MIGRATION OF HEALTH PERSONNEL, SCIENTISTS, AND ENGINEERS FROM LATIN AMERICA

PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau, Regional Office of the
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FOREWORD

This study was suggested by the Pan American Health Organization in its report *Science Policy in Latin America* (PAHO Scientific Publication 119, March 1966). The report made the following recommendation: "The Pan American Health Organization should institute a study of the migration of scientists, in cooperation with all groups that have an interest in the question, for the purpose of obtaining a more specific diagnosis and a practical prescription." A Subcommittee on Migration was formed, and Dr. Charles V. Kidd of the Office of Science and Technology, Executive Offices of the President of the United States, was asked to prepare a draft statement of goals and procedures for a study (see Appendix I). This was done with the collaboration of Dr. Kelly West, Professor of Continuing Education, University of Oklahoma School of Medicine. A preliminary draft was reviewed by the Subcommittee at a meeting in Rio de Janeiro in May 1966, and a revised draft was subsequently reviewed and discussed by the PAHO Advisory Committee on Medical Research at its Fifth Meeting in June 1966. The final report was then prepared by Dr. Kidd.

The Department of Scientific Affairs of the General Secretariat of the Organization of American States, which is engaged in establishing a more effective base for manpower statistics in Latin America, was extremely helpful in providing data. Hopefully, the present exploratory study on migration will provide guides to the kind of data that should be collected and analyzed on a long-term basis.

The American Medical Association and the Immigration and Naturalization Service of the U.S. Department of Justice kindly made available previously unpublished data. The National Science Foundation also made available special data derived from the National Register of Scientific and Technical Personnel.

Thanks are extended to the many individuals who responded to questionnaires, to busy government officials who took the time to supply data and judgments, and to many scientists who gave their ideas in personal interviews.

1. INTRODUCTION

1.1 The Basic Significance of Migration

Modern economics is attaching new significance to two factors hitherto not strongly emphasized: the effect of the quality of the work force on economic well-being, and the impact of science and technology on economic development. With regard to the first, earlier economic analysis had dealt with the work force as if it were composed of equally effective units of unchanging capacity. Later studies have clearly demonstrated, however, that the education, health, alertness, and motivation of workers constitute a major factor in economic development. Thus, theory, after many years, has almost overtaken common sense. As to the role of science and technology, reassessment in recent years has shown that innovation in products and in production techniques turns the process of change itself into an important factor of economic growth. This is a basic shift from the earlier views of economic theorists, which essentially stressed improvement in the efficiency of existing processes for the output of existing goods.

When these two factors, the significance of work-force quality and the effects of science and technology, are considered together, the critical importance of scientists, engineers, and physicians to national development becomes evident. While, on one hand, a balanced, high-quality total work force is important and necessary, on the other hand, scientists, engineers, and physicians comprise a group of singular significance to developing nations. In addition to having an economic value, these highly trained people constitute the small slice of the population that provides intellectual, political, and cultural leadership.

Any measures that increase the supply of such people are important. Similarly, any factors that contribute to a decrease are significant. Migration is one such factor.

In a number of countries of Latin America, many scientists have become so discouraged by the obstacles to a career in science and teaching that they have migrated. They are, in effect, *pushed* out of their native country. At the same time, they are *pulled* toward countries where career prospects are much brighter in both economic and intellectual terms. The country that has held the most attraction in recent years is the United States. While exact and full details concerning the migration of physicians, scientists, and engineers are not known, it is abundantly clear that the loss of such talent is in some countries a severe handicap to national economic, cultural, and intellectual development. It is also clear that the situation differs widely from one country to another.

Much more attention has been paid to the flow of capital than to the flow of brains. Physicians and biomedical scientists are an important case in point. However, like so many aspects of the science field in Latin America, the problem of this group can be adequately understood only in the context of the over-all professional picture.

The central question is not whether the forces that repel or those that attract are most powerful; it is, rather, how both these forces can be moderated in a suitable way. There can be no realistic hope that the forces leading to migration of scientists from Latin America will be eliminated and that migration will cease. The forces at work are too deeply ingrained and too powerful. Indeed, the cessation of migration is not only impossible but unwise. International migration of scientists is a productive phenomenon with which the world has long been familiar. The object of policy should be to establish conditions under which the rate of migration from Latin America may be moderated by voluntary individual decision. Fortunately, practical, inexpensive measures for reducing migration do, in fact, exist.

The present study first summarizes all the facts that could be obtained on the subject. With the cooperation of the nations concerned, the numbers and characteristics of migrants have been reasonably well identified. It then analyzes the forces leading to migration. Finally, it suggests measures to reconcile the legitimate aspirations of highly trained people with the legitimate needs of the countries for highly trained manpower.

1.2 Migration Defined

The focus of the report is on permanent rather than temporary change of an individual's country of residence. All kinds of temporary changes of residence are excluded. For example, the sojourns of thousands of Latin American students who come to the United States to study and then return home are not counted as migration. Study in the United States, however, is regarded as a factor affecting migration, since the opportunity to learn about the United States and to become familiar with the English language unquestionably plays a part in the ultimate decision to migrate. Visits to the United States for business or pleasure are also excluded from the study.

1.3 The Countries of Latin America

For the purpose of this study, the term "Latin America" shall include the following countries:

Mexico	
Costa Rica	Honduras
El Salvador	Nicaragua
Guatemala	Panama
Argentina	Ecuador
Bolivia	Paraguay
Brazil	Peru
Guyana*	Surinam
Chile	Uruguay
Colombia	Venezuela

* Formerly British Guiana.

Although this classification excludes the Caribbean countries, certain data on them will be presented.

1.4 Migration to the United States

The original intent of this study was to examine the migration patterns of scientists, engineers, and physicians and other health personnel from all Latin American countries to all other countries. However, it soon became evident that, practically speaking, the only country to which people from Latin America migrate in significant numbers—numbers sufficient to arouse concern on the part of the countries being left—is the United States. Migration of highly trained Latin Americans to Europe and to other parts of the world has not reached high enough levels to cause general concern, although migration to Europe shows signs of increasing. For these reasons, it was decided to confine the study to migration to the United States.

1.5 Availability of Migration Statistics

Enough is known almost entirely from sources within the United States about the numbers and characteristics of migrants from Latin America to the United States to provide a basis for national policies and action. The formulation of policies in this field does not depend on precise statistics; knowledge of the general magnitude, nature, and causes of a problem is an adequate guide for action. Indeed, there is no reason why an appropriate action program should be affected even by quite substantial changes in magnitudes.

Unfortunately, detailed facts that would further illuminate problems, guide programs, and stimulate action by professional and other groups are not available.

Data on the various professions—the number of people working and the number graduating annually in each one (Tables 1 and 2)—are inadequate in most Latin American countries. Such information is necessary to assess the significance of migration figures. This type of data can be produced only by a general strengthening of national manpower statistics. Such a program is now being advocated, aided, and implemented by the Organization of American States.

The volume of migration into the Latin American countries is almost entirely unknown.

The wide dissemination of the few facts available has had unfortunate consequences. The most serious effect has been an exaggerated idea of the number of migrants. Another

TABLE 1. PERSONS ENGAGED IN SIX PRINCIPAL PROFESSIONS, IN FIVE LATIN AMERICAN COUNTRIES, 1961-1965

Professional group	Brazil	Chile	Argentina	Colombia	Ecuador
Physicians		5,200	35,400	7,500	2,500
Engineers	25,000		21,700	7,300	2,000
Lawyers			21,900		
Dentists		3,300	14,100	2,500	
Pharmacists			12,100		
Architects			4,700		

Source: UNESCO, *Los Estudios de Recursos Humanos en el Contexto de la Planificación y en Metodología en América Latina* (paper prepared for the Conference on the Application of Science and Technology to the Development of Latin America, Santiago, Chile, September 1965), Cuadro 35.

TABLE 2. UNIVERSITY GRADUATES IN GIVEN YEARS, SELECTED PROFESSIONS, IN EIGHTEEN LATIN AMERICAN COUNTRIES

Country	Year	Humanities	Engineering	Natural sciences	Law	Medicine
Costa Rica	1960	6	21	5	24	20
Cuba	1962	66	70	23	83	458
Dominican Republic	1961	52	65	—	153	231
El Salvador	1959	—	20	15	14	33
Guatemala	1961	4	25	13	23	48
Haiti	1961	—	15	—	65	51
Honduras	1960	—	7	—	8	24
Jamaica	1960	56	—	33	—	33
Mexico	1960	12	818	239	558	1,341
Argentina	1962	1,566	1,167	497	1,432	4,363
Brazil	1961	3,302	1,489	784	3,509	3,989
Chile	1961	35	284	86	73	606
Colombia	1961	196	575	73	263	660
Ecuador	1961	2	36	1	89	288
Paraguay	1959	21	6	68	41	77
Peru	1959	7	204	297	389	810
Uruguay	1958	2	124	—	124	170
Venezuela	1961	144	312	31	385	831

Source: Prepublication extract from the UNESCO *Statistical Yearbook* for 1964.

consequence is that discussions of migration have been placed in a rather theoretical light.

The absence of sound data has led people to search for any facts at all that might illuminate the situation. In Mexico, for example, experts studying the supply and demand for physicians have had to rely on statistical reports of physicians tested for practice in the United States. On this basis, they arrived at the following estimate:

> Some 150 young physicians from Mexico are tested annually for settling and practicing in the United States. Of these, 100 are graduates from the Medical School of the National University and the remaining 50 are graduates from State medical schools. From 66 to 75 per cent pass the test successfully the first time; those who fail have the opportunity of passing the test at a later date. Thus, Mexico loses 100 physicians per year.[1]

Actually, the maximum annual number of physicians migrating from Mexico to the United States between 1961 and 1965 has been about 80. In the absence of precise data, the Mexican estimate was remarkably accurate and provided an order of magnitude not at all misleading in terms of policy implications. Thus, any country could take the number of its physicians who pass the test of the Educational Council on Foreign Medical Graduates as a usable measure of migration.

Argentina, however, made a rather serious error some years back. On the basis of no facts whatever, a statement was made that Argentina had lost 5,000 engineers to the United States. No source was specified and no time period was given. The true figures indicated that a maximum of 700 engineers had migrated to the United States over the period 1951-1961.[2] But the real situation was serious enough in itself, since the number of migrants equaled 8 per cent of the number of new engineers graduating over the period 1951-1961.

Far more serious than the inadequacy of statistics, however, is the lack of interest, concern, and action that prevails with regard to the migration problem.

1.6 Interpretation of Migration Statistics

Figures on migration are quite abundant in the United States, particularly from the Immigration and Naturalization Service of the U.S. Department of Justice. These statistics indicate by country and by occupation, for every year, the number of persons admitted as immigrants to the United States (Appendix II). So far as is known, no comparable information is available in any other country in the Western Hemisphere. Data with respect to physicians who have come to the United States from other countries are also available in great detail. Finally, the Institute of International Education in New York collects and publishes annual information on foreign students in the United States in its report *Open Doors*.

The precise meaning of all these data must be understood before they can be interpreted and properly used. Every effort has been made in this report to interpret the available statistics correctly and to note their limitations. Lack of understanding of the true meaning of statistics can lead to misinterpretation and confusion. To take a specific example, the number of physicians who enter the United States in a given year from a given country is not the same as the number who migrate. The total number entering the United States includes tourists, interns, and residents, as well as fully trained physicians who intend to engage in the practice of their profession. The number entering the United States is always greater then the number who migrate, but how much greater is difficult to say. Often when

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[1] D. G. Alarcón, *Evaluación de la Necesidad de Médicos de la Reública Mexicana y Planeación de la Enseñanza Médica,* México, D.F., Facultad de Medicina, Universidad Autónoma de México, 1965.

[2] M. A. Horowitz, *La Emigración de Profesionales y Técnicos Argentinos,* Buenos Aires, Instituto Torcuato di Tella, 1962, p. 1.

individuals enter the United States they themselves do not know whether they will eventually migrate, and people often change their minds. Sometimes figures relating to the total movement to the United States are cited as if they were numbers of immigrants, thus leading to exaggerated ideas with respect to the magnitude of the problem.

This report is oriented towards policy decisions—towards what can and should be done to moderate migration where it seems excessive. In such a context, extreme refinement of statistical data is not required. The statistics are a guide to the nature and magnitude of the problem to be solved, and not an end in themselves. Fortunately, good judgments as to the seriousness of the migration problem can be made on the basis of rough data, since any action that might be taken is the same over a fairly wide range. To take an example, 82 physicians from Colombia were admitted to the United States as immigrants in 1965. With respect to any action Colombia might find desirable and possible to take, it would not make much difference if this figure were 62 or 102. And it would not make much difference whether 10 or 30 per cent of those admitted as immigrants later decided to return to Colombia. The problem for Colombia is essentially the same over the possible range of figures. This example, taken at random, applies to all Latin American countries.

The fact that statistics are adequate for a study of this sort does not mean that they are adequate for all purposes. More refined data, and interpretive studies based on such data, are needed. However, the factual base for broad policy decisions and for action exists.

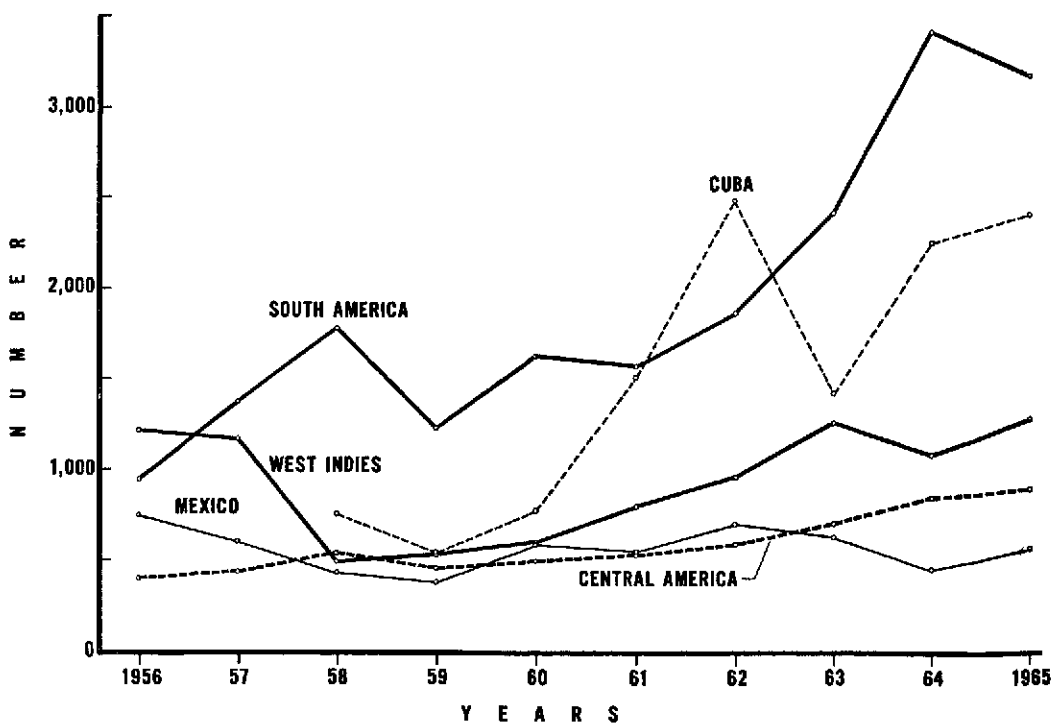
2. WHO MIGRATES?

2.1 The Broad Tides of Movement

Over the past five years, approximately 4,000 university-educated persons have entered the United States from Latin America with immigrant visas. About three quarters of these, or some 3,000, are probably permanent migrants. If the cost of training one person is conservatively estimated at $20,000, the loss to the Latin American countries caused by the migration of 3,000 university-trained people to the United States, measured solely in terms of education cost, has been in the neighborhood of $60,000,000 over the past five years.

The number of professional, technical, and kindred workers migrating to the United States from Latin America, and particularly from South America, is becoming greater each year (Figure 1). The total in 1961 was about 3,100, and in 1965 it was about 5,400. The number of migrants from South America increased from 1,900 in 1961 to 3,600 in 1965, and the Central

FIG. 1. PROFESSIONAL, TECHNICAL, AND KINDRED WORKERS ADMITTED AS IMMIGRANTS TO THE UNITED STATES, FROM SELECTED AREAS IN THE AMERICAS, 1956-1965



American annual total went from 550 to 900 during the same period. Those from Mexico increased from 600 to 900.

Over the 1961-1965 period, a total of 19,100 professional, technical, and kindred workers entered the United States from Latin America with immigrant visas. Of these, 2,900 were from Mexico, 3,500 from Central America, and 12,700 from South America.

Unless specifically mentioned, emigration from Cuba is not included in this summary because of the unique circumstances in that country. Migrants from the West Indies are also excluded.

The number of actual migrants (persons who remain permanently in the United States) is less than these figures indicate, since a large but unknown number of entrants secure immigrant visas even though they return to their own countries after a short period in the United States. For purposes of considering policy and action, however, the number entering with immigrant visas will be considered as the number of migrants, with the understanding that this figure is somewhat high.

In no Latin American country is the loss of highly trained people to the United States as significant as the losses experienced by the Philippines, India, Turkey, Korea, and Iran. Even for certain Western European countries the movement to the United States is more significant, in terms of the proportion of highly trained people who migrate as well as in terms of numbers, than it is for the Latin American countries. For example, the number of scientists and engineers who migrated from the Netherlands, Norway, and Switzerland in 1959 amounted to between 15 and 17 per cent of the year's total graduates in these particular professions. Thus, the situations of other countries can provide a useful point of reference from which to assess the significance of migration from Latin America.

The relatively high rates of migration from Western Europe as contrasted with Latin America testify to the complexity of the forces affecting migration and to the fact that much more than economic factors are involved. The real income of the average professional person is much greater in Western Europe than in Latin America. Therefore, if only economic factors operated, one would expect migration to the United States to be much more prevalent from Latin America than from Western Europe. Yet the migration rate from Western Europe is as great or greater than that from Latin America.

The total emigration to the U.S.A. from Western Europe (France, Germany, the Netherlands, and the United Kingdom) amounted to 6,500 scientists and engineers from 1956 to 1961, probably equivalent to about 6 per cent of Western European new graduates in science and engineering in those years. This was equivalent to about 3 per cent of new graduates in science and 9 per cent of new graduates in engineering.[3]

Viewed from this perspective, the wonder is not why so many Latin American engineers, scientists, and physicians migrate to the United States, but rather why so few migrate. Two important and related considerations are raised by this question.

First, it is evident that the existence of relatively low income opportunities for individuals in a given country does not necessarily lead to migration. Countries with relatively low per capita income need not be fatalistic about the migration question; they do not have to approach the level of the United States in order to keep migration within reasonable bounds.

Second, the fact that out-migration to the United States from Latin America has not been as heavy as migration from Western Europe, even though average income levels are lower in Latin America, suggests that significant non-economic factors inhibit migration from Latin America.

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[3] C. Freeman and A. Young, *The Research and Development Effort in Western Europe, North America, and the Soviet Union*, Paris, Organisation for Economic Co-operation and Development, 1965, p. 58.

The primary difficulties generated for Latin American countries by migration come less from the loss of absolute numbers than from the loss of a critical few highly qualified professional people. These people—engineers, scientists, physicians, and the like—contribute to national development not only by practicing their professions but also by serving, in the capacity of teachers and intellectual leaders, as agents of change. The narrower the human-resource base of any nation, the more significant is the loss of small numbers of highly trained people. The importance of migration to Latin American countries must therefore be measured in terms of the proportion of the highly skilled labor force that migrates as well as in terms of the number who migrate.

The loss of teacher-investigators is particularly serious, since these are the people responsible for expanding the future supply of professionals. The shortage of teacher-investigators is illustrated by the situation in engineering and medicine. In all of Latin America, about 15,000 engineers devote some time to university teaching. Of these, however, only 2,000 are full time, even in the sense of spending a formal full work week at the university. A still smaller number devote themselves completely to academic work. Only 600 to 700 engineers in all of Latin America are engaged exclusively in academic teaching and research.[4] In medicine the proportion of professionally trained persons who devote themselves completely to university teaching and research is a little larger, but not much. The proportion in science, however, is definitely higher, and of the same number of engineers and scientists who migrate a much larger number of teacher-investigators will be found among the scientists.

The better the scientist and the better the laboratory in which he works, the more likely he is to be offered an opportunity to work in a laboratory in the United States. Even the outstanding laboratories in Latin America have difficulty at times in providing the resources investigators consider essential for the optimum progress of their research. Graphic examples of this condition can be cited from laboratories with which members of the PAHO Advisory Committee on Medical Research are associated.

The loss of highly talented leaders through migration cannot be measured by statistics, for a person with the extraordinary gifts of leadership is uniquely valuable and may be worth 10 or 100 persons who have a high degree of professional training but do not have these rare personal attributes. Every country has a small nucleus of persons with the combination of leadership qualities needed for establishing institutions and ensuring their growth, productivity, vitality, and stability. These institutions may be ministries, professional parts of ministries, independent institutes, universities, or parts of universities. Informed people in virtually every Latin American country can name persons of outstanding talent who have migrated to the United States. The numbers vary from country to country and they are small, but they constitute a serious blow to development. On the whole, these losses seem to be more serious in medicine and science than in engineering.

The number of scientists who had their secondary schooling in Latin America and are now working in the United States may serve as a rough guide to the volume of migration of highly trained people. In 1964, 272 scientists with a Ph.D. degree and another 62 with a professional medical degree who had their secondary schooling in Latin America were working in the United States (Appendix III). Three quarters of them came from Argentina, Brazil, Colombia, Mexico, and the West Indies.

The problem cannot be assessed statistically, and there is no point in attempting to do so. The critical fact is that the dimension of quality must be borne explicitly in mind when statistics are examined.

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[4] UNESCO, *Personal Docente, Niveles, Grado de Especialización, y Condiciones de Ingreso en Estudios de Ingeniería* (document prepared for the Conference on the Application of Science and Technology to the Development of Latin America, Santiago, Chile, September 1965), p. 3.

2.2 The Complex Flow of People

While the flow of highly trained people to the United States from Latin America has been the clearly dominant pattern of migration, other paths of movement are significant as well. These include such patterns as migration from outside the hemisphere to Latin America before entering the United States and migration within Latin America.

2.2.1 *Migration from Europe after World War II*

The student of migratory movements within the Western Hemisphere should keep in mind that all the people but the Eskimos and the Indians are either migrants or descendants of migrants. And the flow of people to the hemisphere has not ceased. About 4.4 million people migrated from Europe and Russia during the decade immediately following World War II.[5] Of these, 1.2 million came to the United States and 1.1 million to Latin America. Of the group that migrated to Latin America, 600,000 came to Argentina, 200,000 to Venezuela, and 300,000 to the other countries. Although scientists, engineers, and physicians may constitute a much smaller proportion among these immigrants to Latin America than they do among the migrants leaving the area, even so, the total flow of people to Latin America has been so much greater than the outmigration that the region as a whole has had an important net in-migration of scientists, engineers, and physicians since World War II. The pattern has consisted of a heavy inflow from Europe and a much smaller outflow almost entirely to the United States.

While the post-World War II mass migration from Europe to Latin America has sharply diminished, migration on a smaller scale to particular areas and in particular occupations continues. For example, an important source of in-migration to Latin America is the movement of professors from Europe under the auspices of the Intergovernmental Committee for European Migration. Between January 1964 and April 1966 the Committee sponsored the relocation of 60 European professors in the following Latin American countries:

Total	60
Colombia	33
Brazil	11
Ecuador	7
Costa Rica	2
Nicaragua	1
Chile	4
Guatemala	1
Venezuela	1

By field, they were distributed as follows:

Total	60
Physical sciences	24
Social sciences	23
Agricultural and biological sciences	7
Engineering	6

These people, very few of whom have subsequently migrated to the United States, are making an important contribution to the development of Latin America.

While data are incomplete, it appears that over recent years most migrants to Latin America in the professional categories have come to Argentina, Mexico, Venezuela, and Colombia. Argentina has the most extensive data.

Argentina is a "country of immigrants." If the country had received no migrants over the last 100 years the current population would be only 45 per cent of what it is today.[6] As late as 1914, 30 per cent of the population of Argentina was foreign born. In 1964 the net migration to Argentina had reached a cumulative level of 5.7 million in a country of 30 million.

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[5] D. Kirk, *Major Migrations Since World War II*, in Milbank Memorial Fund, *Selected Studies of Migration Since World War II*, New York, 1958.

[6] Z. de Lattes, *Consecuencias Demográficas de los Movimientos Migratorios Nacionales en la República Argentina, 1870-1960* (paper prepared for the United Nations World Population Conference, Belgrade, 1965).

During the years since World War II, Argentina has continued to be a country of net in-migration. Over the period 1960-1964, 3,858 persons in the professional and technical category migrated to Argentina from all other countries while 3,531 such persons migrated from Argentina to the United States (Table 3).

TABLE 3. MOVEMENT OF PROFESSIONAL AND TECHNICAL WORKERS IN AND OUT OF ARGENTINA, 1960-1964

Year	Immigration from all countries*	Emigration to the U.S.	Net immigration
Total	3,858	3,531	327
1960	759	508	251
1961	815	552	263
1962	793	531	262
1963	639	781	−142
1964	852	1,159	−307

Source: Argentina, Ministerio del Interior, Dirección de Migraciones, *La Emigración de Técnicos Argentinos,* por H.P.O. Ciapuscio, Buenos Aires, 1965 (typewritten study).

* The immigration figures include only persons who have become Argentine citizens; they do not include persons who remain in Argentina for various periods but who do not become citizens.

In all probability, the country gained about as many professional and technical workers as it lost over the period in question. This assessment, however, does not take into account the qualifications of the individuals in the two groups, and it is quite possible that more outstanding individuals left the country than entered. Still, the basic fact that Argentina has experienced only a small net loss of professional and technical persons over recent years is not generally appreciated.

Very little occupational data are available on in-migrants. A special study of engineers migrating to and from Argentina [7] shows that although 77 left to come to the United States, 97 entered Argentina with the intention of remaining permanently and another 246 entered on a temporary basis. This "cross migration" is primarily the result of specific professional requirements generated by a developing economy and the inability of the local universities to provide the needed training.

The amount of permanent in-migration of all classes of professionals to Latin America is not known. Whether more detailed study would bring to light situations like that of Argentina is problematical. The data on in-migration to Venezuela cited in the following section are of interest in this connection.

2.2.2 *Migration before entering the United States*

While most migrants to the United States enter directly from their country of birth, some enter from another country to which they have migrated first. For example, 440 physicians entered the United States from Canada in 1964, but only 205 physicians born in Canada entered the United States in that year (Table 4). It is clear that Canada is a "way station" for migration to the United States. Spain is another important way station. From Cuba, in particu-

TABLE 4. PHYSICIANS ADMITTED TO THE UNITED STATES, BY COUNTRY OF BIRTH AND BY COUNTRY OF LAST PERMANENT RESIDENCE, SELECTED COUNTRIES AND REGIONS, 1964

Country or region	Number admitted	
	Country of birth	Country of last residence
Total	2,249	2,249
Europe	516	623
Greece	30	44
Spain	39	108
Turkey	53	29
United Kingdom	157	165
Asia	235	204
Canada	205	440
Mexico	61	77
Cuba	401	229
South America	435	454
All others	239	57

Source: Direct information, U.S. Department of Justice, Immigration and Naturalization Service.

[7] H.P.O. Ciapuscio, "Emigración e Inmigración de Técnicos," *Revista de la Dirección Nacional de Migraciones,* Buenos Aires, 1965.

Ciapuscio points out that 1961 was not a particularly favorable year for Argentina, but it was the year for which detailed occupational statistics were obtained.

lar, many migrants are entering the United States after residing in other countries.

Most physicians migrating to the United States from Mexico and South America were born there. The part of the migration accounted for by physicians not born in South America who move to the United States after residing in Latin America in quite small. In general, South America and Mexico are not important way stations. On the contrary, most persons who migrate to Mexico and South America from Europe and elsewhere stay in those countries and do not migrate again to the United States.

2.2.3 *Migration within Latin America*

There is no question that there are substantial movements of highly trained people within Latin America, but the absence of statistics leaves only impressions, experience, and informed judgments to go by. Fortunately, however, these impressionistic views are quite adequate to describe the major movements.

The most significant movements of skilled people in Latin America take place within the countries rather than from one country to another. Every nation has problems arising from the movement of people to major cities, usually the capital.

The most carefully studied aspect of this situation is the distribution of physicians between rural and urban areas in Latin America. Physicians gravitate to the big cities to such a degree that the provision of medical services to rural areas has become an exceedingly difficult problem. On the average, there are five times as many physicians in capitals and large cities as in the remaining areas of the countries, or 15 per 10,000, as against 3 per 10,000.[8] In the individual countries the urban ratio is anywhere from three to twenty times as great as the rural ratio.

Scientists tend to cluster around universities, and the largest and most prestigious universities are found in the largest cities. Moreover, opportunities for supplemental income are generally best in large cities. As the seat of national governments, capital cities are the locus of political power and generally the center of the cultural life as well. They tend to hold a particular attraction for scientists, engineers, physicians, and other highly trained people.

The country-to-city, poor-area-to-rich-area internal migration that is typical of Latin American countries can be illustrated by the case of Mexico:

> The available data on the extent and direction of internal migration during the periods of reform and rapid industrialization indicate that a growing number of Mexicans have been migrating from the villages to the cities, from smaller to larger cities and from dry to irrigated land. They have foresaken less developed areas with few opportunities for the most developed areas with greater prospects for further development.
>
> Of equal importance is the nature of the migrants arriving in the more advanced areas.
>
> It is likely that many graduates with middle and higher education from the less advanced states are now living outside them. Upon completion of each phase of their education, ambitious students are often forced to migrate in order to pursue further study and later to find employment opportunities commensurate with their level of education, as well as living standards potentially equal to their expectations. Primary graduates in rural areas must migrate to larger towns to attend secondary school and sometimes to cities to attend preparatory school. University education of high quality and diversity often necessitates travel to the Federal District, and once having left the poorer states, many students do not return.[9]

Just as international migration is caused by basic differences between one country and the next that are difficult to change, so, too, the special situation of large cities is brought

[8] Pan American Sanitary Bureau, *Health Conditions in the Americas, 1961-1962* (prepared for the XV Meeting of the Directing Council), Washington, D.C., 1964, p. 62. (Scientific Publication No. 104)

[9] C. N. Myers, *Education and National Development in Mexico,* in Harbison and Myers (eds.), *Manpower and Education; Country Studies in Economic Development,* New York, McGraw-Hill, 1965, pp. 73-74.

about by powerful historical forces whose consequences are not easily altered. Both problems must be dealt with in the context of total national development—social, cultural, and economic.

Migration of professional people from one country to another within Latin America is substantial. The most significant movement is to Venezuela, whose prosperity and rapid growth rate are key factors. Personal incomes, on the average, are the highest in Latin America. Incomes for scientists, engineers, and physicians are sufficiently generous to attract many excellent people from Western Europe. Indeed, the monthly salaries of scientists engaged full time in research in Venezuela are extraordinarily high:[10]

Monthly salary (approximate U.S. dollar equivalent)	Percentage of scientists
170-400	6
400-440	7
440-550	14
550-660	33
660-770	17
770-880	13
880-990	6
Over 990	4

There are about 750 scientists in Venezuela. Of these, approximately 20 per cent are foreigners and another 17 per cent are naturalized citizens. In the first group, foreigners who have migrated but who have not become naturalized citizens, about 50 are from Latin America, 80 from Europe, and 15 from elsewhere. Spain has supplied the largest number—about 35—and Argentina the next—about 15. Other Latin American scientists have come from Peru, Brazil, Bolivia, Chile, Colombia, Costa Rica, Cuba, Ecuador, Mexico, and Uruguay. Still, more migrants have come from Italy and from England than from any single Latin American country. In all, 14 European countries are represented by the scientists who have moved to Venezuela.

Indeed, more scientists have been attracted to Venezuela from Europe than from elsewhere in Latin America. Two reasons for this are that there are many more scientists in Europe than in Latin America and that conditions for scientific work in many European countries have not been the best in the world.

The case of Venezuela is particularly instructive because it illustrates the powerful influence of money. The ability of Venezuela to attract scientists can be primarily attributed to her rich endowment of petroleum. But general prosperity alone was not enough. Venezuela has had to take specific steps to ensure high salaries for scientists. While Venezuelan salaries are very high by Latin American standards and high by European standards, they are not high by U.S. standards. Thus, it is not necessary for the Latin American countries to match U.S. salary levels in order to keep their professionals at home and to attract migrants from other countries.

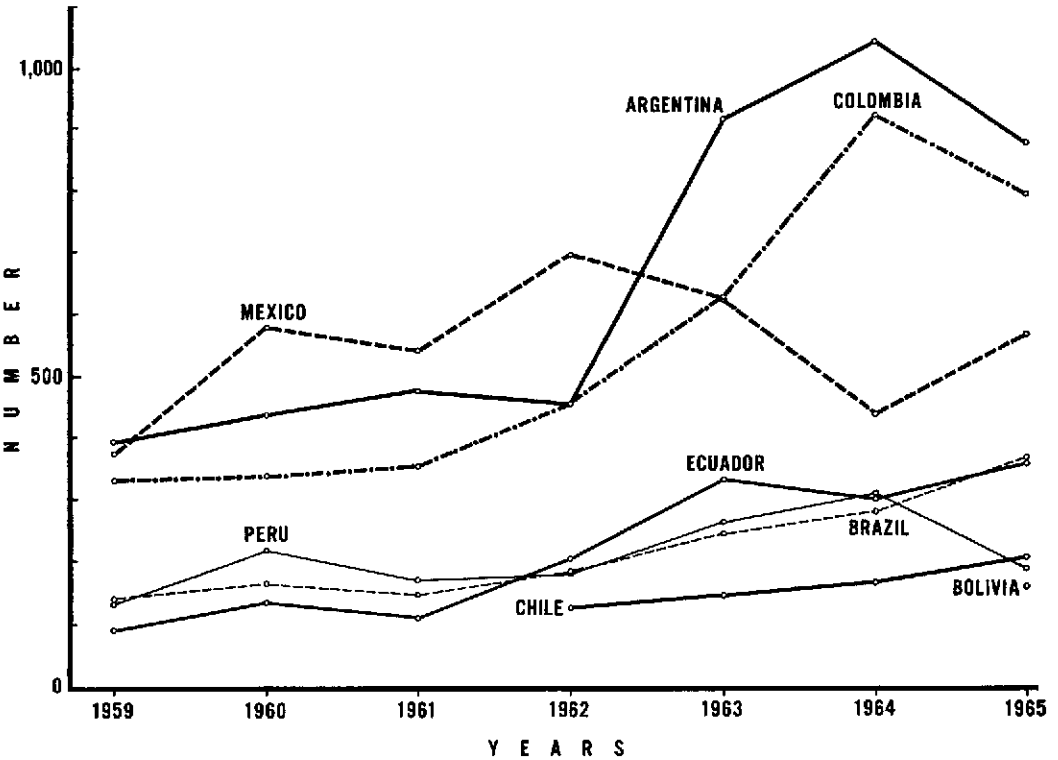
There is a moderate movement of scientists among other Latin American countries, most notably to Mexico, but this flow is not large enough to raise questions of national policy.

2.3 Movement by Country—Numbers and Rates

The Latin American country most adversely affected by migration in recent years has been Cuba, primarily as a consequence of unique political circumstances. Apart from Cuba, the two countries with the largest number of emigrants have been Argentina and Colombia. In both of them, the number of emigrants remained fairly level in the 350-to-500 range from 1959 through 1962, but it took an upward turn in 1963 and had increased to nearly 1,000 from Argentina and 900 from Colombia by 1965 (Figure 2 and Table 5).

