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THE BRAIN DRAIN INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND PHYSICIANS

A STAFF STUDY

FOR THE

RESEARCH AND TECHNICAL PROGRAMS SUBCOMMITTEE

OF THE

COMMITTEE ON GOVERNMENT OPERATIONS

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FOREWORD

This study by the subcommittee staff was undertaken to obtain and to analyze data which could assist the subcommittee in determining the size and implications of the immigration into the United States of scientists, engineers, and physicians—the scientific "brain drain." While the subject has been widely discussed, very divergent views exist on whether there is a brain drain problem. The subcommittee is, therefore, issuing the study for the purpose of obtaining comments from executive agency officials and interested outside experts, as well as for the information of members of the House Government Operations Committee.

HENRY S. REUSS,
Chairman, Research and Technical Programs Subcommittee.

CONTENTS

Page

What is the composition of the brain drain? 1
How significant is the total scientific brain drain into the United States? 3
What is the share of the developing countries in the scientific brain drain? 4
What is the relationship between Federal research and development and the scientific brain drain from the developing countries? 10
Views on the brain drain 13

CHARTS

I. Share of developing countries in the immigration of scientists, engineers, and physicians, fiscal years 1956 and 1966 6

TABLES

Number

I. Immigration of scientists, engineers, and physicians compared with immigration of all professional, technical, and kindred workers, fiscal years 1956 and 1962–66 2
II. Immigration into the United States of scientists, engineers, and physicians, fiscal years 1956 and 1962–66 2
III. Comparisons of annual additions to scientific manpower by U.S. educational institutions and by immigration into the United States, fiscal years 1956 and 1962–66 3
IV. Immigration into the United States of scientists, engineers, and physicians by geographic areas, fiscal years 1956 and 1962–66 4
V. Immigration into the United States of scientists, engineers, and physicians, fiscal years 1956 and 1962–66 5
VI. Percentage share of developing countries in immigration into the United States of scientists, engineers, and physicians, fiscal years 1956 and 1962–66 6
VII. Immigration into the United States of scientists, engineers, and physicians from selected developing countries, fiscal years 1956 and 1962–66 7
VIII. Comparison of the number of scientists, engineers, and physicians graduating in the developing countries and the number emigrating to the United States in 1962 8
IX. Comparison of foreign student enrollment in U.S. colleges and universities and immigration from developing countries, fiscal years 1956 and 1962–66 9
X. Percentage of foreign-origin scientists and engineers from developing countries in R. & D. and teaching and their degree qualifications compared with all U.S. scientists and engineers, 1964 11

APPENDIXES

Appendix A.—Special tabulation of the immigration of scientists, engineers, and medical personnel by the Immigration and Naturalization Service 17
Appendix B.—Statements of Assistant Secretary of State Charles Frankel and Charles V. Kidd, Office of Science and Technology, before the Immigration and Naturalization Subcommittee of the Senate Judiciary Committee, March 6, 1967 91

THE BRAIN DRAIN INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND PHYSICIANS

"Brain drain" is a term invented by the British to describe their losses in recent years of professional people—mainly scientists, engineers, and physicians—through emigration. It has been widely used in this country to refer to the immigration into the United States of highly trained scientists and professionals from all countries.

Widely divergent views exist in the United States on whether there is a brain drain problem, and, if there is, what should be done about it and by whom. Despite this wide range of opinion, the subcommittee found that up-to-date information on the subject was not available. Accordingly, the staff was instructed to obtain new data from the Immigration and Naturalization Service,[1] and to bring together scattered information from other sources which could assist in answering a number of relevant questions.

These are—

(1) What is the composition of the brain drain? Is the brain drain an inflow of a miscellany of scholars in all fields? What is the proportion represented by scientists, engineers, and physicians?

(2) How significant is the total scientific brain drain into the United States?

(3) What is the share of the developing countries in the brain drain? Specifically, what is the drain of scientists, engineers, and physicians from the major recipient countries of U.S. aid? What is the significance of these losses of scientific manpower to the developing countries? To what extent have these countries nevertheless been able to build up scientific manpower by sending their students for education and training in U.S. colleges and universities?

(4) What is the relationship between Federal research and development and the scientific brain drain from the developing countries?

(5) What are the principal views on the brain drain?

What Is the Composition of the Brain Drain?

In 1952, the Walter-McCarran Act [2] introduced a preference within national quotas for applicants of high education and exceptional ability. The Immigration Act of 1965 [3] removed national quotas but it maintained a similar preferential basis in determining eligibility within a worldwide total of permissible immigration. As a result, has immigrant talent flowed into a broad spectrum of U.S. professions, within which the sciences, engineering, and medicine have received a share roughly proportionate to those already existing in the U.S. professional and technical labor force?

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[1] See app. A.
[2] 66 Stat. 163.
[3] 79 Stat. 911.

In the 1960 census (the last date for which statistics are available), scientists, engineers, and physicians comprised roughly 20 percent of all U.S. "professional, technical, and kindred workers." According to data summarized in table I, immigrant scientific professionals are a consistently higher proportion of all immigrating "professional, technical, and kindred workers" than the U.S. 20-percent ratio. Immigrant scientists, engineers, and physicians have ranged from 25 percent to about 32 percent of immigrant professionals in the 6 years, 1956 and 1962 through 1966.

TABLE I.—*Immigration of scientists, engineers, and physicians compared with immigration of all professional, technical, and kindred workers, fiscal years 1956 and 1962–66*

Fiscal year	Immigration of professional, technical, and kindred workers		Immigration of scientists, engineers, and physicians		Percent, scientists, etc. of professional, technical, and kindred workers
	Number	Index (1956=100)	Number	Index (1956=100)	
1956	18,995	100.0	5,373	100.0	28.3
1962	23,710	124.8	5,956	110.8	25.1
1963	27,930	147.0	7,896	147.0	28.3
1964	28,756	151.4	7,810	145.4	27.2
1965	28,790	151.6	7,198	134.0	25.0
1966	30,039	158.1	9,534	177.4	31.7

Note.—"Scientists" do not include social scientists; "physicians" include surgeons and dentists. "Scientists, engineers, and physicians" include college- or university-level instructors of science, engineering, and medicine. The tables which follow in the text follow these definitions.

Source: Annual reports of the Immigration and Naturalization Service and app. A.

The special significance of scientific professionals in the total professional and technical immigration is further revealed by a recent steeper rise in scientific immigration than in professional immigration as a whole. In fiscal 1966, scientific immigration was 77 percent higher than in 1956 while total professional immigration was 58 percent higher. Considered separately (in table II), the upward surge was even higher in the case of scientists (81 percent) and physicians (79 percent).

TABLE II.—*Immigration into the United States of scientists, engineers, and physicians, fiscal years 1956 and 1962–66*

Fiscal year	Total		Scientists		Engineers		Physicians	
	Number	Index (1956=100)	Number	Index (1956=100)	Number	Index (1956=100)	Number	Index (1956=100)
1956	5,373	100.0	1,022	100.0	2,804	100.0	1,547	100.0
1962	5,956	110.8	1,104	108.0	2,940	104.8	1,912	123.6
1963	7,896	147.0	1,612	157.7	4,014	143.2	2,270	146.7
1964	7,810	145.4	1,676	164.0	3,725	132.8	2,409	155.7
1965	7,198	134.0	1,549	151.6	3,455	123.2	2,194	141.8
1966	9,534	177.4	1,852	181.2	4,921	175.5	2,761	178.5

Source: App. A.

If, as these data suggest, scientific professionals are a relatively large and growing portion of total professional immigration, the general "pull" of American prosperity and occupational opportunities may not be a sufficient explanation for the brain drain. Instead, scientific professionals may be entering the United States in greater numbers because of "pulls" specific for them.

