

ASSESSMENT OF TEACHING AND TRAINING PROGRAMS IN THE UNIVERSITIES OF LATIN AMERICA

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ASSESSMENT OF TEACHING

The following consists largely of a list of those teaching and training activities in the field of demography which have come to the writer's attention through conversations with those concerned or through personal observation. It is inconceivable that the list is complete, since no systematic survey is in existence. In particular, very little mention is made of the work going on in schools of public health and medicine. An even more serious defect in the presentation is the lack of the assessment which is called for in the title assigned to me. When a professor publishes original work his colleagues can judge the quality of his class material by this; lack of such publication prevents any assessment except by students.

RESEARCH AND PUBLICATION

A high level of teaching in a university is possible only when staffs are engaged in research. Even good libraries are not ordinarily brought into existence except in relation to research interests of scholars. Latin American teaching in demography, as in other fields, has suffered from the isolation—through distance and language—of the area from the main centers of activity. Relatively few articles which appear in internationally read journals are written by Latin American scholars. Prior to the advent of *Estadística* it might have been thought that a lack of

Spanish-language journals was the main reason for the small amount of research published by them; but evidently this is not so, for *Estadística* has had to fill its pages with translations because of the lack of original material. On the other hand, CELADE has mimeographed several dozens of pieces of research and class notes which it aims to prepare for wider distribution.

TEACHING MATERIALS TRANSLATED INTO SPANISH

One aspect of isolation is the inability of all but a few of even the most promising students at CELADE to use any language other than Spanish. The great majority of students are obliged to use translations. This is increasingly a handicap as one proceeds from elementary teaching to the university level. Even where the best book of its kind has been selected for publication in Spanish, there is little opportunity to compare the views of other authors. The result is that the "best book" is accepted with a degree of faith that even its author would not claim for it.

This applies to George Barclay's "Techniques of Population Analysis" and to Sauvy's "Théorie Générale de la Population," as well as to his other writings; to J. M. Stycos' "Family and Fertility in Puerto Rico"; to the sections on population in W. F. Ogburn and M. Nimkoff's "Sociology"; to the first edition of Dennis Wrong's "Population," and to M. Halbwachs' "Morphologie Sociale." Aside from these, however, the selection seems somewhat eccentric to an outsider. It includes Gini's "Theory of Population"; Chandrasekar's "Hungry People and Empty Lands"; everything written by Josué de Castro; Sydney H. Coontz's "Population Theories and the Economic Interpretation," and Jean Fourastié's "L'Histoire de Demain." None of these latter titles seem to me very valuable, but because of the general scarcity they are invariably included on reading lists. Very helpful in teaching are *Estadística*; the Spanish version of the United Nations' "Determinants and Consequences of Population Trends"; *International Labour Review*; "Urbanización en America Latina," edited by P. M. Hauser; "Corrientes Demográficas Mundiales," edited by Kingsley Davis, and "Aspectos Sociales del Desarrollo Económico en America Latina," edited by J. Medina Echevarría, with an essay by David Glass; certain classics, including Malthus' "Essay," with an introduction by Kingsley Davis; and Cantillon's "Essay." Also available in acceptable translations are Eric Roll's

"History of Economic Theory," Arthur Lewis' "Theory of Economic Development," and R. M. MacIver's "Social Causation." These are precious to the Latin American teacher because of the few pages they contain on the subject of population. CELADE has made a private translation of two chapters of "Population Growth and Economic Development in Low-Income Countries," by A. J. Coale and E. M. Hoover.

This list constitutes the main intellectual fodder in the field of demography and population study available in Spanish.

INDIVIDUAL COUNTRIES

Argentina

José González Galé was for many years director of the Institute of Biometry in the Faculty of Economics of the University of Buenos Aires. His career in demography extended from about 1920 to 1945. He wrote a textbook on actuarial science and many articles and books on the population problems of Argentina, including a population history and a study of the fall in fertility in Argentina, as well as calculating life tables. Associated with him was Argentino Acerboni. His successor is Professor Barral-Souto, whose main contributions are in actuarial science but who also teaches population. In the Faculty of Philosophy and Letters, population is taught regularly in the Department of Sociology by A. Dehollain, a graduate of CELADE, as well as (I am told) in the Department of Geography. The research and teaching in the Department of Sociology attains high standards in all fields, under the leadership of Gino Germani, and it is safe to assume that some attention is given to population in many of the courses.