[10] *Bases para la Creación de un Consejo Nacional de Investigaciones Científicas y Tecnológicas en Venezuela; Informe que Presenta la Comisión Preparatoria Designada al Efecto,* Caracas, Junio 1964.

FIG. 2. PROFESSIONAL, TECHNICAL, AND KINDRED WORKERS ADMITTED AS IMMIGRANTS TO THE UNITED STATES, FROM SELECTED COUNTRIES OF THE AMERICAS, 1959-1965



The situation of Colombia is about three times as difficult as that of Argentina. In the first place, per capita gross national product in Colombia is only about half of that in Argentina—approximately $300 as compared to approximately $600. Therefore, fewer resources are available to make for the kind of conditions that will attract and hold professional people. In the second place, although Colombia's population of 15 million is about 70 per cent of Argentina's 22 million, the base of professional people is much smaller. Colombia has 50 physicians for every 10,000 people, whereas Argentina has about 150 per 10,000. Colombia has only about 7,000 engineers, whereas Argentina has about 22,000. Generally speaking, Argentina has a skilled, professional manpower base about three times as large as that of Colombia. Thus, the loss of a single person is about three times more serious to Colombia than it is to Argentina.

Some of the countries with a low level of out-migration still have problems, however. Ecuador and Brazil provide an interesting contrast in this regard. Every year over the last decade about the same number of professional and related persons have migrated to the United States from both countries. The trend of migration from each country has risen moderately but steadily. However, Brazil has more than 25,000 physicians and 25,000 engineers, whereas Ecuador has fewer than 2,000 in each of these categories. Brazil and Ecuador have roughly the same ratio of physicians to population, but the total population of Brazil is approximately 80 million, whereas that of Ecuador is only about 5 million. The per capita gross national product in each of the two countries is roughly $200, but Brazil has a number of important economic and cultural centers where

TABLE 5. PERSONS ADMITTED TO THE UNITED STATES WITH IMMIGRANT VISAS, FROM SOUTH AMERICA, ARGENTINA, AND COLOMBIA, SELECTED PROFESSIONS, 1965

Professional group	South America	Argentina	Colombia
Total, all professionals	3,562	973	868
Chemists	60	20	6
Professors (all kinds)	134	36	46
Physicians	348	140	82
Engineers, total	299	88	70
Civil	49	12	12
Electrical	28	5	10
Mechanical	36	10	6
Other	186	61	42
Biologists and agricultural scientists	39	6	13
Mathematicians and physicists	9	4	2
Nurses	220	43	58
Economists	33	9	14
Teachers, total	689	196	111
Technicians, total	384	130	115
Medical	61	18	19
Electronic	122	43	37
Scientific	20	11	4
Other	181	58	55

Source: Direct information, U.S. Department of Justice, Immigration and Naturalization Service (see Appendix II).

incomes are well above the national average. Clearly, when an equal number of professionals migrate from each country, Ecuador suffers a much more serious loss than does Brazil.

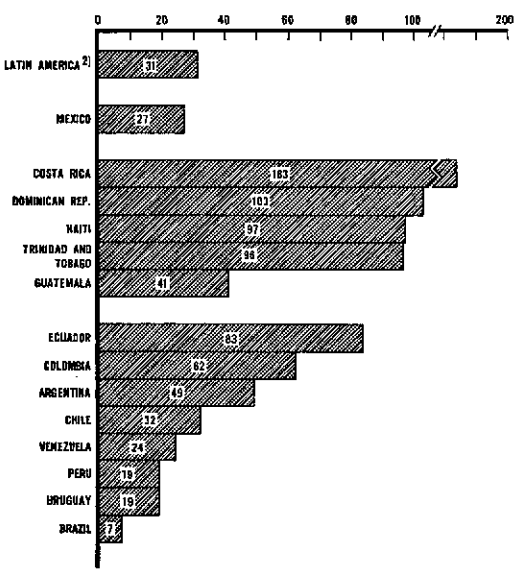
Bolivia and Chile are another example. Roughly the same number of professional persons migrate from each of the countries. But Chile has more than 8 million inhabitants, whereas Bolivia has about 4 million. The per capita gross national product is approximately $500 in Chile and about $150 in Bolivia. Chile has about 5,000 physicians; Bolivia, about 1,000. Thus, the migration of professional persons is a far more serious matter for Bolivia than it is for Chile.

In terms of per million inhabitants, migration from Costa Rica, the Dominican Republic, Haiti, and Trinidad and Tobago is particularly significant, even though the absolute numbers of migrants are small (Figure 3).

The two South American countries most affected by migration are Ecuador and Colombia, with Argentina in third place. Mexico, Chile, and Venezuela are in an intermediate

FIG. 3. POTENTIAL[1] LOSS OF PROFESSIONAL AND TECHNICAL WORKERS, BY COUNTRY, LATIN AMERICA, 1965

(Immigrant Visas to the U.S. per Million Population)



1] A substantial percentage of those who obtain immigrant visas will return

2] Excluding Cuba. Visas per million population for Cuba were 223

position. Peru, Uruguay, and Brazil—particularly Brazil—lose relatively few highly trained people.

2.4 Migration by Occupational Group

Migration of highly trained persons is not concentrated in any specific occupational field. Countries from which large numbers migrate lose many people in all professions. For example, Argentina, Colombia, and Mexico have lost the largest numbers in all of the major skilled groups. (More professors have entered the United States from Colombia, however, than from any other Latin American country.) By and large, the factors giving rise to migration are common to all fields. The basic issues in Latin America do not, as in some other parts of the world, relate to the establishment of priorities among the different scientific fields, allocation of resources to the various disciplines, or the like; rather, they pertain to the operation of the total society and economy and to the emphasis placed on science and higher education as contrasted with other important areas of activity.

3. MIGRATION BY PROFESSION

3.1 Physicians

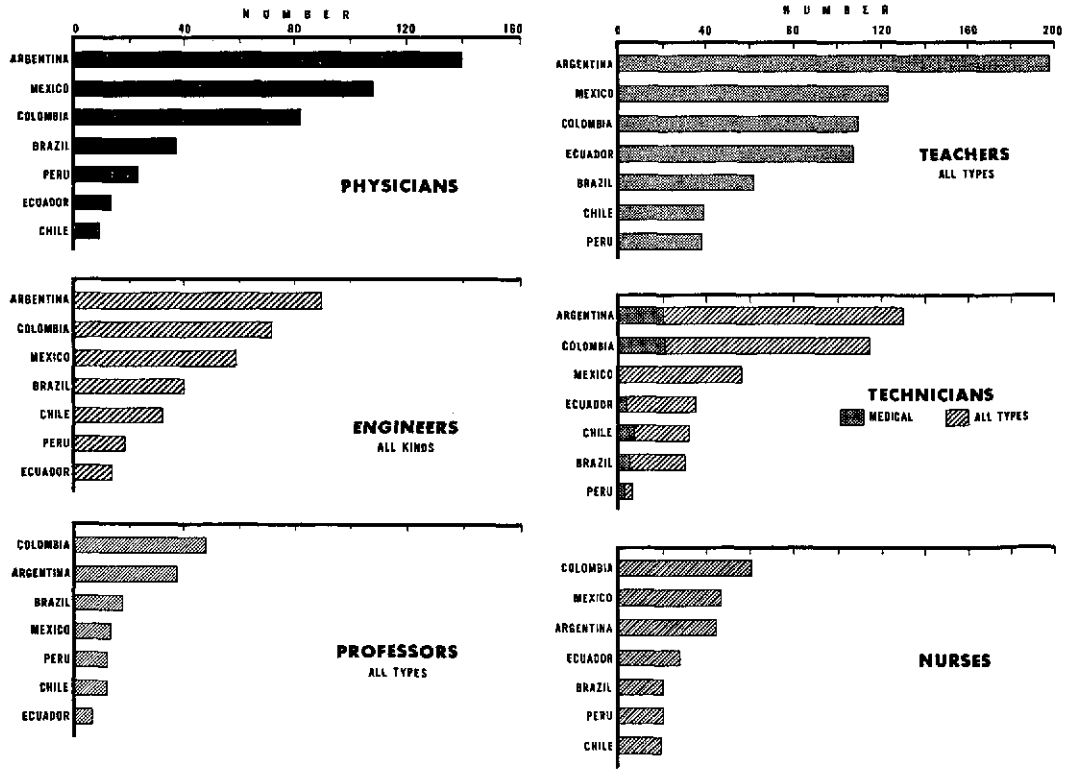
Every year about 300 physicians migrate from Latin America to the United States.[11] This number is equal to the annual output of three large U.S. medical schools. It would cost at least $60 million to build three teaching medical centers and more than $15 million a year to operate them. In these terms, the value of the physicians coming to the United States is roughly equal to that of all U.S. medical assistance to Latin America.

Migration of Latin American physicians to the United States was uncommon before 1950, but in recent years the rate has increased progressively.[12] Between 1956 and 1960 a total

[11] The number who enter with an immigrant visa is a firm figure. The number of these who actually migrate is an estimate.

[12] See Chapter 4 for a full discussion of the data presented in this summary.

FIG. 4. PERSONS ADMITTED TO THE UNITED STATES WITH IMMIGRANT VISAS FROM LATIN AMERICA, SELECTED COUNTRIES AND OCCUPATIONS, 1965



of 1,765 physicians were admitted to the United States with immigrant visas from Latin America (not including Cuba), whereas from 1961 to 1965 some 2,500 were admitted. Their distribution by major geographical areas was as follows:

Area	Total	1956-1960	1961-1965
Total	4,257	1,742	2,515
Mexico	704	286	418
Central America	762	300	462
South America	2,791	1,156	1,635

Most physicians who have immigrated entered the United States as interns or residents. There are currently about 2,200 interns and residents in the United States who are graduates of Latin American schools.

Of the 3,773 graduates of Latin American medical schools in the United States who are not interns or residents, approximately 1,300 are from Cuba, 933 from Mexico (about one third of these are U.S. citizens), 399 from Argentina, 294 from the Dominican Republic, 211 from Colombia, 186 from Peru, and 101 from Brazil.

The 1965 rate of immigration represents about 5 per cent of the annual output of all medical schools (excluding the Cuban schools) in Latin America. If Cuba is included, the proportion goes up to 8 per cent. To appreciate the magnitude of this trend, the situation may be imagined in reverse: What would happen in the United States if every year a comparable proportion of the annual U.S. output—between 300 and 500 physicians—were to migrate to Latin America? An acute reaction indeed could be expected.

Approximately 25 per cent of those physicians who are potential scientists and teachers are being lost to Latin America by migration to the United States. Probably as many as 100 highly trained Latin American physicians in the United States would return to their countries to pursue academic careers if suitable opportunities were available.

As in the case of professionals in general, the migration of physicians to the United States does not pose as severe a problem to the Latin American countries as it does to certain countries in other parts of the world. For example, as many physicians migrate annually to the United States from the Philippines as from all the countries of South America combined. As many physicians migrate to the United States from Turkey as from Argentina, but Turkey only produces a third as many physicians each year as Argentina does and has only one fourth as many physicians in relation to total population.

Of the physicians who migrate to the United States from Latin America, three out of every four come from Argentina, Colombia, Mexico, and Peru. Moreover, three out of four migrants come from eight Latin American medical schools:

Argentina
National University of Buenos Aires [13]
National University of Córdoba
Colombia
National University of Bogotá
Dominican Republic
University of Santo Domingo
Haiti
University of Haiti
Mexico
National University of Mexico [13]
University of Nuevo León
Peru
San Marcos National University

Six of these universities (all except the National University of Córdoba and the National University of Bogotá) accounted for almost 60 per cent of those who migrated in 1960.

As background for these data, it is useful to bear in mind that 80 per cent of all Latin

[13] Appendix VI gives detailed information on the current status of graduates now in the United States from these two universities.

American physicians come from six countries—Argentina, Brazil, Colombia, Cuba, Mexico, and Venezuela—and that two thirds are produced by Argentina, Brazil, and Mexico alone.

The effects of migration on individual countries depend not only on the number but also on the proportion of physicians leaving. Annual migration in relation to annual production of new physicians is estimated as follows for the period 1961-1965:

Area and country	Migrants as a percentage of graduates
Total	5
Mexico	8
Central America	22
South America	9
Argentina	6
Colombia	16

For countries that have relatively few physicians, the loss of even a small number through migration can generate serious difficulties. Smaller countries having a high rate of migration are the following:

Country	Migrants as a percentage of graduates
Dominican Republic	14
Haiti	20
Nicaragua	18

3.2 Nurses [14]

Nurses throughout Latin America are in a difficult economic and social position, and this is the primary cause of migration. Salaries are low; working conditions are often unpleasant; opportunities for advancement are quite poor; and job stability is sometimes affected by political changes. Moreover, nurses do not enjoy a very high social status. Thus, many have a clear motive to migrate, particularly to the United States where wages and working conditions are relatively good. But there are many factors that inhibit migration as well. A number of nurses belong to religious orders and are completely dedicated to their work in their home countries or other Latin American countries. Women often have very strong family ties, and the prospect of migration poses a forbidding personal and cultural change. Also, many of them do not have the kind of training required for easy employment in the United States. Frequently they do not speak English.

Jobs are available in the United States for well-trained Latin American nurses who have an adequate command of English.[15] Salaries, working conditions, and status are all more favorable, often markedly so, than in the Latin American countries. The yearly salary of the average registered nurse in a nonfederal metropolitan hospital is $4,500. Thus, the United States offers strong attracting forces for nurses.

The migration pattern of nurses varies widely from one country to another. Of the 510 Latin American nurses admitted to the United States with immigrant visas in 1965, almost 60 per cent came from seven countries—Argentina, Colombia, Costa Rica, Cuba, the Dominican Republic, Ecuador, and Mexico—whereas only a few came from Bolivia, Brazil, Chile, and Peru (Table 6).

In most Latin American countries the migration of nurses is not a serious problem, but in a few of them, specifically noted below, the situation is cause for concern.

[14] The Zone Offices of PAHO, officials of Latin American governments, the central nursing office of PAHO, and the American Nursing Association kindly cooperated in supplying data for this section.

[15] "National Crisis in Nursing," *Medical World News*, January 20, 1966. The shortage of nurses in the United States approaches a crisis stage. This shortage arises from two primary sets of factors—those affecting the supply of nurses and those affecting the demand. The supply is restricted by such factors as low salaries relative to those available to girls in other occupations, relatively unfavorable working conditions, and marriage. Demand is high because of rising standards of medical care, rising demand for medical care, and increases in the range of services provided by nurses.

TABLE 6. NURSES AND MEDICAL TECHNICIANS FROM LATIN AMERICA ADMITTED TO THE UNITED STATES WITH IMMIGRANT VISAS, 1965

Country	Nurses	Medical technicians
Total	510	174
Mexico	45	12
Cuba	59	55
Dominican Republic	28	6
Haiti	17	7
Trinidad and Tobago	18	5
Central America	*123*	*28*
Canal Zone	1	—
Costa Rica	36	4
El Salvador	22	4
Guatemala	20	5
Honduras	20	5
Nicaragua	7	2
Panama	10	7
British Honduras	7	1
South America	*220*	*61*
Argentina	43	18
Bolivia	10	1
Brazil	19	4
Chile	17	8
Colombia	58	19
Ecuador	28	3
Paraguay	1	—
Peru	18	3
Uruguay	2	—
Venezuela	8	3
Other	16	2

Source: Direct information, U.S. Department of Justice, Immigration and Naturalization Service (see Appendix II).

Bolivia: Of the 464 graduates of the principal nursing schools, 114 (or 24 per cent) have migrated:

Total	114
United States	69
Latin America	39
Peru	16
Venezuela	13
Brazil	6
Other	4
Other	6

Chile: Migration of nurses is a significant problem in this country. The nurses from the best schools are very well trained and are highly regarded in the United States.

Colombia: According to an important study now in progress, there are about 1,200 active nurses in the country.[16] About 12 per cent (160) have migrated to the following areas:

Total	159
United States	90
Latin America	48
Venezuela	21
Panama	11
Ecuador	4
Other	12
Europe	18
Other (Canada and Congo)	3

Ecuador: Of the 414 living graduates of the National School of Nurses, 78 (19 per cent) have migrated—47 to the United States and 31 to other Latin American countries.

Honduras: About 20 per cent of all nurses migrate, mostly to the United States.

Jamaica: This country has a serious migration problem. About 130 nurses graduate annually, but some 200 nurses trained in Jamaica apply for work abroad each year.[17]

The facts on migration of nurses do not bear out certain widely held assumptions. For example, although it is often assumed that migration of nurses is a general problem, many countries lose very few nurses this way. As another example, the migration of nurses from Chile has been widely publicized, but Colombia, Peru, and Ecuador all lose more nurses by migration than does Chile.

3.3 Engineers and Scientists

In 1965 a total of 574 Latin American engineers were admitted to the United States with immigrant visas (Table 7). The figures on engineer migrants tend to be high. In the first place, unlike the case of

[16] Preliminary data from a study of health manpower and medical education in Colombia.

[17] "What Happens to Jamaica's Trained Nurses?" *The Jamaican Nurse,* Dec. 1964, p. 8.

TABLE 7. ENGINEERS FROM LATIN AMERICA ADMITTED TO THE UNITED STATES WITH IMMIGRANT VISAS, 1965

Country	Total	Civil	Electrical	Mechanical	Other
Total	574	123	66	85	300
Mexico	57	13	14	7	23
Cuba	119	34	13	29	43
Dominican Republic	16	2	1	2	11
Haiti	28	8	4	—	16
Trinidad and Tobago	8	4	—	1	3
Central America	*50*	*13*	*6*	*10*	*21*
Costa Rica	10	1	2	4	3
El Salvador	5	2	—	—	3
Guatemala	7	2	—	1	4
Honduras	12	1	1	3	7
Nicaragua	5	2	1	1	5
Panama	8	4	2	—	2
British Honduras	4	1	1	1	1
South America	*299*	*49*	*28*	*36*	*186*
Argentina	88	12	5	10	61
Bolivia	10	1	—	4	5
Brazil	37	6	5	7	19
Chile	29	7	2	3	17
Colombia	70	12	10	6	42
Ecuador	13	4	2	1	6
Paraguay	1	—	—	—	1
Peru	17	3	2	3	9
Uruguay	6	—	—	—	6
Venezuela	24	4	2	2	16

Source: Direct information, U.S. Department of Justice, Immigration and Naturalization Service (see Appendix II).

scientists and physicians, all persons who call themselves engineers are not known for certain to be professionally trained engineers with university degrees. In the second place, not all of those who enter with immigrant visas actually migrate.

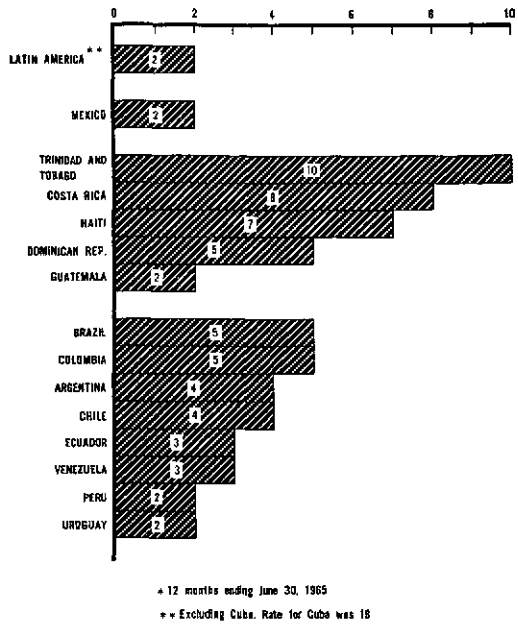
Apart from Cuba, with 119 migrating engineers, four countries account for more than half of the migrating group—Argentina (84), Colombia (70), Mexico (57), and Brazil (37).

In the absence of data on total engineers or annual graduates in each country, a rough migration rate was estimated by computing the number of engineer migrants per million population (Figure 5). This approach, although it is admittedly far from satisfactory, shows the greatest relative losses for Trinidad and Tobago, Costa Rica, Haiti, the Dominican Republic, Brazil, and Colombia, in that order.

The number of engineers migrating from Latin America as a whole is not large enough to generate serious problems. There are several reasons for this. Engineering training in Latin America is typically oriented toward local problems. The background required for the practice of engineering in Latin America is generally different from that required in the United States. The demand for locally trained engineers is typically very high in Latin American countries, and salaries are relatively good. In many countries, engineers are needed both in private industry and in government. Many engineers move from technical positions to general managerial positions. Relatively fewer engineers than physicians and scientists speak English.

For the most part, engineers in Latin America are fully trained when they graduate from the university after a four- or five-year course.

FIG. 5. POTENTIAL LOSS OF ENGINEERS BY COUNTRY, LATIN AMERICA, 1965 *
(Immigration Visas to the U.S. per Million Population)



* 12 months ending June 30, 1965
** Excluding Cuba. Rate for Cuba was 18

They usually require no further work in order to accept jobs and begin their careers. Only in Mexico is graduate work in engineering common. In contrast, the person who aspires to a career as a scientist has completed only his basic training when he graduates from the university, either from a faculty of philosophy in sciences or from medical school. Much further graduate work is required before he is able to assume even the apprenticeship phases of full-time investigator work. Often, if not typically, this graduate work must be done abroad.

Scientists tend more than engineers to be members of an international community. They are trained in an atmosphere where the international movement of people is a normal and expected phenomenon. Scientific work itself is not as closely bound to local conditions as is engineering. To a greater degree than is true in engineering, people working on the same problem are found in different countries. The training of scientists is such that they can move with relatively little disruption of their work.

In Latin America their skills are usually not in as high demand as those of engineers. Positions for scientists are restricted almost entirely to teaching and research posts in universities and research institutes. In general, they do not have the recognition and prestige accorded to physicians and engineers.

Good scientists are eagerly sought by laboratories in the United States. A relatively high proportion of Latin American scientists, particularly in recent years, have obtained part of their advanced training in the United States, and most of them speak English.

Still, the number of scientists migrating from Latin America is small compared to the outflow of engineers and physicians. The small figure may be partly attributed to the fact that some scientists list themselves as "professors" rather than "scientists." But the number of professors who migrate is also small, so the general proposition that few scientists migrate remains valid. The main reason for the low migration rate among scientists is that few of them exist. The professional scientist—a person with a Ph.D. degree or its equivalent who is engaged full time in research or in a combination of research and teaching—is quite new on the Latin American scene. Consequently, the migration of a small number of scientists means the loss of a significant proportion of the total number in a country.

3.4 Nonmigrants Away from Home—Students and International Civil Servants

Students and international civil servants spend time outside their own countries, although most of them return and are therefore not migrants. Their case is of particular interest here because study abroad or service in international organizations is often a prelude to migration. Moreover, such activities abroad tend to aggravate shortages of highly trained people in the home country.

3.4.1 *Latin American students in the United States*

In 1964 the students from Latin America studying in the United States numbered 9,402, graduate students accounting for 3,800 of the total (Table 8).[18] Almost 40 per cent of the total group were studying engineering, physical or natural sciences, or medical sciences. For every student in the medical sciences there were two in the physical and natural sciences and four in engineering.

TABLE 8. LATIN AMERICAN STUDENTS IN THE UNITED STATES, BY FIELD OF MAJOR INTEREST, 1964

Field	Number	Percentage
Total	9,402	100
Agriculture	578	6
Business administration	956	10
Education	273	3
Engineering	2,052	22
Humanities	2,235	24
Medical sciences	544	6
Physical and natural sciences	1,058	11
Social sciences	1,356	14
All other	182	2
No answer	168	2

Source: Institute of International Education, *Open Doors, 1965*, New York, 1965.

Most students are not migrants. They study in the United States and return to their homes. For these students, study in the United States constitutes an important personal gain and also a significant addition to the human resources of their native countries. For the United States, the thousands of Latin American students in attendance at universities provide the means for establishing a cultural bridge to Latin America.

Student training programs, important as they are to Latin American countries, have a hidden cost in the later migration of some of the students. The opportunity to learn English, to become accustomed to the culture of the United States, and to become acquainted with job opportunities often makes later migration seem more feasible and desirable.

Informed persons in both Latin America and the United States agree that those who visit the United States to study with their own funds more often migrate than those whose study is made possible by fellowships either from their own countries or from the United States. The best available figures show that fewer than one per cent of the students who have studied in the United States with the aid of government funds have returned as migrants to the United States. This is logical, since those who study

[18] Institute of International Education, *Open Doors, 1965; Report on International Exchange*, New York, 1965.

TABLE 9. PERCENTAGES OF GRADUATE STUDENTS IN SELECTED FIELDS OF SPECIALIZATION, IN SEVEN LATIN AMERICAN COUNTRIES, 1963-1964

Country	Number of students	Percentage in given specialty				
		Engineering	Agriculture*	Economics	Public admin. and political sciences	Humanities
Total	1,773	21.8	9.0	8.6	2.5	23.7
Brazil	329	16.2	4.3	9.4	6.4	26.3
Mexico	326	18.1	13.2	3.1	0.3	28.7
Colombia	288	23.2	9.7	9.7	1.7	28.3
Venezuela	278	37.8	8.6	10.4	2.2	19.0
Argentina	221	11.3	6.3	14.5	2.3	29.3
Chile	190	17.6	7.4	5.8	3.2	27.1
Peru	141	23.2	16.3	9.2	0.0	22.1

Source: Institute of International Education, *Open Doors, 1965*, New York, 1965.

* Includes all six agricultural specialties: agriculture, agronomy, agricultural engineering, food technology, husbandry, and veterinary medicine.

with the aid of government fellowships usually have a moral obligation to return, and some efforts have normally been made to design the training for employment at home in a preselected field where jobs exist. Those who come with the aid of private funds, on the other hand, are freer to remain in the United States and may not necessarily have assurance of a position to which they can return.

There are disparities between national needs and the current distribution of students (Table 9). During the academic year 1963-64 in seven important countries only 9 per cent of the graduate students were studying agricultural specialities or economics, only 3 per cent were studying public administration and political sciences, about 20 per cent were studying engineering, and almost 25 per cent were studying humanities. The maldistribution of students is a major problem in itself, but it is also related to the question of migration. A more deliberate effort on the part of the Latin American countries with the aid of the United States to adjust training patterns to high-priority national needs should help to keep highly trained persons in their home countries.

3.4.2 *International civil servants*

The number of highly trained and talented citizens employed by international organizations is cause for concern to some Latin American countries. In 1964 more than 800 Latin American professional and technical persons recruited internationally were serving with such

TABLE 10. LATIN AMERICAN CITIZENS RECRUITED INTERNATIONALLY FOR INTERNATIONAL AGENCIES, 1964

Country	Total	FAO	UN	WHO	UNESCO	ILO	OAS	IAEA	PAHO	ICAO	ITU	WMO
Total	819	135	163	71	65	53	209	10	81	24	7	1
Argentina	124	23	19	8	10	10	32	7	8	4	3	—
Bolivia	29	5	7	3	1	2	7	—	3	1	—	—
Brazil	101	21	18	11	7	3	14	3	21	2	—	1
Chile	94	21	18	9	7	6	18	—	12	3	—	—
Colombia	60	8	15	3	4	2	20	—	7	—	1	—
Costa Rica	24	5	4	1	2	2	7	—	1	2	—	—
Cuba	60	4	6	1	2	3	37	—	3	3	1	—
Dominican Republic	9	—	2	1	1	1	4	—	—	—	—	—
Ecuador	35	6	8	4	3	3	8	—	2	1	—	—
El Salvador	13	—	3	1	—	1	5	—	3	—	—	—
Guatemala	13	—	2	1	2	2	3	—	2	1	—	—
Haiti	47	17	8	8	3	2	9	—	—	—	—	—
Honduras	6	3	1	—	—	—	1	—	—	1	—	—
Jamaica	11	—	8	1	1	1	—	—	—	—	—	—
Mexico	63	7	16	11	7	6	8	—	4	3	1	—
Nicaragua	8	2	1	—	—	1	2	—	1	1	—	—
Panama	17	1	4	1	3	—	7	—	1	—	—	—
Paraguay	12	1	4	1	1	1	2	—	1	—	1	—
Peru	44	5	6	4	4	3	11	—	9	2	—	—
Trinidad and Tobago	11	1	7	—	1	2	—	—	—	—	—	—
Uruguay	28	4	5	—	5	2	11	—	1	—	—	—
Venezuela	10	1	1	2	1	—	3	—	2	—	—	—

Source: Direct information, U.S. Department of State.

FAO—Food and Agriculture Organization
UN—United Nations
WHO—World Health Organization
UNESCO—United Nations Economic, Scientific and Cultural Organization
ILO—International Labor Organization
OAS—Organization of American States
IAEA—International Atomic Energy Agency
PAHO—Pan American Health Organization
ICAO—International Civil Aviation Organization
ITU—International Telecommunications Union
WMO—World Meteorological Organization

organizations (Table 10). No details by occupation are available, but it is known that the group is composed almost entirely of highly qualified persons whose services are needed at home as well as by international organizations.

Work abroad does not necessarily mean migration; most persons who serve in international organizations go back to their countries. In the long run the countries benefit from the experience. The persons who serve abroad often return better trained to work locally. Also, national prestige tends to be enhanced. However, some individuals become permanent career employees in international organizations, and hence migrants. The size of the group is not known, but a quarter of the total is a reasonable estimate. If this guess is close, then the cost of providing staff for international organizations is not serious for the Latin American countries, even though exceptionally able executives are always needed at home.

Two thirds of the Latin Americans recruited internationally work for FAO, the UN, or the OAS, and the remainder are scattered among all of the major international organizations (Table 10).

The contributions of various countries to the staffing of international organizations are not uniform. About 60 per cent (500) of all international staff members employed as of 1964 were from six countries: Argentina, Brazil, Chile, Colombia, Cuba, and Mexico. Each of these countries contributed 60 or more employees (Table 11). In terms of national representation, there are some interesting differences. Peru, for example, has more than four times as many international employees as does Venezuela. Chile's contingent is almost as large as that of Brazil. Argentina has nearly twice as many citizens in international organizations as does Mexico, whereas Mexico and Colombia have just about the same number. The reasons for these differences are not clear. Perhaps the relative prosperity of Mexico and Venezuela makes work with international organizations less attractive to citizens of these countries. The quota system tends to make proportionately more jobs available to citizens of smaller countries. National traditions affect the degree of participation in international affairs. These are all contributing factors, to be sure, but they probably do not account entirely for the disproportions that exist.

TABLE 11. LATIN AMERICAN CITIZENS RECRUITED INTERNATIONALLY FOR INTERNATIONAL AGENCIES, REPRESENTATION BY GROUPS OF COUNTRIES, 1964

Country	Number	
Total		819
Argentina	124	
Brazil	101	
Chile	94	
Total		319
Mexico	63	
Colombia	60	
Cuba	60	
Total		183
Haiti	47	
Peru	44	
Ecuador	35	
Total		126
Bolivia	29	
Uruguay	28	
Costa Rica	24	
Total		81
Panama	17	
El Salvador	13	
Guatemala	13	
Total		43
Paraguay	12	
Trinidad and Tobago	11	
Jamaica	11	
Total		34
Venezuela	10	
Dominican Republic	9	
Nicaragua	8	
Honduras	6	
Total		33

Source: Direct information, U.S. Department of State.

4. THE SPECIAL CASE OF PHYSICIANS

Because of the magnitude and significance of the migration of physicians to the United States from Latin America and because of the special interest of the Pan American Health Organization in this profession, a particularly detailed study has been made of this movement. The data presented below summarize information from all known sources and include material collected especially for this investigation.

4.1 Background

The large-scale migration of physicians from Latin America to the United States is a very recent development. In early 1966 there were 3,773 graduates of Latin American medical schools in the United States (excluding interns and residents); of these, however, only 283 had graduated prior to 1940, and about half of these 283 were Cubans who had migrated recently (see Appendix VII for a special note on Cubans). The rate of migration began to rise sharply around 1950 and has increased progressively. Toward 1961 there was a slowing of the rate of increase, but the upward trend has continued (Figure 6). It should be noted, however, that a substantial portion of those who enter the United States with immigrant visas do not stay permanently in the United States, as will be explained below. Another measure of migration is the number of U.S. medical licenses issued by examination to graduates of Latin American schools. Licenses issued to graduates from schools in Mexico, Argentina, Colombia, and Peru showed an increase during the years 1960 through 1964 (Figure 7). Although to some extent these data suggest rates of migration somewhat higher than were actually the case, they still reflect the recent trends fairly well. Excluding Cuban graduates, 215 graduates of Latin American schools obtained U.S. licenses by examination in 1960. The annual figure in 1964 was 345.

In the last several years about 1,500 Cubans have migrated to the United States. An analysis of data from the American Medical Association (AMA) in early 1966 showed that there were 1,728 Cuban graduates in the United States. Migration from Cuba represents a rather special, and to some degree unique,

FIG. 6. U.S. IMMIGRANT VISAS TO GRADUATES OF LATIN AMERICAN MEDICAL SCHOOLS, 1957-1965

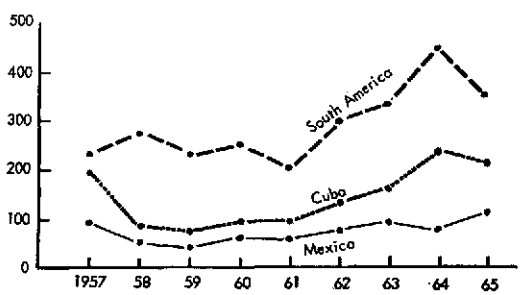
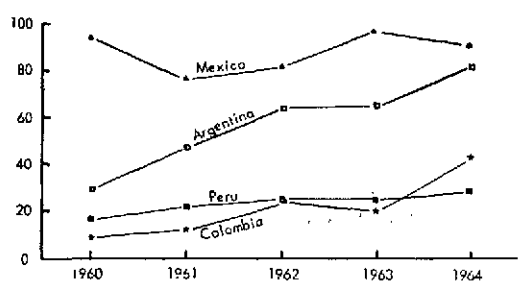


FIG. 7. U.S. LICENSES TO LATIN AMERICAN MEDICAL GRADUATES, 1960-1964



situation. The present report deals mainly with migrations from other Latin American countries.

4.2 Magnitude of Migration

In appraising the data presented here, it is useful to have certain facts in mind. To begin with, there are about 113 medical schools in Latin America, from which approximately 6,700 persons graduate each year. There are roughly 294,000 physicians in the United States, of whom about 40,000 are interns and residents.

As of early 1966 there were 5,971 physicians in the United States who were graduates of Latin American schools (roughly 2 per cent of all U.S. physicians). Three fourths of them came from Cuba, Mexico, Argentina, and Colombia (Table 12). This number is equivalent to one year's output of all Latin American schools. Of the 5,971, about 2,200 are interns and residents and roughly 350 are research trainees. Since 900 of the 5,971 are natives of the United States, the number of physicians in the United States who are natives of Latin American countries is a little more than 5,000.

TABLE 12. GRADUATES OF FOREIGN MEDICAL SCHOOLS RESIDING IN THE UNITED STATES, 1966*

Country	Number	Percentage
Total	6,000	100
Cuba	1,800	30
Mexico	1,380	23
Argentina	780	13
Colombia	540	9
Dominican Republic	420	7
Peru	300	5
Brazil	180	3
Haiti	180	3
Ecuador	60	1
Chile	60	1
Guatemala	60	1
Venezuela	60	1
Nicaragua	60	1
All others †	120	2

Source: Direct information, American Medical Association.
* Figures have been rounded off. The actual total is 5,971 rather than 6,000.
† Includes El Salvador, Honduras, Panama, Paraguay, Surinam, and Uruguay.