How Significant Is the Total Scientific Brain Drain Into the United States?

Are the increases in scientific immigration significant or insignificant?

One test of significance may be found in a comparison of immigrant manpower with the annual gross additions to domestic scientific manpower in the United States.

Table III shows that, by this measure, the annual immigration of foreign scientists, as distinguished from the other two categories, is not significant. In fiscal 1966, immigrant scientists were not only a smaller addition to U.S. manpower resources relative to U.S. output than in fiscal 1956, but a mere 2 percent of U.S. output.

TABLE III.—*Comparisons of annual additions to scientific manpower by U.S. educational institutions and by immigration into the United States, fiscal years 1956 and 1962–66*

Fiscal year	Scientists			Engineers			Physicians		
	Graduates of U.S. institutions [1]	Immigrants		Graduates of U.S. institutions [1]	Immigrants		Graduates of U.S. institutions [2]	Immigrants	
		Number	Percent of U.S. graduates		Number	Percent of U.S. graduates		Number	Percent of U.S. graduates
1956	45,948	1,022	2.2	31,646	2,804	8.9	9,862	1,547	15.7
1962	71,307	1,104	1.5	44,851	2,940	6.6	10,392	1,912	18.4
1963	77,149	1,612	2.1	44,471	4,014	9.0	10,469	2,270	21.7
1964	86,574	1,676	1.9	47,746	3,725	7.8	10,538	2,409	22.9
1965	93,368	1,549	1.6	50,975	3,455	6.8	10,482	2,194	20.9
1966 [3]	99,145	1,852	1.9	51,785	4,921	9.5	10,580	2,761	26.1

[1] Baccalaureate or higher degrees.
[2] Doctorates in medicine and dentistry.
[3] 1966 figures for scientists and physicians are Office of Education estimates.

Sources: Immigration figures, app. A. Figures on U.S. graduates from "Scientific and Technical Manpower Resources," National Science Foundation, NSF 64–28, tables V–13, V–16, and V–19 for 1956, 1962, and 1963. Data for 1964 and 1965 furnished by the Office of Economic and Manpower Studies, National Science Foundation. Data for 1966 furnished by the Division of Statistical Analysis, Office of Education.

The case is different for engineers and greatly different for physicians. Immigrant engineers were not only a larger percentage of U.S. output in fiscal 1966 than in 1956 but nearly 10 percent of that output. Immigrant physicians were an astounding 26 percent of domestic output in fiscal 1966, the ratio having risen more than 1.5 times in the decade. Contributions of this magnitude to U.S. scientific manpower can hardly be regarded as unimportant.

Another test of significance is one of judgment on continuance of the present rising trend of immigration of scientists, engineers, and physicians.

According to the figures in table IV, the total immigration of the three occupational categories from 1956 to 1962 rose sharply during the 2 years 1963 and 1964, declined in 1965, and then, again, rose steeply in 1966. These figures reflect a 1962 liberalization in the former immigration law which permitted people, having special educational and skill qualifications and having immigration applications on file as of April 1, 1962, to enter without regard to national quotas.[4] In 1963 and 1964, therefore, immigration from Asia rose dramatically but subsided in 1965 as those covered by the liberalization utilized their rights.

[4] 76 Stat. 1247.

In 1966, the first stage in the abandonment of the national origins quotas took place. Again, there was a large rise in immigration from Asia.

TABLE IV.—*Immigration into the United States of scientists, engineers, and physicians, by geographic areas, fiscal years 1956 and 1962–66*

Geographic area	1956	1962	1963	1964	1965	1966
Total	5,475	6,148	8,127	8,093	7,502	9,875
Europe	2,419	2,267	2,915	3,092	2,997	3,612
Asia [1]	535	772	1,658	1,265	824	2,736
North America	1,940	2,328	2,550	2,562	2,704	2,591
South America	512	695	866	1,051	871	807
Africa	69	86	138	123	106	129

[1] Includes Oceania.

Source: App. A.

The new law stages the departure from the national origins basis for immigration in two more steps to take place in fiscal 1967 and fiscal 1968. From the beginning of fiscal 1969 onward, non-Western Hemisphere countries will be limited to a global quota of 170,000 persons, of whom about 17,000 could be professionals and highly trained technicians. Western Hemisphere countries have no preference class limitations and a hemispheric total of 120,000 persons may immigrate annually.

In view of the large rises in scientific immigration from Asia following national quota liberalizations in the past, there is no reason to believe that there will not be a continued steady rise in Asian immigration, as the fiscal 1967 and fiscal 1968 liberalizations go into effect. This, in turn, could boost total immigration of scientists, engineers, and physicians above the 1966 figure of 9,534, limited ultimately by a cutoff point around 17,000.[5]

The prospect of increases in scientific immigration in fiscal 1967 and 1968 is supported by visa information provided by the Department of State. The number of qualified "professional, technical, and kindred workers" waiting in line but who could not be accommodated by immigration visas rose from about 3,000 in June 1966 to 8,400 in June 1967. The 3,000 will be reflected in the actual immigration figures for fiscal 1967, and the 8,000 for fiscal 1968. If past proportions continue, roughly a third of these individuals waiting in line are scientists, engineers, and physicians. Adding these to the numbers who will apply and be approved on a current basis, total scientific immigration may assume vaster proportions in the immediate future than it has to date.

WHAT IS THE SHARE OF THE DEVELOPING COUNTRIES IN THE SCIENTIFIC BRAIN DRAIN?

Whatever may be the total scientific brain drain into the United States, it is important to distinguish between immigration from the advanced countries and immigration from the developing countries.

[5] Out of the "third preference" class total of 17,000 persons, a quota for dependents of qualified persons must be filled. This would mean perhaps half of the 17,000 would be principals. However, the "sixth preference" class intended for skilled artisans, totaling another 17,000, is not only usable for those who qualify for "third preference" but has been so used already. Therefore, a total of 17,000 for professional people could come in, with their dependents, by using both third and sixth preference quota numbers.

Advanced countries may suffer flights of talent, but they usually have the advantage of large reserves. Also, they possess financial and other resources with which they can offset outflow by attracting back migrants, by draining talent from others, or by increasing domestic supply. For example, there is considerable evidence that Britain and Canada, both of whom have suffered losses of home talent to the United States, were at the same time beneficiaries of large inflows from third countries.[6]

The poorer countries do not have large talent reserves. They lack money and institutional resources which could attract foreign talent. And with many competing demands for public and private investment, an enlarged domestic output of professionals requiring long and costly training is not a likely first priority for developing countries. Thus, in their case, the departure of professionals like scientists, engineers, and physicians is often an "unrequited" export—an involuntary gift of valuable resources to other countries.

Such a loss by the developing countries is of direct concern to the United States. To the extent that it undermines development, it also defeats a major U.S. foreign policy objective for the sake of which this country is currently spending about $3.7 billion per year in bilateral and multilateral foreign aid. Also, to offset scientific talent drain in the countries which it is aiding, the United States may have to divert aid funds to supply experts, to train replacements for exported manpower, or to build and to maintain facilities for higher education and training. The United States, therefore, could be confronted with either the cost of delayed development or an opportunity cost in relatively unproductive aid expenditures, or both.

Has the United States succeeded in confining its lures for scientific professionals to those from the developed countries?