At the University of the Litoral of Rosario, the Faculty of Economics offers a three-year program for statisticians (previously mathematical statisticians) which includes in the first and second year courses containing a good deal of material on population. These were initiated by Carlos E. Dieulefait and continued by J. C. Elizaga until he left for CELADE at the end of 1957. The first-year course included the principles of demographic analysis as well as sources of data, their compilation and interpretation, in the fields of mortality, fertility, sickness, labor force, and accidents. I understand that the course is still offered. The second-year course for the same students was largely actuarial calculus,

given by Jorge Puente Arroyo over a period ending in 1956. Towards the end of 1954 an Institute of Population was established, with J. C. Elizaga as its first director, to provide a more complete framework in which students could get firsthand experience and training in research.

Bolivia

At the Universidad Mayor de San Andrés courses on population are given by Asthenio Averango Mollinedo. He is the author of a book which provides some facts on the population of Bolivia.

Brazil

Giorgio Mortara, working in the Brazilian Institute of Geography and Statistics (IBGE), founded in 1936, has given active leadership in research, and some well-trained demographers have been turned out. The training is of an in-service rather than university character, and has included the useful affiliations of Professor Mortara with government agencies producing statistical data. Analyses of the 1940 and later censuses, calculations of population growth and migration, studies of fertility and mortality, post-censal population estimates, are all included in the long list of publications. Former fellows of the IBGE are teaching in Rio de Janeiro and São Paulo. According to the report of Carlos E. Dieulefait to UNESCO, there is a chair of "Mathematical and Demographic Statistics" in the School of Economic Sciences of Rio de Janeiro. The National School of Statistics, run by the IBGE, gives special attention to demography; the course in this subject given from 1954 onward by Joao Lyra Madeira, a competent scholar, includes life tables, fertility, immigration, stable populations, economic problems involving demographic variables, and sources of population data.

Chile

Within the University of Chile there is an Escuela de Sociología which includes a course in demography taught by Julio Morales, a graduate of CELADE. Carmen Miró teaches in the Escuela de Economía of the University of Chile. The Chilean Planning Center has a two-year course which includes several hours on population given by Léon Tabah. The Catholic University also offers a course in demography within its Department of Sociology (Faculty of Philosophy); its teacher is Sr. Matelaar, who studied at Louvain and for a time at the Institut National des Etudes Demographiques (INED) in Paris. Jacques

Dorelaer, also at the Catholic University, has written on urbanization and is professor of urban sociology.

Colombia

Demography has not yet been offered to any important degree in Colombia, but the University of the Andes in Bogotá is planning to initiate a course in the near future. It will be given by Alvaro López, an experienced demographer, trained at Princeton. Sr. Nieto, an Ecuadorian, trained at CELADE, was appointed under United Nations technical assistance to Colombia and has been teaching at the National University.

Costa Rica

The National University has a School of Economic Sciences in which an Institute of Statistics was created in the mid-1950s under the direction of Dr. M. M. Babbar; population statistics is one of the courses given in this institute. Dr. Babbar has left, but the course continues under Miguel Gómez, a graduate of CELADE. There are said to be other courses in demography in Costa Rica.

Ecuador

Classes in demography have been given at the Catholic University in Quito by Hector Corréa.

El Salvador

I understand that a course in demographic statistics, principally vital statistics, is given in the Faculty of Medicine of the University of El Salvador.

Guatemala

Dr. Jorge Arias B. has written on the evaluation of censuses and other themes related to our subject. He taught demography in the Universidad de San Carlos, of which he is now rector.

Haiti

In a report prepared for IASI in 1960, mention is made of a course in the university which includes among its 14 topics "Statistics of Population." In addition, the program of the first cycle of the Haitian Institute of Statistics includes the same item. One does not have the impression that the treatment of population is very extensive.

Mexico

Students of the Escuela Nacional de Ciencias Políticas y Sociales of the University of Mexico take a course in demography in their fourth year. It is given by Raúl Benítez, a graduate of CELADE. The director of the school, Professor Pablo González Casanova, is interested in furthering population study. One of the best-known demographers in Latin America is Gilberto Loyo, who continues to write in the field and, from time to time, teaches.

Panama

A course in population problems was initiated at the University of Panama by Carmen Miró; it has been continued, since she left in 1958, by Antonio Maraviglia, an Argentinian.