Precise data are not available on the number of Latin American physicians immigrating each year, but information from several sources suggests that in very recent years the annual rate has been about 525. If 225 Cubans are excluded, the annual immigration rate of all other Latin American physicians may be estimated at 300. This number represents roughly 5 per cent of the annual production of all Latin American schools. If Cubans are included, the proportion approaches 8 per cent.

4.2.1 *Difficulties in determining immigration rates*

Attempts to determine rates of immigration —that is, permanent change of residence without regard to citizenship status—must take into account several complicating factors.

The number of immigrant visas issued is substantially higher than the number of immigrants. Based on sample surveys, there is evidence that as many as half of the physicians in the United States from some countries are postgraduate trainees with immigrant visas who do not plan definitely to immigrate. Immigrant visas sometimes offer fringe benefits, such as making it possible to take back an automobile when returning from the United States. Also an immigrant visa may make it possible to defer indefinitely the decision to return or stay. In contrast, trainees with visitor visas must leave the United States for at least two years immediately after their training is completed. Occasionally waivers of this obligation are granted, but the vast majority of such requests are denied and more than 90 per cent of Latin American physicians who come to the United States with visitor visas return to their own countries. For statistical purposes, the U.S. Immigration and Naturalization Service includes in their counts of "immigrants" both those with immigrant visas and those with permanent resident visas. Five years of residence in the United States is required before U.S. citizenship can be obtained.

Thus, persons with immigrant visas sometimes return to their native countries and occasionally those who enter with visitor visas remain in the United States permanently. Even those who obtain U.S. citizenship may eventually return, and some of those who never become U.S. citizens are immigrants in the sense that they are permanent residents of the United States. It is therefore impossible to predict with certainty who will be a permanent resident of the United States and who will return. The precise immigration figure for 1966, for example, will not be known for many years. Accurate and final determination of immigration rates can only be made in retrospect.

The number of U.S. licenses issued to Latin American graduates is about 50 per cent higher than the actual number of individuals who obtain licenses, since many doctors get licenses in more than one state. With respect to the national origin of the licensees, the data available indicate only the number from each country licensed by examination (see Appendix V). A great majority are licensed by examination, but a lesser portion, perhaps 10 per cent, are licensed by the state licensure boards without an examination. Although many of the states have reciprocity agreements, there are no nationwide licenses. Licenses must be obtained from the board of the state in which the physician practices.

A substantial number of Latin American graduates in the United States do research or other similar work that does not require licensure to practice medicine. Data on the number who do not have licenses are incomplete. The figure of 5,971 graduates of Latin American schools given above includes both licensed and unlicensed physicians. The AMA census system identifies virtually all licensed physicians, interns, and residents, and probably more than 80 per cent of the unlicensed physicians who are graduates of Latin American schools.

A small portion, roughly 10 to 15 per cent, of the graduates of Latin American schools who are in the United States are natives of the United States. About half of them are graduates of the National University at Mexico City. Many of these Mexico City graduates come from Puerto Rico and return there after graduation. Also, about 5 per cent of the Latin Americans in the United States are not natives of the country in which they attended medical school.

4.2.2 *Current rate of immigration*

In 1965 a total of 757 physicians from Latin American countries were admitted to the United States as "immigrants" (Table 13). Many were postgraduate trainees who had not decided definitely to immigrate even though they held immigrant visas. Of this number, 201 were Cubans and 556 were non-Cubans. Since many of the 556 may be expected to return to their native countries, the actual

TABLE 13. PHYSICIANS ADMITTED TO THE UNITED STATES WITH IMMIGRANT VISAS, 1965

Country	Number
Total	757
Mexico	110
Cuba	201
Central America	*98*
Dominican Republic	32
Haiti	20
Trinidad and Tobago	7
Costa Rica	8
El Salvador	6
Guatemala	6
Honduras	5
Nicaragua	6
Panama	8
South America	*348*
Guyana*	2
Argentina	140
Bolivia	28
Brazil	37
Chile	8
Colombia	82
Ecuador	13
Paraguay	2
Peru	25
Uruguay	1
Venezuela	10

Source: Direct information, U.S. Department of Justice, Immigration and Naturalization Service (see Appendix II).
* Formerly British Guiana.

annual immigration rate for non-Cubans is not as high as these data suggest. As indicated above, the annual rate of immigration from Latin America (excluding Cuba) is estimated at 300.

4.3 Characteristics of Migrants

4.3.1 *Country and school of immigrants*

Of all Latin American physicians in the United States, 83 per cent are graduates of just nine schools, although 71 of the 113 Latin American medical schools have graduates in the United States (Table 14 and Appendix IV).

The data on "potential immigrants" (physicians entering the United States on immigrant visas) are more meaningful when evaluated in the light of total populations and numbers of physicians produced annually in the home countries. Measured as the number of physicians per million population, migration rates for the year ended June 30, 1965, ranged from 10.6 in the case of the Dominican Republic to 0.5 in the case of Brazil (Figure 8). When "potential immigrants" are shown as an approximate percentage of the annual number of graduates in the country concerned, the rate varies from 60 per cent in Cuba to 1 per cent in Uruguay (Figure 9). This latter percentage

TABLE 14. LATIN AMERICAN MEDICAL SCHOOLS HAVING THE LARGEST NUMBER OF GRADUATES IN THE UNITED STATES, 1966

School	Number*	%	Cumulative %
Total	3773	100.0	100.0
University of Havana, Cuba	1300†	34.9	34.9
National University, Mexico City	623	16.3	51.2
University of Santo Domingo, D. R.	294	7.7	58.9
University of Buenos Aires, Argentina	286	7.5	66.4
San Marcos University, Lima, Peru	186	4.8	71.2
Univ. of Nuevo León, Monterrey, Mexico	185	4.8	76.0
National University, Bogotá, Colombia	113	2.9	78.9
National School of Medicine, Haiti	76	2.0	80.9
University of Córdoba, Argentina	65	1.7	82.6
Fifty-eight other schools	645	16.9	100.0
Forty-six other schools	0	—	—

Source: American Medical Association, census taken early in 1966.

* Does not include interns or residents.

† Estimate.

FIG. 8. POTENTIAL PHYSICIAN IMMIGRANTS TO THE UNITED STATES PER MILLION POPULATION, 1965

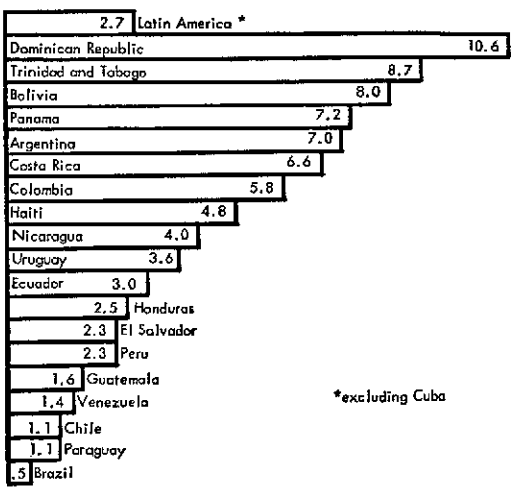
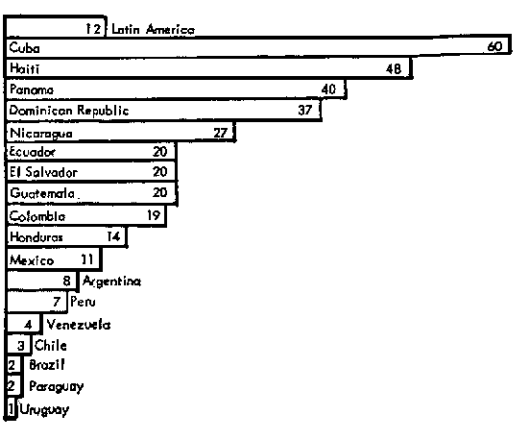


FIG. 9. POTENTIAL PHYSICIAN IMMIGRANTS TO THE UNITED STATES AS A PERCENTAGE OF ANNUAL OUTPUT OF PHYSICIANS, 1965



varies from country to country, and statistics show that in the case of some countries less than 60 per cent of those with immigrant visas will eventually migrate. Nevertheless, these figures make it possible to crudely estimate for each country the extent to which immigration constitutes a drain or a potential drain on manpower.

4.3.2 *Location within the United States*

For the most part, the graduates of Latin American schools are widely scattered throughout the United States. More are found in New York than in any other state, but even so, they are only 296, or 12 per cent of the 2,471 total (non-Cubans who are not interns or residents). There are tendencies for the graduates of some schools to congregate in certain states. Of 294 graduates of the University of Santo Domingo, 67 are in New York and 79 are in Puerto Rico. Out of a total of 259 Latin American graduates in Puerto Rico, 152 are from the National University of Mexico City; Illinois has 21 of the 76 graduates of the Haitian medical school; and Texas is the home of 84 of the 185 graduates of the University of Nuevo León in Monterrey, Mexico. Apart from these instances, however, there are no other notable congregations of Latin American graduates within the United States.

4.3.3 *Citizenship status*

Data on the citizenship of Latin American physicians in the United States are incomplete. Information based on an AMA sample survey indicates that roughly half of the Latin American graduates in the United States (interns and residents excluded) are naturalized U.S. citizens. Most of those who graduated before 1950 have changed citizenship and most of those who graduated after 1955 have not become U.S. citizens.

4.3.4 *Professional activities and specialties*

The general type of professional work is known for 2,471 Latin American graduates in the United States (non-Cubans who are not interns and residents). Analysis of 1966 data supplied by the AMA shows that 806 (33 per cent) are full-time specialists in private practice, 481 (20 per cent) are general practitioners in private practice, 724 (30 per cent) are employed as hospital staff, 104 (4 per cent) are paid by medical schools as full-time faculty members, 137 others (5 per cent) are primarily in research work but do not receive a majority of their income from a medical school, 21 (1 per cent) are in administrative work, 72 (3 per cent) are in laboratory medicine (67 of these are pathologists not in private practice), 44 (2 per cent) are in preventive medicine, 75 (3 per cent) are not in practice, and 5 are retired.

On the whole, this distribution of activities is similar to that of physicians in the same age range who are graduates of U.S. schools. The proportion of pathologists and "hospital staff," however, is somewhat higher among Latin American graduates.

With regard to the various specialties, the distribution of Latin American graduates is similar to that of physicians who are domestic graduates. Of the 2,471 Latin Americans, 574 are generalists. The most popular specialities are general surgery, 254; internal medicine, 230; psychiatry, 219; pathology, 172; and pedi atrics, 161. Anesthesiology claims 121—a proportion of 5 per cent, as against 1 per cent among U.S. physicians.

The distribution of professional activities according to school graduated from and country of origin varies considerably. One tenth of all Latin American graduates are engaged in full-time academic work as research workers or medical school faculty, but the proportion is much higher for graduates of the University of Buenos Aires (22 per cent), the University of Córdoba, Argentina (22 per cent), and for the graduates of Brazilian schools (24 per cent). (The Brazilian graduates are grouped together because each of 14 schools has contributed a small number to the over-all total of 98.) In contrast, only 6 per cent of the graduates of the National University of Mexico

City are in full-time academic work. The proportion not engaged in medical work is 7 per cent among Santo Domingo graduates, whereas only 2 per cent of the graduates of other schools are employed in nonmedical fields.

A census in the academic year 1961-62 counted 43 Latin American students in U.S. and Canadian schools of public health. Data are not available on how many of these were physicians or on what their visa status was.

TABLE 15. BIOMEDICAL RESEARCH TRAINEES FROM LATIN AMERICA SUPPORTED BY NIH TRAINING GRANTS TO U.S. INSTITUTIONS*

Country	Citizens of Latin American countries				U.S. citizens born in Latin America
	Total	Immigrant visa	Non-immigrant visa	Visa status unknown	
Total	206	102	86	18	55
Argentina	50	30	17	3	3
Bolivia	2	1	1	0	0
Brazil	18	12	6	0	2
Chile	13	3	9	1	3
Colombia	13	5	7	1	2
Cuba	32	27	2	3	10
Dominican Rep.	0	0	0	0	5
Ecuador	3	3	0	0	0
El Salvador	1	0	0	1	0
Guatemala	12	0	6	6	1
Guyana †	0	0	0	0	1
Haiti	3	2	1	0	0
Honduras	0	0	0	0	2
Jamaica	4	0	4	0	0
Mexico	25	6	17	2	10
Nicaragua	3	1	2	0	1
Panama	5	2	3	0	3
Paraguay	2	2	0	0	0
Peru	13	6	6	1	4
Trinidad and Tobago	0	0	0	0	6
Uruguay	2	2	0	0	0
Venezuela	5	0	5	0	2

Source: Direct information, National Institutes of Health.

* About 80 per cent are physicians. About half of the Latin American biomedical research trainees in the United States are supported by this means.

† Formerly British Guiana.

4.3.5 *Research trainees*

There are roughly 350 Latin American physicians in the United States engaged primarily in research training. In 1964 a total of 206 research trainees were supported by the National Institutes of Health (NIH) through grants to U.S. institutions (Table 15). Most of these were physicians. Through this type of grant alone, NIH supported 50 research trainees from Argentina, 32 from Cuba, 25 from Mexico, 18 from Brazil, and 13 from Chile, Colombia, and Peru. About half of the 206 held immigrant visas, and 55 were U.S. citizens born in Latin America.

During the period 1958-1965, NIH granted postdoctoral fellowships for study in the United States to 124 Latin Americans (Table 16). Nineteen such fellowships were awarded to Latin Americans in 1965.

In 1962 a study was made of the status of 99 research trainees who had been supported by NIH through grants to U.S. institutions between 1955 and 1960 (Table 17). These trainees were all born in Latin America, and they constituted about 20 per cent of all biomedical research trainees from Latin America during that period. At the start of

TABLE 16. NIH INTERNATIONAL POSTDOCTORAL FELLOWSHIPS TO LATIN AMERICANS, 1958-1965

Country	1958	1959	1960	1961	1962	1963	1964	1965	Total
Total	0	16	11	13	17	29	19	19	124
Argentina	0	2	2	1	1	4	3	1	14
Bolivia	0	0	0	0	0	0	1	0	1
Brazil	0	3	2	3	3	7	3	0	21
Chile	0	3	1	0	2	4	4	5	19
Colombia	0	1	1	1	3	2	2	2	12
Costa Rica	0	0	0	0	2	0	0	1	3
El Salvador	0	1	0	0	0	0	1	0	2
Mexico	0	2	3	3	1	3	1	3	16
Peru	0	2	1	2	2	6	2	4	19
Uruguay	0	2	1	3	0	2	1	2	11
Venezuela	0	0	0	0	2	1	1	1	5
West Indies	0	0	0	0	1	0	0	0	1

Source: Direct information, National Institutes of Health.

TABLE 17. FORMER NIH RESEARCH TRAINEES FROM LATIN AMERICA, FOLLOW-UP AND CITIZENSHIP STATUS IN 1962

Country of birth	No.	Returned to country of birth	Still in U.S.	In third country	Location unknown
Totals	99				
U.S. citizens	25	0	22	1	2
Citizens of Latin American countries	74	42	22	3	7
Argentina					
U.S. citizen at start of training in U.S.	2		2		
Citizen of Argentina	21	13	8	0	0
Bolivia					
U.S. citizen at start of training in U.S.	0		0		
Citizen of Bolivia	2	0	1	1 (Colombia)	0
Brazil					
U.S. citizen at start of training in U.S.	1		1		
Citizen of Brazil	6	5	1	0	0
Chile					
U.S. citizen at start of training in U.S.	3	1	1		1
Citizen of Chile	2	1	1	0	0
Colombia					
U.S. citizen at start of training in U.S.	1			1 (Brazil)	
Citizen of Colombia	9	0	3		6
Costa Rica					
U.S. citizen at start of training in U.S.	1		1		
Citizen of Costa Rica	1	1	0	0	0
Cuba					
U.S. citizen at start of training in U.S.	7		7		
Citizen of Cuba	1	0	1	0	0
Dominican Republic					
U.S. citizen at start of training in U.S.	0				
Citizen of Dominican Republic	2	0	1	1 (Chile)	0
Ecuador					
U.S. citizen at start of training in U.S.	1		1		
Citizen of Ecuador	1	1	0	0	0
French West Indies					
U.S. citizen at start of training in U.S.	0				
Citizen of French West Indies	1	0	0	1 (Canada)	0
Guatemala					
U.S. citizen at start of training in U.S.	0				
Citizen of Guatemala	3	1	2	0	0
Jamaica					
U.S. citizen at start of training in U.S.	1		1		
Citizen of Jamaica	0	0	0	0	0
Mexico					
U.S. citizen at start of training in U.S.	7		6		1
Citizen of Mexico	15	11	3	0	1
Peru					
U.S. citizen at start of training in U.S.	0				
Citizen of Peru	5	5	0	0	0
Trinidad					
U.S. citizen at start of training in U.S.	1		1		
Citizen of Trinidad	1	0	1	0	0
Venezuela					
U.S. citizen at start of training in U.S.	0				
Citizen of Venezuela	4	4	0	0	0

Source: Direct information, National Institutes of Health.

their research training, 25 were U.S. citizens and 74 were citizens of other countries. At the time of the study, 22 of the latter group were still in the United States, 42 had returned to their native countries in Latin America, and 3 had left the United States but were not in their native countries (2 of the 3 having gone to other countries in Latin America). The location of 7 was unknown. Further information on the group of 22 who were still in the United States suggested that as many as half of these might later return to Latin America. On the basis of these and other data it may be concluded that in recent years roughly 25 per cent of the Latin American medical research trainees who are not U.S. citizens when they begin training have been immigrating, while a majority have been returning to their countries.

Information available on the 45 research trainees who had returned to Latin America showed that 75 per cent were engaged to some extent in teaching and 70 per cent were doing research. Those who were engaged in research spent an average of about 40 per cent of their time in research and those in teaching were devoting an average of 21 per cent of their time to teaching. Altogether, about 65 per cent were devoting a majority of their time to academic pursuits and 85 per cent were doing some sort of academic work.

A 1962 sample survey of research projects supported by NIH grants (these are different from the training grants mentioned above) identified 37 citizens of Latin American countries. Since the sample included about 10 per cent of all biomedical research workers in the United States in 1962, the total number of Latin Americans in this field may be estimated at between 300 and 400. Probably about 250 of these were physicians and some of the physicians were research trainees. The same survey also identified 9 U.S. citizens born in Latin America. Since 1962 there has been an increase in the number of research workers in the United States who are natives of Latin America.

4.3.6 *Scientists and teachers*

Indirect evidence suggests that perhaps 25 per cent of those physicians who are potential scientists and teachers are being lost to Latin America through migration.

As stated before, one tenth of the 2,471 Latin American graduates studied by the AMA held full-time academic positions as research workers or medical school faculty as of early 1966. Others, such as full-time members of hospital staffs, also performed some academic work, but only the 241 who described themselves as primarily research workers or full-time faculty were included in the subsequent AMA study on scientists and teachers.

Questionnaires were sent to 75 persons in this group (Appendix VIII). Of these, 49 were completed and returned. One was excluded, since the respondent was a native of the United States. The remaining 48 replies were then subjected to analysis. The final sample thus represented 25 per cent of the entire group of 241 full-time academic workers described above.

All of these academicians had graduated prior to 1961. Four had graduated in 1960, 21 between 1955 and 1959, 13 between 1950 and 1954, 7 between 1940 and 1949, and 3 prior to 1940. All of those who were U.S. citizens had graduated before 1956. Seventeen were U.S. citizens and 31 were citizens of other countries. Only 5 of these 31 graduated before 1954.

Visa status was learned for 28 of the 31 who were not U.S. citizens: 16 had immigrant visas, 8 had permanent resident visas, and 4 had visitor visas. Of the 31 who were not U.S. citizens, 10 had licenses to practice in the state of residence, 3 had temporary licenses, and 15 were unlicensed. The licensure status of 2 is unknown. In the group of 18 U.S. citizens, 13 had licenses and 5 did not.

In 43 instances the primary purpose of the first visit to the United States is known: 18 came initially as interns, 13 as residents, 11 as research trainees, and 1 as a faculty member.

Of the 14 U.S. citizens who answered the

question, 12 indicated that they definitely planned to remain permanently in the United States, one indicated that he definitely planned to return to his country, and one indicated that he probably would return. The answers of the 37 who were not U.S. citizens were quite different: 5 said they definitely planned to return, 7 more said they probably would return, and 14 indicated that they might return although this was not likely. Only 5 of 37 had definitely decided to stay permanently in the United States.

All but one of the 48 academicians were married: 20 had married U.S. natives, 18 had married natives of their own country, and 9 had married natives of other countries. In 6 of these 9 instances the husband had left his native country (such as Paraguay) to attend medical school elsewhere in Latin America (Argentina, for example) and had eventually married a woman from the latter country. It appears that in some cases the decision to immigrate preceded marriage to a U.S. native. It seems likely that in some of the 20 instances marriage played a role in the decision to immigrate. Among the 48 academicians perhaps 10 or 15 indicated that marriage to a U.S. citizen was an important factor in the decision to immigrate.

4.3.7 *Interns and residents*

As of 1966 there are about 2,200 interns and residents in the United States who are graduates of Latin American schools. In 1963 there were 1,631, distributed as follows: 334 from Cuba, 256 from Mexico, 248 from Argentina, 235 from Colombia, 120 from Peru, 105 from the Dominican Republic, and 87 from Central America (including Panama). Since the average duration of stay for those who return to their countries is about three years, it appears that about 700 Latin American graduates now enter the United States annually to begin internships or residencies. Roughly 100 of these are U.S. citizens, and in recent years about 120 have been Cubans. Thus the number of non-Cuban Latin Americans who enter annually for internships or residencies is approximately 480. If the present trend continues, about two thirds of these will return to their own countries and roughly one third will stay permanently in the United States. In addition, some of those who return may be expected to migrate to the United States at a later time. About 80 per cent of the Latin American physicians who have migrated to the United States have been interns or residents in U.S. hospitals. Data from a variety of sources suggest that roughly half of the Latin Americans who have come to the United States as interns or residents in recent years will eventually migrate if they have not already done so. Some of those who have entered as postgraduate trainees have planned from the beginning to migrate, but a large majority do not make the decision until later.

Biographical data were examined on a 10 per cent sample of the foreign graduates who received their first U.S. license in 1962 (U.S. natives excluded). Of a total of 27 Latin Americans, 11 were from Cuba and 16 from other countries. All of the 16 had had either internships or residencies in the United States (14 had had internships). These 16 licensees had graduated between 1940 and 1960. The average number of years between graduation and arrival in the United States was three years. The average period between graduation and U.S. licensure was eight years.

4.3.8 *Latin Americans in U.S. medical schools*

Data gathered by the AMA indicate that in the academic year 1961-62 there were 71 Latin American students enrolled in U.S. medical schools: 25 from Central America, 34 from South America, and 27 from "North America" (Mexico and the Caribbean?). This suggests that about 15 or 20 Latin Americans graduate from U.S. medical schools annually. The visa status and the subsequent movements of this group are not known.

4.4 Effects

From a purely quantitative standpoint these immigration losses of Latin America, while highly significant, are not catastrophic as far as the region as a whole is concerned. On the other hand, the data in Figures 8 and 9 and Appendix III show that the rates of immigration are uneven from country to country. The losses and potential losses of Haiti, the Dominican Republic, Bolivia, Colombia, and the Central American countries are quite substantial in relation to the capacities of these countries to produce physicians. Argentina is losing many physicians, but this number is relatively modest in proportion to the rate of production of physicians in that country. Brazil's losses in proportion to the population and rate of production of physicians are virtually insignificant.

The gain realized by the United States is substantial. Even ignoring the Cuban migration, it would take three academic medical centers of average size to produce the same number of physicians. As pointed out earlier, the dollar value of this manpower approximately equals the cost of all U.S. medical assistance to Latin America.

One of the most important questions concerning this migration is the extent to which potential leadership is being lost. Even though the manpower drain is quantitatively modest, it could have a profound effect on the development of some of the nations if the losses included a large fraction of young physicians with outstanding potential. There are no precise methods or criteria for comparing the capacities of those who migrate and those who do not. Moreover, generalizations for Latin America are subject to exceptions because the nature of the migrations vary from country to country. Conclusions on this subject should therefore be cautious and tentative. With these reservations, the judgments in the following paragraphs are offered.

In general, the migrants originate from the stronger Latin American medical schools. Most of the recent immigrants in the United States are in clinical practice, either privately or as members of hospital staffs. The capacities and potentialities of this group seem to be roughly comparable to those of their classmates who did not migrate. The group of migrants who enter clinical practice seems to include persons with average native ability, above-average ability, and, occasionally, below-average ability. A sample of 11 immigrant practitioners from seven schools in five Latin American countries were asked to indicate whether their schoolmates who had migrated to the United States were, in general, average in ability, decidely below average, or decidedly above average (see question 16, Appendix VIII). All of the respondents characterized the ability of migrants in their graduating class as average.

The present study has yielded no evidence that the group of migrants and potential migrants includes an unusual number of outstanding graduates. On the other hand, there is some evidence that the group contains a substantial number who are interested in academic careers, and this latter subgroup has been found to include an impressively large number of exceptionally talented persons. The academicians in the United States who are Latin American graduates believe that their countries are losing some of their best physicians through migration to the United States. Of the 40 who responded to question 16 on the questionnaire, only one thought that in general immigrants were below average compared to their other classmates; 16 characterized immigrants as average and 23 thought they were definitely above average. Here is a rather typical comment made in response to the questionnaire by a Latin American who is now an assistant professor at a U.S. medical school: "This 'brain drain' from Latin American countries is certainly very obvious with respect to persons who are interested in basic research and academic medicine. I know a goodly number of these individuals who were superbly trained in many

areas of medicine and returned to their native countries only to find themselves beset with almost impossible difficulties."

Finally, it should be noted that there are in the United States a large number of young Latin American scientists, teachers, and potential scientists and teachers who have not made a definite decision concerning their country of permanent residence. There are probably as many as 100 highly trained physicians who would return to Latin America to pursue academic careers if suitable opportunities were available. Most of these persons would not ask for ideal working conditions or large salaries, but they would require a certain minimum of academic stability and opportunity. Probably about 50 Latin American physicians who are academicians or research trainees are immigrating to the United States each year. This is the most important aspect of the migration problem. Fortunately, it is a difficulty that can be mitigated at least to some extent.

5. WHAT CAUSES MIGRATION?

The causes of migration apply to all people, but they relate in a particular way and with particular force to those with professional training. Professional persons are more "migration prone" than is the population as a whole. They are more susceptible than other groups to the "pushing" and "pulling" forces that give rise to migration. The fact alone that they are highly educated, whatever their profession, tends to make them less tightly bound to their home countries. Many people in the younger generation are competent in English. They are exposed to a wide variety of foreign influences in the course of their education. The professions tend to be international in character, and the sciences in particular have a strong tradition of international cooperation. Finally, the opportunity for study or professional practice in the United States is a very significant factor in the migration of highly educated people.

5.1 "Deliberate Push" from the Native Country

Few countries have ever deliberately pushed their highly trained people to emigrate. Occasionally, however, this happens, as when a change of political regime impels certain highly trained people to leave the country. In such cases, a person's background and training are incidental and his political views or affiliations are paramount.

5.2 "Unintentional Push" from the Native Country

A major cause of migration to the United States from Latin America is the low level of professional and economic opportunity in the home countries. In this connection, two points need emphasis. First, the opportunities available at home do not have to equal those available in the United States in order to keep people from emigrating. Most physicians, scientists, and engineers, like people everywhere, prefer to remain at home. This is where their families are, where their roots are. They know their own people, their own customs, their own language, their own food. People do not generally move from one country to another solely to obtain a slight economic or professional advantage. The difference must be significant enough to outweigh the strong natural preference to remain at home.

Second, the direction of change in the home country, as well as the absolute level of development, plays an important part in the decision to emigrate or not. If the political situation appears to be becoming more stable, the prospects for economic growth are good, and career opportunities in general are improving, then emigration will decrease, even though a large gap may still exist between conditions in the home country and conditions in the United States. This statement is borne out by the over-all migration trends in such countries as Venezuela, Argentina, and Mexico. In Venezuela salaries and professional opportunities are not as favorable as in the United States, but they are adequate to forestall all but a small amount of migration. In Argentina the fluctuations in the prospects for political stability and economic growth are reflected—with a lag of from six months to a year—in the migration figures.

In short, people can be pushed out of their countries, in spite of the strong natural inclination to remain at home, if conditions are so unsatisfactory that they feel they must leave. These conditions may be the sort that impel all types of citizens to migrate: general political unrest and uncertainty as to the future, politics in the universities, low incomes, general lack of hope for the future, inflation, difficulty in getting ahead without political or family influence. In some countries, such as Argentina, the cost and scarcity of housing is another important factor leading to emigration and inhibiting repatriation.

In addition, professional people may be faced with special conditions: the part-time system and poor remuneration in universities, difficulty in utilizing their advanced training, or problems in maintaining contact with the world community in their particular profession.

The highly important factor of income can be illustrated by the case of physicians in Colombia. Many physicians in the major cities have a difficult time making a living. The absolute minimum income required by a young bachelor physician is about 5,000 pesos a month and by a physician with a small family about 7,000 pesos per month—the equivalent of an annual income of between $4,000 and $5,000 in the United States. Many find it impossible to earn this much in the major cities. An offer of a position in the government service at a salary of 9,000 pesos per month would produce an avalanche of applicants. Medical services are, of course, urgently needed in rural areas, but a physician who moves to the countryside sentences his family to cultural exile and poverty.

The professional salary structure in Colombia is strongly influenced by the government salary structure, since a high proportion of the demand for professionally trained people arises from government activities. No government employee may be paid more than a minister, and ministers receive a salary of 6,600 pesos a month—the rough equivalent of an annual income of $6,000 in the United States. This, then, is the top income to which professionals in government service may aspire. Many have undoubtedly reflected that the same salary is commanded by competent secretaries in the United States. The case of Colombia is duplicated, with minor variations, in many Latin American countries.

The Gutiérrez and Riquelme study of migration from Chile has produced the only firm data on a point vital to a study of migration—salaries of high-level migrants before and after migrating.[19] The existence of wide salary differentials between Latin American countries and the United States is well known—particularly by those who migrate from various countries—and need not be proved by statistics. The value of the Chilean data is that it provides, in effect, "before and after" case studies of individual migrants and that it makes the existence of the salary differentials particularly graphic.

Salaries before migration were relatively low. Almost half of the migrants reported salaries of less than $150 a month before they left Chile (Table 18). However, this group is heavily weighted with unemployed persons and new entrants into the labor market. When such people are excluded, 75 per cent of the remaining group had salaries of between $150 and $300 per month. In contrast, only 28 per cent of the migrants reported a first salary in the United States of less than $300 per month. Almost three quarters of the migrants reported current salaries of over $400 per month, and 40 per cent reported salaries of $800 a month or more.

Clearly, there is no realistic prospect that salaries in Chile will match those in the United States in the foreseeable future. This is true of all other Latin American countries with the possible exception of Venezuela, although salaries in some countries, such as Mexico, are higher than those in Chile.

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[19] S. Gutiérrez and J. Riquelme, *La Emigración de Recursos Humanos de Alto Nivel y el Caso de Chile*, Washington, D.C., Unión Panamericana, 1965.

The problem is not solely economic, however. Ironically, countries may encourage the emigration not only of highly trained people but of the best of the highly trained through their very efforts to raise standards of education in engineering, science, and medicine. Indeed, this is also true of technical training, and the loss of skilled technicians and nurses is in some countries as serious a problem as the migration of professional people. The Faculty of Medicine at the Valle University in Cali, Colombia, presents a specific example of the problems generated by elevation of levels of education. This faculty is excellent, and it has been the fortunate and deserving recipient of much foreign assistance designed to make it an outstanding Latin American center of medical education. Yet look at the distribution of its graduates from the class of 1958:

Residence	Number	Percentage
Total	211	100
Colombia	148	70
United States	55	26
Other Latin American countries	5	2
Europe	3	2

5.2.1 *Migration and balanced national development*

One important source of "unintentional push" from the home country is unbalanced national development. The concept of balance is just as fundamental to the evolution of countries in the early phases of development as it is to countries that have reached the advanced stages. Ideally, certain factors would remain in balance throughout the course of a nation's development: the rate of economic growth, the rate of general cultural development, the development of the educational system at all levels, the institutional forms for education at all levels, and the development of adequate human resources to meet evolving needs. But such an ideal is virtually impossible to attain. Moreover, its value lies in its existence as an ideal, rather than as a goal to be achieved and sustained. Progress in the affairs of nations does not take place in an even and balanced manner; it occurs as spurts in various sectors. These spurts make for imbalances that nations must then try to remedy. The process of seeking to achieve a balance is the essence of progress. In this process, dislocations are inherent; they are a means of adjusting to the unevenness of the development process. If they are not too severe, the adjustments are productive in the long run. They may be regarded as just a normal price to be paid for development itself. Migration is an evidence of imbalance in the development process—simply one of a variety of dislocations that are inherent in a highly complex, dynamic process.

It is virtually impossible to produce highly trained people at the precise rate required for the development of national economies. One primary obstacle is the persistence of obsolete patterns of professional education. It may be claimed, for example, that because of the high status of the medical profession in the culture some Latin American countries train an exces-

TABLE 18. COMPARATIVE INCOME DISTRIBUTION OF CHILEAN MIGRANTS TO THE UNITED STATES, BEFORE AND AFTER MIGRATION, AS OF 1963

Chile			United States		
	Last salary in Chile				
Monthly salary*	All migrants	Excluding the "under 150"	Monthly salary	First salary in the U.S.	Current salary in the U.S.
Total	100	100		100	100
Under 150	48	—		—	—
151-180	14	27		—	—
181-200	11	21	Under 200	3	—
201-300	14	27	201-300	25	3
301-350	7	14	301-400	32	10
351-450	4	8	401-500	14	14
Over 450	2	3	501-800	14	33
			801-1000	10	17
			1001-1500	1	15
			1501-2000	1	7
			Over 2000	—	1

Source: S. Gutiérrez and J. Riquelme, *La Emigración de Recursos Humanos de Alto Nivel y el Caso de Chile*, Washington, D. C., Unión Panamericana, 1965, Cuadro V, pp. 30-31.

* U.S. dollar equivalent.

sive number of physicians. It is felt that the resources devoted to the education of physicians could be better used for national development and for the training of other groups such as engineers and technicians.

Another cause for difficulty in the development of human resources is the length of the training period. For instance, deliberate efforts to extend the advanced training of chemists, such as those that have been made in Argentina, rest on the assumption that very special types of industries will develop five to ten years hence.

Not all projections of future manpower needs turn out to be accurate. The training of academic scientists is often based on the expectation that career opportunities not existing at the time of training will be available when the training is completed. These expectations, which frequently depend on drastic changes in laws, customs, and administrative structures of universities, are not always fulfilled.

Just as human resource shortages can aggravate the problem of imbalance, imbalance among the sectors can, in turn, have a negative effect on the training process. To take one example, the training of nurses depends on the development of medical and related services. A similar situation often obtains in other public service professions.