The figures in tables V and VI show the facts to be to the contrary. A large and rising share of the immigration into the United States of scientists, engineers, and physicians is from the developing countries. And these figures probably substantially understate the actual share from the developing countries since Canada, counted as a developed country, is a way station for many who ultimately migrate to the United States.[7]

TABLE V.—*Immigration into the United States of scientists, engineers, and physicians, fiscal years 1956 and 1962–66*

Fiscal year	Total, all countries		Developed countries		Developing countries	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
1956	5,373	100.0	3,604	67.1	1,769	32.9
1962	5,956	100.0	3,573	60.0	2,383	40.0
1963	7,896	100.0	4,534	57.4	3,362	42.6
1964	7,810	100.0	4,607	59.0	3,203	41.0
1965	7,198	100.0	4,548	63.2	2,650	36.8
1966	9,534	100.0	5,144	54.0	4,390	46.0

Note.—Developed countries include the European countries, Canada, Japan, South Africa, Australia, and New Zealand. Developing countries are all other countries.

Source: App. A.

[6] (British) Committee on Manpower Resources for Science and Technology, *Report on the 1965 Triennial Manpower Survey of Engineers, Technologists, Scientists and Technical Supporting Staff*, London. H. M. Stationery Office, October 1966, p. 36; also Harry C. Johnson, infra, footnote 22, p. 14.

[7] According to unpublished NSF data, only 1,844 out of 3,460 immigrating scientists in 1962–64 from Canada were Canadian born. Also, some Japanese officials believe that Japan, a developed country, is becoming a "parking place" for students from Southeast Asia who are in Japan until they can qualify for permanent residence in the United States.

TABLE VI.—*Percentage share of developing countries in immigration into the United States of scientists, engineers, and physicians, fiscal years 1956 and 1962–66*

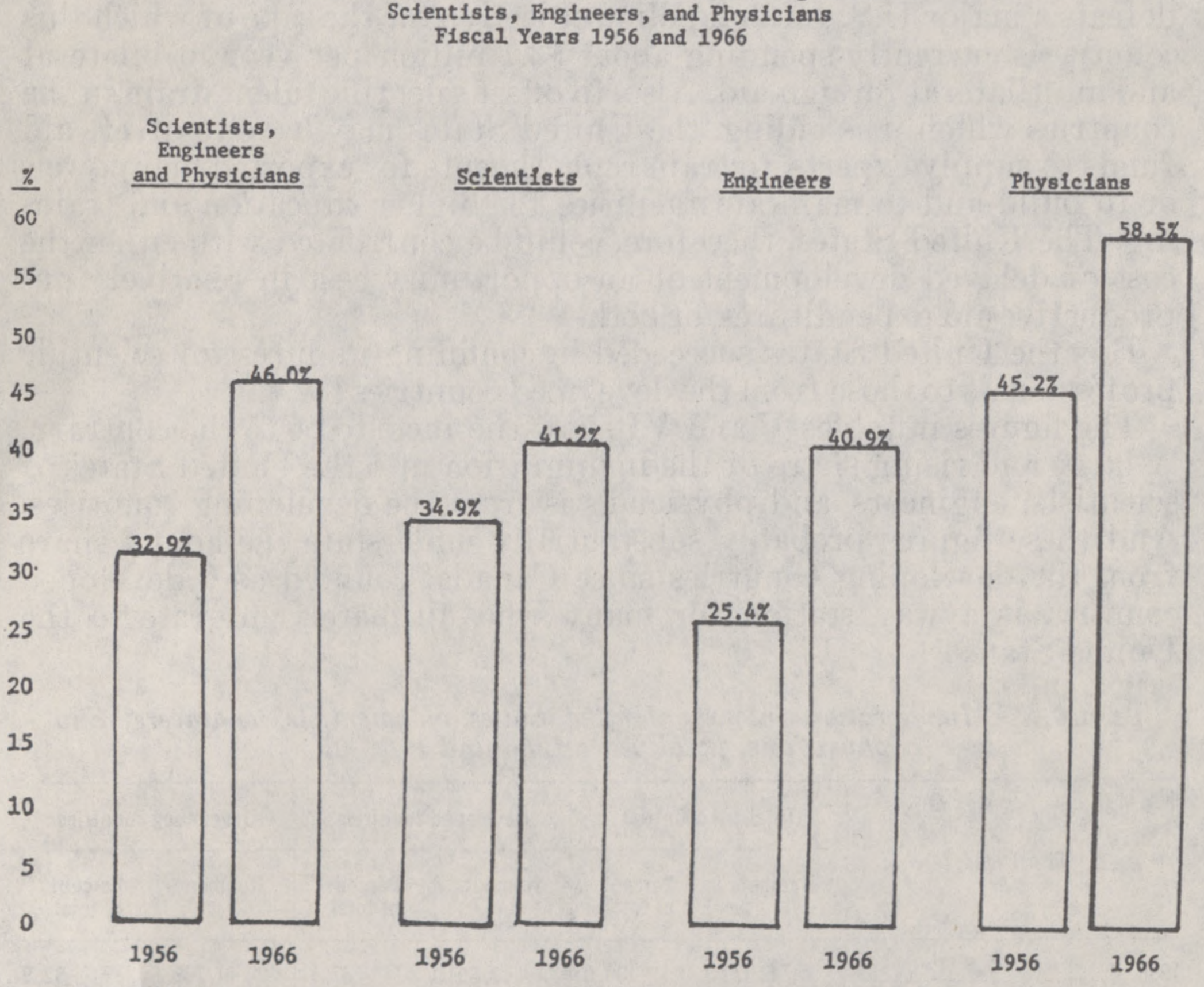
Fiscal year	Total, 3 groups	Scientists	Engineers	Physicians
1956	32.9	34.9	25.4	45.2
1962	40.0	26.9	33.5	57.6
1963	42.6	34.9	40.9	51.0
1964	41.0	32.6	36.8	53.3
1965	36.8	27.0	30.4	53.8
1966	46.0	41.2	40.9	58.5

Source: App. A.

In the period, 1956–66, the share of the developing countries went up from 32.9 percent to 46 percent of the total. In fiscal 1966 they provided 41.2 percent of the immigrant scientists, 40.9 percent of the engineers, and a massive 58.5 percent of the physicians. (See chart I.)

CHART I

Share of Developing Countries in the Immigration of Scientists, Engineers, and Physicians Fiscal Years 1956 and 1966



Source: Table VI

Of the total scientific immigration of 4,390 from the developing countries in fiscal 1966, nearly 60 percent were from the 13 countries which have received the bulk of U.S. aid in recent years. (See table VII.)

TABLE VII.—*Immigration into the United States of scientists, engineers, and physicians from selected developing countries, fiscal years 1956 and 1962–66*

	1956	1962	1963	1964	1965	1966
All developing countries	1,769	2,383	3,362	3,203	2,650	4,390
Major recipients of U.S. foreign aid:[1]						
Group 1	317	619	1,150	710	612	1,637
Brazil	121	87	100	85	98	96
Chile	29	34	49	50	51	33
Columbia	65	131	179	268	193	205
Dominican Republic	28	122	111	61	58	109
India	43	79	349	111	100	896
Korea	6	71	155	43	30	139
Pakistan	(2)	16	20	22	11	40
Turkey	25	73	179	67	68	114
Vietnam	(2)	6	8	3	3	5
Group 2	253	346	588	721	293	926
China (Taiwan)	117	36	190	455	47	234
Iran	27	83	66	86	73	179
Israel	71	86	112	91	83	116
Philippines	38	141	220	89	90	397
Total, 13 countries	570	965	1,738	1,431	905	2,563

[1] Group 1 countries together received 79 percent of all U.S. bilateral aid in fiscal 1966; group 2 countries were very recently included among major U.S. aid recipients.
[2] Not available.

Source: App. A.