Peru

There has been little demographic teaching in recent years at the University of Peru, but it appears that Dr. Arca-Parró, after a career in the administration of statistics and in politics, is now returning to his interest in demography, which dates back many years, and will shortly initiate a course.

Venezuela

In Ciencias Económicas y Sociales of the University of Caracas there is an Escuela de Estadística y Ciencias Actuariales. Julio Páez Celis, a graduate of CELADE, gives a course of three hours a week to third-year students. Still teaching there, and with considerable influence, is E. Machalup, who concentrates particularly on life tables and other aspects of mortality.

CENTRAL AMERICAN COURSES IN STATISTICS

Several courses in statistics for students from Central America have been held under the auspices of the secretariat of the IASI. The first of these was in El Salvador in 1954 and 1955, followed by others in Costa Rica, the Dominican Republic, and Panama. The curriculum of each of these included "demographic statistics," with lectures given over a nine-month period. The notes prepared by Dr. Clotilde Bula for the course in Costa Rica suggest an extreme concentration on mathematical topics; the training of statisticians rather than demographers was their

object. The same applies to the notes published by Nydia Marquez, a mathematical statistician, who initiated the course in El Salvador.

Santiago

Three institutions in Santiago are of interest for the purposes of this report: 1. The Inter-American Statistical Training Center (CIENES) which is under the auspices of the Organization of American States and which is a successor to the Inter-American Education Center for Economic and Financial Statistics (CIEF). 2. The Inter-American Center for Biostatistics established in 1952; instruction has continued in the School of Public Health with over 300 students from 20 countries trained in the past 10 years. 3. The Latin-American Center for Demography (CELADE) was established in 1958 under the auspices of the University of Chile, the United Nations, and several private foundations. The CIENES provides a five-month course on demographic and social statistics, during which the students have three hours of lectures and three hours of laboratory work a week. Its interest extends over the whole field of statistics. The Center for Biostatistics has now gone out of existence. We will confine our discussion to CELADE.

THE LATIN-AMERICAN DEMOGRAPHIC CENTER

CELADE offers a 10½-month basic course to about 15 students each year. Most of the students are on the payroll of the government which nominates them; all other expenses, including the stipend for their living allowance in Santiago, are covered by CELADE. The success of the course depends on the quality of the students who are nominated, and the administration of CELADE has gone as far as it can in influencing governments to name people who will put the instruction to good use. The basic course is divided into two semesters, with written examinations at the end of each. An impressive degree of discipline is maintained in respect to punctuality, attendance at classes, and out-of-class study in preparation for examinations. All professors appear to set high standards in respect to the quantity and quality of the material covered.

The basic curriculum includes numerical calculus, statistical method, sampling concepts; sources and methods of collection of data; the world demographic situation and the history of population theories; the composition and distribution of population; mortality, fertility, migration;

population models treated in rigorous mathematical fashion; evaluation of demographic data; social and economic aspects of population growth. The course consists of 243 hours of lectures and 166 of formal laboratory periods.

The second- and third-year courses involve fewer students, and take the form of guided research rather than attendance at lectures.

The administration has had a considerable measure of success in securing good teachers and keeping them, so that at the end of five years an effective team has been built up. Morale and willingness to cooperate are very high. This applies to the teaching, but even more to the various field studies which have been carried out or are pending. Some effort is made to keep in touch with former fellows and give them advice and help, sometimes through the visit of staff members to their country. CELADE is frequently consulted by governments in connection with their censuses and other problems. Its students have prepared several dozen studies, usually based on the statistics of their own countries, which have been reproduced in CELADE and constitute a solid fund of material. The professors have mimeographed their class notes, some of which—for example, those of Léon Tabah on population models—are as comprehensive and sophisticated as any materials I have seen on the subjects.