5.2.2 *Political instability*

In Latin America as a whole, political instability is a major factor of "unintentional push" that forces highly trained people to leave their home countries. Generally, highly educated people in Latin America are not neutral in their beliefs. They tend to have definite political views, which they express in a variety of ways. Attitudes toward the structure of universities, attitudes toward government policy on science, attitudes toward the acceptance of outside assistance for research, attitudes toward scientific relationships with the Western Bloc or the Eastern Bloc, as well as direct political affiliations, establish the individual scientist's position on the political spectrum. When changes of government result in a change in the prevailing political philosophy, those who are out of sympathy with the government sometimes find it impossible to remain productively at work. The pressures on individuals range from mild harrassment to physical force. A substantial portion of the migration of scientists from Latin America is traceable to political factors.

Political instability itself, regardless of an individual's views and the prevailing political philosophy, also tends to push people out of their own countries. Instability means uncertainty. Uncertainty generates uneasiness, tension, and fear of the future. These reactions are often the decisive factor among professionally trained people who would otherwise remain in their own countries.

5.3 "Unintentional Pull" to the United States

The attraction of the United States is the strongest force affecting migration from Latin America. Latin American physicians, scientists, and engineers are drawn by the high incomes and relatively good professional opportunities they see there. The attractions exist not by reason of any intentional effort on the part of individuals or the United States Government, but rather by reason of the very nature of the culture and the economy.

Many policies of the United States since World War II have tended to enhance this attraction. High, stable levels of employment have expanded the general demand for professional as well as other workers. Sharp increases in the need for physicians have not been matched by the annual output of graduates. Large research and development expenditures have created heavy demands for scientists and engineers. University policies have made it possible to establish thousands of new academic positions at all levels.

In general, the policies that have been considered appropriate for the internal development of the United States have at the same time

been policies that would attract people from other countries. Conversely, policies that would effectively discourage the movement of talented people to the United States have been domestically unacceptable because they would lead to economic stagnation and to the restriction of professional and economic opportunities.

Other internal policies that would have reduced the unintentional pull to the United States might have been, but were not in fact, acceptable. For example, an intensive effort some time back to step up the production of physicians in the United States might have helped to avoid the deficit that is now affecting the reserves in other countries. Today the Latin American countries are helping to meet the demand for physicians that the United States, by inaction, failed to provide for a decade ago. Higher rates of production of Ph.D.'s in the sciences would have had the same effect.

5.4 "Intentional Pull" to the United States

"Intentional pull" on the part of the United States Government has been nonexistent. The formal actions of government specifically related to migration have been in the direction of restraining it; to wit, the requirement that persons with an exchange visitor's visa spend two years outside the United States. However, the United States Government has not taken strong, direct steps to discourage the migration of highly trained persons from Latin America through such devices as the imposition of admission quotas on these particular groups.

A number of private employers, including universities and industrial research laboratories, in the United States have deliberately offered positions to Latin Americans. These offers are frequently very attractive in terms of income and professional opportunities—equipment, space, facilities, assistants, and professional associations. However, not a large proportion of highly trained migrants come to the United States this way. The more common pattern is for them to come first on a visit—as students, tourists, employees, or self-employed workers. Then, after a period of assessment, the decision to migrate is made. It is during or after this period that professional opportunities are offered in the United States. Thus, it is difficult to determine in the case of many individuals the forces that "pushed" and those that "pulled," and the extent to which these forces were intentional or unintentional.

5.5 Why Physicians Migrate

Although physicians are generally subject to the same forces that affect other professionals, their situation is somewhat different, and special attention has been paid to this group. The forces tending to increase or decrease migration were evaluated from several different angles. Many physicians throughout Latin America who did not migrate were interviewed. This group included some who had and some who had not received postgraduate training in the United States. In addition, a large number of immigrants and potential immigrants in the United States were consulted. And finally, the 75 replies to the questionnaire described in the previous section were carefully studied (Appendix VIII).

The reasons for immigrating or for not immigrating to the United States vary from country to country and within countries from one individual to another. Although the decision to leave or remain in the native country is usually influenced by a variety of factors, often a single one will be decisive. For example, marriage to a citizen of the United States may tip the scales in favor of immigration, or the offer of a specific job at home may be decisive in the repatriation of a Latin American. In the case of physicians, the factors that encourage and inhibit migration can be listed in their approximate order of their importance:

Factors encouraging migration of physicians	Factors inhibiting migration of physicians
Lack of professional opportunity	Lack of fluency in English
Very low income	Adequate local career opportunities
Poor resources and facilities	Adequate salary (does not have to equal U.S. salaries)
Poor professional environment	Adequate equipment, resources, facilities
Professional politics	Good professional environment
Political instability, limitation of personal or professional freedom	Advancement based on professional merit
Lack of immigration quotas in the U.S.	Poor quality of medical education
Professional opportunities in U.S.	Patriotism, loyalty to local society and country, pioneer spirit
Marriage to U.S. native	Political stability and freedom
Liberal state licensure laws in U.S.	Social and family ties
Good medical schools	Licensing requirements in U.S.
Postgraduate training in the U.S.	Good postgraduate training opportunities in Latin America
High quality	Requirement to leave U.S. for those with visitor visas
Long duration	ECFMG examination
High salaries	
Training irrelevant to medical priorities in Latin America	
Fluency in English	

The estimate of "importance" is based on how frequently the factor applies and the degree to which it is likely to be highly influential in determining whether a physician will leave or remain in his native country. For example, personal political persecution is not often the cause of migration, but when this factor applies it may be decisive. On the other hand, the lack of adequate career opportunities locally is a very frequent cause of migration and in a majority of cases this is a primary consideration.

The requirement to pass the examination of the Education Council for Foreign Medical Graduates applies to most potential immigrants, since all who wish to take internships or residencies in the United States must pass it. Persons who do not have the fluency in English or the professional competence to pass the examination usually lack the kind of qualifications necessary to pursue careers in the United States and would not wish to immigrate in the first place. Only in a sense, then, does the examination serve to limit the potential number of immigrants.

Although fluency in English, good undergraduate medical education in Latin America, and postgraduate training opportunities in the United States all have a potentiality for increasing the rate of migration, none of these factors in themselves causes migration.

It is instructive to consider which of the factors listed are susceptible to change. Modification of some of these determinants would be out of the question, even though such changes would tend to control the rate of immigration. For example, maintaining a poor medical education system would reduce the number of potential migrants, but this is obviously undesirable. There remain a variety of factors, however, that are susceptible to modification. For example, the migration rate would be reduced by improving postgraduate training programs and career opportunities in Latin America, and by encouraging postgraduate training in the United States only when the training is relevant to the circumstances existing in Latin America.

Three kinds of political factors lead to the emigration of physicians. One of these, not frequent, is personal political persecution. A second political difficulty, more general in nature, is the kind that is characterized by a lessening of professional freedom and stability. Both of these difficulties are part of the broader problems of the Latin American people, an evaluation of which is beyond the scope of this discussion. However, there is a third kind of "political" difficulty that the medical profession could have more influence in mitigating. Many emigrants and potential emigrants charge that professional advancement in their native

countries is not based on merit or accomplishment. They say they would be willing to live and serve in Latin America at levels of income substantially below what they could earn in the United States if only the prospects for professional advancement were more related to professional merit and less related to political, social, or economic influence.

Almost without exception, potential migrants, including physicians, are drawn to their native countries by a genuine loyalty and patriotism. In most cases migration occurs only when other contrary forces of considerable importance outweigh the desire to work in their native countries. The majority of potential migrants are willing to work in their own countries under economic, social, and professional conditions that are in many respects inferior to those in the United States. For the most part, immigration has only occurred when repatriation would require great personal or professional sacrifice.

Although postgraduate training in the United States is a major factor in increasing the rate of immigration, there is a great deal of evidence that such experiences are not necessarily associated with a high risk of emigration. Appraisal of the programs of the Kellogg and Rockefeller Foundations, the NIH International Fellowship Program, and the training programs of PAHO and AID indicates that under certain conditions U.S. training is associated with a very low rate of "defection." Usually these programs are designed to provide well-planned, well-timed training experiences for well-selected trainees; the training is specifically conceived to fit the career prospects of the trainee; and support is often contingent on reasonable evidence that circumstances will permit the application of such training. Often plans have been made to provide some type of further support during the initial phase of the returnee's career in his own country. These successful programs are not characterized by rigidity of policies, but rather by simple, sensible planning of the training experience.

5.6 Measuring the "Push" and "Pull" Forces

Data from Argentina can be used to illustrate an exploratory means of quantifying the "push" and "pull" forces. The essential suggestion is that when there are wide fluctuations in migration over a period of time the minimum level represents the "pull" of the United States and all migration above the minimum represents the "push" from the Latin American country.

Over the 15-year period from 1951 through 1965, a total of 1,065 physicians from Argentina were admitted as immigrants to the United States. The movement by 5-year periods was as follows:

Total	1,065
1951-1955	94
1956-1960	396
1961-1965	575

Since the more recent years are of particular interest, the annual breakdown for 1961-1965 is as follows:

1961	74
1962	94
1963	116
1964	151
1965	140

Variations from year to year are significant. Probably more than twice as many physicians migrated in 1964 as in 1961. Emigration of physicians in 1964 and 1965 was higher than in any year since 1950. According to the theory, these rapid and significant changes are attributable to differences in conditions in Argentina rather than to changes in the United States. One can estimate roughly how many migrants are "pushed" from Argentina by adverse circumstances and how many are "pulled" to the United States by relatively good circumstances on the basis of the hypothesis that the minimum migration figures over the past decade represent the "pull" factor and

that all migration above the minimum represents the "push" factor.[20] The lowest figures during the decade were 70 in 1959 and 74 in 1961. It may be assumed, then, that 70 migrants per year were "pulled" to the United States and that the remainder were "pushed" from Argentina. Thus, over the last decade a total of 700 migrants were "pulled" to the United States and 271 migrants were "pushed" from Argentina. Or, in other words, about 70 per cent of the migrants were primarily attracted by the United States and 30 per cent were primarily repelled by conditions in Argentina.

This hypothesis also provides a useful indication of the volume of migration that may be expected to continue even if future conditions in Argentina are relatively stable. It would appear reasonable to assume that a minimum of 70 or 80 physicians will continue to migrate from Argentina under the best of circumstances.

Migration data may be used not only to measure "push" and "pull" forces but also to relate migration to the changes in the "push" forces over time. In Argentina, for example, it appears that political disturbances result in an increase in persons admitted to the United States about a year after the disturbances occur. After Perón was overthrown in 1954 there was a period of uneasy time under the interim government. While migration had been low during the Perón period, reaching a maximum of about 200 per year, the figure climbed to 717 in 1957-1958 (Table 19). Similarly, when the Frondizi government was in difficulty in 1962 and 1963 migration rose a little bit, but by the following year it had soared to 1,157 —about double the average for 1958-1962.

After a troublesome period, it apparently takes people a substantial time to make the emotional, material, and bureaucratic arrangements necessary to translate the thought of migration into an act. If this analysis is correct, the number of Argentine professional, technical, and kindred workers entering the United States will rise markedly above the 1964-1965 level in 1966-1967.

TABLE 19. MIGRATION OF PROFESSIONAL, TECHNICAL, AND KINDRED WORKERS FROM ARGENTINA, CORRELATED WITH DOMESTIC CONDITIONS

Year	Number admitted to the U.S. with immigrant visas
1950-1951	78
1951-1952	114
1952-1953	153
1953-1954 (Perón deposed)	212
1954-1955 (Interim Government)	218
1955-1956	354
1956-1957	562
1957-1958	717
1958-1959	478
1959-1960	508
1960-1961	552
1961-1962	531
1962-1963 (Frondizi deposed)	781
1963-1964	1,159
1964-1965	809

Source: Figures from U.S. Department of Justice, Immigration and Naturalization Service (see Appendix II).

5.7 Assessment of the Forces Affecting Migration

It is clear that the unintentional forces in Latin America and in the United States are much more important than the intentional forces. The governments of the Latin American countries do not intend to compel highly talented persons to leave, and the government of the United States does not intend to draw talented people from Latin America. Yet both of them, by unintended effects of general policies—or lack of policies—generate forces that lead to extensive migrations.

Part of the migration of highly skilled people from Latin America to the United States results from differences in economic and professional opportunities that will not disappear. For example, among professional migrants from Chile, only 50 per cent had an income of $150 a month or more before leaving Chile,

[20] Migrants are here considered equal to those admitted with immigrant visas, although the number of migrants is actually smaller. The important factor, however, is the change from period to period.

but 75 per cent of them are earning $400 a month or more in the United States.[21] A realistic approach to the problem of migration must rest on the assumption that there will be a continuing flow of professional people from Latin America to the United States. Only if the Latin American countries and the United States were to place unthinkable limitations on the rights of individuals could migration be halted.

The fact that migration rates vary widely from country to country, and from year to year in the same country, indicates that changing conditions in the Latin American countries have an important effect on the flow. This is a significant finding, since it leads to the conclusion that deliberate efforts to improve conditions in Latin American countries can affect migration.

A substantial proportion of the migration of highly trained people from Latin America to the United States could be avoided by the adoption of policies that the Latin American countries can afford.

The primary obstacles to the adoption and execution of effective policies are not economic, but are rather institutional, cultural, and political. One major deterrent is the lack of understanding on the part of officials who are in a position to institute the necessary measures. Another is the absence of a central point of official responsibility for science and manpower within the government.

Only Argentina has made organized efforts to bring back her emigré scientists and to conduct official migration studies.[22] Perhaps the most significant measures have been those designed to enhance the status of scientists in Argentina through the efforts of the National Council for Scientific and Technical Research (CNICT). The establishment of the career investigator plan has undoubtedly contributed to the return of some scientists. In addition to these general measures, specific inducements have been offered. For example, upon moving back to Argentina, scientists who had migrated to other countries have been accorded tax-exempt privileges on the importation of scientific instruments and apparatus, an automobile, and personal effects up to a value of $4,000.[23] The normal tax had been so heavy that it was keeping away some scientists who might otherwise have returned.

Careful attention has been paid to the appointment of returning scientists to suitable chairs and to the provision of adequate research space, equipment, assistance, and funds for their work.

The Ford Foundation made a grant of $400,000 in 1961 to the National Council for Scientific and Technical Investigation to be used to encourage the return of eminent Argentine scientists working in other countries.

These measures all concentrate on the repatriation of eminent academic scientists. It is generally believed that they are the emigré group most important to the national welfare. Moreover, the group is relatively small, its members will readily identify, and special inducements are likely to be effective with these people. No organized effort has been made to persuade physicians, engineers, and others engaged in the nonacademic phases of their professions to return.

Of 474 persons who might take advantage of the special inducements to return offered by Argentina, 288 have actually gone back. With the aid of a Ford Foundation grant, the National Council has kept a record of 18 particularly eminent scientists who returned in 1964.[24] They were all highly qualified, and each one represented an important addition to Argentina's university faculties. Of the 18 who returned, 14 had been in various laboratories (including 10 different universities) in the United States, 3 had been in France, and 1 in Denmark. Ten of the 18 are in the bio-

[21] Gutiérrez and Riquelme, *op. cit.*, p. 31.

[22] Decree 7558 of 1965 (see Appendix IX).

[23] Decree 2754 of 1964 (see Appendix X).

[24] Data kindly supplied by Mr. Raúl G. B. Hinsch, Executive Secretary of the National Council for Scientific and Technical Investigation.

medical sciences. With the exception of one who returned to full-time research in an independent institute, all of them took positions in universities. In view of the heavy concentration of research in Buenos Aires, it is noteworthy that half of those who returned went to provincial universities—La Plata (2), Cuyo (1), Córdoba (2), Sur (2), Tucumán (1), and Corrientes (1).

Argentina's investment of time and effort to secure the return of scientists has been well rewarded. Perhaps similar plans could be adopted by other countries. It should be kept in mind, however, that such measures cannot in themselves eliminate the fundamental causes for migration—witness the political events that took place in Argentina in July and August 1966.

The degree of awareness of the problem of migration in various countries has depended more on the initiative of a few individuals than on the seriousness of the problem. For example, excellent and adequately publicized studies in Chile and Argentina have directed a great deal of public attention to the migration question (see Bibliography). In contrast, the more serious migration from Colombia has been virtually unnoticed in that country.

6. WHAT SHOULD BE DONE?

6.1 The Intractable Basics and the Feasible

Migration of highly trained people from Latin America to the United States is basically the result of factors that would not be affected by recommendations in a report such as this—low levels of income, inflation, political instability, overwhelming numbers of poorly qualified university students, lack of opportunities to pursue and develop professional skills, archaic university systems, frustrating bureaucratic delays, and political influence over professional appointments and promotions. Changes in fundamental conditions such as these come about slowly; they are the consequence of the process of development itself. In the United States as well there are many basic factors giving rise to migration that are not amenable to change through recommendations. The dynamism of the economy, which generates insatiable demands for persons with highly developed skills and professional training, the rapid growth of research in universities, and the extreme shortage of physicians—these all result from forces so fundamental that recommendations will do little if anything to modify them.

Since the factors that affect change are so numerous, perhaps expressions of views from informed sources and the presentation of new, significant, and little-known facts can touch on at least some aspects of the constellation. This report, therefore, takes note of many basic causes of migration that are not amenable to quick change.

Apart from fundamental economic, social, and political considerations, there are important contributory factors that can be modified by specific actions within the economic capacity of every nation.

This report concentrates on such actions. Even if they were adopted in total, however, they would not stop all migration. Indeed, the abolition of migration is impracticable and undesirable. Movement of people from one nation to another is generally helpful to individuals and to countries. The purpose of these recommendations is to prevent the normal from becoming pathological, abnormal, and harmful.

6.2 Physicians, Scientists, and Engineers Differentiated

The measures that are required to retain professional people such as engineers and practicing physicians are, by and large, the basic economic, political, and social changes required for national development. There are a few measures that can be specifically designed to reduce the migration of these groups. Even if such measures could be devised, there are so many engineers and physicians that the cost would be excessive. The case of scientists, however, is a special one. In absolute numbers, few of them migrate, but the loss per scientist is very high to the countries concerned. The movement of one scientist can, and has, meant the ruin of an entire university department and the disbandment of a whole field of research. The scientists who work in their own countries are teachers and leaders as well as investigators. Hence, the gain in keeping scientists at home, or repatriating them, is very

high per scientist. The total number of scientists in any country is small in relation to the number of practicing engineers and physicians. Accordingly, the total investment required to moderate the movement of scientists is relatively small and the return is extraordinarily high.

6.3 The Responsibilities of Individuals

While recommendations to individuals are not particularly appropriate, observations on the responsibilities of individuals are relevant. This matter has been presented directly and persuasively by Professor Houssay:

> Science does not have a homeland, but the scientist does—the land where he was born and educated; the land that nurtured him, gave him his schooling, and gave him a place in his profession; the home of his friends and family . . .
>
> Every man has a tacit, unsigned commitment to help his country. His education has been made possible by the labors of the entire population—farmers, industrial workers, and professional people—who produced the resources that maintained him and supported the schools and universities. He should repay the people by devoting his highest efforts to the advancement of his country.[25]

The PAHO Advisory Committee on Medical Research fully endorses this philosophy.

6.4 Recommendations to the Latin American Countries

The primary responsibility for taking steps to moderate the movement of highly trained people to the United States rests with the Latin American countries. The differentials in terms of professional opportunity, income, and stability that give rise to migration should be reduced by raising rather than by lowering professional and economic opportunities.

The nature of the measures relating to migration that are appropriate and feasible differ widely among the Latin American countries. However, the recommendations in the present report are stated as if Latin America were a single unit. This is done with full knowledge of the extent of diversity, but with the central assumption that the proposals will stimulate leaders to select, choose, adapt, delete, and add measures suited to the specific needs and capabilities of their countries.

6.4.1 *General measures to strengthen science in Latin America*

The actions required to reduce the migration of scientists from Latin America are precisely those required to establish stronger science and technology. The following steps toward the strengthening of science have been uniformly recommended by national and international study groups:

- *An increase in the over-all level of investment in science and science education*

The need for expanded and stable support for science and science education is urgent. In most countries such support is only possible through external assistance. However, the strengthening of indigenous science and education is the constant objective, and in this the nations have a responsibility that they have not yet adequately met.

A reasonable goal for investment in research might be set at between 0.5 and 1.0 per cent of the gross national product, depending on the relative wealth of the nation. Research is an investment, not an expenditure. Carefully planned investments in research and higher education are among the most profitable that a country can make, and most Latin American countries do not invest enough in these fields.

More important than the priority of any given scientific field or the choice of emphasis between science and technology is the size of the total investment in research development

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[25] B. Houssay, *La Emigración de Científicos, Profesionales y Técnicos de la Argentina* (presented at a symposium conducted by the Brazilian Academy of Sciences, Rio de Janeiro, May 1966), p. 12.

and technology. The most fundamental problem confronting the development of science—including biomedical science—in Latin America relates not to any specific deficiency but to a complex of social attitudes that result in a nonscientific or an antiscientific attitude on the part of the population generally and often on the part of political leaders as well. The science leaders in Latin America bear a heavy responsibility to change these attitudes.

More intensive and effective applied research and development is a prime goal, but its pursuit should not detract from efforts in basic research.

• *Strengthening of existing centers*

High priority should be given to the reinforcement of existing strength in engineering, science, and medicine. In general, investments in selected existing centers of high quality—organizations already in being that have good leadership, facilities, equipment, and students—will yield a greater return in terms of the training and quality of research than investments in new centers.

In general, and as a long-range objective, emphasis should be on strengthening the areas of excellence—departments, faculties, research groups, institutes, or whatever they may be—that have a strong educational component. This, as a rule, means areas associated with universities. Some universities are so archaic, badly organized, and poorly staffed, however, that they fall far short of the ideal institution combining teaching and research. In such cases it is necessary to consider the strengthening of nonuniversity points of excellence.

No specific recommendations are offered for the solution of the deeply rooted problems typical of most Latin American universities. Certainly those who are working toward the needed reforms deserve every encouragement. Assistance should be directed as much as possible toward strengthening the position of those who are trying to modernize the outlook and structure of universities.

• *Establishment of links among domestic and international centers of strength—an international common market*

Existing efforts to link the points of strength within each country and form stronger total national systems are commendable and should be encouraged. Such efforts are being made in Argentina, Brazil, Chile, Colombia, and Venezuela. A stronger national system enables people to be trained to higher levels within their own countries. The higher the level of training at home, the less the probability of migration.

International links are important, too. No nation can wisely pursue a policy of autarchy in science. The smaller the country, the greater the difficulty in establishing a solid structure for science and the greater the need for strong links to world science. A degree of isolation can be useful to scientists as a protection against unproductive conformity, but this is only desirable under special circumstances.

The need for communication—for more widespread efforts to establish free and easy collaboration within countries, for an increased flow of scientific information and people among nations, and for a stronger network of international activities—is particularly acute in Latin America. Accordingly, it is proposed to extend the "common market" idea to the creation of an international intellectual community, or common market, building on the excellent steps already taken.

Specifically, active leadership, staff assistance, and funds should be provided by international organizations for the development of advanced training—to the Ph.D. level in some cases—taking advantage of existing centers of excellence wherever they may be found in Latin America. The full exploitation and expansion of Latin America's capability to offer advanced scientific training is a major means of preventing undesirable migration. Precedents for such action exist—for example, the program of the Latin American Physiological Society, which has selected 12 centers after screening a much larger number on the basis of objective criteria.

The Pan American Federation of Associations of Medical Schools is a potential instrument for developing such arrangements.

More fellowships should be made available for study by Latin Americans in other Latin American countries. Steps in this direction have been taken by the Ford and Guggenheim Foundations and by the Organization of American States. AID is financing the study of a substantial number of Latin American students in Mexico. From the standpoint of the Latin American countries, expansion of this so-called "third country" training would be highly desirable, even if financed by reducing the number of fellowships for study in the United States.

• *Improvement in the organization of science—establishment of strong national research bodies*

The absence of a means by which all factors affecting research can be considered in their relation to each other is a major handicap in most countries, and the need for national bodies competent to deal with such problems is critical. Indeed, the entire complex of factors—training, emigration of highly trained persons, research support, university structure, full-time jobs, and all the others that vitally affect a country's capacity to conduct a vigorous research effort—must be considered together. Characteristically, research in Latin America lacks organization and coherence. True, there are dangers in overorganization; however, the Latin American case is one of ineffective organization. The fragmentation of the university, the lack of coherence in science at the national level, and the weakness of international collaboration—all are evidence, at different levels, of inadequate organization.

Every Latin American country with multiple centers of research—and every country with emerging points of scientific strength—should have an official national agency devoted to science policy. The establishment of such a body should not be considered desirable simply because it is the fashion to set up this kind of organization. There are real and important tasks to be performed for science. The first of these is the making of decisions regarding the national investment in science as contrasted with other fields. This is essentially a political matter and generally and quite properly lies in the hands of the political authorities. Often the authorities have little comprehension of the power of science and technology in relation to economic and cultural development. A national science body can be a vital link between the political authorities and the scientific and technological communities.

The second task is scientific, and relates to the problem of choice. Every nation has a science policy consisting of *de facto* decisions. The real question is how these decisions are made—Are they developed in a context that reveals the possible consequences of choices before they are made, permits an examination of alternative choices, and exposes the general relationships between the use of resources for research and higher education and their investment in other important goals such as secondary education, public works, or defense? If such choices are to be made with a reasonably high degree of rationality, and if governments are to be guided toward intelligent choices, deliberate attention must be paid to these matters at the national level. The national research body can play a key role in this process.

National research bodies can also collect and analyze data on resources for science and technology, improve communication among scientists in other countries, and serve as a link with international bodies and sources of scientific collaboration and support in other countries.

Finally, national research bodies are the natural instrument for viewing the question of migration of highly trained people in the total context of national affairs and for securing effective action.

• *Organized planning of study abroad*

Study abroad continues to be an essential part of the education of many highly trained persons in Latin America. Much of this training is obtained in the United States. However,

well-known and continuing deficiencies in the planning of training opportunities detract from the usefulness of such programs. Inadequate planning tends to increase migration.

As noted above, training opportunities should be expanded within Latin America to help minimize reliance on training elsewhere. Training in Latin America tends to be more closely related to domestic needs and capabilities, it is much less expensive, and it tends to decrease both the incentives and the opportunities to migrate.

Those who do study abroad should first exhaust all training opportunities of adequate quality in Latin America. The older the students are when they go abroad for study, the more likely they are to be married and therefore to return to the home country.

The nature of training abroad should be related to needs and opportunities at home. Whenever possible, positions relevant to the advanced training should be assured before individuals go abroad for training. In many countries it is important to consider, before people are trained, how many specialists the country can absorb in the particular field. This is one aspect of general manpower planning. In specific terms related to migration, serious questions have been raised as to the advisibility of providing more fellowships before the issue of jobs and careers is resolved.

These recommendations are not new. They are reiterated here because they are important and because deficiencies in the training process continue to exist.

Many individuals go abroad for advanced training on their own initiative and not under official auspices. They have a right to do so, but those who advise them have a responsibility to help them decide on the nature of their foreign training.

6.4.2 *Specific repatriation measures—promotion of migration studies*

Each country should stimulate, perhaps through subsidizing the necessary research, studies of the extent, nature, and causes of the migration of highly trained people. The investigations sponsored by the National Academy of Science of Brazil, the studies of health manpower carried out in Colombia, the scholarly investigations conducted by the Torcuato di Tella Institute in Argentina, and the special study of Chilean emigration recently completed by Gutiérrez and Riquelme are examples of the various practical approaches that countries can take. Any such study must have, as a prime requirement, the interest and support of an influential person and the services of at least one competent scholar to carry it out. Governments, research councils, professional societies, and similar groups have a responsibility to promote such research, to publicize the results, and to consider the implications for positive action.

- *Conduct of official inquiries*

National governments should institute official inquiries into the migration question, conducted by appropriate persons or groups. The investigations should be aimed at discovering the nature and extent of migration and making realistic recommendations. The investigation undertaken in Argentina (Decree 7558 of 1965) could serve as a model (see Appendix IX).

- *Improvement of migration statistics*

The biggest deficiency in migration statistics is the scarcity of data on the number and characteristics of persons who return to their home countries after various periods abroad. Clearly, the usefulness of extensive information on persons entering the United States with immigrant visas is substantially reduced by the fact that little is known about the number who return. Only in the case of physicians are there any reliable data at all.

Another serious statistical gap exists with respect to the migration of foreigners to Latin American countries. Argentina is the only country in which this subject has been studied (see Bibliography).

The Organization of American States should

add to its statistical program a technical review of migration statistics with the aim of strengthening the data available.

- *Adoption of a repatriation program*

Each country should give full consideration to a program for repatriating professionally trained personnel. This program should be the responsibility of a person highly placed in an influential organization either in or connected with the government. The measures that should be considered include (1) organized efforts, through government and professional societies, to keep track of all highly trained people who migrate, and organized efforts to secure names and addresses of highly trained nationals residing in the United States; and (2) the provision of special inducements for those willing to return. The primary and most powerful inducements are general rather than specific—namely, favorable political, economic, and social conditions with adequate opportunities for professional work. However, special inducements might be offered in the form of guaranteed housing accommodations at reasonable prices, tax-exempt privileges on the importation of household goods and an automobile, assured support for research, and assured career opportunities. Specifically which inducements might be offered to the different professional groups would vary from country to country. In general, it would appear most feasible and productive to offer special inducements to persons who would be associated on a full-time basis with institutions engaged in research and advanced training. This group is relatively small and has special importance to national development.

6.5 Recommendations to the United States

Since the primary responsibility for moderating migration rests with Latin American countries, the recommendations to the United States are relatively brief.

Some arrangements already in existence are helping to moderate the flow. For example, persons with exchange visitor and student visas are required to remain outside the United States for at least two years before they can secure an immigrant visa. This constitutes a wise, moderate, and helpful curb on the migration of highly trained people from Latin America to the United States.

Another curb is the existing system of examination for foreign physicians administered by the Educational Council for Foreign Medical Graduates (ECFMG), which operates to the advantage of the Latin American countries, to the United States, to physicians, and to patients. The examination is merely evidence that those who pass it possess a medical education equal to the minimum expected of physicians in the United States. The ECFMG examination should be designed to select physicians from Latin America with at least average as compared to minimum qualifications. This would tend to lower the number of migrating physicians. It would also increase the average qualifications of those who migrate and afford them better status and positions in the United States.

The training of about 9,000 Latin American citizens per year in the United States is an important factor in the total education scheme of Latin American countries and it offers significant advantages to the United States. However, greater care should be exercised to keep this training program from becoming the first stage of migration to the United States.

- *Consideration of special assistance for the development of Latin American universities*

The most effective contribution the United States could make toward moderating the immigration of academic persons—scientists, engineers, physicians, and others—would be to establish a general plan of assistance to Latin American universities. This plan should have as its objective the strengthening of universities to meet national requirements for cultural, scientific, and economic development. The assistance should not be directed toward

specific projects; rather, it should be aimed toward the development of high competence in broad areas of teaching and research.

The United States should devote further efforts to encouraging professors from U.S. universities to conduct research and to teach postgraduate courses in Latin American universities, remaining long enough to exert a strong influence over groups of students and thereby ramify and perpetuate the effect of their work.

To the extent that the United States considers the development of strong, stable universities in Latin America to be in its own interest, serious consideration should be given to assisting suitable professors from Europe or other areas to teach and conduct research in Latin America.

It is difficult to persuade professors from other areas to teach and carry on research in Latin America. As a practical matter, stronger incentives should be made available in terms of income, career protection, and other factors.

Stronger efforts should be made to place more postgraduate fellows from the United States in Latin American universities for substantial periods.

• *Maintenance of research support to Latin America*

Certain agencies of the United States government support research in Latin America to attain specific, limited objectives within the framework of their own stated goals. However, as an unintended but highly important consequence, this support helps to sustain the vitality of many of the most important Latin American research institutions. Thus the support of scientific research is one of the most important actions taken by the United States to forestall the migration of scientists and to promote their repatriation. Withdrawal of this support would, in turn, have as an unintended but certain consequence the collapse of many laboratories and the migration of a substantial portion of the scientific talent of Latin America to the United States.

To the extent that United States policy favors the strengthening of science and the academic structure generally in Latin America, the trend of research support should be viewed in a wider context than the specific, limited objectives of the separate agencies that are engaged in such programs.

• *Coordination of existing research support*

The United States should accept the principle that its actions with respect to research support in Latin America bear directly on broader aspects of policy. The nature and extent of U.S. support for research in Latin America determines the level of effectiveness of most major research centers, including their capacity to train advanced students. Since the strengthening of higher education in the sciences and the moderation of migration rates from Latin America are of basic concern to the United States, some means of using research support more effectively to achieve these wider objectives would be valuable. It would be helpful if the total effects of all U.S. research support in a given country could be considered, insofar as possible, in relation to the over-all national development.

• *Encouragement of "third country" training*

As long as the United States Government is disposed to invest funds in the training of Latin Americans for work in their own countries, a marked increase in support for training in local institutions should be considered. Such an increase would be particularly welcome if it involved no decrease in training opportunities in the United States. Clearly, assistance to training programs within Latin America has a higher priority, from the standpoint of the Latin American countries, than increased opportunities for study in the United States.

• *Consideration of ethical responsibilities in recruitment*

Research leaders under whom younger Latin American scientists work, learn, and teach in the United States have an ethical responsibility

to recruit in a manner that will ensure the return of as many as possible to their home countries.

Individuals and organizations who seek employees or professional associates in Latin America should give serious consideration to the contribution that these people are making to their communities and to their nations.

The United States has a responsibility to help Latin American students obtain better counseling before they come to the United States. In this connection, the efforts that have been made by Education and World Affairs, a private foundation, are commendable. The aim of this organization is to promote the establishment of counseling, evaluation, and testing centers for prospective student visitors to the United States.[26] Good advice to prospective students is so fundamental to effective training and education that this activity should be financed by both private and public funds.

- *Improvement of migration statistics*

The data available from the U.S. Immigration and Naturalization Service are the most significant single source of information on migration from Latin America to the United States. However, these statistics could be improved to good advantage. First, it would be helpful if data on the individual occupations in the professional, technical, and kindred worker group were tabulated every year and made available in printed form. Second, it would be helpful if the occupational classification of persons were made more reliable. How to do this is a technical matter not within the province of this report. Perhaps a joint U.S.-Latin American conference of experts could work out a practical approach to the solution of this problem.

[26] Education and World Affairs, *The Overseas Selection of Foreign Students*, New York, 1966.

6.6 Recommendations to International Organizations

6.6.1 *United Nations*

The manpower aspects of national development, including the migration of highly trained persons, should be more strongly emphasized by the Committee on Science and Technology of the Economic and Social Council.

UNESCO should sponsor studies on the movement of highly skilled persons from less to more developed countries, concentrating on areas where migration studies have not previously been made.

6.6.2 *Organization of American States*

The manpower studies of the OAS should be expanded to include current studies on migration. The Organization should also establish long-range basic statistical series in this area.

6.6.3 *World Health Organization and Pan American Health Organization*

The World Health Organization should analyze the international migration of physicians on a worldwide basis, determine the implications of this migration, and advocate appropriate action.

The Pan American Health Organization should use the present report, supplemented by additional data and informed opinions, as the basis for an appropriate policy statement regarding the migration of health personnel to, from, and among the Latin American countries. This report and the PAHO policy statement should be widely distributed in all the countries of the Western Hemisphere.

The Pan American Health Organization should extend its total fellowship program, and in so doing it should place greater stress on the training of biomedical scientists.