In a recent statement, Dr. Charles V. Kidd estimated that scientific professionals have cost their countries of origin at least $20,000 per person in education and training.[8] By this measure, the 4,390 scientists, engineers, and physicians immigrating from the developing countries in fiscal year 1966 represent a contribution of some $88 million to the United States. Of this amount, the 13 countries which have been the major targets of the U.S. aid program, contributed more than $50 million to the United States in the form of 2,563 scientific professionals. The estimated "reverse foreign aid" more than offsets the $40,285,000 spent in U.S. aid funds to give technical training to about 16,000 persons from the developing countries, of whom perhaps 25 to 30 percent were scientists, engineers, and similar specialists.[9]

A second measure of the cost of the scientific brain drain to developing countries is its size relative to the additions to the scientist population of the countries by new graduates.

Table VIII shows 1962 data for a number of the major recipients of U.S. aid.[10] The significance of even a small number of emigrants can be seen in the case of some countries. For example, while the Dominican Republic sent us only 78 physicians in 1962, they were more than a third of the country's additions to stock in that year. The 44 emigrating Dominican engineers were more than two-thirds of the country's new graduates. Chile's 18 engineers who came to the United States were the equivalent of a fifth of its additions through new graduates. Israel's 30 physicians were an astounding 41.7 percent of its additions to the physician population of the country.

[8] Kidd, app. B.
[9] Technical training data supplied by the Agency for International Development.
[10] Data for 1962 are used for this comparison since 1962 is the most recent year for which comparable worldwide data are available on university degrees granted, by field of study.

TABLE VIII.—*Comparison of the number of scientists, engineers, and physicians graduating in the developing countries and the number emigrating to the United States in 1962*

Country	Scientists			Engineers			Physicians		
	Graduates	Immigrants	Immigrants as percent of graduates	Graduates	Immigrants	Immigrants as percent of graduates	Graduates	Immigrants	Immigrants as percent of graduates
Brazil	60	13	21.7	1,373	45	3.3	3,305	29	0.9
Chile (1961)	86	9	10.5	90	18	20.0	334	7	2.1
China (Taiwan)	595	10	1.7	1,358	21	1.5	289	5	1.7
Colombia	44	8	18.2	575	41	7.1	533	82	15.4
Dominican Republic	(1)	(1)	(1)	65	44	67.7	231	78	33.8
Israel (1960)	161	7	4.3	666	49	7.4	72	30	41.7
Korea	1,394	17	1.2	1,522	16	1.0	2,251	19	.8
Philippines	451	5	1.1	4,253	13	.3	5 655	123	2.2
Turkey	74	5	6.8	1,160	36	3.1	1,099	32	2.9
Vietnam	34	-------	-------	54	6	11.1	121	-------	-------

[1] All natural science graduates are included in medical sciences, here labeled "physicians."

Source: UNESCO Statistical Yearbook 1964 (Paris, 1966), table 20, "Education at the Third Level: Graduates by Field of Study," pp. 288–305; and the Immigration and Naturalization Service, "Immigration Into the United States of Scientists, Engineers, and Medical Personnel by Country of Last Residence, Fiscal Year 1962." Data on Brazil, Chile, and Colombia are from the Pan American Union, America En Cifras 1965 (Washington, D.C., 1967).

But it would be a mistake to state the loss to developing countries merely in terms of numbers of persons or of some estimate of the monetary cost of their education and training. The loss of even a few exceptional individuals in a poor country can mean an important development venture not undertaken, the denial of high-quality instruction and training for the future leaders of development, and the diminution of the energy, drive, and vision without which there is no development. According to a recent Pan American Health Organization study:

> 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.[11]

But despite losses in immigration to the United States, have the developing countries been able to build up their scientific manpower, through an increased flow of graduates from U.S. colleges and universities? Unfortunately, figures on foreign student graduates are not compiled by anyone, so direct evidence is lacking. A rough estimate may, however, be hazarded.

In the academic year 1963, there were enrolled a total of 22,510 students from the developing countries in the physical and natural

[11] Pan American Health Organization and World Health Organization, "Migration of Health Personnel, Scientists and Engineers From Latin America," September 1966 (Washington, D.C.), p. 8.

sciences, medical sciences, and engineering. (See table IX.) If it is assumed that these students earned B.A. and advanced degrees 4 years later in the same relative proportions as U.S. students do, some 17 percent of the undergraduates would have received B.A. degrees and about 34 percent of the graduates would have earned advanced degrees in 1966. Nearly half of all foreign students are graduates rather than undergraduates. Therefore, it may be hazarded that in 1966 around 6,000 new graduates from U.S. colleges and universities were added to the scientific manpower of the developing countries. Since the present enrollment is higher than in 1963, the crop of graduates 4 years hence should also rise.

TABLE IX.—*Comparison of foreign student enrollment in U.S. colleges and universities and immigration from developing countries, fiscal years 1956 and 1962–66* [1]

Year	Foreign student enrollment [1]	Immigration [1]
1956	10,856	1,769
1962	19,955	2,383
1963	22,510	3,362
1964	25,972	3,203
1965	28,751	2,650
1966	28,419	4,390

[1] Enrollments include only those students majoring in the physical sciences, medical sciences, and engineering; immigration figures include only scientists, engineers, and physicians.

Source: Enrollment figures from Institute of International Education annual issues of Open Doors; immigration figures from app. A.

This would be a cheerful outlook but for the fact that immigration is rising. Instead of the 2,500–3,000 total of past years, 1966 immigration of scientific professionals from the developing countries increased to 4,390. At the previous levels of immigration, developing countries with 6,000 new graduates could have offset their immigration losses and still had a sizable net gain—of five or six out of every 10 graduates. But with a rise in immigration to 4,390, the actual net gain after offset of immigration losses was only three out of 10 new graduates.

Suppose immigration from the developing countries rises to 6,000 4 years hence—a not at all unlikely prospect in view of the liberalization in the immigration law.[12] The ratio of net gain by developing countries through new graduates might then be only one or two out of 10, since the 28,419 presently enrolled students should yield something over 7,000 graduates.

Over and above the direct levy in scientific manpower paid by the developing countries to the United States, whether from "reserves" or from the current crop of graduates, the developing countries suffer another cost. Many of their students, who do go home after study and research in the United States, are ill equipped for work in their own countries because the education and training they have shared in U.S. colleges and universities are naturally directed to the needs of this country. The sophisticated specialization in study, research, and application in U.S. science, engineering, and medicine, is not what developing countries usually need from their scientific professionals.

[12] See supra, p. 4, on immigration from Asia.

Mr. C. P. McMeekan, a New Zealand agricultural research scientist, states:

> * * * It is difficult to induce these young specialists to take on such mundane jobs as the testing of different cultivation practices, the better feeding of a pig, or the rather dirty routine of diagnosing pregnancy in a cow to provide a basis to better cow management systems.[13]

Prof. William C. Johnstone, Johns Hopkins School of Advanced International Studies, says of students from India and Asia:

> I encountered far too many foreign students who * * * had been given training of a sort, but wholly unrelated to the needs of their own countries.[14]

Dr. G. Halsey Hunt, executive director of the Educational Council for Foreign Medical Graduates, charges that American hospitals have been more interested in foreign manpower to fill the hospital service gap left by vacancies in internships and residencies than in training foreign medical graduates. He adds:

> * * * the United States can assume its rightful role in the training of foreign physicians, which I believe should have the specific design of training them to return home and raise the standards of medical practice in their home countries. * * *[15]

After an extensive study of foreign medical scientists in the United States, Dr. Kelly M. West, of the University of Oklahoma School of Medicine, found:

> [a] * * * significant defect [in] the frequency with which the character of the training provided lacks relevance to the future prospects of the foreign trainee. All too commonly, foreign trainees spend months or even years learning techniques or skills which require equipment not obtainable in their native country. * * *[16]

What Is the Relationship Between Federal Research and Development and the Scientific Brain Drain From the Developing Countries?