CELADE is oriented to the problems of the countries of the area, as can be seen from the extensive list of materials provided by Jorge Somoza. It is at its strongest in its affiliations with mathematics, emphasizing less the social aspects of the subject, and one concludes that the same would apply to the teaching for which its graduates are responsible in their own countries. It is fair to say that because of the work of CELADE over the past five years the teaching of demography in Latin America has changed from a few courses offered by very much isolated, if devoted, men—each teaching a more or less private interest and using home-developed methods—to a considerable number of courses in more than half of the countries of the continent, using the most modern techniques, and promising a multiplication of the excellent program of CELADE. The objective demographic problem of Latin America, which is in the mind of every contributor to this Conference, can hardly be solved by outsiders; its solution will be the result of forces acting within Latin America itself. But among these forces must be reckoned the influence of CELADE, through its students and those they will teach, in the sharpening of consciousness in regard to the population

issue. If CELADE errs on the side of keeping its students too busy on the mathematical side of the discipline, this is at least an error in the right direction, in the face of the opposite error which is found so generally in underdeveloped countries—a tendency to give the students too little materials and for these to be of a literary and philosophical rather than a scientific character.

It is inconceivable that the teaching of demography in the universities of Latin American should not partake of the general weaknesses of university organization in the area. With some exceptions, says Pendleton Herring, in a Social Science Research Council Report:

“. . . the general academic picture is predominantly that of part-time faculty and part-time students, both suffering from distractions and demands that limit their time and energy for scholarly and scientific pursuits. The professor complains of overly large classes and indifferent students. He is poorly paid and overworked and has virtually no opportunity for research on his own. He must work at one or even two jobs other than his academic duties in order to gain a livelihood.”¹

This statement applies as much in the field of population as in any other.

SUMMARY

In three or four Latin American universities the teaching of demography goes back a generation. It is usually part of a course in economics, and like these older courses has a strong affinity with actuarial science. Only one or two scholars of a generation ago, to judge by the writings which have survived, were interested in what we would today call problems of population. Among these J. González Galé of the University of Buenos Aires is outstanding. Demography in Brazil has drawn on the Italian school, through the teaching and research of G. Mortara, whose interests have included a deep concern for the problems of Latin America. Eric Michalup in Caracas has provided elements of a different European tradition. Gino Germani at the University of Buenos Aires, though by no means specializing in demography, has included it within the scope of his interests at the Instituto de Sociología. Carlos E. Dieulefait has provided leadership at the Universidad del Litoral of Rosario;

his concentration has been largely on the mathematical side of the subject. Some teaching of demography—though not in separate courses—is done in departments of statistics, public health, geography, and other subjects. Where this is an incidental portion of some other course, one suspects that the treatment falls considerably short of what would be given by even a second-rate professional demographer.

Aside from these few courses, whose character it is not possible to judge because they have neither been based on published research by the teacher nor inspired research on the part of the students, the outstanding focus today is the Centro Latinoamericano de Demografía which is a joint project of the United Nations, the University of Chile, the Population Council, and other groups. It has so far had about 75 fellows, from 18 of the 20 Latin American republics, and a considerable number of its graduates now teach courses in institutions in their own countries.

REFERENCE

1. Herring, Pendleton, *The Social Sciences in Latin America*, *Items*, 16, 13, June, 1962.

APPENDIX I

NUMBER OF FELLOWS OF CELADE BY COUNTRY

<i>Country</i>	<i>Number</i>	<i>Country</i>	<i>Number</i>
Argentina	10	Haiti	2
Bolivia	3	Honduras	3
Brazil	6	Mexico	5
Colombia	7	Panama	3
Costa Rica	3	Paraguay	3
Chile	10	Peru	2
Ecuador	4	Puerto Rico	2
El Salvador	3	Uruguay	2
Guatemala	2	Venezuela	4
Total			74