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APPENDICES

Appendix I

MIGRATION OF TRAINED PEOPLE
FROM LATIN AMERICA

Statement of Goals and Procedures for a Study to be Undertaken Jointly by the Pan American Health Organization and the Organization of American States

July 13, 1965

A. The Problem

In a number of countries, many scientists have become so discouraged by the obstacles facing them in building a career in science and teaching that they have migrated. They are in effect pushed out of their native country. On the other hand, they are pulled towards countries where career prospects in both economic and intellectual terms are much brighter. The country with the most attraction in recent years has been the United States. While the facts about the migration of physicians, scientists, and engineers are not known with precision, it is abundantly clear that in some countries the loss of talent is a severe handicap to national economic, cultural, and intellectual development. Much more attention has been paid to the outflow of capital than to the outflow of another fundamental national resource—brains. This problem is not, of course, confined to the biomedical sciences. However, as is true of so many aspects of sciences in Latin America, the biomedical sciences are so significant that they can best be examined in the context of all sciences.

Whether the forces that repel or those that attract are most powerful is not the central problem. The central problem is how both forces may be moderated in a suitable way. There can be no realistic hope that the forces leading to the emigration of scientists from Latin America can be done away with and that migration will cease. The forces at work are too deeply ingrained and too powerful. Moreover, the cessation of migration is not only impossible but unwise. International migration of scientists is a productive phenomenon with which the world has long been familiar. The object of policy should be to establish conditions under which the rate of migration from Latin America will be moderated by the voluntary choice of individuals. Fortunately, it appears that there are practical measures, which can be instituted at moderate cost, that will reduce migration.

B. General Proposal for Action by PAHO

It is most urgent that the problem be more specifically diagnosed and that a practical prescription be written. The Pan American Health Organization and the Organization of American States are therefore instituting a study, in cooperation with all groups having an interest in the question. The study will begin with a determination of relevant facts. Next, the forces leading to migration should be analyzed. The analysis should result in suggestions for practical, acceptable measures designed to reconcile the legitimate aspirations of scientists with the legitimate needs of the countries for highly trained manpower.

C. Information to Be Secured

While it is not possible to know precisely what information will be secured, the categories of facts and judgments that will be sought can be outlined. They fall into three broad categories.

Part A. Statistical Data on Migrants from and to Latin America

1. Number and characteristics of migrants from Latin America

a. Number of physicians, number of scientists, and number of engineers who have migrated from each Latin American country in each year over the past ten years; country to which they have migrated; specialties (within each of the three major occupational groups) of those who have migrated.

b. Number of nurses, technicians, and those in other important subprofessional groups who have migrated; country to which they have migrated.

(The U.S. is the most significant country, and most of the data will be on migrants to the U.S. New and more refined data will be sought from the U.S. Immigration and Naturalization Service.)

2. Number and characteristics of migrants to Latin American countries

Venezuela will be particularly important in this connection, although data will be sought on this subject from all countries.

3. Number and characteristics of persons who have returned to Latin America after migrating.

Few people will be in this category and it will probably be impossible to secure a statistical count. Persons in this category are very important to the study because their experience can provide leads to the kinds of policies required to bring people back.

Part B. Reasons for Migration from Latin America

An effort will be made to assess reasons for migration by questioning migrants in the United States. Procedures for this may include a questionnaire. Preferably, information will be sought by personal interviews conducted by Latin Americans. The basic questions are these:

- Is the cause primarily the attraction of other countries? Is the attraction primarily economic, or are other factors involved?
- Is the cause primarily conditions within the country? What is the relative significance of economic and political factors?
- What is the significance of personal factors, such as temperament or family circumstances?

Part C. Judgments and Policies

Finally, judgments will be sought, primarily through interviews with a varied sample of informed people in various Latin American countries, on questions such as the following:

1. How serious is the problem of migration of scientists, of engineers, and of physicians?
   - Why is the problem serious, if it is?
   - If the problem is not serious, what accounts for the fact that few people migrate?
   - Why the differences among different occupational groups?
2. What specific measures have been taken, if any, to reduce the migration of scientists, engineers, physicians, and subprofessional groups?

- How have such measures differed, if at all, from those intended to create a more favorable climate for science or the practice of medicine or engineering in the nation?

3. How significant is the movement of people to each country (in-migration) in meeting requirements for highly trained manpower?

4. What specific measures have been taken, if any, to induce those who have migrated to return? How successful have they been? What accounts for their effectiveness or lack of effectiveness?

D. Planning, Direction, and Advice

The study will be planned and directed by Dr. Charles V. Kidd, who will be responsible for drafting a report. PAHO and the Department of Scientific Affairs of the OAS General Secretariat will provide staff advice and assistance within the limits of their available resources. The report will be reviewed by the PAHO Advisory Committee on Medical Research as a whole at its meeting in June 1966, but the PAHO/ACMR will not assume responsibility for the content of the report. Similarly, the Department of Scientific Affairs may arrange for a review of the draft study.

The study will proceed under the general guidance of a PAHO/ACMR Subcommittee on Migration, consisting of all of the Latin American members of the Committee, under the chairmanship of Dr. Bernardo A. Houssay. Similarly, the Department of Scientific Affairs may establish an advisory group. The Subcommittee will review draft material by mail and will probably meet once early in 1966 to discuss the progress of the study, to review data and draft manuscript material, and to advise on final steps.

Logistical support for the study will be provided by PAHO headquarters and its zone offices. The Department of Scientific Affairs will assist by providing access to data and informed people.

E. Study Procedures

1. Review of literature

All pertinent literature and existing data on migration of scientists, particularly from Latin America, will be examined.

2. Contact with appropriate groups

The study will be discussed with appropriate individuals and groups interested in the migration of scientists (including the Directorate for Scientific Affairs of the Organisation for Economic Co-operation and Development, the National Science Foundation, and UNESCO) to explain the scope, objectives and procedures for the study, and to discuss the possibilities of collaborative effort.

3. Establishment of definitions

It will be necessary to establish working definitions for terms such as "migrants," "students on fellowships," "visiting professors," "persons with immigrant visas," and so forth. Another required definition relates to the qualifications of those to be considered in the study. For example, how is a "scientist" to be defined? to be included? As a preliminary judgment both aspects should be part of the study.

4. Collection of U.S. data

Arrangements will be made for collection of statistical data from the U.S. Bureau of the Census, the Immigration and Naturalization Service, and the National Science Foundation on scientific migrants to the U.S. from Latin America over the last decade, by country and by occupational group. Analysis will be made of the data.

5. Collection of Latin American data

Arrangements will be made for collection of such data as may be available from the Latin American countries, requesting members of the PAHO Advisory Committee on Medical Research and persons suggested by the Department of Scientific Affairs to provide access to people and data.

6. Conduct of sample survey

To determine the relative importance of various forces affecting their migration, a sample study of Latin American scientists who have migrated to the U.S. will be planned and executed.

7. Interviews in Latin America

After arranging in advance for appropriate interviews, the views of informed people in selected Latin American countries on the question of migration will be discussed. Heavy reliance will be placed on the assistance of members of the PAHO Advisory Committee on Medical Research and persons suggested by the Department of Scientific Affairs both to provide information and judgment and to advise on supplemental sources of information. Eight countries will be discussed according to the following schedule:

September	December
Brazil, Chile, Argentina, Peru, Uruguay	Mexico, Venezuela, Colombia

The Study Director will visit most of these countries, but assistance may be required both in studying the situation in these countries and in studying additional countries if this seems desirable. Staff members of PAHO and the Department of Scientific Affairs will be asked to visit some of the countries involved. For those countries in which discussions are not held, data will be solicited by letter from informed people.

8. Preparation of draft report

The report will be comparable in length to the report *Science Policy in Latin America* (Scientific Publication No. 119). It will contain both data and analyses of the data. Stress will be placed on policy matters—recommendations as to what the Latin American countries and the U.S. should do to deal with the problem. Supplementary reports on a country-by-country basis will probably be prepared as in the case of the report on biomedical research policy because the situation varies. The content of supplementary reports will be determined during the course of the study.

9. Timing

1965

July	August	September	October	November	December
Name Committee Select Study Director					

1965 (cont.)

July	August	September	October	November	December
			Review literature		
			Contact appropriate groups (OAS, NSF, OECD, UNESCO)		
			Establish definitions		
					Collect U.S. data
					Collect Latin American data
					Conduct sample survey
					Interviews in Latin America

1966

January	February	March	April	May	June	July
			Analyze data			
	1. First rough draft					
	2. Committee meeting in Rio de Janeiro					
	3. Interviews in Latin America					
		Draft final report				
		Distribute draft for comment				
		Redraft				
		Present report to PAHO/ACMR				

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

A. Year ended June 30, 1961:

	Country or region of last residence	Total	Accountants and auditors	Actors and actresses	Airplane pilots and navigators	Architects	Artists and art teachers	Athletes	Authors	Chemists	Chiropractors	Clergymen
			000	001	002	003	004	005	006	007	008	009
NORTH AMERICA		9,148	672	32	39	88	106	63	22	147	3	192
505	*Puerto Rico (U.S.)	3										
506	*Virgin Is. (U.S.)	3										1
574	*Canada	5,562	295	22	18	34	51	37	14	109	3	126
582	*Mexico	636	37	4	4	5	22	4		6		22
583	*United States	310	12	3	1	3		6	2	6		9
	West Indies	2,054	250	3	12	41	28	8	4	21		30
507	Guadeloupe (Fr.)	3								1		
508	Neth. Antilles	30	2				2			1		
509	Bermuda (U.K.)	26	2									1
511	Martinique (Fr.)	7										
512	Bahamas (U.K.)	18	4			1						
513	Barbados	40										
514	Jamaica	275	38	1	3	6	6			1		6
516	Trinidad & Tobago	80	1							2		1
518	Antigua	19										
519	Dominica	5								1		
520	Grenada	8							1			
521	Montserrat											
522	St. Christopher	13								1		1
523	St. Lucia	5										
524	St. Vincent	7										
525	British Virgin Is.	7	1									
526	Cayman Islands											
527	Turks-Caicos Is.											
584	*Cuba	1,145	166	1	8	29	14	5		12		15
585	*Dominican Republic	237	15			3	2	2		2		4
586	*Haiti	127	21	1	1	2	4	1				2
	Central America	580	78		4	5	5	8	2	5		4
504	*Canal Zone (U.S.)	12	1									
575	*Costa Rica	98	9		1	1				2		1
576	*El Salvador	98	24		2	1				1		1
577	*Guatemala	77	6			1	2		1			1
578	*Honduras	88	13		1				1	1		
579	*Nicaragua	83	11			1	1	2				
580	*Panama	115	14			1	2	6		1		1
581	British Honduras	9										
SOUTH AMERICA		1,927	116	2	14	31	32	13	3	43	1	35
602	Surinam (Neth.)	6										1
603	Guyana†	38								2		1
687	*Argentina	552	11		4	7	15	12		25		4
688	*Bolivia	54	5									
689	*Brazil	253	10		1	3	3		1	3		9
690	*Chile	142	8	1	4		3		1	4	1	4
691	*Colombia	376	43		4	7	3			2		8
692	*Ecuador	108	17			1	1		1	2		2
693	*Paraguay	13	1	1								
694	*Peru	171	8			3	2	1				2
695	*Uruguay	23					1					1
696	*Venezuela	191	13		1	10	4			5		3

* Nonquota countries

† Formerly British Guiana

Source: Direct information, U.S. Department of Justice, Immigration and Naturalization Service.

Note: These data have been published earlier only in part. The full tables are presented here so that those interested in migration may derive information directly from them.

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

A. Year ended June 30, 1961 (Cont.):

	Country or region of last residence	College presidents and deans	Professors and instructors: Agricultural sciences	Biological sciences	Chemistry	Economics	Engineering	Geology and geophysics	Mathematics	Medical sciences	Physics	Psychology
		010	012	013	014	015	016	017	018	019	023	024
NORTH AMERICA		2	5	4	7	7	5	3	7	2	9	2
505	*Puerto Rico (U.S.)											
506	*Virgin Is. (U.S.)											
574	*Canada	1	2	3	3	6	3	3	3	1	7	2
582	*Mexico		1		1	1						
583	*United States				1		1					
	West Indies	1	2	1	2		1		4	1	2	
507	Guadeloupe (Fr.)											
508	Neth. Antilles											
509	Bermuda (U.K.)											
511	Martinique (Fr.)											
512	Bahamas (U.K.)											
513	Barbados											
514	Jamaica				1				1			
516	Trinidad & Tobago											
518	Antigua											
519	Dominica											
520	Grenada		1									
521	Montserrat											
522	St. Christopher											
523	St. Lucia											
524	St. Vincent											
525	British Virgin Is.											
526	Cayman Islands											
527	Turks-Caicos Is.											
584	*Cuba	1	1	1	1		1		3	1	1	
585	*Dominican Republic										1	
586	*Haiti											
	Central America											
504	*Canal Zone (U.S.)											
575	*Costa Rica											
576	*El Salvador											
577	*Guatemala											
578	*Honduras											
579	*Nicaragua											
580	*Panama											
581	British Honduras											
SOUTH AMERICA			1	1			1		1	3	2	
602	Surinam (Neth.)											
603	Guyana†											
687	*Argentina		1	1						1		
688	*Bolivia											
689	*Brazil						1			1		
690	*Chile											
691	*Colombia								1		2	
692	*Ecuador											
693	*Paraguay											
694	*Peru									1		
695	*Uruguay											
696	*Venezuela											

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

A. Year ended June 30, 1961 (Cont.):

	Country or region of last residence	Professors and instructors					Dancers and dancing teachers	Dentists	Designers	Dietitians and nutritionists	Draftsmen	Editors and reporters
		Statistics	Other natural sciences	Other social sciences	Nonscientific subjects	Subject not specified						
		025	026	027	028	029	031	032	033	034	035	036
NORTH AMERICA		1	6	6	31	91	42	52	125	36	268	84
505	*Puerto Rico (U.S.)											
506	*Virgin Is. (U.S.)											
574	*Canada	1	4	1	7	33	31	10	94	31	218	33
582	*Mexico				1	3	3	6	2		11	7
583	*United States		1		1	7	2		7	1	4	1
	West Indies		1	5	19	41	6	31	18	4	26	35
507	Guadeloupe (Fr.)											
508	Neth. Antilles			1				1			1	
509	Bermuda (U.K.)											
511	Martinique (Fr.)											
512	Bahamas (U.K.)						1					
513	Barbados							1		1	2	1
514	Jamaica			2	1	5		3	4		5	2
516	Trinidad & Tobago					1			2	1	1	
518	Antigua										1	
519	Dominica											
520	Grenada											
521	Montserrat											
522	St. Christopher											
523	St. Lucia											
524	St. Vincent											
525	British Virgin Is.											
526	Cayman Islands											
527	Turks-Caicos Is.											
584	*Cuba		1	2	17	30	4	19	9	2	13	29
585	*Dominican Republic					1	1	4	3		3	1
586	*Haiti				1	4		3				2
	Central America				3	7		5	4		9	8
504	*Canal Zone (U.S.)											
575	*Costa Rica				2	6		2			2	2
576	*El Salvador							1	2		1	
577	*Guatemala								1		1	2
578	*Honduras					1		2	1		1	2
579	*Nicaragua										2	1
580	*Panama				1						2	1
581	British Honduras											
SOUTH AMERICA				1	16	50	12	27	28	4	46	26
602	Surinam (Neth.)											
603	Guyana†							1		1	1	1
687	*Argentina			1	5	16	7	7	9	1	8	10
688	*Bolivia					1					3	
689	*Brazil				2	4	2	3	8		8	1
690	*Chile				2	2	1		2		1	3
691	*Colombia				3	12		6	6		15	5
692	*Ecuador					5	1	4				2
693	*Paraguay										1	
694	*Peru				1	8		1	1	2	3	1
695	*Uruguay							2	1			
696	*Venezuela				3	2	1	3	1		6	3

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

A. Year ended June 30, 1961 (Cont.):

	Country or region of last residence	Aeronautical engineers	Chemical engineers	Civil engineers	Electrical engineers	Industrial engineers	Mechanical engineers	Metallurgists and metallurgical engineers	Mining engineers	Engineers (n.e.c.)	Entertainers	Farm and home management advisers
		041	042	043	044	045	046	047	048	049	051	052
NORTH AMERICA		45	66	123	175	34	154	24	14	540	64	3
505	*Puerto Rico (U.S.)						1			1	1	
506	*Virgin Is. (U.S.)									1		
574	*Canada	39	41	63	127	24	103	23	11	380	30	2
582	*Mexico		5	3	7		7		2	16	3	
583	*United States	4	2	5	9	2	10			37	16	
	West Indies	1	17	47	28	6	28	1	1	88	14	
507	Guadeloupe (Fr.)				1					1		
508	Neth. Antilles		1	1	1	1				2		
509	Bermuda (U.K.)									1	1	
511	Martinique (Fr.)			1						1		
512	Bahamas (U.K.)									1		
513	Barbados											
514	Jamaica			1	1		5			5	3	
516	Trinidad & Tobago			1	1					3	3	
518	Antigua											
519	Dominica											
520	Grenada											
521	Montserrat											
522	St. Christopher										1	
523	St. Lucia											
524	St. Vincent											
525	British Virgin Is.									1	1	
526	Cayman Islands											
527	Turks-Caicos Is.											
584	*Cuba	1	16	24	24	5	18	1	1	52	5	
585	*Dominican Republic			17			5			15		
586	*Haiti			2						6		
	Central America	1	1	5	4	2	5			17		1
504	*Canal Zone (U.S.)											
575	*Costa Rica	1		3		1				1		1
576	*El Salvador									1		
577	*Guatemala		1				1			3		
578	*Honduras			1		1	3			4		
579	*Nicaragua				1		1			7		
580	*Panama			1	3							
581	British Honduras									1		
SOUTH AMERICA		8	16	26	28	10	30	6	3	144	10	1
602	Surinam (Neth.)						1					
603	Guyana†									2		
687	*Argentina	4	2	12	11	5	9	6		28	8	
688	*Bolivia				1	1	1			6		
689	*Brazil	2	1	1	7		4			18		
690	*Chile	1	1	3	3	1	5		2	12		
691	*Colombia		4	3	1	1	3			18	2	
692	*Ecuador		1	2	2					6		
693	*Paraguay											
694	*Peru	1	6	2	1	1	2		1	18		1
695	*Uruguay			1		1				1		
696	*Venezuela		1	2	2		5			35		

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

A. Year ended June 30, 1961 (Cont.):

	Country or region of last residence	Foresters and conservationists	Funeral directors and embalmers	Lawyers and judges	Librarians	Musicians and music teachers	Agricultural scientists	Biological scientists	Geologists and geophysicists	Mathematicians	Physicists	Miscellaneous natural scientists	Professional nurses
		053	054	055	056	057	061	062	063	067	068	069	058
NORTH AMERICA			4	193	43	145	30	15	37	9	38	3	1,601
505	*Puerto Rico (U.S.)												
506	*Virgin Is. (U.S.)												
574	*Canada	18	2	18	36	51	3	12	32	7	36	2	1,316
582	*Mexico	1		15		26	4	1	1				43
583	*United States	1		7	1	14	2		1		1	1	14
	West Indies		2	146	4	48	11		2	1	1		160
507	Guadeloupe (Fr.)												
508	Neth. Antilles			2		1							2
509	Bermuda (U.K.)												7
511	Martinique (Fr.)												
512	Bahamas (U.K.)												4
513	Barbados		2			1							13
514	Jamaica			13	1	8	1						29
516	Trinidad & Tobago					3			2				29
518	Antigua					2							9
519	Dominica												1
520	Grenada			1									3
521	Montserrat												
522	St. Christopher												2
523	St. Lucia												2
524	St. Vincent						1						2
525	British Virgin Is.					2							
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba			115	2	25	7			1			24
585	*Dominican Republic			10		5	2				1		8
586	*Haiti			5	1	1							25
	Central America	1		7	2	6	10	2	1	1			68
504	*Canal Zone (U.S.)					1							1
575	*Costa Rica			2			3		1				7
576	*El Salvador			2			3						13
577	*Guatemala				2								9
578	*Honduras						1						14
579	*Nicaragua					1	3	1					10
580	*Panama	1		3		4		1		1			11
581	British Honduras												3
SOUTH AMERICA		1	1	42	7	54	9	8	11			1	134
602	Surinam (Neth.)						1						1
603	Guyana†		1										19
687	*Argentina			9	1	19	1						20
688	*Bolivia			3		1	1		1				5
689	*Brazil			9	2	10	1		1				12
690	*Chile			3	3	2	1		1				20
691	*Colombia	1		7	1	9	1	5	1			1	21
692	*Ecuador			1		6	2		1				7
693	*Paraguay							2					
694	*Peru			2		1		1	3				15
695	*Uruguay					1							2
696	*Venezuela			8		5	1		3				12

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

A. Year ended June 30, 1961 (Cont.):

	Country or region of last residence	Student professional nurses	Optometrists	Osteopaths	Personnel and labor relations workers	Pharmacists	Photographers	Physicians and surgeons	Radio operators	Recreation and group workers	Religious workers	Social & welfare workers except group workers	Economists
		059	070	071	072	073	074	075	076	077	078	079	081
NORTH AMERICA		72	13		11	73	99	606	37	9	305	64	25
505	*Puerto Rico (U.S.)												
506	*Virgin Is. (U.S.)												
574	*Canada	56	7		10	20	40	287	14	6	157	54	13
582	*Mexico	3				7	22	64	10		88	2	3
583	*United States				1	2	4	34	2	1	9		3
	West Indies	11	6			40	26	187	8	2	36	6	5
507	Guadeloupe (Fr.)												
508	Neth. Antilles							2					
509	Bermuda (U.K.)								1				
511	Martinique (Fr.)						1	1					
512	Bahamas (U.K.)							1			1		
513	Barbados								1				
514	Jamaica	2				3	3	2	1	2	4	2	1
516	Trinidad & Tobago						1	4			2	2	
518	Antigua					1					1		
519	Dominica	1											
520	Grenada												
521	Montserrat												
522	St. Christopher	1				1	1						
523	St. Lucia						1						
524	St. Vincent							1					
525	British Virgin Is.					1					1		
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba	1	5			23	15	94	5		19	2	4
585	*Dominican Republic		1			11	3	76			8		
586	*Haiti	6					1	6					
	Central America	2				4	7	34	3		15	2	1
504	*Canal Zone (U.S.)								1		2		
575	*Costa Rica					2	1	6			5		1
576	*El Salvador						2	8	1			1	
577	*Guatemala							2					
578	*Honduras							7			1	1	
579	*Nicaragua	1				1	2	5	1		4		
580	*Panama	1				1	2	5			3		
581	British Honduras							1					
SOUTH AMERICA		5		1	2	22	33	208	9		65	7	8
602	Surinam (Neth.)												
603	Guyana†						1	1			1		
687	*Argentina	1		1		8	12	74	2		9	1	
688	*Bolivia					1		4	1		2	2	
689	*Brazil				1	1	8	12			9	2	1
690	*Chile					1	1	7	1		7	1	
691	*Colombia	4				5	3	52	2		27	1	5
692	*Ecuador					3	1	3	2				
693	*Paraguay							1					
694	*Peru	1			1	1	1	37			6		
695	*Uruguay							2	1		1		
696	*Venezuela					2	6	15			3		2

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

A. Year ended June 30, 1961 (Cont.):

	Country or region of last residence	Psychologists	Statisticians and actuaries	Miscellaneous social scientists	Sports instructors and officials	Surveyors	Teachers (n.e.c.)	Technicians			Therapists and healers	Veterinarians	Professional and technical workers (n.e.c.)
								Medical and dental	Testing	Type not specified			
		082	083	084	091	092	093	094	095	096	097	098	099
NORTH AMERICA		20	7	4	29	36	1,118	177	80	436	40	16	331
505	*Puerto Rico (U.S.)						1						
506	*Virgin Is. (U.S.)												
574	*Canada	15	5	2	19	27	476	113	61	320	37	6	235
582	*Mexico	1				2	97	11	2	21		1	28
583	*United States	2		1	2		28	3	2	10	1		10
	West Indies	1	2		5	5	345	36	14	64	2	6	44
507	Guadeloupe (Fr.)												
508	Neth. Antilles				1		3	1	1	1			2
509	Bermuda (U.K.)					2	8			2			1
511	Martinique (Fr.)						2				1		
512	Bahamas (U.K.)				1		1			1		1	1
513	Barbados						9	4	2	2			1
514	Jamaica					1	77	6	3	11		1	4
516	Trinidad & Tobago						8	6	1	5			
518	Antigua						1	2		2			
519	Dominica						2						
520	Grenada							2					
521	Montserrat												
522	St. Christopher						2	1	1	1			
523	St. Lucia						1						1
524	St. Vincent						1	1		1			
525	British Virgin Is.						1			1			
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba				3	1	192	11	4	22	1	4	29
585	*Dominican Republic	1	1			1	15	2	1	9			3
586	*Haiti		1				22		1	6			2
	Central America	1		1	3	2	171	14	1	21		3	14
504	*Canal Zone (U.S.)						3	1		1			1
575	*Costa Rica				1	1	25		1	4			3
576	*El Salvador						26	2		4		1	1
577	*Guatemala			1			36	3		2			2
578	*Honduras					1	25	1		4			1
579	*Nicaragua						22	1		2			2
580	*Panama	1			2		30	6		4		2	4
581	British Honduras						4						
SOUTH AMERICA		5	1		5	8	254	23	13	97	7	5	90
602	Surinam (Neth.)							1	1				
603	Guyana†						2	3		1			
687	*Argentina	3			2	3	85	1		37		1	30
688	*Bolivia						6	1	1	2			5
689	*Brazil		1			1	51	1	3	21			13
690	*Chile				3	1	13	1	1	5	1		4
691	*Colombia	1					37	7	3	9	3		21
692	*Ecuador						24	1	1	6		1	2
693	*Paraguay						2		1	3		1	
694	*Peru						19	4		4		1	8
695	*Uruguay						4	1		2			1
696	*Venezuela	1				3	11	2	2	7	1	1	6

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

B. Year ended June 30, 1962:

	Country or region of last residence	Total	Accountants and auditors	Actors and actresses	Airplane pilots and navigators	Architects	Artists and art teachers	Athletes	Authors	Chemists	Chiropractors	Clergymen	College presidents and deans
			000	010	012	013	014	015	020	021	022	023	030
NORTH AMERICA		10,012	845	47	70	96	112	59	18	123	6	255	4
505	*Puerto Rico (U.S.)	5		1								1	
506	*Virgin Is. (U.S.)	1											
574	*Canada	5,561	285	31	29	34	53	31	14	81	6	131	2
582	*Mexico	852	46	5	8	12	20	4	1	7		24	1
583	*United States	284	11		2	5	2	2		4		11	
	West Indies	2,541	399	7	29	40	28	12	2	27		69	1
507	Guadeloupe (Fr.)	2											
508	Neth. Antilles	38	6							1			
509	Bermuda (U.K.)	31	5				1		1			2	
511	Martinique (Fr.)	13	3			2	1					1	
512	Bahamas (U.K.)	25	1		1							1	
513	Barbados	38	2									6	
514	Jamaica	741	150	1	1	12	4	3		11		14	1
516	Trinidad & Tobago	69	3				2					1	
518	Antigua	9											
519	Dominica	5											
520	Grenada	7											
521	Montserrat	1											
522	St. Christopher	15	1										
523	St. Lucia	7											
524	St. Vincent	15											
525	British Virgin Is.	5										1	
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba	981	171	2	23	17	12	9		12		28	
585	*Dominican Republic	351	35	3	4	8	6		1	3		13	
586	*Haiti	188	22	1		1	2					2	
	Central America	768	104	3	2	5	9	10	1	4		19	
504	*Canal Zone (U.S.)	27	3									1	
575	*Costa Rica	192	27	1		2			1	1		7	
576	*El Salvador	109	18	1		1	1						
577	*Guatemala	98	13		1	1	1					1	
578	*Honduras	111	20				1	3		1		3	
579	*Nicaragua	53	5	1								3	
580	*Panama	166	18		1	1	6	7		2		4	
581	British Honduras	12											
SOUTH AMERICA		2,540	227	8	24	39	37	11	11	31		39	
602	Surinam (Neth.)	3											
603	Guyana†	50	4		1					1		3	
687	*Argentina	531	13	3	6	15	12	2	2	7		7	
688	*Bolivia	77	6		2	1						1	
689	*Brazil	318	21		5	2	13			7		9	
690	*Chile	151	11		1					2		2	
691	*Colombia	511	74	1	5	6	4	3	3	4		10	
692	*Ecuador	221	39	1	1	2	3	1	3	2		1	
693	*Paraguay	42	1							1			
694	*Peru	198	17	1		1	2	2				4	
695	*Uruguay	29	1	1		1						1	
696	*Venezuela	409	40	1	3	11	3	3	3	7		1	

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

B. Year ended June 30, 1962 (Cont.):

Country or region of last residence		Professors and instructors											
		Agricultural sciences	Biological sciences	Chemistry	Economics	Engineering	Geology and geophysics	Mathematics	Medical sciences	Physics	Psychology	Statistics	Other natural sciences
		031	032	034	035	040	041	042	043	045	050	051	052
NORTH AMERICA		2	6	9	1	13	5	3	5	8	12		4
505	*Puerto Rico (U.S.)												
506	*Virgin Is. (U.S.)												
574	*Canada	2	5	5	1	7	3	1	4	5	5		3
582	*Mexico					3	1		1		4		
583	*United States		1					1		1			
	West Indies			4		2	1			2	3		1
507	Guadeloupe (Fr.)												
508	Neth. Antilles										1		
509	Bermuda (U.K.)												
511	Martinique (Fr.)												
512	Bahamas (U.K.)												
513	Barbados												
514	Jamaica			2		1				1			
516	Trinidad & Tobago												
518	Antigua												
519	Dominica												
520	Grenada												
521	Montserrat												
522	St. Christopher												
523	St. Lucia												
524	St. Vincent												
525	British Virgin Is.												
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba			1						1	2		1
585	*Dominican Republic			1		1	1						
586	*Haiti												
	Central America					1		1					
504	*Canal Zone (U.S.)					1							
575	*Costa Rica												
576	*El Salvador												
577	*Guatemala												
578	*Honduras							1					
579	*Nicaragua												
580	*Panama												
581	British Honduras												
SOUTH AMERICA		1		1		1	1	4	3	3	5		2
602	Surinam (Neth.)												
603	Guyana†												
687	*Argentina			1				1	1		1		
688	*Bolivia												
689	*Brazil	1					1		1				
690	*Chile					1					1		2
691	*Colombia							1			2		
692	*Ecuador								1	1			
693	*Paraguay												
694	*Peru									1			
695	*Uruguay							1					
696	*Venezuela							1		1	1		

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

B. Year ended June 30, 1962 (Cont.):

	Country or region of last residence	Professors and instructors			Dancers and dancing teachers	Dentists	Designers	Dietitians and nutritionists	Draftsmen	Editors and reporters	Aeronautical engineers	Chemical engineers	Civil engineers
		Other social sciences	Nonscientific subjects	Subject not specified									
		053	054	060	070	071	072	073	074	075	080	081	082
NORTH AMERICA		5	26	76	39	41	115	25	300	95	57	74	161
505	*Puerto Rico (U.S.)												1
506	*Virgin Is. (U.S.)												
574	*Canada	3	12	33	22	6	91	18	227	45	51	46	71
582	*Mexico		2	6	3		3		15	11	1	4	5
583	*United States			6		2	2		2	2	3	3	3
	West Indies	1	9	18	14	24	16	7	48	30	1	17	71
507	Guadeloupe (Fr.)						2						
508	Neth. Antilles					1			3	1			
509	Bermuda (U.K.)							1					
511	Martinique (Fr.)												1
512	Bahamas (U.K.)			1					2			1	
513	Barbados			1				2		1			1
514	Jamaica		1	2	4	5	4	2	20	5		2	9
516	Trinidad & Tobago				1	1	1					1	
518	Antigua												
519	Dominica												
520	Grenada						1						
521	Montserrat												
522	St. Christopher												1
523	St. Lucia												
524	St. Vincent												
525	British Virgin Is.												
526	Cayman Islands												
527	Turks-Calcos Is.												
584	*Cuba		8	7	7	9	6	1	18	18	1	13	40
585	*Dominican Republic			4	1	4	2	1	4	4			18
586	*Haiti	1		3	1	4			1	1			1
	Central America	1	3	13		9	3		8	7	1	4	10
504	*Canal Zone (U.S.)			1						1			
575	*Costa Rica		1	3		4	2		3		1	2	2
576	*El Salvador			1		2	1			2			
577	*Guatemala			1		1			2	2		1	1
578	*Honduras			1		1				2			3
579	*Nicaragua	1		1		1			1				
580	*Panama		2	5					2			1	4
581	British Honduras												
SOUTH AMERICA		3	14	73	8	34	23	2	52	37	2	15	51
602	Surinam (Neth.)												
603	Guyana†							1	1				
687	*Argentina	2	3	16	4	4	4	1	7	5	1	6	7
688	*Bolivia					1			1				4
689	*Brazil		1	4	1	5	3		9	6	1	4	6
690	*Chile		1	4		2	5		2	6			6
691	*Colombia		2	12	1	7	7		20	7		2	9
692	*Ecuador		1	11	1	5			3	2			4
693	*Paraguay		1			1							
694	*Peru	1	2	12		6			1	1		2	2
695	*Uruguay			1					1				
696	*Venezuela		3	13	1	3	4		7	10		1	13

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

B. Year ended June 30, 1962 (Cont.):

	Country or region of last residence	Electrical engineers	Industrial engineers	Mechanical engineers	Metallurgists and metallurgical engineers	Mining engineers	Sales engineers	Engineers (n.e.c.)	Entertainers	Farm and home management advisers	Foresters and conservationists	Funeral directors and embalmers	Lawyers and judges
		083	084	085	090	091	092	093	101	102	103	104	105
NORTH AMERICA		178	42	127	23	15	38	476	62	7	7	4	227
505	*Puerto Rico (U.S.)	1						1					
506	*Virgin Is. (U.S.)							1					
574	*Canada	125	33	87	18	11	35	339	30	3	6	1	12
582	*Mexico	5	3	7	2	2	1	19	13	1			23
583	*United States	5		7		2		16	5			1	6
	West Indies	37	4	23	1		2	77	11	2	1	2	156
507	Guadeloupe (Fr.)												
508	Neth. Antilles	1						3					2
509	Bermuda (U.K.)		1	1					2				1
511	Martinique (Fr.)			1				1	1				
512	Bahamas (U.K.)							3				1	2
513	Barbados							2					
514	Jamaica	12		1				9	1				44
516	Trinidad & Tobago	1						2					
518	Antigua							1	1				
519	Dominica												
520	Grenada												
521	Montserrat												
522	St. Christopher												
523	St. Lucia												
524	St. Vincent												
525	British Virgin Is.							1					
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba	19	3	18			2	33	6	2	1		84
585	*Dominican Republic	3		1	1			20					20
586	*Haiti	1		1				2				1	3
	Central America	5	2	3	2			23	3	1			25
504	*Canal Zone (U.S.)												
575	*Costa Rica			2	1			3					9
576	*El Salvador		1							1			1
577	*Guatemala	2						8	1				1
578	*Honduras							5					7
579	*Nicaragua	1			1			3					1
580	*Panama	2	1					3	2				6
581	British Honduras			1				1					
SOUTH AMERICA		29	16	41	5	4	2	96	12	1	1		49
602	Surinam (Neth.)												
603	Guyana†							1					
687	*Argentina	5	6	8	5	1		20	3				8
688	*Bolivia			1				2					
689	*Brazil	7	3	4				20	2				5
690	*Chile	2	1	2				6	1		1		1
691	*Colombia	5	1	10			1	13	1				8
692	*Ecuador	1		3				3	1				6
693	*Paraguay							1	2				
694	*Peru	1	2	5		1		10		1			4
695	*Uruguay			1									1
696	*Venezuela	8	3	7		2	1	20	2				16