The sharp rise in the share of the developing countries—from a third to nearly half—in the scientific immigration of the past decade has its source in the changes in the U.S. immigration laws. However, the near doubling of total scientific immigration from 5,373 in 1956 to 9,534 in 1966, in which the developing countries had a rising share, cannot be so explained.

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[13] C. P. McMeekan, "What Kind of Agricultural Research?" Finance and Development. The International Monetary Fund and the International Bank for Reconstruction and Development, vol. II, No. 2 (June 1965), pp. 71–72.

[14] Proceedings of the Conference on the International Migration of Talent and Skills. Council on International Educational and Cultural Affairs of the U.S. Government, October 1966, p. 110.

[15] Ibid., p. 127.

[16] Kelly M. West "Training for Medical Research: The World Role of the United States," The Journal of Medical Education, vol. 39, No. 3 (March 1964), p. 260.

In the case of the scientists and engineers, have the immigrants, and specifically those from developing countries, been absorbed into research and development activities, the huge expansion of which is due largely to the Federal R. & D. programs? Or, have handicaps of language, inadequate previous education and training, and other factors diverted them to less demanding occupations?

Relevant information is available on both points from replies submitted in 1964 to the National Science Foundation and the Engineers Joint Council by scientists and engineers for the purpose of updating the National Register of Scientific and Technical Personnel. Among the 224,000 scientists and 57,000 engineers considered eligible for their respective registers, there were 6,387 scientists and 1,515 engineers born or educated in the developing countries. Selected data on the scientist and engineer register groups as a whole and on the foreign-origin groups are compared in table X.

TABLE X.—*Percentage of foreign-origin scientists and engineers from developing countries in R. & D. and teaching and their degree qualifications compared with all U.S. scientists and engineers, 1964*

	Scientists		Engineers	
	Foreign origin	U.S. total	Foreign origin	U.S. total
Percentage in R. & D	53	35	41	27
Research	50	30	12	6
Development or design	3	5	29	21
Percentage in teaching	19	18	6	4
Degree qualifications:				
Ph. D	53	38	15	5
Master's	32	27	28	17
Bachelor's	12	32	38	63
Other	3	2	19	15

Note:—The data on scientists are for persons whose secondary school was in such countries while those on engineers are for individuals born in such countries.

Sources: Data for U.S. scientists from National Science Foundation, American Science Manpower, 1964 (NSF 66–29); for U.S. engineers from Engineers Joint Council, Engineering Manpower in Profile; for foreign-origin scientists and engineers from special tabulations by NSF of data on individuals from non-OECD countries.

According to these comparisons, scientists and engineers from the developing countries are not only taking part in R. & D.; they are proportionately more heavily engaged in R. & D. than their U.S.-origin counterparts. More than half of the foreign-origin scientists are in R. & D., compared with 35 percent for all U.S. scientists; and 41 percent of the foreign-origin engineers compared with only 27 percent of all U.S. engineers are in R. & D.

Moreover, the foreign-origin scientists and engineers from the developing countries are of superior quality, when they are judged in terms of their academic attainments. Both groups have significantly larger proportions of Ph. D.'s and more master's degree holders relative to B.A.'s than the counterpart U.S. groups.

Further confirmation of the quality of the foreign-origin scientists and engineers is shown by their ability to contribute more than their proportionate share to teaching, an activity no less demanding of excellence than R. & D.

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Whether the strong participation in R. & D. and the exceptionally high quality of the National Register groups of foreign-origin scientists and engineers, hold true for those not studied, could only be resolved by a more comprehensive census. But even without a census, it can be surmised that immigrant scientists and engineers from developing countries are generally more likely than Americans to be working in the scientific professions rather than in management, production, sales, and other nonscientific activities. Before December 1, 1965, they could not have entered the country as scientists and engineers and then selected a job from a wide range of opportunities. Instead, each immigrant not only had to prove his credentials as a scientist or engineer. He was also required to have a definite job offer and to show that the job called for his particular scientific qualifications.

For this reason, the bulk of the immigrant scientists and engineers from developing countries who came into the country in the period 1956–66 are likely to be concentrated in scientific work. And since scientific work in this period has been dominated by the Federal R. & D. programs, the likelihood is great that scientific immigrants entered and remain here because their services are required in these programs.

The case appears to be different for physicians from the developing countries. According to the American Medical Association, only 1,100 out of an estimated total of 40,000 graduates of foreign medical schools in the United States are engaged full time in research. The overwhelming majority are practicing medicine, and a small number are teaching.[17] There is, therefore, little direct relationship between immigration and the volume of federally financed medical research.

But an important indirect relationship should be noted. The acute shortage of practicing physicians in the United States, which has created career opportunities for immigrants, is due in large part to the failure adequately to expand medical education and training. However, even the present inadequate growth in physican supply would have given us more doctors to tend patients, to teach, and to staff hospitals, and thus correspondingly reduced the demand for foreign physicians if an increasing number of M.D.'s were not going into research.

Between 1960 and 1965, the total supply of physicians in the United States rose from 274,834 to 305,115, a net increase of 30,281. However, about one-fifth of this increase, roughly 6,300, represented an increase in the numbers of physicians engaged in full-time research and not those in practice or teaching. Physicians in research rose in this period from 11,400 to 17,700.

The 17,700 research M.D.'s are far from being the major performers of medical research. But they are a significant fraction (28.5 percent) of an estimated total of 62,000 professionals engaged in biomedical research, the majority of whom are Ph. D. scientists. Most of both groups are in research because of the Federal medical research program.

To the extent that Federal demands for medical research have drawn physicians into research and away from practice and teaching, they have indirectly added to the inducements for foreign physicians to come to this country.

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[17] Data furnished by Dr. Harold Margulies, American Medical Association, Washington offices, June 27, 1967, based upon a recent AMA survey yet unpublished.

From the establishment in 1952 of a preferential immigration category for selected professionals, the Department of Labor has consistently held that nationwide manpower supply shortages justified the approval of immigration visas for a wide range of qualified scientists and engineers. These judgments appear to be based on estimates of long-term need rather than on year-to-year variations in demand. For example, a 1960 National Science Foundation report indicated that the supply of scientists and engineers had grown at an annual rate of about 5.1 percent in the decade 1950–60, and that manpower requirements in the decade to follow would expand at an even higher rate.[18]

By contrast, the actual demand in relation to supply for scientists and engineers has shown very large spurts and sags. For example, in mid-1962, public employment offices registered fewer than two applicants for every unfilled job in engineering occupations. This ratio changed drastically in 1964 when there were nearly four applicants for every listed unfilled job, hardly a situation of general shortage. In mid-1966, however, there were more unfilled jobs than applicants. The same general pattern of demand and supply was true for scientists also.

According to the Bureau of Employment Security, these changes are due in part to demand shifts in activities like construction, aircraft production, and defense procurement.

However, the sharpest changes have occurred because of the expansion or curtailment of defense or space research and development. In 1962, the acute shortage of scientists and engineers was attributed to "Government-sponsored research and development * * * formulative efforts in missiles, application of solid state electronic circuitry, and the establishment of the DEW-line and other defense systems."[19] In 1963 and 1964, this situation changed because of "cancellations of some projects such as Sky Bolt and Dyna-Soar, and completion of still others such as Titan II and the Ranger."[20] The 1965 and 1966 resurgence of demand for scientists and engineers is explained as due to space R. & D. requirements for the Apollo and Saturn programs and the Nimbus meteorological satellites, as well as to Vietnam military needs.

The powerful effect of even slight modifications in the massive Federal R. & D. program on the demand for U.S. scientists and engineers suggests that the demand for immigrant scientists and engineers, constituting an additional supply, could also be affected by R. & D. policies. If there should be less rapid growth in Federal R. & D. in the future and immigrants of exceptional ability continue to enter, the jobs they fill could increasingly be at the expense of a portion of locally trained manpower.