APPENDIX II

FORMER FELLOWS OF CELADE NOW TEACHING

<i>Name</i>	<i>Year in CELADE</i>	<i>Country</i>	<i>Institution</i>	<i>Subject</i>
Alvarez, L.	1959-60	Chile	Esc. de Sociología, Univ. de Chile CELADE	Assistant in demography Assistant in practical work
Benítez, R.	1958	Mexico	Esc. de Ciencias Políticas y Sociales, Univ. de Nuevo León	Social structure
Cabrera, G.	1960	Mexico	Esc. de Ciencias Políticas y Sociales, Univ. de Nuevo León	Demography
Dehollain, A.	1959-60	Argentina	Univ. de Buenos Aires	Demography
Gómez, M.	1959	Colombia	School of Soc. Service, Univ. Femenina, Bogotá	Demography
Gómez, M.	1961-62	Costa Rica	Esc. de Agronomía Esc. de Economía de la Univ.	Statistical methods Demographic statistics, experimental design, statistical methods, and biostatistics
Guerrero, E.	1961	Mexico	Esc. de Ciencias Políticas y Sociales, Univ. de Nuevo León	Statistical assistant
Gutiérrez, H.	1958-59	Chile	Esc. de Salubridad de la Univ. de Chile	Assistant in demography
Madrigal, R.	1960	Mexico	Univ. de Nuevo León	Demography
Moreno, C.	1961	Ecuador	Catholic Univ.	Economic geography
Morales, J.	1958	Chile	CIENES and Esc. de Sociología, Univ. de Chile	Demography
Nieto, B.	1959-60	Ecuador	Univ. Nal. (Colombia)	Demography
Ojeda, M.	1961	Colombia	Esc. de Economía de la Univ. Nacional	Demography
Pérez-Celis, J.	1958-59	Venezuela	Univ. Central	Demography
Pujol, J.	1962-63	Chile	CIENES	Laboratory assistant to Sr. Morales

DISCUSSION

Dr. José Amador-Guevara: I ask to be excused in this highly qualified meeting because my English is not so fluent as I wish.

My relations with demography and statistics come from the fact that I am now Professor of Preventive Medicine in the recently organized Medical School of Costa Rica.

We are trying now to awaken the interest of the medical students in these important subjects that we are discussing at this meeting. In general, most of the students of medicine think that they do not have anything to do with preventive medicine, demography, and vital statistics, but I must say that the excellent reaction of our students has been a great surprise to us. They accept the fact that there is only one field of medicine, that between disease and health there is only a very short distance, and that to understand human problems one needs to know something more than medicine.

With your permission, I shall give a brief résumé of these efforts in connection with the interesting paper by Dr. Nathan Keyfitz, and say that we need demographers for better health services and a better medical profession.

The objectives of the organization of our Department of Preventive Medicine are as follows: In the first place, to teach preventive medicine during all six years of the training and, in the second place, to teach statistics during three years, giving 16 hours each year. The students have to serve an internship similar to that in internal medicine and surgery.

I want to mention that in this new experience we have been receiving excellent collaboration from a former fellow of CELADE, Sr. Miguel Gómez Barrantes. Also, I must mention that just a few weeks ago, a fellow trained in Louisiana State University returned to Costa Rica.

I hope that in the near future a more effective collaboration will be established between international organizations on demography and vital statistics and medical schools through the departments of preventive medicine.

It is time to say clearly that Latin America has many demographic and public health problems, and that we think one way to look for the solution is through a change in the mental attitude of the people coming from our medical schools, with new concepts of anthropology, demography, genetics, and public health.

The Medical School of Costa Rica has shown great interest in participating in all research programs in the field of vital statistics, and has recently started, with its students, a family study in a suburban area near the capital. We agree with Dr. Keyfitz that high-level teaching is possible only with a staff engaged in research.

I wish to take this opportunity to congratulate Dr. Keyfitz on his presentation and ask you to excuse me because I cannot go further into his paper. I wish to thank the Milbank Memorial Fund, Dr. Robertson, and Dr. Kiser, for this excellent meeting and the special opportunity given to me.

Dr. Guillermo Llanos: To comment on the report presented by Dr. Keyfitz on the teaching of demography in Latin America, I will say that in our countries little has been done to give it the importance it deserves, because teaching has been in the hands of people of little prestige within the community, and because the concept of demography has been little understood. Only recently has the prestige of those working in the demographic field been raised and only in the last year or so have our governments begun to attach importance to demographic problems.

But we should not limit ourselves to spreading demography through informal channels. In my country we are utilizing whatever opportunity is available. Thus, for example, through one inter-American study of mortality, mentioned by Dr. Ruth Puffer, we are teaching the private physician the importance and the correct manner of filling out the medical certificate of cause of death, a concept which would otherwise be disregarded for the most part. Aware of the low quality of our vital statistics, we are trying, little by little, to instill in students the knowledge that good statistics depend on the good quality of the data. Finally, since our last census was carried out in 1951, needing actual data on our population in the places where we are working, and aware that the duty of a university is to project itself to the community which it is serving, we are making it the aim of ourselves, our students, and every faculty that we have to proceed step by step, teaching different people the importance of obtaining good quality census data and vital statistics. We think that in this way we can gradually improve the standards of our work.