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

B. Year ended June 30, 1962 (Cont.):

	Country or region of last residence	Librarians	Musicians and music teachers	Agricultural scientists	Biological scientists	Geologists and geophysicists	Mathematicians	Physicists	Miscellaneous natural scientists	Professional nurses	Student professional nurses	Optometrists	Osteopaths
		111	120	130	131	134	135	140	145	150	151	152	153
NORTH AMERICA		59	178	32	12	54	9	39	9	1,602	128	16	1
505	*Puerto Rico (U.S.)												
506	*Virgin Is. (U.S.)												
574	*Canada	45	46	8	7	47	8	33	5	1,259	77	3	1
582	*Mexico	2	48	3	1	3		1		50	13		
583	*United States	1	17	3		1	1	2		11	2		
	West Indies	3	43	10	4	1		2	3	189	31	11	
507	Guadeloupe (Fr.)												
508	Neth. Antilles		1		1					7			
509	Bermuda (U.K.)		2							4	2		
511	Martinique (Fr.)												
512	Bahamas (U.K.)		1							1			
513	Barbados			1						13		1	
514	Jamaica	1	11	3	2	1		1		40	2	3	
516	Trinidad & Tobago		1							34		1	
518	Antigua									4			
519	Dominica									2	1		
520	Grenada			1						4			
521	Montserrat												
522	St. Christopher		2							6			
523	St. Lucia									3			
524	St. Vincent									11			
525	British Virgin Is.										1		
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba	1	11	2	1			1	1	16		5	
585	*Dominican Republic		10	2						10	1		
586	*Haiti	1	4	1					2	34	24	1	
	Central America	8	24	8		2		1	1	93	5	2	
504	*Canal Zone (U.S.)	3	1						1	3	1	1	
575	*Costa Rica	2	6	1						23	2		
576	*El Salvador		1	4		1				16			
577	*Guatemala	1	2	1		1				15			
578	*Honduras		1	1						11			
579	*Nicaragua			1				1		7	1		
580	*Panama	2	13							16	1		
581	British Honduras									2		1	
SOUTH AMERICA		18	60	6	7	13	1	2		156	6	1	
602	Surinam (Neth.)												
603	Guyana†									23			
687	*Argentina	3	22		1	3		1		23	2		
688	*Bolivia			1		4				5	1		
689	*Brazil	3	4	3						8			
690	*Chile	1	7	2				1		16	2		
691	*Colombia	8	10		4					32			
692	*Ecuador	2	4			1				17	1		
693	*Paraguay									8			
694	*Peru		1			1				10			
695	*Uruguay		1							2			
696	*Venezuela	1	11		2	4	1			12		1	

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

B. Year ended June 30, 1962 (Cont.):

	Country or region of last residence	Personnel and labor relations workers	Pharmacists	Photographers	Physicians and surgeons	Public relations men and publicity writers	Radio operators	Recreation and group workers	Religious workers	Social & welfare workers except group workers	Economists	Psychologists	Statisticians and actuaries
		154	160	161	162	163	164	165	170	171	172	173	174
NORTH AMERICA		12	109	128	692	44	37	8	378	56	23	15	19
505	*Puerto Rico (U.S.)												
506	*Virgin Is. (U.S.)												
574	*Canada	11	19	40	280	18	19	6	145	43	12	14	14
582	*Mexico	1	13	39	70	6	6	2	133	2	2		1
583	*United States		3	2	65	3			16	2	1		
	West Indies		63	34	240	11	7		54	6	7	1	3
507	Guadeloupe (Fr.)												
508	Neth. Antilles		1	1	1		1				1		
509	Bermuda (U.K.)		1	1									
511	Martinique (Fr.)			1	1								
512	Bahamas (U.K.)			1	1								
513	Barbados					1							
514	Jamaica		17	12	42	3	1		6	2	2		2
516	Trinidad & Tobago		1	1					2				
518	Antigua		1										
519	Dominica												
520	Grenada			1									
521	Montserrat												
522	St. Christopher			1									
523	St. Lucia								1				
524	St. Vincent												
525	British Virgin Is.												
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba		18	10	120	6	3		24	3	2	1	
585	*Dominican Republic		23	5	67	1	1		17		1		1
586	*Haiti		1		8		1		4	1	1		
	Central America		11	13	37	6	5		30	3	1		1
504	*Canal Zone (U.S.)												1
575	*Costa Rica		4	2	9	4	1		9		1		
576	*El Salvador		1	2	6		2		8				
577	*Guatemala		1		3				3	2			
578	*Honduras		2	2	5	1			1				
579	*Nicaragua		1	1	4		1		2				
580	*Panama		2	5	10	1			6	1			
581	British Honduras			1			1		1				
SOUTH AMERICA		3	22	52	298	15	27	1	77	17	18	2	2
602	Surinam (Neth.)												
603	Guyana†								1	1		1	
687	*Argentina		5	18	94	4	1	1	12	2	1		
688	*Bolivia			2	5		3		2		2		1
689	*Brazil			6	24		2		26	1	2		
690	*Chile			1	5	1	2		3	4	2		1
691	*Colombia		6	3	75	3	7		16	4	4		
692	*Ecuador		4	4	6		8			3			
693	*Paraguay		1		7				1				
694	*Peru		1	3	43		1		8		1	1	
695	*Uruguay			1	1				5				
696	*Venezuela	3	4	14	38	7	3		3	2	6		

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

B. Year ended June 30, 1962 (Cont.):

	Country or region of last residence	Miscellaneous social scientists	Sports instructors and officials	Surveyors	Elementary school teachers	Secondary school teachers	Teachers (n.e.c.)	Technicians: Medical and dental	Technicians: Electrical and electronic	Technicians: Other engineering & physical sciences	Technicians: Type not specified	Therapists and healers	Veterinarians	Professional and technical workers (n.e.c.)
		175	180	181	182	183	184	185	190	191	192	193	194	195
	NORTH AMERICA	1	51	46	185	143	947	191	198	50	296	36	28	262
505	*Puerto Rico (U.S.)													
506	*Virgin Is. (U.S.)													
574	*Canada		36	23	70	49	440	124	153	30	198	29	12	174
582	*Mexico		1		10	12	90	15	16	2	30	1		16
583	*United States		1	2		5	17	4	2	2	1			15
	West Indies	1	10	18	70	61	284	37	20	14	49	2	7	46
507	Guadeloupe (Fr.)													
508	Neth. Antilles			2							2			1
509	Bermuda (U.K.)				2		3	1						
511	Martinique (Fr.)													
512	Bahamas (U.K.)			1		1	2		1		1			2
513	Barbados						5	1		1				
514	Jamaica		2	9	45	37	120	9	9	5	19	1	1	11
516	Trinidad & Tobago			1			5	9						1
518	Antigua							1			1			
519	Dominica						2							
520	Grenada													
521	Montserrat							1						
522	St. Christopher					1	2				1			
523	St. Lucia						2						1	
524	St. Vincent						4							
525	British Virgin Is.						1							
526	Cayman Islands													
527	Turks-Caicos Is.													
584	*Cuba	1	6	2	21	21	73	8	6	5	9	1	4	24
585	*Dominican Republic		2	2			21	4	4	3	12		1	4
586	*Haiti			1	1	1	44	3			4			3
	Central America		3	3	35	16	116	11	7	2	18	4	9	11
504	*Canal Zone (U.S.)						7	1			1			
575	*Costa Rica		3		11	8	23	1	2		4		1	3
576	*El Salvador				3	2	19	4	2		6		2	
577	*Guatemala				6	1	18			1	1	1	3	1
578	*Honduras			3	11	4	13	2	2		2			2
579	*Nicaragua				1		9	1		1			1	2
580	*Panama				3	1	23	2	1		4	3	2	3
581	*British Honduras						4							
	SOUTH AMERICA		6	10	36	41	314	34	48	17	109	6	9	88
602	Surinam (Neth.)										1			2
603	Guyana†					1	4	5			1			
687	*Argentina		1		2	2	59	10	15	6	30	2	3	21
688	*Bolivia				2		17	1	2		4			6
689	*Brazil				10	4	50	3	5	1	14			11
690	*Chile		1	1		5	18		4	1	8	1		4
691	*Colombia		1	2	3	8	51	11	5	2	19	2	2	14
692	*Ecuador			1	5	3	51			1	9			5
693	*Paraguay			1	5		12							
694	*Peru		1	1	2	4	19	3	5	1	2			11
695	*Uruguay					3	4				1			2
696	*Venezuela		2	4	7	11	29	1	12	5	20	1	4	12

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

C. Year ended June 30, 1963:

	Country or region of last residence	Total	Accountants and auditors	Actors and actresses	Airplane pilots and navigators	Architects	Artists and art teachers	Athletes	Authors	Chemists	Chiropractors	Clergymen	College presidents and deans
			000	010	012	013	014	015	020	021	022	023	030
NORTH AMERICA		10,217	788	37	57	71	122	91	14	147	6	229	4
505	*Puerto Rico (U.S.)	38	1					1		1		1	
506	*Virgin Is. (U.S.)	4											
574	*Canada	6,398	364	20	28	42	55	43	8	105	6	144	1
582	*Mexico	816	54	5	5	13	27	10	2	18		19	3
583	*United States	205	5			1	2	4		3		6	
	West Indies	1,970	232	7	15	12	33	21	2	16		46	
507	Guadeloupe (Fr.)	4											
508	Neth. Antilles	34	2				1					1	
509	Bermuda (U.K.)	42	3				1						
511	Martinique (Fr.)	2				1							
512	Bahamas (U.K.)	37	4				1					3	
513	Barbados	33	1					1					
514	Jamaica	337	35	1	4	3	4	2		3		8	
516	Trinidad & Tobago	82	1			1		1		2		3	
518	Antigua	6					1						
519	Dominica	7											
520	Grenada	12											
521	Montserrat												
522	St. Christopher	6										1	
523	St. Lucia	3											
524	St. Vincent	9											
525	British Virgin Is.	3											
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba	666	87	2	1	6	7	5	1	10		18	
585	*Dominican Republic	449	42	4	2		13	11	1			10	
586	*Haiti	238	57			1	5	1		1		2	
	Central America	786	132	5	9	3	5	12	2	4		13	
504	*Canal Zone (U.S.)	21	1				1					1	
575	*Costa Rica	166	35		3					1		4	
576	*El Salvador	125	25	1	2	1	1	3		1		1	
577	*Guatemala	138	7	2	1		1		1			2	
578	*Honduras	128	36	1	1					1			
579	*Nicaragua	64	8				1	3				2	
580	*Panama	119	20	1	2	2		6	1			1	
581	British Honduras	25					1			1		2	
SOUTH AMERICA		3,250	367	18	19	41	42	17	7	64		47	
602	Surinam (Neth.)	9											
603	Guyana†	73	2							1		3	
687	*Argentina	781	32	5	4	16	7	5	3	30		15	
688	*Bolivia	102	10		3	1						1	
689	*Brazil	362	21	5	2	2	3	2	1	11		11	
690	*Chile	174	8		2	2	3			7		1	
691	*Colombia	691	100	3	4	10	8	5	1	7		9	
692	*Ecuador	333	87	1	2	1	3		1	2		2	
693	*Paraguay	26	1				1						
694	*Peru	281	60		1		3	3		1		1	
695	*Uruguay	34	1				1		1			2	
696	*Venezuela	384	45	4	1	9	13	2		5		2	

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

C. Year ended June 30, 1963 (Cont.):

Country or region of last residence	Professors and instructors											
	Agricultural sciences	Biological sciences	Chemistry	Economics	Engineering	Geology and geophysics	Mathematics	Medical sciences	Physics	Psychology	Statistics	Other natural sciences
	031	032	034	035	040	041	042	043	045	050	051	052
NORTH AMERICA	4	3	10	5	11	7	10	7	7	11	1	8
505 *Puerto Rico (U.S.)												
506 *Virgin Is. (U.S.)												
574 *Canada	3	2	7	5	3	7	6	3	4	6	1	4
582 *Mexico					3			3	1	3		2
583 *United States			1									
West Indies		1	2		4		1	1	2	2		1
507 Guadeloupe (Fr.)												
508 Neth. Antilles												
509 Bermuda (U.K.)												
511 Martinique (Fr.)												
512 Bahamas (U.K.)							1					
513 Barbados												
514 Jamaica					1					1		
516 Trinidad & Tobago												
518 Antigua												
519 Dominica												
520 Grenada												
521 Montserrat												
522 St. Christopher												
523 St. Lucia												
524 St. Vincent												
525 British Virgin Is.												
526 Cayman Islands												
527 Turks-Caicos Is.												
584 *Cuba		1	2		2			1		1		
585 *Dominican Republic					1				1			1
586 *Haiti									1			
Central America	1				1		3					1
504 *Canal Zone (U.S.)												
575 *Costa Rica							1					1
576 *El Salvador					1		1					
577 *Guatemala												
578 *Honduras							1					
579 *Nicaragua												
580 *Panama	1											
581 British Honduras												
SOUTH AMERICA		2	2	1	3		1	3	9	4	1	3
602 Surinam (Neth.)								1				
603 Guyana†										1		1
687 *Argentina			1					1	1	2		2
688 *Bolivia									1	1		
689 *Brazil		1							2			
690 *Chile												
691 *Colombia							1	1			1	
692 *Ecuador									1			
693 *Paraguay												
694 *Peru												
695 *Uruguay												
696 *Venezuela		1	1	1	3				4			

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

C. Year ended June 30, 1963 (Cont.):

	Country or region of last residence	Professors and instructors			Dancers and dancing teachers	Dentists	Designers	Dietitians and nutritionists	Draftsmen	Editors and reporters	Aeronautical engineers	Chemical engineers	Civil engineers
		Other social sciences	Nonscientific subjects	Subject not specified									
		053	054	060	070	071	072	073	074	075	080	081	082
NORTH AMERICA		2	10	103	38	49	114	35	309	85	58	68	158
505	*Puerto Rico (U.S.)		2	2	3		1					1	2
506	*Virgin Is. (U.S.)												
574	*Canada	2	5	54	22	13	95	22	253	44	51	40	103
582	*Mexico		1	11	5	9	5	1	6	11		12	8
583	*United States		2	8	1	2			4	1		2	4
	West Indies			13	6	21	10	10	33	13	7	10	29
507	Guadeloupe (Fr.)												
508	Neth. Antilles											1	1
509	Bermuda (U.K.)										5		
511	Martinique (Fr.)												
512	Bahamas (U.K.)					1					1		
513	Barbados												1
514	Jamaica			2	2	2	1	6	7	4	1	2	4
516	Trinidad & Tobago							2	1				2
518	Antigua												
519	Dominica												
520	Grenada												
521	Montserrat												
522	St. Christopher												
523	St. Lucia												
524	St. Vincent												
525	British Virgin Is.												
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba			6	3	9	10	2	18	4		6	8
585	*Dominican Republic			3		7	2		5	4		1	10
586	*Haiti			2	1	2	1		2	1			3
	Central America			15	1	4	3	2	13	16		3	12
504	*Canal Zone (U.S.)			3		1			1				1
575	*Costa Rica			5	1	1			6	3			2
576	*El Salvador			1			1		1	1			1
577	*Guatemala					1	2		4	2		1	1
578	*Honduras			1		1				7		1	2
579	*Nicaragua			2				1	1				1
580	*Panama			3				1		3			4
581	British Honduras											1	
SOUTH AMERICA		1	10	66	15	58	41	5	72	33	7	13	44
602	Surinam (Neth.)												1
603	Guyana†		1						1			1	
687	*Argentina	1	2	17	4	13	15		16	7	4	3	13
688	*Bolivia			3		4	1		2	1			
689	*Brazil			9	3	8	6	1	9	4		3	6
690	*Chile			7	4	4	3	1	5	1	1	1	4
691	*Colombia		2	7		16	7	1	23	3	1	2	8
692	*Ecuador		2	7	1	8	2		3	4			
693	*Paraguay												1
694	*Peru		2	3	2	1	4	2	3	4		1	4
695	*Uruguay			2	1								
696	*Venezuela		1	11		4	3		10	9	1	2	7

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

C. Year ended June 30, 1963 (Cont.):

	Country or region of last residence	Electrical engineers	Industrial engineers	Mechanical engineers	Metallurgists and metallurgical engineers	Mining engineers	Sales engineers	Engineers (n.e.c.)	Entertainers	Farm and home management advisers	Foresters and conservationists	Funeral directors and embalmers	Lawyers and judges
		083	084	085	090	091	092	093	101	102	103	104	105
NORTH AMERICA		215	39	132	26	9	28	465	71	11	12	5	95
505	*Puerto Rico (U.S.)	2	1					2	1				
506	*Virgin Is. (U.S.)								1				
574	*Canada	150	30	93	26	8	23	370	40	2	12	5	19
582	*Mexico	15	3	6				10	8	1			11
583	*United States	7		6				13	5				2
	West Indies	35	3	23			4	55	13	8			57
507	Guadeloupe (Fr.)							1					
508	Neth. Antilles	1		1				2	1				3
509	Bermuda (U.K.)	2		1			1	1					
511	Martinique (Fr.)												
512	Bahamas (U.K.)	1		3				1					
513	Barbados	1		1									
514	Jamaica	4	1	2				8		1			4
516	Trinidad & Tobago	2		2			1						
518	Antigua												
519	Dominica							1					
520	Grenada												
521	Montserrat												
522	St. Christopher												
523	St. Lucia								1				
524	St. Vincent												
525	British Virgin Is.							1					
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba	20	2	8			1	18	5				30
585	*Dominican Republic	3		4			1	15	6	6			15
586	*Haiti	1		1				7		1			5
	Central America	6	2	4		1	1	15	3				6
504	*Canal Zone (U.S.)												
575	*Costa Rica	2	1					5					1
576	*El Salvador	1							1				
577	*Guatemala							2	1				2
578	*Honduras	1		1				2					1
579	*Nicaragua	1		2		1		3					
580	*Panama	1	1	1			1	2	1				2
581	British Honduras							1					
SOUTH AMERICA		41	24	39	6	7	1	140	20	3	1		60
602	Surinam (Neth.)							1					
603	Guyana†	1						1					
687	*Argentina	8	11	14	4			39	5				7
688	*Bolivia					1		3					5
689	*Brazil	4	1	8				19	5	1	1		15
690	*Chile	5	1	3		1		9	2				4
691	*Colombia	8	4	4			1	20	2				11
692	*Ecuador	4		2				7	1				5
693	*Paraguay												1
694	*Peru	3	3	4	1	3		16	1	1			3
695	*Uruguay			1				4					1
696	*Venezuela	8	4	3	1	2		21	4	1			8

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

C. Year ended June 30, 1963 (Cont.):

	Country or region of last residence	Librarians	Musicians and music teachers	Agricultural scientists	Biological scientists	Geologists and geophysicists	Mathematicians	Physicists	Miscellaneous natural scientists	Professional nurses	Student professional nurses	Optometrists	Osteopaths
		111	120	130	131	134	135	140	145	150	151	152	153
NORTH AMERICA		56	174	28	21	44	6	30	8	1,852	97	10	
505	*Puerto Rico (U.S.)		2							1	2		
506	*Virgin Is. (U.S.)		2										
574	*Canada	47	62	9	18	43	5	27	2	1,461	71	5	
582	*Mexico	2	40	4						42	6		
583	*United States	1	6		2	1		1		7	1		
	West Indies	2	48	4	1		1	1	2	256	9	3	
507	Guadeloupe (Fr.)									1			
508	Neth. Antilles		2							9			
509	Bermuda (U.K.)		1					1		10	2		
511	Martinique (Fr.)										1		
512	Bahamas (U.K.)		2						1	1			
513	Barbados									13			
514	Jamaica		7	1	1				1	71	3	2	
516	Trinidad & Tobago									36			
518	Antigua		1							2			
519	Dominica									2			
520	Grenada									11			
521	Montserrat												
522	St. Christopher		1							2			
523	St. Lucia												
524	St. Vincent									5			
525	British Virgin Is.									1			
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba	2	20				1			13	1	1	
585	*Dominican Republic		13	2						40	1		
586	*Haiti		1	1						39	1		
	Central America	4	14	11				1	4	85	8	2	
504	*Canal Zone (U.S.)									3	1		
575	*Costa Rica	3	1	3					1	21		1	
576	*El Salvador		2	2				1	2	17	1		
577	*Guatemala	1	4	3						16		1	
578	*Honduras		1	3					1	5	1		
579	*Nicaragua									8	3		
580	*Panama		4							11	2		
581	British Honduras		2							4			
SOUTH AMERICA		6	69	11	15	6	4	2	4	220	10	6	
602	Surinam (Neth.)									1			
603	Guyana†				1					37	1		
687	*Argentina	1	28	1	2	3	1	1		31	2		
688	*Bolivia	1								8			
689	*Brazil		9	1	2	1	2		1	12	1		
690	*Chile	1	1	1	1	2				17	2		
691	*Colombia		6	5	7				3	41	1	3	
692	*Ecuador		3	1	1					24	1		
693	*Paraguay		1										
694	*Peru	1	7							27	1		
695	*Uruguay		3				1			1			
696	*Venezuela	2	11	2	1			1		21	1	3	

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

C. Year ended June 30, 1963 (Cont.):

	Country or region of last residence	Personnel and labor relations workers	Pharmacists	Photographers	Physicians and surgeons	Public relations men and publicity writers	Radio operators	Recreation and group workers	Religious workers	Social & welfare workers except group workers	Economists	Psychologists	Statisticians and actuaries
		154	160	161	162	163	164	165	170	171	172	173	174
NORTH AMERICA		14	68	117	873	36	48	6	288	94	26	25	18
505	*Puerto Rico (U.S.)				1	1						1	
506	*Virgin Is. (U.S.)												
574	*Canada	12	15	59	467	15	22	5	131	73	17	20	16
582	*Mexico		8	20	97	10	5	1	91	5	1	1	
583	*United States	1	2	1	48				4	1		1	
	West Indies	1	40	29	241	5	10		49	11	8	2	2
507	Guadeloupe (Fr.)												
508	Neth. Antilles		1						2				
509	Bermuda (U.K.)												
511	Martinique (Fr.)												
512	Bahamas (U.K.)			2	3				1		1		
513	Barbados		1		1		1		1				
514	Jamaica		6	6	7		5		6	5	1		
516	Trinidad & Tobago		1		1		1		1				
518	Antigua				1								
519	Dominica			1					1				
520	Grenada												
521	Montserrat												
522	St. Christopher												
523	St. Lucia												
524	St. Vincent			1									
525	British Virgin Is.												
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba	1	12	8	156	5	1		8	5	3	2	1
585	*Dominican Republic		19	9	65				29		3		
586	*Haiti			2	7		2			1			1
	Central America		3	8	19	5	11		13	4			
504	*Canal Zone (U.S.)								1				
575	*Costa Rica		1		6	2	4		1	3			
576	*El Salvador					2			2	1			
577	*Guatemala		1	4	1				3				
578	*Honduras			1	4		5						
579	*Nicaragua			2	6		1		2				
580	*Panama		1	1	1		1		3				
581	British Honduras				1	1			1				
SOUTH AMERICA		4	33	66	327	14	33		71	12	15	2	7
602	Surinam (Neth.)		1		1								
603	Guyana†		1		4				1				
687	*Argentina		8	18	116	1	6		3	2	1		
688	*Bolivia			3	9		2		1	1			
689	*Brazil		2	8	29	4	1		9	1	2		
690	*Chile		1	6	8	1	1		2	1	1		1
691	*Colombia	3	8	9	90		4		43	5	6	2	2
692	*Ecuador	1	5	5	15		16			2	2		
693	*Paraguay				4	3			5				
694	*Peru		2	4	22	2			4		1		1
695	*Uruguay			1	2				1				
696	*Venezuela		5	12	27	3	3		2		1		3

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

C. Year ended June 30, 1963 (Cont.):

Country or region of last residence		Miscellaneous social scientists	Sports instructors and officials	Surveyors	Elementary school teachers	Secondary school teachers	Teachers (n.e.c.)	Technicians				Therapists and healers	Veterinarians	Professional and technical workers (n.e.c.)
								Medical and dental	Electrical and electronic	Other engineering & physical sciences	Type not specified			
		175	180	181	182	183	184	185	190	191	192	193	194	195
NORTH AMERICA			48	63	152	95	1,034	230	202	37	311	37	24	258
505	*Puerto Rico (U.S.)						9				1			
506	*Virgin Is. (U.S.)													
574	*Canada		40	45	63	51	474	167	148	26	209	32	16	176
582	*Mexico		1	1	19	12	92	7	20	2	20	1	1	†16
583	*United States		3		2	2	25	3	2		5		1	6
	West Indies		3	13	35	20	247	46	20	8	54	3	3	45
507	Guadeloupe (Fr.)						2							
508	Neth. Antilles						2		1		2			1
509	Bermuda (U.K.)		1				8	2	1		1	1		
511	Martinique (Fr.)													
512	Bahamas (U.K.)		1	1	1		4		2					1
513	Barbados						7	2			1			1
514	Jamaica			1	10	4	53	11	5		11			7
516	Trinidad & Tobago						11	5	1		2	1		4
518	Antigua						1							
519	Dominica						2							
520	Grenada						1							
521	Montserrat													
522	St. Christopher						1	1						
523	St. Lucia			1			1							
524	St. Vincent						3							
525	British Virgin Is.													
526	Cayman Islands													
527	Turks-Caicos Is.													
584	*Cuba		1	4	19	13	46	13	2	5	9		2	14
585	*Dominican Republic			6	3	2	41	8	7	2	18	1	1	11
586	*Haiti				2	1	64	3	1	1	10			6
	Central America		1	4	33	10	187	7	12	1	22	1	3	15
504	*Canal Zone (U.S.)				1		5		1					
575	*Costa Rica				4	4	29	3	4		3			
576	*El Salvador			3	4	1	35		1		3			4
577	*Guatemala		1	1	13	2	44	1			4		1	7
578	*Honduras				10	1	34	1	1		2		1	
579	*Nicaragua						7		2		5		1	1
580	*Panama				1	1	27	1	2	1	5			3
581	*British Honduras					1	6	1	1			1		
SOUTH AMERICA		2	3	11	43	38	447	45	63	11	187	9	6	90
602	Surinam (Neth.)						2							
603	Guyana†				2		11	1	1					
687	*Argentina		2	2	12	2	120	7	25		54	2	1	22
688	*Bolivia				3	3	16	2	1		10			5
689	*Brazil	1			4	4	56	4	10	3	11	3	2	15
690	*Chile		1		2	4	23	2	2	2	5		1	6
691	*Colombia			2	11	5	73	11	12	2	46	3	1	17
692	*Ecuador			1	2	6	68	6	2	2	14			10
693	*Paraguay				1		7	1						
694	*Peru				1	4	38	3	1		26	1		5
695	*Uruguay						4	2			2			3
696	*Venezuela	1		6	5	10	29	6	9	2	19		1	7

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

D. Year ended June 30, 1964:

	Country or region of last residence	Total	Accountants and auditors	Actors and actresses	Airplane pilots and navigators	Architects	Artists and art teachers	Athletes	Authors	Chemists	Chiropractors	Clergymen	College presidents and deans
			000	010	012	013	014	015	020	021	022	023	030
NORTH AMERICA		10,709	863	31	67	92	124	71	14	171	7	269	2
505	*Puerto Rico (U.S.)	1											
506	*Virgin Is. (U.S.)												
574	*Canada	6,510	363	78	52	41	80	41	8	121	7	163	1
582	*Mexico	666	56	2	1	6	14	4		12		21	
583	*United States	301	18			5		2	1	8		8	
	West Indies	2,317	278	8	11	36	27	12	3	26		61	1
507	Guadeloupe (Fr.)	2											
508	Neth. Antilles	25					1			3			
509	Bermuda (U.K.)	32	4										
511	Martinique (Fr.)	5								1		1	
512	Bahamas (U.K.)	40	3							1		1	
513	Barbados	37	1							1		1	
514	Jamaica	240	19						1	6		16	
516	Trinidad & Tobago	72	4				1	1		1		1	
518	Antigua	10	1										
519	Dominica	5	1										
520	Grenada	13											
521	Montserrat	3											
522	St. Christopher	7	1				1			1			
523	St. Lucia	4	1										
524	St. Vincent	14											
525	British Virgin Is.	6	1										
526	Cayman Islands	3	1										
527	Turks-Caicos Is.	2											
584	*Cuba	1,276	175	7	11	28	11	5	1	11		24	
585	*Dominican Republic	276	14	1		2	5	5		1		15	1
586	*Haiti	245	51			6	8	1	1			2	
	Central America	914	148	3	3	4	3	12	2	4		16	
504	*Canal Zone (U.S.)	23	1					2					
575	*Costa Rica	226	31		1	2	1	2		1		1	
576	*El Salvador	128	27	2	1	1				2			
577	*Guatemala	147	15		1				1			5	
578	*Honduras	179	48						1			2	
579	*Nicaragua	77	11	1				4				1	
580	*Panama	103	15			1	2	4				4	
581	British Honduras	31								1		3	
SOUTH AMERICA		3,889	410	17	23	66	51	17	6	78	1	38	4
602	Surinam (Neth.)	7											
603	Guyana†	58	1							1			
687	*Argentina	1,159	64	6	6	29	13	6	1	37	1	5	2
688	*Bolivia	138	18		1	2	1		2	3		1	
689	*Brazil	382	25	1	3	1	6		1	10		12	
690	*Chile	174	7		3	2	6	2		3		2	
691	*Colombia	973	126	5	6	22	14	3		10		8	2
692	*Ecuador	295	70			2	2			5		2	
693	*Paraguay	280	1					1				1	
694	*Peru	335	70	1		2	1		2	2		2	
695	*Uruguay	44	2	1		1	3					1	
696	*Venezuela	296	26	3	4	5	5	5		7		4	

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

D. Year ended June 30, 1964 (Cont.):

	Country or region of last residence	Professors and instructors											
		Agricultural sciences	Biological sciences	Chemistry	Economics	Engineering	Geology and geophysics	Mathematics	Medical sciences	Physics	Psychology	Statistics	Other natural sciences
		031	032	034	035	040	041	042	043	045	050	051	052
NORTH AMERICA		2	3	6	5	15	6	13	9	3	24	2	4
505	*Puerto Rico (U.S.)												
506	*Virgin Is. (U.S.)												
574	*Canada	2	3	3	4	7	5	1	6	3	12	1	3
582	*Mexico			1		4	1				6		
583	*United States					1		4	3			1	
	West Indies			2		2		5			3		1
507	Guadeloupe (Fr.)												
508	Neth. Antilles												
509	Bermuda (U.K.)												
511	Martinique (Fr.)												
512	Bahamas (U.K.)										1		
513	Barbados			1									
514	Jamaica												
516	Trinidad & Tobago												
518	Antigua												
519	Dominica												
520	Grenada												
521	Montserrat												
522	St. Christopher												
523	St. Lucia												
524	St. Vincent												
525	British Virgin Is.												
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba			1		1		5					1
585	*Dominican Republic					1					2		
586	*Haiti												
	Central America				1	1		3			3		
504	*Canal Zone (U.S.)												
575	*Costa Rica							2					
576	*El Salvador										1		
577	*Guatemala										2		
578	*Honduras					1							
579	*Nicaragua												
580	*Panama				1			1					
581	British Honduras												
SOUTH AMERICA			4	1	1	5		3	1		5		1
602	Surinam (Neth.)												
603	Guyana†												
687	*Argentina			1	1	1		1			1		1
688	*Bolivia					1							
689	*Brazil		2					2			1		
690	*Chile										1		
691	*Colombia		1			2							
692	*Ecuador					1							
693	*Paraguay										1		
694	*Peru								1				
695	*Uruguay												
696	*Venezuela		1								1		

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

D. Year ended June 30, 1964 (Cont.):

	Country or region of last residence	Professors and instructors			Dancers and dancing teachers	Dentists	Designers	Dietitians and nutritionists	Draftsmen	Editors and reporters	Aeronautical engineers	Chemical engineers	Civil engineers
		Other social sciences	Nonscientific subjects	Subject not specified									
		053	054	060	070	071	072	073	074	075	080	081	082
NORTH AMERICA		9	27	114	34	44	103	50	340	76	29	66	139
505	*Puerto Rico (U.S.)												
506	*Virgin Is. (U.S.)												
574	*Canada	5	12	58	23	8	77	38	260	45	23	48	85
582	*Mexico	1	1	4	6	8	7	2	9	4		2	5
583	*United States		4	20		3	1		14	2		3	8
	West Indies	3	7	22	5	24	16	6	42	20	3	13	32
507	Guadeloupe (Fr.)			1									
508	Neth. Antilles								1		1	1	
509	Bermuda (U.K.)												
511	Martinique (Fr.)												
512	Bahamas (U.K.)		1		1		3	1				1	2
513	Barbados							1	2				
514	Jamaica			2	2	1	1	3	8				2
516	Trinidad & Tobago			1			1	1		1			1
518	Antigua												
519	Dominica												
520	Grenada					1							
521	Montserrat												
522	St. Christopher												
523	St. Lucia								1				
524	St. Vincent								1				
525	British Virgin Is.								1				
526	Cayman Islands						1						
527	Turks-Caicos Is.												
584	*Cuba	3	6	12		17	9		19	17	2	11	19
585	*Dominican Republic			2	2				9	1			4
586	*Haiti			4		5	1			1			4
	Central America		3	10		1	2	4	15	5	3		9
504	*Canal Zone (U.S.)												1
575	*Costa Rica		2	4		1	2		5	3	2		3
576	*El Salvador		1						1				2
577	*Guatemala							2	1	1			
578	*Honduras			1					3	1			1
579	*Nicaragua			2					2				1
580	*Panama			3				2	2		1		1
581	British Honduras								1				
SOUTH AMERICA		5	10	80	7	52	41	3	81	41	3	20	63
602	Surinam (Neth.)	1											1
603	Guyana†					2			2				
687	*Argentina		6	20	3	10	10	1	26	8	1	7	20
688	*Bolivia			3		8			1			1	4
689	*Brazil		1	5	1	4	10		8	7		3	2
690	*Chile			6	1	3	2		2	2	1	2	6
691	*Colombia	1	2	31	1	14	11		26	14	1	3	15
692	*Ecuador	2	1	3		3			3				2
693	*Paraguay												1
694	*Peru	1		1	1	4	5	2	5	2		2	4
695	*Uruguay			4						2			1
696	*Venezuela			7		4	3		8	6		2	7