Views on the Brain Drain

(1) One view holds that the brain drain is just so much "hullabaloo." Scholars have been moving around for centuries to places which attract them. They just happen to be coming now in greater numbers to

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[18] National Science Foundation, "Scientists, Engineers, and Technicians in the 1960's: Requirements and Supply," NSF 63–34, pp. 7–8 and 67–68.

[19] "The Current Employment Market for Engineers, Scientists, and Technicians." Department of Labor, December 1966, p. 5.

[20] Ibid.

the United States because this country offers opportunities to the most talented that other countries do not or cannot give. The world of scholarship is clearly of enduring importance, transcending shorter term political or national considerations. What is good for the scholars is, therefore, good for the world, and the United States should not be misled into treating scholarly migration as a problem.[21]

(2) A related view holds that the brain drain is not a problem; it is a boon. The migration of talent does not cause one nation to lose and another to gain; instead there is mutual gain. As in the case of international trade and finance, movements of "human capital" in response to market demand maximize benefits for all participants, albeit in the long run. The gainers of manpower obviously benefit from their output. The losers also gain because they can share in the resulting advance in science and technology and receive remittances sent home by emigrants without investing in costly educational and research facilities to obtain the benefits. It would be consistent with this view to regard the draining of brains from relatively backward countries as a favor to them and any reduction in migration as a bad thing for the world.[22]

(3) The present U.S. official view [23] distinguishes between brain drain from the developed countries and the developing countries. With respect to the former, a net outflow of talent to the United States should not be regarded as a problem for this country. Developed countries have the resources, should they choose, to draw back a compensating inflow of talent, whether their own or from third countries. Developing countries would not have this recourse, but their brain drain has been exaggerated. To the extent that it does exist, U.S. action should be limited to "affirmative" ones like training more Americans to fill jobs now filled by foreigners, assisting foreign governments to recruit their own citizens for jobs at home, persuading American firms overseas to hire more U.S.-trained nationals, and financing foreign research and educational facilities.

If the brain drain from the developing countries does get worse, these countries and not the United States should assume the burden of restrictive action. While the magnetic "pull" of prosperity and opportunity in this country is as much the cause of the brain drain as the "push" of repelling forces in the less satisfactory societies of the poorer countries, nothing much can be done about the "pull" forces—the United States cannot weaken its economy in order to discourage immigration and it ought not to reinstate discriminatory immigration restrictions. Therefore, the developing countries should make themselves attractive to their scientists and professionals—in short, become developed—and the United States should help in this job.

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[21] See Howard J. Caquelin, counselor, University of Illinois, "Exchange or Immigration, the Phony Controversy," NAFSA Newsletter, National Association for Foreign Student Affairs, October 1965, p. 2.

[22] Herbert G. Grubel, associate professor of finance at the University of Pennsylvania, and Harry G. Johnson, professor of economics at the University of Chicago, have stated the arguments for this view. See, for example, Grubel, "The Brain Drain: A U.S. Dilemma," Science, Dec. 16, 1966, pp. 1420–23, and Johnson, "The Economics of the 'Brain Drain': The Canadian Case," Minerva, spring 1965, pp. 299–311.

[23] Statements of Assistant Secretary of State Charles Frankel and Charles V. Kidd, Office of Science and Technology, before the Immigration and Naturalization Subcommittee of the Senate Judiciary Committee, Mar. 6, 1967. (See app. B.) Also see "Some Facts and Figures on the Migration of Talent and Skills," prepared by the staff of the Council on International Educational and Cultural Affairs, Department of State, Feb. 21, 1967.

(4) A fourth view holds that there is a brain drain problem, particularly serious for developing countries. The flight of talent constitutes aid from the poorer to the richer countries in the amount of previous investment in the education and training of emigrants, substantially reversing U.S. efforts to help developing countries. It imposes high social costs on loser countries in the deprivation of essential services like medical care and teaching at universities. It deprives such countries of the future services of emigrants, some of whom are those rare few in any country with the qualities of leadership, creative ability, and entrepreneurship essential to development. Losses of such individuals in particular are seen as striking at the roots of development and likely to widen the gap between richer and poorer countries.[24]

Some experts who share this view believe that vigorous action by the United States, including administrative and legal measures, is necessary to cut down on the brain drain from the developing countries. Dr. James A. Perkins, president of Cornell University, would close "* * * selfish loopholes—the special waivers that allow students to stay here in our own 'national interest,' particularly if they can teach a foreign language or be useful to the defense department; the cynical exploitation of foreign students by the diploma mills; the all-too-easy solutions to our need for teaching assistants, laboratory aides, and medical workers, offered in the name of scholarships and fellowships * * *."[25]

Mr. Gregory Henderson, Senior Research Officer at the United Nations Institute for Training and Research, states that U.S. temporary visas, and especially student visas, have become "launching pads for immigration." Thus, he argues that adjustments in the status of foreign students and other visitors from temporary to permanent residents ought to be made less automatic.[26]

(5) A fifth view, which takes account of the data and analysis in this report, would call for a modification in the official U.S. position in a number of particulars: (a) a candid recognition by responsible officials of the Department of State, Office of Science and Technology, and the Agency for International Development that the scientific brain drain from the developing countries is a growing problem; (b) frank discussions with countries receiving U.S. aid of alternative cooperative measures to reduce drain; (c) greater efforts to expand the domestic U.S. supply of physicians and surgeons; and (d) consideration of the effects on foreign scientific manpower of proposed future major Federal R. & D. projects.

In this view, the United States should not agree to restrictions on permanent entry into the United States which would discriminate between scientific professionals from the developing countries and those from developed countries. But, for example, the United States might agree with an AID country to honor any commitments by the nationals of that country to return home at the end of a temporary period of education, training, or research in the United States.

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[24] John C. Shearer, in rebuttal of the Grundel position, states this view. Shearer, "In Defense of Traditional Views on the 'Brain Drain' Problem," International Educational and Cultural Exchange, fall 1966, pp. 17–25.

[25] James A. Perkins, "Foreign Aid and the Brain Drain," Foreign Affairs, July 1966, pp. 618–619.

[26] Mr. Henderson's position is set forth in the proceedings of the Conference on the International Migration of Talent and Skills, op. cit., pp. 120–124, and also in a letter to Senator Edward Kennedy, dated Mar. 8, 1967.

In addition to examining and improving upon present efforts to expand the domestic supply of physicians and surgeons, the United States, in this view, should weigh the brain drain consequences of any proposed major expansion in Federal R. & D. programs. This would be especially important in periods of stringent supply of domestic scientific manpower when added demand could be met only by drawing upon foreign talent.

APPENDIXES

Appendix A

[Tables I through VI are special tabulations of the immigration of scientists, engineers, and medical personnel, in the fiscal years 1956 and 1962–66, provided by the Immigration and Naturalization Service of the Department of Justice in response to a request by the subcommittee. Table VII shows for the same years the immigration of "professional, technical, and kindred workers," of which the selected occupational categories of tables I through VI are a part.]