Dr. George A. Silver: I wonder if I could ask Dr. Keyfitz a question about his informal remarks, a statement he made that was not mentioned in the paper. It had to do with the setting of the problem for research by the government. Dr. Keyfitz, by implication, indicated that

this type of research perhaps limited the workers. I wonder whether in this country there is not something of the same kind by indirection. You get your money for projects that are approved, so to speak, which in a sense is setting the problem because you cannot get the money to do things that are not approved.

I wonder whether Dr. Keyfitz agrees to the generalization that the government's setting the problem of necessity diminishes the quality or the value of the research.

Dr. George Rosen: I wish to ask Dr. Keyfitz a question which concerns partly what has already been brought out and which goes a little further in terms of the comments that have been made.

A comment was made on the distinction between the humanities and research-mindedness in the two Americas. I wonder if Dr. Keyfitz feels that the research-minded demographer or other scientist might not benefit by having a greater appreciation of the humanities. Apparently this is regarded as suitable for CELADE. Isn't it suitable also for those who live north of the Rio Grande?

The other point is the one Dr. Silver raised about governmental direction of research. We in this country have long had governmental direction of research—for example, in the Bureau of Standards and a number of other governmental departments—and apparently the quality has not suffered. The Bureau of Standards is regarded very highly. Furthermore, there is also the situation where the Government actually invites people to undertake projects and provides money for that. Very good scientists have accepted the Government's invitation to do work.

Would Dr. Keyfitz comment on both of these points?

Dr. Puffer: My experience differs from that of many in this group, and to me vital and health statistics and demography are primarily tools for the health administrator. Perhaps this field was not considered in the survey of teaching of demography. In our schools of public health in Latin America—you will hear later, I think, about the school of public health in Chile—a great deal is being taught about vital and health statistics and demography, not only in the school of public health on which Dr. Behm will be reporting, but in the other eight schools of public health. They are carrying on considerable instruction and have an important responsibility for training the health leaders in terms of vital and health statistics, and also the statisticians.

Some of this training has been of the kind Carmen Miró has referred to, at the intermediate level, but recently courses are being given at the

highest level in Chile. They are providing nine intensive months of training in vital and health statistics for physicians who have had their M.P.H. preparation. These well-prepared health statisticians will serve in their governments at a higher level and have influence in the development of statistics in those countries. It has become evident that the statistician at the intermediate level may not be able to effect progress as rapidly as desired in those countries.

In addition to this development in schools of public health, progress has been made in medical schools, and two examples are from Colombia and Costa Rica. There was a recommendation made by the Seminar on Preventive Medicine in Chile that there should be a department of preventive medicine in each medical school which would have a full-time professor of medical statistics. We have over 100 medical schools, and many of them are incorporating the teaching of medical and demographic statistics. Some of these professors have been trained in Latin America, and some have had training at Harvard or Johns Hopkins or other institutions in this country. So, there is a parallel development in schools of public health and medicine and these developments are in addition to the kind of demography and of training the others have been talking about.

Dr. Alexander Robertson: If I could say a word here, I was delighted to hear Dr. Puffer say this. I think perhaps it should be a little bit underlined that one's impression, from relatively limited experience, certainly is that in the medical schools in Latin America a great deal more thought and consideration are being given to teaching and training in demography as a basis for comprehensive medical planning than has been the case in North America or in Western Europe. Dr. Amador-Guevara in Costa Rica gave us one example of one new department. This is something that is going on in several places. I hope Dr. Duffy will have an opportunity to expand a little bit about the schools of public health later on. This is, to me, terribly important.

The other point, of course, which is not quite relevant to Dr. Keyfitz's paper, is the planning courses which Dr. McKenzie-Pollock at the Pan American Health Organization is responsible for. Mr. Somoza and people from CELADE have been involved in planning the course in Chile which, I think, is one of the most important landmarks of intercommunication between health people, demography, economics, and statistics in our developing ideas about health planning. There has been an absolutely fascinating series of meetings. I am sorry we have not had time to hear more about them. All of demography, I sincerely hope,

with due respect to Dr. Keyfitz, is not going to be taught exclusively in the kinds of institutions to which you have referred.

Dr. Stycos: I was particularly interested in Dr. Keyfitz's remarks about the Latin American students, because all American professors who go to Latin American universities are impressed with this phenomenon of the active role of the student in university affairs. We get constant complaints of the series of frustrations that the American professor has because of the active role of the students.

