical complex. So, each year in January, I had to take my class down to Puerto Rico. I must confess there were certain climatic as well as technical attractions in Puerto Rico at that time of year.

Not even in Puerto Rico, which is ahead of most other places in health planning, has demographic projection been carried out sufficiently for our requirements as an economic planning tool. After all, what we are doing in health today has a very profound influence on population size and age distribution of the population tomorrow. So scientific "guesstimates" on population competition are not only useful to the health planner but, as Dr. Arbona has pointed out, are also of interest to the educator and the economist in calculating labor force potentials.

In public health we cannot tailor population to suit the requirements of industry and economic development, although that seems to be what some economists imply when they blame us for upsetting the calculations by saving too many people from premature death.

So health planning, as Dr. Arbona defines it, is not an entity unto itself; but is just one facet of a larger planning process. After all, the economist is in the driver's seat today as far as allocation of resources is concerned, and it is to our own self-interest to translate our require-

ments into figures that can be fed into the same computer that the economist uses.

As a result of Operation Bootstrap, to which Dr. Arbona referred, according to this week's *Saturday Review*, a child born in the Commonwealth of Puerto Rico today can look forward on the average to 70 years of life. We are sometimes told investment in health only increases populations and makes economic progress for the few more difficult. I contend most emphatically that unless investment in public health is made, political stability, on which economic development depends, will not be possible.

The economist developed his indices in the post-Industrial Revolution period, after social adjustment to industrialization had taken place and the overwhelming burden of communicable disease had been brought under control. This process required substantial community investment and adjustment, and I think this is where the sociologist can help, as we have heard already, at the present juncture. This process of adjustment, this process of crystal-gazing to see the effect of what we are doing today in 10 years' time is what I call "macro-sociology," not "micro-sociology."

After a long period of isolationism, as illustrated in the paper by Professor Janer and Dr. Arbona, we health workers at last are trying to work closely with our economist colleagues in the general planning process. The Puerto Rican experience, as Dr. Arbona outlined, certainly illustrates that health planning designed to fit in the context of economic planning for regional or national development can be done.

However, while agreeing with Dr. Arbona that piecemeal action in public health over the last 30 years has only tended to isolate us in the national planning scene, I want to take serious issue with him when he insinuates that health measures have been responsible for the explosive population growth of the last 30 years. In his paper I am afraid he does make that insinuation. Unfortunately, apart from malaria control, perhaps, public health is not so efficient as his contention would imply.

I think whatever evidence we have does not support this contention because at the periphery, which is practically untouched by health, the populations are actually increasing faster than they are in areas with heavy health concentrations. I have no doubt that someone will take me up on that statement, but for what it is worth, I make it.

My feeling is that it is not health alone that is causing the population explosion. It is the general influence of the modern world penetrating

further into the periphery than health has been able to penetrate. The villager returning to his village, after a trip to the city or after working in the city, brings with him much more sophistication from the big outside world than I think we like to admit. Modern advertising has gone further into the periphery than we admit. I have seen in very faraway places, far beyond the last health center, pictures of Lux soap products, of chewing gum, and of patent medicines.

So let's allocate the blame where it lies. Let's not continue to blame only health for the population explosion.

Sometimes attack is the best form of defense, so let's for a change say that industry, the modern way of life, also, has a big influence on this population explosion.

Health planning as defined in Dr. Arbona's paper, I think, can be divided into two main categories. At the top we have what I like to call "macro-planning." Macro-planning is involved with the place of total health in its widest context within the national economy. It considers both the public and private sectors and the financing of these services. "Micro-planning" is the process of developing health policies and operational programs to match most effectively needs with resources, taking into account relative priorities.

To sell health at the economic planning level, it is useful to produce a minimum plan, which is the cost of continuing present services over the next 10 years calculated on the basis of population increase and population accessible to these services. I think this can be considered the technical and also perhaps the political base line, because no politician could possibly advocate a program that decreases the present health standards.

I think we must also produce what I call a maximum plan which estimates the desirable improvements in health protection and medical care.

Then, having done that homework, we are in the position of going to the economist, going to the central planning commission, and saying: "Here is the cost of continuing the present work for the next 10 years, and here is the cost of what we would very much like to do. What point between these ranges can the economy stand?"

When you put the ball into the economists' court like that, it knocks them back on their heels. I have seen that in action quite recently in both El Salvador and Panama, where the homework has been done along the lines of minimum plan, maximum plan, and the cost of same

projected for 10 years. It is very interesting to see the effect on the central planning commission when we in health have done our homework sufficiently to be able to present the case like that.

As I say, the operational plan is the point between these two extremes that the central planning commission says the economy can stand.

I agree with Dr. Arbona that evaluation indices are certainly not good at the moment. However, perhaps we have achieved more than we actually have accurately measured. Following malaria eradication, there is certainly less debility, and lands become available for colonization. I doubt, however, if we have yet developed methods to measure and express these gains properly. I think the demographer has a great responsibility in this field. Perhaps we have put too much emphasis on mortality as an index of health work. The debility caused by disease stands out more sharply as the number of deaths decline. The new science of medical economics, I think, is trying very hard to express the community damage that disease does. The demographer must help us in this.

Emphasis on demography is good, but I feel—and I think Dr. Arbona agrees with this point in his paper—we should not stop at measuring births and deaths. We need measures of quality of population, of productivity, of real productivity and potential productivity, to serve as indices for the evaluation of the health work in the future.

We must be able in the future to measure the quality of the human resource as well as its quantity, to be able to bat in the same league with the economist.