TABLE I

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
ALL COUNTRIES	13,449	4,921	241	322	489	681	169
TOTAL DEVELOPED COUNTRIES	7,909	2,908	216	182	175	429	55
Europe	4,762	1,955	163	126	114	288	29
Austria	117	42	1	2	8	10	-
Belgium	63	16	1	-	1	2	1
Denmark	105	57	-	6	8	20	-
Finland	21	5	-	-	-	3	-
France	180	88	1	9	4	18	1
Germany	615	234	3	16	7	29	5
Greece	142	50	-	2	6	13	3
Ireland	175	22	1	2	2	6	-
Italy	185	62	1	6	9	4	-
Netherlands	129	43	2	5	1	7	-
Norway	149	59	1	3	16	3	-
Portugal	21	2	-	-	-	-	1
Spain	116	23	-	2	4	4	1
Sweden	195	83	3	5	11	5	1
Switzerland	297	153	2	16	1	28	2
United Kingdom	2,015	941	146	40	30	127	14
Other Europe	237	75	1	12	6	9	-
Asia	124	34	2	3	1	7	-
Japan	124	34	2	3	1	7	-
North America	2,827	859	48	47	50	129	26
Canada	2,827	859	48	47	50	129	26
Africa	32	7	-	1	-	-	-
South Africa	32	7	-	1	-	-	-
Oceania	164	53	3	5	10	5	-
Australia	136	47	3	4	9	5	-
New Zealand	28	6	-	1	1	-	-
TOTAL DEVELOPING COUNTRIES	5,540	2,013	25	140	314	252	114
Europe	119	45	-	5	6	6	3
Turkey (includes Asia)	119	45	-	5	6	6	3

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
Asia	2,820	1,353	15	92	190	152	85
Burma	20	11	-	-	3	-	-
China (includes Taiwan)	260	172	3	13	34	23	3
Hong Kong	242	121	2	3	14	16	5
India	925	645	4	45	75	62	65
Indonesia	7	4	-	-	-	1	1
Iran	188	86	2	3	23	7	2
Iraq	38	16	-	-	4	-	-
Israel	153	61	2	4	2	11	4
Jordan (incs. Arab Palestine)	25	12	-	1	3	1	-
Korea	173	53	1	10	3	8	1
Lebanon	69	26	-	3	8	3	-
Malaysia	24	9	-	1	1	2	1
Pakistan	41	21	-	2	6	4	-
Philippines	546	86	-	7	8	10	3
Syrian Arab Republic	25	9	-	-	2	1	-
Thailand	52	4	-	-	2	1	-
Vietnam	11	4	-	-	-	1	-
Other Asia	21	13	1	-	2	1	-
North America	1,488	323	3	20	73	50	13
Mexico	268	57	-	8	11	3	1
Other North America	140	38	-	3	5	6	5
Dominican Republic	142	38	-	-	15	3	1
Haiti	77	10	-	-	4	-	-
Other West Indies	681	153	3	8	32	34	6
Costa Rica	28	8	-	-	1	1	-
El Salvador	27	4	-	-	-	-	-
Guatemala	39	4	-	1	2	-	-
Honduras	35	6	-	-	2	2	-
Nicaragua	17	1	-	-	1	-	-
Panama	17	4	-	-	-	1	-
Other Central America	17	-	-	-	-	-	-
South America	984	260	5	23	35	41	12
Argentina	248	59	1	6	7	7	3
Bolivia	37	7	-	1	-	1	1
Brazil	114	35	2	4	1	7	1
Chile	48	16	-	-	1	4	1
Colombia	255	85	1	8	18	17	4
Ecuador	71	8	-	1	2	1	-
Paraguay	11	3	-	-	3	-	-
Peru	86	13	-	1	1	1	1
Uruguay	21	8	-	-	1	2	-
Venezuela	50	23	1	2	-	1	1
Other South America	43	3	-	-	1	-	-
Africa	122	29	2	-	9	3	1
Algeria	3	-	-	-	-	-	-
Ethiopia	5	-	-	-	-	-	-
Ghana	3	1	-	-	-	-	-
Kenya	4	2	1	-	-	1	-
Morocco	7	2	-	-	-	1	-
Nigeria	8	4	-	-	2	-	-
Tunisia	2	-	-	-	-	-	-
U.A.R. (Egypt)	51	9	1	-	2	1	1
Other Africa	39	11	-	-	5	-	-
All Other Countries	7	3	-	-	1	-	-

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092	093	040
ALL COUNTRIES	582	100	39	57	2,146	95
TOTAL DEVELOPED COUNTRIES	325	58	29	41	1,369	29
Europe	188	37	8	19	962	21
Austria	3	-	-	-	18	-
Belgium	1	-	-	-	9	1
Denmark	2	-	-	2	19	-
Finland	-	-	-	-	1	1
France	9	-	-	1	42	3
Germany	13	5	2	3	150	1
Greece	5	3	-	-	15	3
Ireland	3	-	-	-	8	-
Italy	8	1	-	-	32	1
Netherlands	5	-	-	-	23	-
Norway	3	-	-	1	30	2
Portugal	-	1	-	-	-	-
Spain	4	1	-	-	7	-
Sweden	4	-	-	1	52	1
Switzerland	15	1	-	3	84	1
United Kingdom	102	25	6	8	436	7
Other Europe	11	-	-	-	36	-
Asia	5	2	-	1	12	1
Japan	5	2	-	1	12	1
North America	127	18	20	19	369	6
Canada	127	18	20	19	369	6
Africa	-	1	1	1	3	-
South Africa	-	1	1	1	3	-
Oceania	5	-	-	1	23	1
Australia	4	-	-	1	20	1
New Zealand	1	-	-	-	3	-
TOTAL DEVELOPING COUNTRIES	257	42	10	16	777	66
Europe	6	-	-	-	14	5
Turkey (includes Asia)	6	-	-	-	14	5

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092	093	040
Asia	182	25	5	7	553	47
Burma	–	1	1	–	6	–
China (includes Taiwan)	18	4	1	1	62	10
Hong Kong	10	1	–	1	66	3
India	95	12	2	3	259	23
Indonesia	1	–	–	–	1	–
Iran	8	1	–	1	37	2
Iraq	1	1	–	–	10	–
Israel	8	–	–	–	29	1
Jordan (incs. Arab Palestine)	3	–	–	–	4	–
Korea	3	3	–	–	22	2
Lebanon	4	1	–	–	7	–
Malaysia	–	–	1	–	3	–
Pakistan	2	–	–	–	6	1
Philippines	25	1	–	1	28	3
Syrian Arab Republic	3	–	–	–	3	–
Thailand	1	–	–	–	–	–
Vietnam	–	–	–	–	3	–
Other Asia	–	–	–	–	7	2
North America	39	5	2	6	102	10
Mexico	6	2	–	1	21	4
Other North America	5	2	–	–	9	3
Dominican Republic	3	–	–	1	14	1
Haiti	–	–	–	–	6	–
Other West Indies	23	1	–	3	42	1
Costa Rica	2	–	1	–	2	1
El Salvador	–	–	–	1	3	–
Guatemala	–	–	–	–	1	–
Honduras	–	–	–	–	2	–
Nicaragua	–	–	–	–	–	–
Panama	–	–	1	–	2	–
Other Central America	–	–	–	–	–	–
South America	28	12	3	3	95	3
Argentina	6	6	–	–	23	–
Bolivia	2	–	–	–	2	–
Brazil	2	1	–	–	15	2
Chile	1	1	1	1	6	–
Colombia	9	2	1	–	24	1
Ecuador	1	–	–	–	3	–
Paraguay	–	–	–	–	–	–
Peru	2	–	–	–	7	–
Uruguay	1	2	–	–	2	–
Venezuela	4	–	1	2	11	–
Other South America	–	–	–	–	2	–
Africa	2	–	–	–	11	1
Algeria	–	–	–	–	–	–
Ethiopia	–	–	–	–	–	–
Ghana	–	–	–	–	1	–
Kenya	–	–	–	–	–	–
Morocco	–	–	–	–	1	–
Nigeria	–	–	–	–	2	–
Tunisia	–	–	–	–	–	–
U.A.R. (Egypt)	1	–	–	–	3	–
Other Africa	1	–	–	–	4	1
All Other Countries	–	–	–	–	2	–