I am wondering whether we should not begin to consider joining the system instead of trying to lick it. I am going to take the radical position that Latin American students are really there to stay. For a long time, despite everything we do, they will be a very powerful and active force in the university. In fact, this might be put to very good use. I think one difficulty is that we are accustomed to dealing with an administration, and very often when we go to Latin America and try to deal with the administration we are frustrated because there is a power group which we simply do not see at all.

I would like to ask Professor Keyfitz, in the light of the fact that the student bodies in Latin America are often far ahead of the faculties in terms of their ideas about university teaching and organization, whether it would not be feasible, particularly in the light of the difficulty of introducing demography into some of the departments, to enlist student support. Since Dr. Keyfitz has had close relationship with the students, what would be his ideas?

Dr. Arca-Parró: Maybe I can implement the information about the role of the students in South American universities. It is very difficult for an American professor or scholar to realize how Latin American students are involved in the administration of a university.

We have to go back to some 20 or 30 years ago when this movement started as a protest against the way the faculties used to rule and used to deal with student affairs. The faculties were not so well prepared from the scientific point of view. A professor could keep a chair practically for life. I think the pressure of the students for changes in that system has had some good influence, which we recognize.

I was a student in the middle of this movement, and my experience as a student and as an instructor in the university is that when a professor really knows his subject, when he really knows how to deal with the students, and when he knows how to direct them, he will receive cooperation from the students.

We usually think that the students are just trying to pass the examina-

tions in any way. No, there is an enormous interest in a better standard of university work in Latin America. Of course, as anywhere else, some are interested in getting a degree as soon as possible with very little effort, but we have to recognize the sacrifice which is being made by hundreds and, I would say, maybe thousands of people going to the university, working under the same conditions as American students do, but sometimes engaging in jobs as police. I have seen students at the university who belong to the police corps of Lima. They have to study in addition to this work.

There are groups that are very active and take advantage of the participation of the students in the organization of the faculty. The students have a right to have delegates to the faculty boards, to the board of the university, and they participate in the election of directors and the dean. That may be a carry-over from medieval times, when the students had a right to participate in the make-up of the university. I do not know what the situation is in North America now.

We must recognize, too, that some of the political ideas of ideological movements always begin in the universities of Latin America. That is traditional. In Latin America the movements for independence started in the universities, despite the fact that the universities at the time were of different character. Mostly they limited themselves to philosophy and theology, but nevertheless the independence movements began in a good number of the Latin American universities and colleges.

We are not afraid of what is happening. I think we are pushing ahead, with the co-operation of the students, in clearing up problems. We have cases of new openings in the universities where the students are taking a much more active part in even the administration of the student houses.

To give you an idea of how enormous the pressure is for wider university training, we had opened few schools with university standards for the past 100 years or so. We had just three or four state universities and one private university. During the last six years it was necessary to open eight provincial universities, or at least colleges with some university standards, and two more private universities have been established, because students were leaving Peru. We have 6,000 Peruvian students attending Argentine universities alone.

As has been pointed out, I think it would be a good idea to awaken in the students some interest in new disciplines and show them how, even for the interpretation which they have to do in social science, they

need to prepare themselves technically or basically in a subject which is not generally taught in Latin American universities.

Mr. John W. Morse: I should like to add one footnote to that, if I may. It is related to some earlier remarks. I think one of the important considerations to training in Latin America is recognition of the fact that an empiricist is considered a quack. Many students may think they have good ideas or theories resulting from philosophical and theoretical approaches. It is incumbent upon their teachers to encourage them to see the value of the full use of the scientific method which begins with theory, subsequently subject to test by empirical methods.

Dr. Reed: I have had many years of experience in each of these realms. It seems to me the thing we are striving for in our universities is the development and spread of new ideas. That raises a question as to where the new ideas come from. Certainly in many cases they come from students. Anyone who has lived with students realizes that these people, with their young minds, create many of the thoughts that prove fruitful. Among the professors themselves, those who are and remain students are similarly creative and have an added maturity to bring to their thinking. The administration can run the university but, by and large, I have little faith in the university development coming from university administration.