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

D. Year ended June 30, 1964 (Cont.):

	Country or region of last residence	Electrical engineers	Industrial engineers	Mechanical engineers	Metallurgists and metallurgical engineers	Mining engineers	Sales engineers	Engineers (n.e.c.)	Entertainers	Farm and home management advisers	Foresters and conservationists	Funeral directors and embalmers	Lawyers and judges
		083	084	085	090	091	092	093	101	102	103	104	105
NORTH AMERICA		189	41	132	18	25	28	427	59	3	19	5	126
505	*Puerto Rico (U.S.)												
506	*Virgin Is. (U.S.)												
574	*Canada	120	31	99	16	21	21	325	31		16	4	12
582	*Mexico	4	4	4	1			18	11			1	27
583	*United States	5	1	8		1	1	12	1				2
	West Indies	55	4	19	1	3	4	54	14	2	2		71
507	Guadeloupe (Fr.)												
508	Neth. Antilles	1		1				3					
509	Bermuda (U.K.)	1						1	1				
511	Martinique (Fr.)					1							
512	Bahamas (U.K.)	2		3				1	1	1			1
513	Barbados	1						2					
514	Jamaica	9		5		1		3					3
516	Trinidad & Tobago	1						4	3				
518	Antigua	1											
519	Dominica												
520	Grenada												
521	Montserrat												
522	St. Christopher	1											
523	St. Lucia												
524	St. Vincent							1					
525	British Virgin Is.												
526	Cayman Islands			1									
527	Turks-Caicos Is.												
584	*Cuba	34	3	7	1	1	4	26	3		2		39
585	*Dominican Republic	3		2				8	5	1			10
586	*Haiti	1						5	1				18
	Central America	5	1	2			2	18	2	1	1		14
504	*Canal Zone (U.S.)								1				
575	*Costa Rica			1				8	1	1			4
576	*El Salvador	2		1				1					1
577	*Guatemala						1	2					1
578	*Honduras	2					1	1					4
579	*Nicaragua	1						2					2
580	*Panama		1					2					2
581	British Honduras							2			1		
SOUTH AMERICA		52	24	47	13	12	2	123	11	3	1		51
602	Surinam (Neth.)	1		1									
603	Guyana†							2					
687	*Argentina	20	6	20	10	2	1	34	7				8
688	*Bolivia	1	2					4					1
689	*Brazil	7	2	11	1			12	2				9
690	*Chile	4	3	4		1		7					1
691	*Colombia	10	5	4	1	2	1	21	1	1			16
692	*Ecuador	1		1				12		2			2
693	*Paraguay												2
694	*Peru	2	4	2	1	4		16	1				2
695	*Uruguay	1	1	1				1					3
696	*Venezuela	5	1	3		3		14			1		7

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

D. Year ended June 30, 1964 (Cont.):

	Country or region of last residence	Librarians	Musicians and music teachers	Agricultural scientists	Biological scientists	Geologists and geophysicists	Mathematicians	Physicists	Miscellaneous natural scientists	Professional nurses	Student professional nurses	Optometrists	Osteopaths
		111	120	130	131	134	135	140	145	150	151	152	153
NORTH AMERICA		57	163	46	33	38	11	36	13	1,807	99	5	
505	*Puerto Rico (U.S.)										1		
506	*Virgin Is. (U.S.)												
574	*Canada	46	72	11	23	35	8	29	11	1,436	85	1	
582	*Mexico		29	5	2		1	3	1	28	4	2	
583	*United States	1	8	1	2	2	1			11	1		
	West Indies	3	37	16	4	1	1	1	1	219	3	1	
507	Guadeloupe (Fr.)												
508	Neth. Antilles									2			
509	Bermuda (U.K.)		2							12			
511	Martinique (Fr.)		1										
512	Bahamas (U.K.)		2							2			
513	Barbados		1							12	1		
514	Jamaica		4	1	1					64			
516	Trinidad & Tobago					1		1		16			
518	Antigua												
519	Dominica									2			
520	Grenada			2						7			
521	Montserrat			1									
522	St. Christopher									1			
523	St. Lucia												
524	St. Vincent									7	1		
525	British Virgin Is.												
526	Cayman Islands												
527	Turks-Caicos Is.									1			
584	*Cuba	2	20	5	2		1			50		1	
585	*Dominican Republic	1	5	3						26			
586	*Haiti		2	4	1				1	17	1		
	Central America	7	17	13	2			3		113	5	1	
504	*Canal Zone (U.S.)		1							3	3		
575	*Costa Rica	1	2	4				2		29			
576	*El Salvador		2	2						18			
577	*Guatemala	3	3	1				1		22		1	
578	*Honduras	3	3	3						18	2		
579	*Nicaragua			3	1					9			
580	*Panama		6		1					6			
581	British Honduras									8			
SOUTH AMERICA		21	95	17	14	9		7	4	228	4	3	
602	Surinam (Neth.)												
603	Guyana†			2						22	1		
687	*Argentina	3	37	2		1		5	2	45	1	2	
688	*Bolivia		3	1						5			
689	*Brazil	3	16		1	3		1		29			
690	*Chile	1	3	1						14			
691	*Colombia	5	17	4	13	1			1	51	1		
692	*Ecuador	3	1	5					1	19			
693	*Paraguay	1	1							1			
694	*Peru	2	4	2		3				27	1		
695	*Uruguay	1	1					1		1			
696	*Venezuela	2	12			1				14		1	

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

D. Year ended June 30, 1964 (Cont.):

	Country or region of last residence	Personnel and labor relations workers	Pharmacists	Photographers	Physicians and surgeons	Public relations men and publicity writers	Radio operators	Recreation and group workers	Religious workers	Social & welfare workers except group workers	Economists	Psychologists	Statisticians and actuaries
		154	160	161	162	163	164	165	170	171	172	173	174
NORTH AMERICA		13	114	99	909	31	50	11	246	114	20	24	18
505	*Puerto Rico (U.S.)												
506	*Virgin Is. (U.S.)												
574	*Canada	12	31	41	440	21	27	10	145	66	12	18	12
582	*Mexico		10	12	77		2		40		3	1	
583	*United States		1	2	51				4	2	1	2	
	West Indies		70	28	304	6	11		42	41	4	2	5
507	Guadeloupe (Fr.)												
508	Neth. Antilles						1						
509	Bermuda (U.K.)		1		3		1						
511	Martinique (Fr.)												
512	Bahamas (U.K.)				2							1	
513	Barbados			1					2				
514	Jamaica			5	7		1		5	4			
516	Trinidad & Tobago			1	5				3		1		
518	Antigua				1				1				
519	Dominica		1										
520	Grenada												
521	Montserrat												
522	St. Christopher				1				1				
523	St. Lucia												
524	St. Vincent												
525	British Virgin Is.												
526	Cayman Islands												
527	Turks-Caicos Is.												
584	*Cuba		53	9	229	3	3		10	35	2	1	4
585	*Dominican Republic		14	4	39	2	5		19		1		
586	*Haiti		1	8	17	1			1	2			1
	Central America	1	2	16	37	4	10	1	15	5		1	1
504	*Canal Zone (U.S.)				3								
575	*Costa Rica			7	9		3	1	5	1		1	
576	*El Salvador			4	6					1			1
577	*Guatemala			2	4		3		3	2			
578	*Honduras	1		1	8		3		1				
579	*Nicaragua			2	3				1				
580	*Panama		2		3	4			1	1			
581	British Honduras				1		1		4				1
SOUTH AMERICA		4	51	85	454	21	32	1	63	24	4	7	3
602	Surinam (Neth.)												
603	Guyana†				6				1				
687	*Argentina		10	29	151	7	6	1	6	6	1	3	1
688	*Bolivia		8	3	24	1	1		1	2	1		
689	*Brazil		3	3	26	4	3		12	1	3	1	
690	*Chile		2	3	15	1	1		5	1	1	1	
691	*Colombia	1	13	23	158	4	14		18	7	14	1	1
692	*Ecuador		1	3	10	1	4		1		1		
693	*Paraguay				6				1				
694	*Peru	2	7	6	32	1	3		6	2	1	1	
695	*Uruguay			2	2				2				
696	*Venezuela	1	7	13	24	2			10	2	2		1

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

D. Year ended June 30, 1964 (Cont.):

	Country or region of last residence	Miscellaneous social scientists	Sports instructors and officials	Surveyors	Elementary school teachers	Secondary school teachers	Teachers (n.e.c.)	Technicians				Therapists and healers	Veterinarians	Professional and technical workers (n.e.c.)
								Medical and dental	Electrical and electronic	Other engineering & physical sciences	Type not specified			
		175	180	181	182	183	184	185	190	191	192	193	194	195
	NORTH AMERICA	6	68	53	233	160	1,121	290	210	56	332	47	25	245
505	*Puerto Rico (U.S.)													
506	*Virgin Is. (U.S.)													
574	*Canada	4	51	36	83	61	531	195	155	35	223	41	14	166
582	*Mexico	1	5		26	14	99	10	10	3	14		3	14
583	*United States		1	1		5	39	6	6	3	6		1	6
	West Indies	1	9	12	76	63	247	66	22	10	52	6	6	49
507	Guadeloupe (Fr.)						1							
508	Neth. Antilles			1			4	2			1			1
509	Bermuda (U.K.)					1	3		1			1		
511	Martinique (Fr.)													1
512	Bahamas (U.K.)			1	2	3	2							1
513	Barbados						6	2	1					1
514	Jamaica				2	3	26	12	3	2	13			4
516	Trinidad & Tobago				1		7	8	2	1	2			2
518	Antigua						3	1	1		1			
519	Dominica				1									
520	Grenada						3							
521	Montserrat						2							
522	St. Christopher													
523	St. Lucia						2							
524	St. Vincent						3	1						
525	British Virgin Is.					1	2	1						
526	Cayman Islands													
527	Turks-Caicos Is.										1			
584	*Cuba	1	8	3	65	53	93	32	8	6	20	4	5	32
585	*Dominican Republic			4	2	1	34	4	6		9		1	2
586	*Haiti		1	3	3	1	56	3		1	5	1		5
	Central America		2	4	48	17	205	13	17	5	37		1	10
504	*Canal Zone (U.S.)					2	3		1		1			1
575	*Costa Rica		1	1	6	4	55	1	3	1	9			2
576	*El Salvador		1		6	2	30	2	2		6			2
577	*Guatemala			1	17	4	30	3	4	1	9			1
578	*Honduras				13	4	42	4	1	2	2			2
579	*Nicaragua			1		1	19	1	2	1	4		1	1
580	*Panama			1	6		19	2	3		5			1
581	*British Honduras						7		1		1			
	SOUTH AMERICA		7	20	52	42	536	89	119	23	200	13	13	130
602	Surinam (Neth.)						1	1						1
603	Guyana†				1		8	4			2	1		2
687	*Argentina		3	4	17	10	190	26	57	11	84	4	3	35
688	*Bolivia				2	1	21	1	1	1	3			4
689	*Brazil			1	6	2	60	8	14	1	9	2		21
690	*Chile			1	2	2	24	6	1		10	2		6
691	*Colombia		1	3	10	10	80	30	18	2	48	3	3	38
692	*Ecuador			2	5	8	79	5	9	1	12		1	9
693	*Paraguay			1		2	6		1					1
694	*Peru		1	1	3	1	51	4	9	3	14		3	5
695	*Uruguay			1			3	1	3		1			3
696	*Venezuela		2	6	6	6	13	3	6	4	17	1	3	5

* Nonquota countries

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

E. Year ended June 30, 1965:

Occupation	Code	Total	Mexico 582	Cuba 584	Dominican Republic 585	Haiti 586	Trinidad & Tobago 516	Total Central America	Canal Zone (U. S.) 504	Costa Rica 575	El Salvador 576	Guatemala 577	Honduras 578	Nicaragua 579	Panama 580
Total		7,804	929	1,581	311	398	77	946	14	219	149	156	184	72	124
Professional, technical, and kindred workers															
Accountants and auditors	000	862	100	211	13	68	1	148		36	33	15	35	7	20
Actors and actresses	010	24	4	8	1		2	2					1	1	
Airplane pilots and navigators	012	43	2	16		1	1	2						1	1
Architects	013	97	7	22	2	6		3		1		1			1
Artists and art teachers	014	112	17	13	5	6		11		5	1	3			2
Athletes	015	37	8	6	6	1	1	3	1						2
Authors	020	7		5											
Chemists	021	105	19	18	3		1	4		1	1		2		
Chiropractors	022														
Clergymen	023	132	42	16	6	2	3	14	1	2	2		4		4
College presidents and deans	030	1	1												
Professors and instructors, agricultural sciences	031	5				2									
Professors and instructors, biological sciences	032	3						2					2		
Professors and instructors, economics	035	2				1									
Professors and instructors, engineering	040	4	1												
Professors and instructors, geology and geophysics	041	1	1												
Professors and instructors, medical sciences	043	5		1											
Professors and instructors, physics	045	2		2											
Professors and instructors, psychology	050	3	1					1					1		
Professors and instructors, natural sciences (n.e.c.)	052	3		1	1										
Professors and instructors, social sciences (n.e.c.)	053	10		4				1					1		
Professors and instructors, nonscientific subjects	054	33	1	12				5	1	1		1		1	1
Professors and instructors, subject not specified	060	144	7	21	2	3	1	9	1	1		2	1		4
Dancers and dancing teachers	070	26	4	3		2									
Dentists	071	102	14	26	4	7	1				2		1		2
Designers	072	66	3	15	5	3	1								
Dietitians and nutritionists	073	12	1	2			2								
Draftsmen	074	130	5	34	1	4	2	19		5	1	2			1
Editors and reporters	075	88	9	23	4	1		9		4	1	1	2		1
Engineers, aeronautical	080	5	1					9					1		
Engineers, chemical	081	31	2	11				2				1			
Engineers, civil	082	123	13	34	2	8	4	13		1	2	2	1	2	4
Engineers, electrical	083	66	14	13	1	4		6		2			1	1	2
Engineers, industrial	084	30	3	3		1		2		1			1		
Engineers, mechanical	085	85	7	29	2		1	10		4		1	3	1	
Engineers, metallurgical, and metallurgists	090	26	1	1	1										
Engineers, mining	091	3													
Engineers, sales	092	2		1											
Engineers (n.e.c.)	093	208	17	27	10	15	3	17		2	3	3	5	1	2
Entertainers (n.e.c.)	101	43	11	5	2	2	1	4			1			1	2
Farm and home management advisers	102	17			10			2		1				1	
Foresters and conservationists	103	4	1												

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

E. Year ended June 30, 1965 (Cont.):

Occupation	Code	British Honduras 581	Total South America	Surinam 602	Guyana † 603	Argentina 687	Bolivia 688	Brazil 689	Chile 690	Colombia 691	Ecuador 692	Paraguay 693	Peru 694	Uruguay 695	Venezuela 696
Total		28	3,562	4	48	973	350	465	240	868	358	22	203	54	177
Professional, technical, and kindred workers															
Accountants and auditors	000	2	321		3	32	14	32	14	89	82	2	32	3	18
Actors and actresses	010		7				1	1		1			2		2
Airplane pilots and navigators	012		21			3		2	5	10			1		
Architects	013		57			21	1	5	5	19	1		1	3	1
Artists and art teachers	014		60			16	4	11	4	10	6	1	2	1	5
Athletes	015		12			3		2		3			1	1	2
Authors	020		2					2							
Chemists	021		60		2	20	1	8	2	6	4	3	4		10
Chiropractors	022														
Clergymen	023	1	49		3	7	3	11	4	11	5		1	1	3
College presidents and deans	030														
Professors and instructors, agricultural sciences	031		3							1	1		1		
Professors and instructors, biological sciences	032		1							1					
Professors and instructors, economics	035		1										1		
Professors and instructors, engineering	040		2					1		1					
Professors and instructors, geology and geophysics	041														
Professors and instructors, medical sciences	043		4			2		1	1						
Professors and instructors, physics	045														
Professors and instructors, psychology	050		1						1						
Professors and instructors, natural sciences (n.e.c.)	052		1			1									
Professors and instructors, social sciences (n.e.c.)	053		5		1			1	1	2					
Professors and instructors, nonscientific subjects	054		15			6		1	3	1			1	1	2
Professors and instructors, subject not specified	060		101			27		11	5	40	4		9	1	4
Dancers and dancing teachers	070		17			8	1	1	3	1	1		1		1
Dentists	071		45			11	2	3	4	12	4	1	4	3	1
Designers	072		39			13		9	2	10	1		3		1
Dietitians and nutritionists	073		7			1		2	1	2			1		
Draftsmen	074		75			18	1	21	1	21	3		3	1	6
Editors and reporters	075		42			9	1	10	3	10	4		1	2	2
Engineers, aeronautical	080		3			2									1
Engineers, chemical	081	1	16	1		2		1		7	1		1		3
Engineers, civil	082	1	49			12	1	6	7	12	4		3		4
Engineers, electrical	083		28			5		5	2	10	2		2		2
Engineers, industrial	084		21			6	1	5	2	5			1	1	
Engineers, mechanical	085	1	36			10	4	7	3	6	1		3		2
Engineers, metallurgical, and metallurgists	090		23			13	1	4	3					2	
Engineers, mining	091		3			1				1			1		
Engineers, sales	092		1							1					
Engineers (n.e.c.)	093	1	119	1	3	37	3	9	12	28	5	1	5	3	12
Entertainers (n.e.c.)	101		18			5		4		7	1				1
Farm and home management advisers	102		5			1				3					1
Foresters and conservationists	103		3						1	2					

† Formerly British Guiana

APPENDIX II: IMMIGRANTS ADMITTED TO THE UNITED STATES IN THE PROFESSIONAL, TECHNICAL, AND KINDRED WORKER GROUP, BY COUNTRY OR REGION AND BY OCCUPATION

E. Year ended June 30, 1965 (Cont.):

Occupation	Code	Total	Mexico 582	Cuba 584	Dominican Republic 585	Haiti 586	Trinidad & Tobago 516	Total Central America	Canal Zone (U. S.) 504	Costa Rica 575	El Salvador 576	Guatemala 577	Honduras 578	Nicaragua 579	Panama 580
Lawyers and judges	105	183	35	72	10	13		3		1	1			1	
Librarians	111	30		10		2		3			1	2			
Musicians and music teachers	120	176	36	19	16	4		18		3	3	4	2	2	4
Agricultural scientists	130	52	9	8		6		8		3		1	2	2	
Biological scientists	131	22	2				1	1		1					
Geologists and geophysicists	134	6				1	1								
Mathematicians	135	3	1												
Physicists	140	11	2	1				1						1	
Miscellaneous natural scientists	145	8		1											
Nurses, professional	150	495	41	59	28	17	18	117	1	33	21	20	19	7	9
Nurses, student professional	151	15	4					6		3	1		1		1
Optometrists	152	10		4		1									
Personnel and labor relations workers	154	6		1				1					1		
Pharmacists	160	136	22	55	6	6	1	8		3		1		1	3
Photographers	161	139	12	21	10	6		24		4	7	5	2	4	2
Physicians and surgeons	162	757	110	201	32	20	7	39		8	6	6	5	6	8
Public relations men and publicity writers	163	40	2	5				5		1	1	1		2	
Radio operators	164	37	1	3	1	5		11			1	4	5	1	
Recreation and group workers	165	6	1	2		1		1							1
Religious workers	170	233	87	14	31			20		3	1	6	3	4	1
Social and welfare workers, except group workers	171	102	3	76			1	7		3	1		1		1
Economists	172	42	5	2		1		1		1					
Psychologists	173	4		1											
Statisticians and actuaries	174	9		2	2	3									
Miscellaneous social scientists	175	1													
Sports instructors and officials	180	27	3	4		1		1							
Surveyors	181	37	3	3	2	9		8		1		2	2	1	
Teachers, elementary schools	182	177	15	75		4		39		6	2	19	8	1	2
Teachers, secondary schools	183	134	9	61	1	3		13	1	4	3	2	1		2
Teachers (n.e.c.)	184	1,286	128	147	57	121	4	222	3	51	35	35	57	12	25
Technicians, medical and dental	185	174	12	55	6	7	5	28		4	4	5	5	2	7
Technicians, electrical and electronic	190	212	18	20	14	12	6	20		4	6	2	2	3	3
Technicians, other engineering and physical sciences	191	36	3	4	1	3		5	1	1		1			2
Technicians (n.e.c.)	192	267	21	16	6	8	5	30	3	8	6	5	3	3	1
Therapists and healers (n.e.c.)	193	18		2		1	1	2			1				1
Veterinarians	194	28	8	9	1	1									
Professional, technical, and kindred workers (n.e.c.)	195	183	19	44	6	5	2	19	1	6	1	3	3	2	2

E. Year ended June 30, 1965 (Cont.):

Occupation	Code	British Honduras 581	Total South America	Surinam 602	Guyana † 603	Argentina 687	Bolivia 688	Brazil 689	Chile 690	Colombia 691	Ecuador 692	Paraguay 693	Peru 694	Uruguay 695	Venezuela 696
Lawyers and judges	105		50			7	2	10	4	18	5	1	1		2
Librarians	111		15			6	2	1		3				2	1
Musicians and music teachers	120		83		1	22	4	19	3	17	3	2	4	1	7
Agricultural scientists	130		21			3	2	5	3	4	2		2		
Biological scientists	131		18			3		3	1	9					2
Geologists and geophysicists	134		4			1		1	1	1					
Mathematicians	135		2			1				1					
Physicists	140		7			3		2		1	1				
Miscellaneous natural scientists	145		7			3				2	2				
Nurses, professional	150	7	215		16	43	10	18	17	56	27	1	17	2	8
Nurses, student professional	151		5					1		2	1		1		
Optometrists	152		5			2				2					1
Personnel and labor relations workers	154		4			1	1			2					
Pharmacists	160		38			15	4	3	1	7		1	4		3
Photographers	161		66			22	1	6	3	18	6	2	5	1	2
Physicians and surgeons	162		348		2	140	28	37	8	82	13	2	25	1	10
Public relations men and publicity writers	163		28			6		9	4	7		1			1
Radio operators	164		16			3	2		1	6	3				1
Recreation and group workers	165		1					1							
Religious workers	170	2	81		2	15	4	20	5	18	3	1	8	2	3
Social and welfare workers, except group workers	171	1	15		1			1	3	4	3		1		2
Economists	172		33			9		3		14	2		3		2
Psychologists	173		3			3									
Statisticians and actuaries	174		2						1						1
Miscellaneous social scientists	175		1						1						
Sports instructors and officials	180	1	18			8	1		2	4	2				1
Surveyors	181	2	12			1		3	1	5				2	
Teachers, elementary schools	182	1	44		2	13	3	5	4	3	3		7		4
Teachers, secondary schools	183		47		1	15	1	4	3	12	4	1	2	1	3
Teachers (n.e.c.)	184	4	607	2	6	178	32	90	47	96	102	1	28	12	13
Technicians, medical and dental	185	1	61		2	18	1	4	8	19	3		3		3
Technicians, electrical and electronic	190		122		1	43	2	6	9	37	17	1	1	2	3
Technicians, other engineering and physical sciences	191		20			11			3	4	1				1
Technicians (n.e.c.)	192	1	181			58	8	19	12	55	15		3	3	8
Therapists and healers (n.e.c.)	193		12			2	1	2	1	4			1		1
Veterinarians	194		9			1			1	3	4				
Professional, technical, and kindred workers (n.e.c.)	195	1	88		2	25	2	16	4	19	6		2	2	10

† Formerly British Guiana

Appendix III

LATIN AMERICAN SCIENTISTS IN THE UNITED STATES BY HIGHEST DEGREE, CITIZENSHIP, AND FIELD, 1964

(Persons Who Received Their Secondary Schooling in Latin America)

A. Highest Degree / B. Citizenship

Geographical region	Total	Ph.D	Professional medical	Master's	Bachelor's	Less than Bachelor's	Foreign	No report	U.S.A.	Non U.S.A.	U.S.A. applied for	Non U.S.A. permanent resident	No report
Total	693	272	62	166	135	4	44	10	262	34	209	186	2
Argentina, Paraguay	133	66	22	17	8		17	3	42	5	58	27	1
Brazil	68	32	4	18	11		2	1	25	1	17	24	1
Bolivia, Chile	40	15	3	10	7	1	4		14	4	14	8	
Colombia	43	19	8	10	3	1	2		16	3	15	9	
Ecuador, Galápagos Islands, Peru	52	15	7	17	11		2		21	4	10	17	
Guyana,* French Guiana, Surinam	12	4		4	4				3	2	3	4	
Uruguay	9	6	1	1			1		3		5	1	
Venezuela	14	4		2	7		1		3			11	
Central America†	54	17	3	19	14		1		40		12	2	
Mexico	69	20	6	26	14		1	2	34	3	6	26	
West Indies‡	59	27	1	15	13	1	1	1	30		12	17	
Cuba, Dominican Republic, Haiti	139	47	7	27	42	1	12	3	30	12	57	40	
South America, general	1				1				1				

C. Scientific Field

Geographical region	Total	Chemistry	Earth science	Meteorology	Physics	Mathematics	Agricultural sciences	Biological sciences	Psychology	Statistics	Economics	Sociology	Linguistics	Other
Total	693	203	31	7	98	74	26	120	29	10	32	7	12	44
Argentina, Paraguay	133	49	1		16	18		26	4		6		4	9
Brazil	68	11	5		18	10		6	6	2	1	3		6
Bolivia, Chile	40	9	3		8	3	2	6	1		3			5
Colombia	43	10	3		4	8	2	7	2		3		2	2
Ecuador, Galápagos Islands, Peru	52	11	5		5	3	5	15	1	1	1	1	1	3
Guyana,* French Guiana, Surinam	12	1	1		2	1	1	2	1	1	1		1	
Uruguay	9	3			1	1		4						
Venezuela	14	3	2		4		1	2						2
Central America†	54	19	1		6	3	4	9	2	4	4		1	1
Mexico	69	21	5	1	11	5	4	16				2	1	3
West Indies‡	59	24	1	1	4	5	3	11	3		5		1	1
Cuba	139	41	4	5	19	17	4	16	9	2	8	1	1	12
South America, general	1	1												

* Formerly British Guiana.

† Includes British Honduras, Canal Zone, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

‡ Includes Antigua, Barbados, Cayman Islands, Grenada, Grenadines, Jamaica, Leeward Islands, Netherlands Antilles, Trinidad and Tobago, Turks and Caicos Islands, and Windward Islands.

Appendix IV

LATIN AMERICAN MEDICAL GRADUATES IN THE UNITED STATES, BY SCHOOL AND COUNTRY OF ORIGIN*

Country and school	Number
Total for Latin America	3773
Argentina	*399*
Buenos Aires University	286
Córdoba University	65
La Plata University	13
Rosario University	31
Tucumán University	4
Bolivia	*34*
San Andrés University, La Paz	12
San Francisco Xavier University, Sucre	4
San Simón University, Cochabamba	18
Brazil	*101*
School of Medicine, Surgery and Pharmacy, Bahia	6
University of Pôrto Alegre, Rio Grande do Sul	3
University of Brazil, Rio de Janeiro	33
São Paulo University	13
Pará School of Medicine and Surgery	3
University of Minas Gerais, Belo Horizonte	7
Recife University, Recife, Pernambuco	7
Paraná University, Curitiba	6
Faculty of Medical Sciences, Rio de Janeiro	4
Ceará University, Fortaleza, Ceará	1
Ribeirão Preto School of Medicine	5
Paulista School of Medicine, São Paulo	5
Fulminense School of Medicine, Niterói, Rio de Janeiro	3
Three other Brazilian schools	5
Chile	*48*
University of Chile, Santiago	48
Colombia	*211*
National University, Bogotá	113
Cartagena University, Cartagena	26
Antioquia University, Medellín	22
Catholic University, Bogotá	39
Faculty of Medicine, Cali	9
Caldas University, Manizales	1
Cauca University, Popayán	1
Cuba	*1300* †
Havana University	1300 †
Dominican Republic	*294*
Santo Domingo University	294

* Does not include interns and residents.
† Estimated

Appendix IV (Cont.)

LATIN AMERICAN MEDICAL GRADUATES IN THE UNITED STATES, BY SCHOOL AND COUNTRY OF ORIGIN

Country and school	Number
Ecuador	*65*
Central University, Quito	49
Cuenca University, Cuenca	1
Guayaquil University, Guayaquil	15
El Salvador	*22*
University of El Salvador, San Salvador	22
Guatemala	*13*
University of Guatemala	13
Haiti	*76*
School of Medicine and Pharmacy, Port-au-Prince	76
Honduras	*12*
University of Honduras	12
Mexico	*933*
National University, Mexico City	623
Nuevo León University, Monterrey	185
Guadalajara University, Guadalajara	46
School of Medicine, San Luis Potosí	11
Military School of Medicine, Mexico City	6
Faculty of Medicine, Mérida	11
Faculty of Medicine, Morelia	1
School of Homeopathy (Escuela Libre)	5
School of Homeopathy, Puebla	2
School of Medicine, Oaxaca	1
Autónoma University, Guadalajara	21
School of Homeopathy, National Polytechnical Institute, Mexico City	10
Puebla University, Puebla	8
Tamaulipas University, Tampico	2
Veracruz University, Veracruz	1
Nicaragua	*29*
University of Nicaragua, León and Granada	25
Southeastern University, Granada	1
Central University, León	3
Panama	*4*
National University, Panamá	4
Paraguay	*14*
National University, Asunción	14
Peru	*186*
San Marcos University	186
Uruguay	*7*
University of the Republic, Montevideo	7

Appendix IV (Cont.)

LATIN AMERICAN MEDICAL GRADUATES IN THE UNITED STATES, BY SCHOOL AND COUNTRY OF ORIGIN

Country and school	Number
Venezuela	*22*
Central University of Venezuela, Caracas	14
University of the Andes, Mérida	2
University of Zulia, Maracaibo	6
West Indies	*3*
University of the West Indies, Jamaica	3
Forty-six other schools	0

Appendix V

LATIN AMERICAN MEDICAL GRADUATES LICENSED BY EXAMINATION TO PRACTICE IN THE UNITED STATES, 1960-1964*

Country	1960	1961	1962	1963	1964
Grand total	292	301	407	498	600
Total excluding Cuba	215	222	261	298	345
Argentina	*28*	*46*	*64*	*67*	*83*
Tucumán University, School of Medicine, Tucumán	3	0	0	1	0
Buenos Aires University	21	32	43	54	61
Córdoba University, Córdoba	4	7	9	9	12
Litoral University, Rosario	0	3	8	2	9
La Plata University, School of Medical Sciences, La Plata	0	4	4	1	1
Four other schools	0	0	0	0	0
Bolivia	*4*	*3*	*2*	*8*	*6*
San Andrés University, La Paz	2	1	0	2	1
San Francisco Xavier University, Sucre	1	1	1	2	2
San Simón University, School of Medicine, Cochabamba	1	1	1	4	3
Brazil	*7*	*9*	*10*	*10*	*13*
Recife University, Recife, Pernambuco	0	0	0	0	1
School of Medicine, Surgery, and Pharmacy, Bahia	0	0	0	0	2
Fluminense School of Medicine, Niterói, Rio de Janeiro	0	0	3	2	2
Paulista School of Medicine, São Paulo	0	0	0	1	0
University of Brazil, Rio de Janeiro	3	2	1	6	5
São Paulo University	1	0	2	1	0
Paraná University, Curitiba	1	1	1	0	1
Ribeirão Preto School of Medicine, Ribeirão Preto	0	1	0	0	2
Pará School of Medicine and Surgery, Pará	2	0	0	0	0
University of Brazil, School of Medicine, Surgery, and Pharmacy, Rio de Janeiro	0	1	1	0	0
Faculty of Medical Sciences, Rio de Janeiro	0	1	0	0	0
University of Minas Gerais, School of Medicine, Belo Horizonte	0	3	2	0	0
Eighteen other schools	0	0	0	0	0
Chile	*5*	*3*	*5*	*10*	*5*
University of Chile, Santiago	4	3	5	9	5
Catholic University of Chile, Santiago	1	0	0	1	0
Two other schools	0	0	0	0	0
Colombia	*8*	*13*	*26*	*23*	*44*
National University, Bogotá	4	8	19	17	22
Antioquia University, Medellín	1	3	2	3	5
Cartagena University, School of Medicine, Cartagena	1	0	2	3	8
Javeriana University, Bogotá	2	2	3	0	7
Valle University, Cali	0	0	0	0	2
Two other schools	0	0	0	0	0

* Number of licenses granted. Many persons are licensed in more than one state; hence, the number of individuals is roughly 50 per cent as great as the number of licenses.

Appendix V (Cont.)

LATIN AMERICAN MEDICAL GRADUATES LICENSED BY EXAMINATION TO PRACTICE IN THE UNITED STATES, 1960-1964

Country	1960	1961	1962	1963	1964
Costa Rica	*0*	*0*	*0*	*0*	*0*
University of Costa Rica, School of Medicine (new school)	0	0	0	0	0
Cuba	*77*	*79*	*146*	*200*	*255*
Havana University	77	79	146	200	255
One other school	0	0	0	0	0
Dominican Republic	*31*	*33*	*24*	*28*	*46*
Santo Domingo University	31	33	24	28	46
Ecuador	*5*	*4*	*11*	*7*	*4*
Central University, Quito	5	4	8	5	2
Guayaquil University, School of Medicine, Guayaquil	0	0	2	2	2
Cuenca University, School of Medicine, Cuenca	0	0	1	0	0
El Salvador	*0*	*1*	*1*	*1*	*2*
University of El Salvador, San Salvador	0	1	1	1	2
Guatemala	*2*	*0*	*0*	*0*	*2*
University of Guatemala, Guatemala City	2	0	0	0	2
Haiti	*10*	*6*	*4*	*9*	*12*
School of Medicine and Pharmacy, Port-au-Prince	10	6	4	9	12
Honduras	*2*	*0*	*2*	*3*	*0*
University of Honduras, School of Medicine, Surgery, and Pharmacy, Tegucigalpa	2	0	2	3	0
Jamaica	*0*	*0*	*0*	*0*	*0*
No information					
Mexico	*94*	*78*	*83*	*98*	*92*
Michoacán University, San Nicolás de Hidalgo, Morelia	0	0	0	3	0
National University, Mexico City	48	48	58	53	48
Nuevo León School of Medicine, Monterrey	41	21	14	28	26
Guadalajara University, Guadalajara	1	5	4	5	7
Scientific Institute, San Luis Potosí	1	1	2	3	0
Autónoma University, School of Medicine, Guadalajara	0	0	0	3	7
Tamaulipas University, School of Medicine, Tampico, Tamaulipas	0	0	0	1	1
National Homeopathic Medical School, Mexico City	0	0	0	0	1
Southeast University, School of Medicine, Mérida	0	1	1	1	1
Libre University, Mexico City	0	1	0	1	0
Puebla University, Puebla	0	1	4	0	1
Military School of Medicine, Mexico City	3	0	0	0	0
Nine other schools	0	0	0	0	0
Nicaragua	*1*	*2*	*1*	*3*	*5*
University of Nicaragua, Granada (defunct)	1	2	1	2	4
Oriente University, Medical School, Granada (defunct)	0	0	0	1	1
Central University of Nicaragua, León	0	0	0	0	0
Panama	*0*	*0*	*0*	*0*	*0*
National University of Panama, Faculty of Medicine	0	0	0	0	0

Appendix V (Cont.)

LATIN AMERICAN MEDICAL GRADUATES LICENSED BY EXAMINATION TO PRACTICE IN THE UNITED STATES, 1960-1964

Country	1960	1961	1962	1963	1964
Paraguay	*2*	*2*	*1*	*2*	*2*
National University, Asunción	2	2	1	2	2
Peru	*16*	*21*	*26*	*26*	*29*
San Marcos University, San Fernando School of Medicine, Lima	16	21	26	26	29
Three other schools	0	0	0	0	0
Uruguay	*0*	*0*	*0*	*0*	*0*
University of the Republic, Faculty of Medicine, Montevideo	0	0	0	0	0
Venezuela	*0*	*1*	*1*	*3*	*0*
Central University of Venezuela, Caracas	0	1	1	3	0
Five other schools	0	0	0	0	0

Appendix VI

STATUS IN THE UNITED STATES OF GRADUATES OF THE UNIVERSITY OF BUENOS AIRES, THE NATIONAL UNIVERSITY OF MEXICO, AND COLOMBIAN MEDICAL SCHOOLS*

A. University of Buenos Aires Medical Graduates

The following data have been drawn from a 1965 sample of 140 physicians in six major U.S. cities who are graduates of the University of Buenos Aires.

It is evident that migration to the United States is becoming more frequent. In the sample group there were only 6 individuals who graduated prior to 1940, whereas there were 4 who graduated between 1940 and 1944, 6 who graduated between 1945 and 1949 (3 additional persons who graduated during this period were taking residences), 16 who graduated between 1950 and 1954 (plus 6 others in residencies), and 18 who graduated between 1955 and 1959 (not including 20 residents).