I have often thought that we in this country would benefit if, in some more organized form, we took advantage of our student thought. Many individual professors do so. At the end of their courses they turn to their students and ask for comments and out of these they get ideas that guide them in the future. But except for some individual departments the university as a whole tends to keep the students under wraps. I think we could take a leaf from Latin America and open our students up to a little more active participation.

I shall ask Dr. Keyfitz to close the discussion. I am sure that we have laid ourselves open to many comments from him.

Dr. Keyfitz: Thank you very much, Dr. Reed.

I am not going to undertake to say in this company how a university ought to be run. It positively is the case that ideas come from students; there is an interaction between the professor and his students that is the essence of the teaching process. The students' expectations of the professor are what stimulate him; his expectations of them are what makes them get into the subject. I agree with you entirely on this.

But the kind of student participation which we have agreed takes

place does not always constitute quite the right sort of interaction, in that it is not always related to the subject matter of the discipline itself. This is what I am protesting about; I make no assertion that the students ought to be docile and take the material the professor hands out to them and then give it back to him. The process of co-operative discovery is checked on the one side by student political preoccupations, on the other by a formal stance of the professor before his classes. The Spanish expression for teaching is *dictar un curso*. The professor reads the course carefully out of his notes, reads it slowly enough for the student to take down every word. That constitutes the class.

That is really the opposite of the sort of interaction that I think you, Dr. Reed, had in mind, and fortunately the style is changing, partly as a result of student pressure.

Dr. Arca-Parró raises the subject, as did Dr. Stycos, in a way that is more subtle, and hence more difficult for me to deal with. On the one hand, in every university the students do decide what is going to be taught in the sense that if too few enroll for a course, it will not be taught. That is true of North or South America or any other part of the world. To that extent, the incentive to the professor to make his formulation of the subject correspond to its importance in our world applies on both sides of the Rio Grande.

Whether one can go further in enlisting student support for demography is what Dr. Stycos asks. But how much further can the teacher properly go than presenting the subject as well as he possibly can? I never had any difficulty with Latin American students myself and was talking more on behalf of my unfortunate Latin American colleagues who have often been in trouble when face to face with classes which, for one reason or another, did not think that they were good teachers.

I find it difficult to arbitrate the matter in general. In many respects the students are a constructive force. In many respects the traditional professor is thoroughly obsolete in Latin America and the students have enabled him to see that he is obsolete. I think Dr. Arca-Parró and Dr. Stycos would agree that the discussion would have to be carried out on a much more specific plane to get to any useful results.

In regard to the determination of research by governments, Dr. Rosen and Dr. Silver want to know whether that did not happen here and whether it was such a bad thing that it happened in either place, North or South America; that, after all, governments perhaps do have some idea of what research is useful. In some circumstances they plainly do.

In some circumstances the government official who determines the line of research is fully as much a scientist as the university professor who executes it. Quite plainly, again on this general level, I would not be prepared to dispute the point that was made.

Dr. Rosen asks if we ourselves do not need a little more of this broad humanistic outlook that is so strongly rooted in Latin America. A part of my motivation in going to Latin America to teach was in the hope of being infected in some degree with this humanistic approach. Again on a general level, I cannot argue against Dr. Rosen. At the same time, getting a larger component of empirical work into the Latin American curriculum is hard to do, and constitutes a real problem.

In that regard, I liked very much the suggestion of Dr. Llanos. In a situation where good data are totally lacking, the staff of the university made use of this inter-American study of mortality to educate doctors on the importance of filling out the death certificate; they demonstrated to him not only the importance of doing it but how to do it.

In regard to the other matter that he mentioned, the lack of a national census since 1951, and how the university staff and students actually undertook a local census, I cannot think of any better means of incorporating this empirical statistical approach that all of us are in favor of, and getting it rooted deeply in the habits of students and staff alike.

In relation to the remarks of Dr. Amador-Guevara, Dr. Puffer, and especially Dr. Robertson, I can only apologize for my lack of medical knowledge and contacts. I have had no contact with medical schools either in South or North America, in the teaching of demography. I was wrong in leaving out medicine in referring to some of the sorts of affiliations—I mentioned sociology and economics—that demographic study could have.

Dr. Reed: I want to make one more comment that is historical. Dr. Notestein, Dr. Taeuber, Frank Lorimer, and others will remember a meeting of the Milbank Fund several years ago when we discussed the extent to which we were isolated from government and how we might bring demographic facts to government attention. It seems that things have changed somewhat since that time.