There were 14 interns in Chicago but only one in all of the five other cities combined. There was only one physician in residency training in Los Angeles, but there were from 7 to 21 in each of the other five cities. There were 9 practitioners in New York but only one in St. Louis. There were 5 full-time faculty members in New York but none in either Chicago or St. Louis. There were research workers in New York but none in St. Louis.

Of the 140 graduates, 83 were house officers (15 interns and 68 residents), 17 were in private practice, 17 were full-time hospital staff, 8 were full-time medical school faculty, 13 were engaged in research, and 2 were in other fields.

The most common specialties for the residents were general surgery (16), psychiatry (13), internal medicine (11), pathology (6), and pediatrics (5). Of those in practice the most common specialties were general practice (4) and psychiatry (3). Not more than one practitioner was in any other specialty. Of the 17 individuals who were full-time hospital staff, the most common specialties were psychiatry (4), pediatrics (3), and internal medicine (3).

Additional information on this subject was obtained from AMA data on the number of licenses issued to medical graduates of the University of Buenos Aires during the period 1960-1964. U.S. licenses were issued to 21 Buenos Aires medical graduates in 1960, to 32 in 1961, to 43 in 1962, to 54 in 1963, and to 61 in 1964. Not all the licensees represented new additions to the profession, however, because about 40 per cent of them already held a license in another state. It may be assumed, then, that only about 60 per cent of the licensees were new additions.

Probably about 10 per cent of all physician immigrants from Latin America are graduates of the University of Buenos Aires. If Cubans are excluded from the total, Buenos Aires graduates amount to almost 20 per cent.

B. National University of Mexico Medical Graduates

Data from several sources make it possible to roughly estimate the number of graduates of this school who have migrated to the United States in recent years. In 1960, 48 graduates of the National University of Mexico were licensed in the United States by examina-

* Direct information, American Medical Association.

tion, and probably a few more were licensed without an examination. Since some of these licenses were issued to persons who had already been licensed in some other state, only about 30 represented new additions to the profession. From these and other data it would appear that about 35 graduates of this school have been migrating to the United States annually during recent years.

Licenses were granted to 48 Mexico University graduates in 1961, to 58 in 1962, to 53 in 1963, and to 48 in 1964. The certifying examination of the Educational Council for Foreign Medical Graduates, which was put into effect in 1961, may have tended to limit the number of Mexicans pursuing internships and residencies in the United States. This in turn would tend to reduce the migration rate. Thus it would appear that less than 5 per cent of the graduates have been migrating to the United States.

In order to evaluate the activities in the United States of the medical graduates of the National University of Mexico, a sample of 99 physicians residing in six U.S. cities was studied. The distribution of the group was as follows: 38 were in Chicago, 15 in Los Angeles, 13 in St. Louis, 10 in Boston, and 9 in Philadelphia. In evaluating this information it should be kept in mind that the sizes of the medical establishments and the populations of these cities differ significantly. For example, the population of the New York area is about 15 million; Chicago, about 6 million; Los Angeles, 5 million; Philadelphia, 4 million; Boston, 3 million; and St. Louis, 2 million. Thus the relatively small number in New York and the large number in Chicago are significant.

General practice was by far the most frequent specialty of the practitioners (15 out of 41), whereas internal medicine was the most common specialty of the residents (7 out of 32). In Los Angeles there were no interns or residents; 11 of the 15 physicians in that city were in private practice. In Boston, on the other hand, only one of the 10 physicians was in private practice, whereas 6 of the 10 were residents. All those in the sample group who graduated prior to 1950 were in practice, whereas a substantial portion of those who graduated between 1955 and 1959 were employed as full-time hospital staff (these were not residents).

Only 5 of these 99 physicians were pursuing academic work on a full-time basis. Three were members of medical school faculties and two were research workers. However, it is quite likely that some of the others were doing some academic work, particularly among those who were full-time hospital staff, since some of these hospitals undoubtedly have interns and residents.

The large number of graduates (19) practicing in Chicago is probably attributable to the fact that many graduates of the National University go to Chicago for residency training. At the time of the study there were 12 residents in Chicago who were graduates of this school.

All these data suggest that in quantitative terms the loss of medical scientists and potential medical scientists is relatively small. Probably about 5 per cent of these migrants are or will become medical scientists. Therefore, if there are about 35 migrants a year the loss of scientists or potential scientists would average about 3 a year.

C. Colombian Medical Graduates

Of approximately 535 graduates of Colombian medical schools in the United States, 324 are serving as interns and residents and 211 are not interns and residents. Of the 211 who are not interns and residents, 113 are graduates of the National University at Bogotá, 26 are graduates of Cartagena, 39 are from Javeriana in Bogotá, 22 are from Medellín, 9 are from Cali, 1 is from Manizales, and 1 from Popayán.

The 113 graduates of the National University in Bogotá are widely scattered in 27 states: 24 in New York, 15 in Illinois, 9 in California, 7 in Florida, and 6 in Michigan. The Cartagena graduates are in 14 states: 9 in Illinois and no more than 3 in any other state. The 22 Medellín graduates are in 15 states, no more than 3 in any one state. Of the 39 Javeriana graduates, 10 are in New York and the remainder are scattered in 18 other states, with no more than 3 in any one state. The 9 Cali graduates are in 9 different states.

Of the 211 Colombian graduates in the United States, only one graduated before 1930, 4 between 1930 and 1939, and 32 between 1940 and 1949. Thus, the vast majority have graduated since 1950.

Of the 113 graduates of the National University, 38 are in full-time specialty practice, 8 are in general practice with a specialty interest, 43 are "other full-time staff in hospital service,"* 9 are full-time medical school faculty, 5 are in laboratory medicine or pathology, 3 are in preventive medicine, and 7 are in research. Thus, a total of 16 are full-time academic workers (medical school faculty or full-time researchers). Of the 26 Cartagena graduates, 11 are in full-time specialty practice, 2 are in general practice, 11 are "other full-time staff in hospital service," one is in laboratory medicine, and one is in research. Of the 22 Medellín graduates, 4 are in full-time specialty practice, one is in general practice, 10 are "other full-time staff in hospital service," 2 are full-time medical school faculty, 4 are in laboratory medicine, and 1 is in research. Of the Javeriana graduates, 10 are in full-time specialty practice, 1 is in general practice, 24 are "other full-time staff in hospital service," 1 is a full-time faculty member, and 3 are in research. Of the 9 Cali graduates, only 1 is practicing, 4 are "other full-time staff in hospital service," 1 is full-time faculty, 2 are in laboratory medicine, and 1 is in research.

Of the 211 Colombian graduates in the United States who are not residents or interns, 13 are full-time faculty members in U.S. schools and 13 more are mainly engaged in research. Thus, there are 26 in the United States who are in full-time academic work. There are undoubtedly a few more in other categories who do some academic work, such as research or teaching, but they are not primarily engaged in academic work. The detailed list sent to PAHO gives the names, addresses, year of graduation, year of birth, speciality, source of income, kind of work, and status of citizenship for each of the 535 Colombian graduates in the United States (324 interns and residents and 211 who are not interns and residents).

Between 1958 and 1965 the National Institutes of Health awarded 12 international postdoctoral fellowships to Colombians for study in the United States (an average of about 2 a year). In 1964 there were 13 Colombians, plus 2 U.S. citizens born in Colombia, being supported by NIH training grants to U.S. institutions. Since these NIH training grants support about half of the foreign research trainees who are physicians, it may be roughly estimated that there are about 30 biomedical research trainees in the United States who are graduates of Colombian schools. Visa status was known for 12 Colombians in NIH training grant programs in 1964. Five had immigrant visas and 7 had nonimmigrant visas.

In 1965, 82 physicians from Colombia entered the United States with immigrant visas. A large number of these were interns and residents. There is no information available concerning the number who had definitely decided to immigrate, but we know that many of those with immigrant visas have not decided definitely to immigrate. Between 1960 and 1964 the number of Colombian graduates who received licenses to practice in the United States increased steadily. About half of these physicians are graduates of the National University of Bogotá. A substantial majority of those who receive U.S. licenses do immigrate. Through examinations in the various states, 8 physicians were licensed in 1960, 13 in 1961, 26 in 1962, 23 in 1964, and 44 in 1964. In 1965 the number of licenses was 31, representing a slight decline. Of the 31 licensees in 1965, 14 were from the National University at Bogotá, 8 were from Javeriana, 5 were from Cartagena, 3 from Cali, and 1 from Medellín. For the 5-year period beginning in 1961, the total number of licensees by school was as follows: National University of Bogotá, 80; Javeriana, 20; Medellín, 14; Cartagena, 18; Cali, 15; and other schools, none.

The number of licenses does not reflect exactly the number entering practice in the United States for a variety of reasons too complex to recite here, but the number of licenses is a crude index of the rate of immigration. In very recent years probably about 35

* The category "other full-time staff in hospital service" includes such people as psychiatrists in state hospitals, full-time anesthesiologists, certain clinical and research trainees who are not called interns or residents even though they may be receiving postgraduate training, and other people engaged in similar activities.

Colombian physicians a year have been taking up permanent residence in the United States. Since the total number of graduates in Colombia is approximately 400, it would appear that roughly 8 per cent of the total manpower output is being lost through immigration to the United States. It is conceivable that this rate of loss will continue to increase as the quality of medical education in Colombia improves, producing a larger number of persons qualified for training positions and subsequent careers in the United States.

There are about 324 interns and residents in the United States who are Colombian graduates. Since the average duration of training is about three years, it would appear that roughly 110 Colombian graduates enter the United States for postgraduate medical training each year. Apparently about two thirds of these return and one third stay permanently in the United States. We have evidence that some of these graduates who have completed their training and are still in the United States have not reached a definite decision to take up permanent residence in the United States even though they may be eligible to do so.

Appendix VII

SPECIAL NOTE ON THE MIGRATION OF CUBAN PHYSICIANS

The political situation generated by the Cuban revolution is markedly different from that in any other Latin American county, and it has had unique effects on the migration of highly trained personnel. Cuba is therefore regarded as a special case, and data for this country have been considered separately.

The migration pattern of physicians who graduated between 1953 and 1956 has been as follows:

Year of graduation	Total graduates*	Total emigrants*	Percentage of graduates migrating
Total	954	137	14.3
1953	302	45	14.9
1954	314	40	12.7
1955	216	22	10.2
1956	122	30	24.6

* Unless otherwise noted, all data cited are from "Migration of Professionals," by Leopoldo E. Bernal, President of the National Medical College, Havana, Cuba. This article appeared in *Cuba*, a mimeographed pamphlet prepared for the International Symposium on the Problem of the Development of Science, World Federation of Scientific Workers, Budapest, September 20-30, 1965.

Migration of physicians from Cuba over the period 1959 through 1964 has been as follows:

Year	Cuban data*	U.S. data†
1959	42	—
1960	582	18
1961	778	94
1962	194	120
1963	161	156
1964	188	229

* Bernal, *op. cit.* † Persons admitted with immigration visas.

The differences between the Cuban and the U.S. data are explained by two factors. First, the Cuban figures refer to all physicians leaving Cuba, whereas the U.S. data refer only to those Cubans who came to the United States. Second, many Cubans were admitted to the United States as refugees without immigrant visas.

Until the end of 1962 there were no Cuban restrictions on emigration. But in December 1961 the Revolutionary Government, in view of the requirements arising from the increase of medical services, established a regulation covering the emigration of medical doctors. Hence, from that time on the curve describes a phenomenon under control, not spontaneous as it had been before. The regulation consisted in postponing permits to leave the country so that they were granted one year after application. These restrictions remained in effect until late 1964. The reduced number of migrants in 1962, 1963, and 1964 probably reflects to a considerable extent the effects of this regulation.

In January 1965 there were 6,300 medical doctors in Cuba, 65 per cent of whom were practicing in Havana. The migration of 1,360 doctors during the years 1960 and 1961 represented the loss of almost one quarter of all physicians in Cuba.

Neither the place of first migration nor the subsequent movement of these migrants is known. However, the figures on their year of arrival in the United States are as folows:

Year	Number *	Percentage
Total	1,236	100
1959	59	5
1960	256	20
1961	442	36
1962	201	17
1963	147	12
1964	131	10

* R. A. Penalver, *The University of Miami School of Medicine and the Cuban Refugee Physician* (to be published).

Over the 1959-1964 period a total of 1,945 Cuban physicians left Cuba and 1,263 arrived in the United States. Therefore, although details are not available, it appears safe to say that between two thirds and three fourths of the Cuban refugee physicians have come to the United States.

Data on licenses issued to physician graduates of the University of Havana in the United States shed a little more light on the question:

Year	U.S. licenses issued to medical graduates of the University of Havana*
Total	757
1960	77
1961	79
1962	146
1963	200
1964	255

* American Medical Association, *Graduates of Latin American Medical Schools Licensed by Examination in the USA, 1960-1964.*

In 1960 and 1961 the number of licenses issued to Cuban physicians in the United States was much less than the number migrating from Cuba in those years, but in 1963 and 1964 the number of licenses exceeded the number of migrants. Possibly physicians migrated from Cuba to other countries and from there to the United States, arriving in relatively large numbers in 1963 and 1964. Or most of those migrating in 1960 and 1961 may have come directly to the U.S. and secured licenses two or three years later.

In 1965 the number of physicians in Cuba was nearly 7,000.* Thus, the production of physicians has apparently been high enough to offset the losses due to migration and other causes (death, retirement, and so on). To produce a net pool of 6,500 physicians ("nearly 7,000"), given the known number of migrants and assuming an attrition rate of 2 per cent a year, would require an average annual output of about 370 physicians from the University of Havana's faculty of medicine. The actual number graduated in 1963 was 334.†

Clearly, the extensive migration has been an important factor affecting the total supply of physician in Cuba, and the effects have been more pronounced than in any other Latin American country.

* Bernal, *op. cit.*, p. 7.

† Medical Information Center, *Directory of Schools of Medicine in Latin America*, Washington, D.C., Pan American Health Organization, 1965.

Appendix VIII

QUESTIONNAIRE FOR LATIN AMERICAN MEDICAL GRADUATES IN THE USA

Date_____

NAME (print) _____
Last First Middle initial

PRESENT ADDRESS _____

SEX_____ YEAR OF BIRTH_____ YEAR OF GRADUATION (M.D. or Equiv.)_____

COUNTRY OF CITIZENSHIP_____ NATIVE COUNTRY_____

1. If noncitizen of USA, give visa status (underline one of the following):
   a) Exchange visitor
   b) Immigrant
   c) Permanent resident
   d) Other (specify) _____
2. Name and location of medical school from which you graduated: _____
   _____
3. Family status: Single___ Married___ No. and ages of children_____
4. Native country of spouse:_____ Year of marriage_____
5. Primary purpose of *first* visit to the USA of more than 3 months duration (underline one of the following and briefly explain answer if necessary):
   a) Internship
   b) Residency
   c) Research training
   d) Faculty position (greater than 50% of time devoted to research and/or education)
   e) Research position (outside a degree-granting institution)
   f) Practice of medicine
   g) Other (specify) _____
6. Nature of present work:

	Approximate % of time
Practice	_____
Research	_____
Administration	_____
Teaching	_____
Other (specify)	_____

7. Specialty: _____ Board Certified? No ( ) or Yes ( )
8. Principal employer: _____
9. Licensure:
   a) Do you have or have you ever had a license to practice medicine in the USA? _____
   b) If so, what state or states? _____
   c) Give approximate year of licensure _____
   d) Very briefly explain why you sought licensure in the particular state or states mentioned above: _____
   _____
10. Postgraduate training in the USA (skip this question if you did not have training in the USA):

Institution	Location	Nature and Specialty (such as Residency in Pediatrics or Fellowship in Biochemistry, etc)	Approx. dates
_____	_____	_____	to _____
_____	_____	_____	to _____
_____	_____	_____	to _____
_____	_____	_____	to _____

11. Which of the following answers is most applicable? (underline one)
    a) Definitely plan to return to my native country to pursue my professional career
    b) Probably will return
    c) May return but not likely
    d) Definitely do not plan to return

12. If your answer is (b) or (c) to question 11, what conditions must be met if you are to return?

13. If you have immigrated to the USA and plan to stay permanently please indicate the relative importance of the factors which influenced your decision to immigrate.

	Relative Importance of Factors in Decision to Immigrate			
A. *Nonprofessional factors*				
Cultural or social	None ( )	Slight ( )	Moderate ( )	Great ( )
Domestic or family	( )	( )	( )	( )
Political (if this is of any importance, explain below)	( )	( )	( )	( )
B. *Professional factors*				
Salary or income	( )	( )	( )	( )
Professional environment	( )	( )	( )	( )
Equipment and resources	( )	( )	( )	( )
C. *Other factors* (specify)	( )	( )	( )	( )

Add here any comments or explanations on answers to questions 11 and 13:

_____

_____

_____

14. Question 13 seeks the considerations which influenced you *personally* in making the decision to immigrate. But we also would like to have your opinion concerning the relative importance of various factors in influencing *other* physicians from your native country to immigrate to the United States. Therefore, would you please answer the same question as it applies in general to physicians from your native country who have immigrated to the USA in recent years.

	Relative Importance of Factors in Decisions to Immigrate			
A. *Nonprofessional factors*				
Cultural or social	None ( )	Slight ( )	Moderate ( )	Great ( )
Domestic or family	( )	( )	( )	( )
Political (if this is of any importance, explain below)	( )	( )	( )	( )
B. *Professional factors*				
Salary or income	( )	( )	( )	( )
Professional environment	( )	( )	( )	( )
Equipment and resources	( )	( )	( )	( )
C. *Other factors* (specify)	( )	( )	( )	( )

Add here any comments on answers to question 14

_____

_____

_____

15. If you have immigrated or plan to immigrate, was your immigration more related to the attractions and advantages offered by the United States, or on the other hand was it more related to difficulties or potential difficulties in your native country?

16. Which of the answers below most nearly characterizes the total group of physicians from your medical school who have immigrated to the USA. In comparison to their classmates, those who later immigrated had, in general, (underline one):
    a) Average ability
    b) Definitely below average ability
    c) Definitely above average ability

Add here any further comments on answer to question 16:

17. What factors have been most influential in *inhibiting* the rate of emigration of physicians from your native country who are interested in academic medicine?

18. Add here any comments on the causes and effects of the immigration of physicians from your native country to the USA.

Appendix IX

ESTABLISHMENT OF A SPECIAL COMMITTEE TO STUDY THE MIGRATION OF ARGENTINE SCIENTISTS, PROFESSIONALS, TECHNICIANS, AND SKILLED WORKERS—DECREE 7,558 OF 1965

Buenos Aires, Argentina
September 3, 1965

WHEREAS:

There is need for a detailed study of the serious problem implicit in the emigration over the past ten years of a considerable number of Argentine professional and technical personnel to other countries, especially the highly industrialized countries;

It is urgently necessary to study the reasons for this emigration, which has been increasing for some years—an estimated 8,515 teachers, technicians, and skilled workers having left Argentina for the United States of America between 1951 and 1961;

The National Academy of Sciences of Buenos Aires has addressed a memorandum to the Chief Executive stating its concern over this serious exodus and has recommended that an exhaustive study be made of the situation with a view to moderating as much as possible the outflow of teachers, technicians, and highly skilled workers from Argentina and to ensuring the future training of specialists and scientists for whom the country has an ever greater need for its own development;

The Chief Executive shares this concern, has taken these suggestions into consideration, and is seeking solutions to the problem by drawing up an appropriate set of guidelines;

To achieve this end the technical agencies concerned should make a study of the practical results of administrative provisions hitherto in force under Decrees 13,438/62, 6,093/63, and 2,754/64, particularly with regard to the recovery of the high-level professional human resources that have gone abroad,

THE PRESIDENT OF THE ARGENTINE NATION

DECREES:

1. A special committee shall be established to study the migration of Argentine scientists, professionals, technicians, and skilled workers for the purpose of making a detailed evaluation and of planning appropriate solutions to the problem, bearing in mind the application of Decrees 13,438/62, 6,093/63, and 2,754/64.

2. The Committee shall be under the authority of the National Council of Scientific and Technological Research, and it shall be composed of one representative and one alternate from each of the following agencies:

a) Ministry of Education and Justice
b) Ministry of Foreign Affairs and Worship
c) Ministry of Labor and Social Security
d) Ministry of Economy
e) National Development Council
f) Interuniversity Council
g) National Council for Technical Education
h) National Council for Scientific and Technological Research

The Committee shall be entitled to invite such other associations, professional societies, learned societies, and similar organizations as have a professional interest in or have made

studies of the subject or are investigating the problem of the migration of technical and scientific personnel from the country to appoint one representative and one alternate to the Committee.

3. The National Academy of Sciences of Buenos Aires and the Torcuato di Tella Institute shall be especially invited to join the Committee.

4. The Committee shall be authorized to directly approach national agencies and provincial and municipal authorities for the purpose of collecting data, information, and other material to enable it to carry out its task, and it shall be particularly responsible for conducting, in cooperation with the Ministry of Foreign Affairs and Worship and through its diplomatic and consular corps, a survey of the Argentine nationals who have emigrated in order to ascertain their number, geographical location, occupation, and especially their reasons for leaving the Republic.

5. The Committee shall establish a Register of Scientists, Technicians, Professional Personnel, and Highly Skilled Workers, whether employed, unemployed, or underemployed, in order to keep information on this labor market up to date so that it can be studied.

6. Within sixty days of its constitution and every sixty days thereafter the Committee shall report on its work to the National Council of Scientific Research and Technology. Within six months of its establishment it shall submit to the legislative branch a manpower program covering the position of professional, scientific, and technical personnel and highly skilled workers in the country; the establishment of a special employment service; and a diagnosis and prognosis of the migration trend.

7. This decree shall be ratified by the Minister of Labor and Social Security, the Minister of Foreign Affairs and Worship, the Minister of Education and Justice, and the Minister of Economy.

8. This decree shall be proclaimed, published, and transmitted to the General Bureau of the Official Bulletin and the Printing Office for appropriate purposes.

(signed) ILLIA

Fernando Solá
Miguel Angel Zavala Ortiz
Carlos F. A. Alconada Aramburú
Juan Carlos Pugliese

Appendix X

CUSTOMS EXEMPTIONS FOR ARGENTINE SCIENTISTS, UNIVERSITY-LEVEL PROFESSIONALS, AND TECHNICIANS—DECREE 2,754 OF 1964

Buenos Aires, Argentina
April 17, 1964

WHEREAS:

Until such time as conditions in the country will, of their own weight, discourage the exodus of scientists, university-level professionals, and technicians and will be conducive to their definitive settlement and stability, it is advisable to devise means for facilitating the return of persons of unquestioned merit who have left in search of more favorable conditions;

To this end, a system of exemptions applicable to scientists, university-level professionals, and technicians who are of proven competence, and whose return to the national community may be expected to contribute to raising the scientific and technical level of the nation and, consequently, to its progress may be established, including the necessary safeguards so that the objectives in view will not be defeated;

In the granting of exemptions, primary importance should be given to the opinion of the National Council for Scientific and Technical Research regarding the qualifications of interested persons, as evidenced by studies or work performed abroad, and to the requirement of a minimum reasonable period of foreign residence;

In order to keep administrative procedures to a minimum and to allow greater flexibility in reaching decisions on specific cases, it is desirable that the processing of applications be initiated through the National Council for Scientific and Technical Research and that this body should itself make the direct decision in cases of failure to prove undisputed competence;

As a consequence of the system established in Decrees 13,438/62 and 6,093/63 and of insufficient familiarity with its exact provisions, many applications have been submitted by scientists, professional persons, and technicians abroad in the understanding that the provisions of that system applied to them, only to find, after cancelling their commitments abroad, initiating the appropriate procedures, and sometimes even returning to the Republic, that, for various reasons, these provisions did not in fact apply to them or to the property they were importing;

Such personnel include a group of technicians (specialists without a professional university degree) whose situation was not foreseen in the provision of Decree 6,093/63 that included "university-level professionals," provided the work or studies they had carried out abroad related to their professions;

The differences of opinion that have arisen between the Department of the Treasury and the National Council for Scientific and Technical Research regarding the treatment to which such technicians were entitled under the system, as well as the fact that the State itself is to some extent responsible for the situation created, due to insufficient dissemination of information abroad relative to the applicable standards, justify possible favorable consideration of the case of this group of technicians, as an exception, provided that as individuals they fulfill the other requirements of the system in question, as well as those to be established herein;

For the reasons set forth above, it is equitable to consider the situation of scientists, professionals, and technicians who, because of their belief that they were covered by the provisions of the aforementioned decrees, have returned to the Republic and/or initiated

appropriate measures for that purpose upon expiry of the periods established in the latter, prior to the date of entry into force of the present Executive Decree; and

It is desirable to consider on a broad basis other situations that have arisen because of the existence of the aforementioned system;

In accordance with the advice of the Department of the Treasury,

THE PRESIDENT OF THE ARGENTINE NATION

DECREES:

Beneficiaries—Exemptions

ARTICLE 1. Upon returning to the Republic, Argentine scientists, university-level professionals, and technicians (both native-born and naturalized citizens) of proven competence who have worked abroad for an uninterrupted period of at least three (3) years, shall be entitled to exemption from payment of customs duties and import surcharges on used instruments, scientific equipment, and other materials appropriate to their respective specializations, as well as the automobile and personal and household property they used abroad, up to a total value of four thousand dollars (US $4,000) or its equivalent in other currencies.

The automobile must have been owned and used abroad by the applicant for at least one (1) year prior to the date of his return to the country.

Participation of the National Council for Scientific and Technical Research

ARTICLE 2. The National Council for Scientific and Technical Research shall state its opinion regarding the qualifications of the interested parties as evidenced by degrees obtained and studies and/or work performed abroad and in the country, for the purpose of determining whether or not the persons fall within the category of "proven competence."

Proven competence is understood to mean the possession of special knowledge or aptitudes that endow the applicant with a capacity superior to the common, basic level required in the particular profession.

In the case of technicians (specialists who do not hold a university degree or who have a lesser university degree), the Council shall take it into account if the applicant has worked abroad, in his specialization, for a foreign institution, entity, or enterprise of established integrity or standing.

In all cases, the fact that the repatriation of the scientist, professional, or technician is of particular interest to the country, because of the specialization and/or activities that he will carry out in the Republic, shall be taken into account as a factor favorable to the application submitted.

The opinion referred to in this article shall be decisive in granting the benefits mentioned in Article 1 of this decree. In the event of an unfavorable finding, the National Council for Scientific and Technical Research shall reject the application directly and shall inform the interested party and the Department of the Treasury of its decision, which will be recorded in its proceedings and filed.

In the event of such an unfavorable finding, an appeal for reconsideration may be filed with the entity that arrived at the finding within fifteen (15) business days from the date of notification. The new decision of the Council shall be final.

Processing of Applications—Documentary Proof Documents of Foreign Origin, Requirements

ARTICLE 3. Applications for the benefits of this decree shall be submitted directly to the National Council for Scientific and Technical Research, together with the *curriculum vitae* of the applicant and any other information that the Council may require.

The applicant's passport shall constitute proof of residence abroad, the date of his actual return to the Republic, the number of visits that were made to this country during the

period of residence abroad, and the duration of such visits. In the absence of such evidence, the appropriate administrative authority may admit as proof, only on an exceptional basis, a consular certificate of residence duly certified by the Ministry of Foreign Affairs and Worship. If the applicant does not have a passport, or if the latter does not provide the aforementioned proof because it has replaced one or more passports previously issued, the applicant shall provide proof in the form of a consular certificate attesting to a minimum of four (4) years of foreign residence.

Ownership and use of an automobile abroad at the time mentioned in the second paragraph of Article 1 shall be established by means of the title or certificate of ownership and an operator's permit issued by a competent foreign authority and bearing the applicant's name. If either of these two documents is not available, the appropriate authority may accept the other one and may require, in such instances, the submission of further documentary evidence, such as a sale-purchase agreement or a bill of sale.

Documentation of foreign origin to be submitted to the administering agency shall be inspected by the Argentine consular officer of the jurisdiction concerned, who shall authenticate the signature, and shall seek to determine the veracity of the data contained in such documents. His signature, in turn, shall be authenticated by the Ministry of Foreign Affairs and Worship. When the aforementioned documentation is not written in the Spanish language, it shall be translated properly by an official public translator.

Time Limits for Submission of Application and Arrival of Property at an Argentine Port

ARTICLE 4. Applications for the benefits established in this decree shall be initiated within thirty (30) days after the applicant's return to the country. Applications submitted before such time may be accepted. The property of the applicant shall arrive at an Argentine port within one hundred and eighty (180) days after notification of the decision authorizing importation in accordance with the provisions of this decree.

Administering Agency

ARTICLE 5. The Department of the Treasury shall administer the provisions of this decree, and the National Council for Scientific and Technical Research shall report to the Department each case that is processed for the purpose of granting the exemption, after the opinion mentioned in Article 2 has been issued, if such opinion is favorable.

Appeals for reconsideration of decisions of the Department of the Treasury may be submitted within ten (10) business days from the date of notification of such decisions. The new decision reached by that body shall be final.

Expiry of the Exemption

ARTICLE 6. The automobiles, instruments, equipment, materials and effects that are brought into the country under the provisions of this decree shall not be transferred for a period of three (3) years from the date of their shipment to market, unless the applicant chooses to pay the customs duties and import surcharges that were applicable on the date of their entry into the country.

ARTICLE 7. Exemptions granted under this decree shall be null and void if the applicant leaves the country for periods of more than ninety (90) days in any years of the three (3)-year period established in the preceding article, unless such absence is due to the performance of an official mission entrusted to him by a State, national, provincial, or municipal organization or by a national university. To this end, the beneficiaries shall agree to submit proof to the National Customs Administration at the end of each semester and within the aforementioned period of their residence in the country and of their actual possession of the goods and effects that were exempted at the time of importation, and they shall be warned that immediate payment of applicable duties will be demanded whenever so warranted.

Visits to the Republic

ARTICLE 8. For the purposes of Article 1, sporadic visits to the Republic not in excess of ninety (90) days per year made by the persons to whom this decree applies during their residence abroad shall not be considered to be interruptive of such residence, provided that the total time of absence from the country is not less than three (3) years.

In the cases contemplated in the first paragraph of this article, the total value of the goods imported under exemption due to utilization of the beneficiary's passport on the occasion of each of the above-mentioned visits shall be deducted from the total value established in Article 1 of this decree; consequently, the latter shall be reduced in equal degree.

Fellowship Grantees and Persons Affiliated with National Entities

ARTICLE 9. The system established under this decree shall not apply to persons who left the country in order to avail themselves of a fellowship granted by an official or private, national or foreign entity, unless, upon the expiry of the fellowship, the beneficiary thereof should continue to engage in his professional or technical activities abroad on his own account for a period of not less than three (3) years, provided that the extension of his sojourn is not in violation of his obligation to return to the country upon termination of his fellowship, as established legally or through agreements with official agencies.

Likewise, the system shall not apply to persons who have left the Republic because of their affiliation with national, provincial, or municipal agencies or private national institutions, entities, or enterprises, or while maintaining such relationships with either or both of the aforementioned type of entity.

Miscellaneous Provisions

ARTICLE 10. For purposes of application of this decree, the type of entry visa issued by the foreign country of residence to applicants (*immigrant, nonimmigrant, temporary, resident, temporary for lapses,* etc.) shall not be taken into account.

ARTICLE 11. The system established in the preceding articles shall in no case apply to persons who have left the country after the date of entry into force of this decree.

Temporary Provisions

ARTICLE 12. The persons to whom the sixth and seventh clauses of the preamble of this decree refer are hereby declared to be covered by the system established in Decrees 13,438/62 and 6,093/63, provided that in the respective processes presently being carried out it is established that they are persons ideally suited to a specific specialization or technical branch and that they have performed tasks appropriate to such specialization while abroad, or that their services have been contracted in such a capacity by foreign institutions, entities, or enterprises.

The National Council for Scientific and Technical Research shall decide on the satisfaction of the above requirements and, after it has issued a favorable finding, shall report such finding to the Department of the Treasury for the purpose established in Article 13. In the event of an unfavorable finding, it shall act in accordance with the provisions of the fifth paragraph of Article 2.

ARTICLE 13. The Department of the Treasury shall make a decision regarding applications in process under the system established in Decrees 13,438/62 and 6,093/63 that were submitted prior or subsequent to its expiry and, until such time as this decree shall enter into force, in accordance with the provisions of that system.

To this end, applications submitted outside of the legal time limit and the cases of applicants who arrived in the country after September 30, 1963, and have formally submitted their applications are hereby declared to be covered by the system established in Decrees 13,438/62 and 6,093/63.

ARTICLE 14. For the purposes of the provisions of Article 13, time of ownership and use of the automobile shall accrue up to the date of arrival of the applicant, provided that such arrival shall have taken place prior to the date of this decree and that the purchase of the vehicle shall have been effected prior to the date of publication of Decree 13,438/62 in the Official Bulletin (14-12-62).

ARTICLE 15. Persons covered by the provisions of this decree or those of the system established in Decrees 13,438/62 and 6,093/63 who, as of December 14, 1962, have brought into the Republic, temporarily, goods that are their property and are covered by those provisions shall be authorized to import them under the exemptions established by the aforementioned decrees and within the total value limits prescribed therein, respectively, up to one hundred and eighty (180) days after the date of entry into force of this decree.

ARTICLE 16. The agency that administers this decree is hereby authorized to consider the cases of persons who are not covered by the system established in Decrees 13,438/62 and 6,093/63 due to having returned to the country shortly before the two(2)-year period as of the date of publication of the first of the aforementioned decrees in the Official Bulletin (14-12-62), as established in the second paragraph of Article 4 of Decree 6,093/63. To this end, the above-mentioned agency shall be authorized to advance the aforementioned two-year period by ninety (90) days prior to that date, provided that the cases in question refer to applications formally submitted before the entry into effect of Decree 6,093/63.

Likewise, in appropriate cases, the administrative agency is hereby authorized to grant an extension of the one hundred and eighty (180)-day period provided in the last paragraph of Article 2 of Decree 13,438/62 for shipment to market of goods, provided that the new period shall not exceed sixty (60) days as of expiry of the period established in the aforementioned provision.

ARTICLE 17. The Ministry of Foreign Affairs and Worship shall formulate the appropriate recommendation to include, among the exceptions established in Article 3 of Decree 13,110/62 consular inspection of all documentation required on an obligatory basis for implementation of this decree. It shall also adopt measures to assure that the consulates of the Republic will furnish Argentine citizens residing abroad with the most detailed information possible regarding the provisions of this system.

ARTICLE 18. The present decree shall be endorsed by the Minister of Economy, the Minister of Education and Justice, the Minister of Foreign Affairs and Worship, and it shall be signed by the Secretary of the Treasury.

ARTICLE 19. This decree shall be proclaimed, published, and transmitted to the General Bureau of the Official Bulletin and the Printing Office, and also to the National Customs Administration, for appropriate purposes.

(signed) ILLIA

Eugenio A. Blanco
Carlos R. S. Alconada Aramburu
Miguel A. Zabala Ortiz
Carlos A. García Tudero

Notice

Persons applying for the exemptions granted in Decree 2,754/64 are hereby informed of the following requirements:

1. The appropriate application form must be fully executed.
2. The requested documentation, duly certified at the appropriate Argentine Consulate and translated into Spanish by a competent translator, must be attached to the application.
3. The application must be submitted approximately two months prior to return to the country OR AT THE LATEST WITHIN THIRTY DAYS AFTER ARRIVAL IN THE COUNTRY.