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
ALL COUNTRIES	1,852	125	33	27	137	58	32	838
TOTAL DEVELOPED COUNTRIES	1,089	46	25	13	74	21	16	493
Europe	760	32	21	7	57	8	6	369
Austria	25	-	2	-	3	-	-	13
Belgium	11	-	-	-	2	-	-	5
Denmark	6	-	-	-	1	-	-	4
Finland	2	-	1	-	-	-	-	1
France	24	-	-	1	4	-	1	7
Germany	112	3	2	-	6	1	-	51
Greece	36	9	1	1	3	-	1	17
Ireland	17	-	-	-	1	-	-	13
Italy	45	4	2	1	-	-	-	23
Netherlands	28	-	-	-	3	-	-	17
Norway	11	2	4	-	-	-	-	1
Portugal	8	4	-	-	-	-	-	2
Spain	8	-	1	-	-	-	-	4
Sweden	12	-	-	-	1	-	-	6
Switzerland	75	1	-	-	5	2	-	50
United Kingdom	310	7	3	4	25	4	3	142
Other Europe	30	2	5	-	3	1	1	13
Asia	41	5	-	1	3	1	4	8
Japan	41	5	-	1	3	1	4	8
North America	246	8	3	5	14	10	2	103
Canada	246	8	3	5	14	10	2	103
Africa	3	-	-	-	-	-	1	1
South Africa	3	-	-	-	-	-	1	1
Oceania	39	1	1	-	-	2	3	12
Australia	29	1	1	-	-	1	3	7
New Zealand	10	-	-	-	-	1	-	5
TOTAL DEVELOPING COUNTRIES	763	79	8	14	63	37	16	345
Europe	12	-	-	-	-	-	1	5
Turkey (includes Asia)	12	-	-	-	-	-	1	5

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
Asia	472	19	2	12	29	29	10	237
Burma	1	–	–	–	–	–	–	1
China (includes Taiwan)	45	–	–	1	6	2	1	22
Hong Kong	47	1	–	–	3	–	–	31
India	209	7	–	6	9	16	6	109
Indonesia	3	–	–	–	–	–	–	3
Iran	13	1	1	–	–	1	–	8
Iraq	14	1	–	1	1	2	–	6
Israel	23	1	–	1	2	2	–	5
Jordan (incs. Arab Palestine)	6	1	–	1	–	–	1	3
Korea	51	–	–	1	4	3	–	25
Lebanon	13	2	–	1	–	1	1	5
Malaysia	5	1	–	–	1	–	–	–
Pakistan	8	2	–	–	1	1	–	3
Philippines	31	2	1	–	2	1	1	14
Syrian Arab Republic	3	–	–	–	–	–	–	2
Thailand	–	–	–	–	–	–	–	–
Vietnam	–	–	–	–	–	–	–	–
Other Asia	–	–	–	–	–	–	–	–
North America	146	43	5	2	17	6	3	48
Mexico	36	13	–	–	1	–	–	18
Other North America	32	2	–	–	7	4	2	8
Dominican Republic	12	11	1	–	–	–	–	–
Haiti	4	4	–	–	–	–	–	–
Other West Indies	49	7	2	1	6	2	1	21
Costa Rica	3	1	1	–	1	–	–	–
El Salvador	1	1	–	–	–	–	–	–
Guatemala	2	1	–	–	–	–	–	1
Honduras	2	–	1	–	1	–	–	–
Nicaragua	3	2	–	–	1	–	–	–
Panama	–	–	–	–	–	–	–	–
Other Central America	2	1	–	1	–	–	–	–
South America	114	11	–	–	17	1	–	50
Argentina	31	1	–	–	2	–	–	20
Bolivia	5	2	–	–	1	–	–	–
Brazil	19	–	–	–	1	1	–	11
Chile	5	1	–	–	1	–	–	1
Colombia	30	4	–	–	11	–	–	8
Ecuador	6	2	–	–	–	–	–	3
Paraguay	2	–	–	–	–	–	–	2
Peru	8	1	–	–	–	–	–	1
Uruguay	1	–	–	–	–	–	–	1
Venezuela	6	–	–	–	1	–	–	2
Other South America	1	–	–	–	–	–	–	1
Africa	19	6	1	–	–	1	2	5
Algeria	–	–	–	–	–	–	–	–
Ethiopia	–	–	–	–	–	–	–	–
Ghana	–	–	–	–	–	–	–	–
Kenya	–	–	–	–	–	–	–	–
Morocco	–	–	–	–	–	–	–	–
Nigeria	1	1	–	–	–	–	–	–
Tunisia	–	–	–	–	–	–	–	–
U.A.R. (Egypt)	13	2	–	–	–	1	2	5
Other Africa	5	3	1	–	–	–	–	–
All Other Countries	–	–	–	–	–	–	–	–

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	135	174	140	045	145	052
ALL COUNTRIES	83	15	52	63	250	65	52	22
TOTAL DEVELOPED COUNTRIES	58	11	40	34	188	20	36	14
Europe	15	5	32	18	138	14	30	8
Austria	-	-	3	-	3	-	1	-
Belgium	-	-	-	1	-	2	1	-
Denmark	-	-	-	-	1	-	-	-
Finland	-	-	-	-	-	-	-	-
France	-	-	1	1	6	1	2	-
Germany	3	1	4	-	29	2	9	1
Greece	-	-	1	-	1	1	-	1
Ireland	-	-	-	-	3	-	-	-
Italy	2	1	2	-	5	2	3	-
Netherlands	1	-	1	-	5	-	1	-
Norway	-	-	1	-	2	-	1	-
Portugal	-	-	1	-	-	-	1	-
Spain	-	-	-	-	1	-	1	1
Sweden	1	-	-	1	1	-	1	1
Switzerland	1	-	1	-	12	3	-	-
United Kingdom	6	3	16	13	68	3	9	4
Other Europe	1	-	1	2	1	-	-	-
Asia	2	1	1	1	11	2	1	-
Japan	2	1	1	1	11	2	1	-
North America	33	5	7	14	31	2	3	6
Canada	33	5	7	14	31	2	3	6
Africa	1	-	-	-	-	-	-	-
South Africa	1	-	-	-	-	-	-	-
Oceania	7	-	-	1	8	2	2	-
Australia	4	-	-	1	7	2	2	-
New Zealand	3	-	-	-	1	-	-	-
TOTAL DEVELOPING COUNTRIES	25	4	12	29	62	45	16	8
Europe	1	-	-	-	3	2	-	-
Turkey (includes Asia)	1	-	-	-	3	2	-	-

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	134	174	140	045	145	052
Asia	8	1	10	23	43	33	11	5
Burma	–	–	–	–	–	–	–	–
China (includes Taiwan)	–	–	1	4	4	1	1	2
Hong Kong	1	–	1	4	2	4	–	–
India	4	–	4	6	19	15	5	3
Indonesia	–	–	–	–	–	–	–	–
Iran	–	–	–	–	1	1	–	–
Iraq	–	–	1	–	1	1	–	–
Israel	1	–	3	2	4	1	1	–
Jordan (incs. Arab Palestine)	–	–	–	–	–	–	–	–
Korea	–	–	–	–	7	10	1	–
Lebanon	1	–	–	1	1	–	–	–
Malaysia	–	1	–	–	1	–	1	–
Pakistan	–	–	–	1	–	–	–	–
Philippines	–	–	–	5	3	–	2	–
Syrian Arab Republic	1	–	–	–	–	–	–	–
Thailand	–	–	–	–	–	–	–	–
Vietnam	–	–	–	–	–	–	–	–
Other Asia	–	–	–	–	–	–	–	–
North America	3	1	–	3	9	4	1	1
Mexico	–	–	–	2	1	1	–	–
Other North America	2	–	–	–	6	–	–	1
Dominican Republic	–	–	–	–	–	–	–	–
Haiti	–	–	–	–	–	–	–	–
Other West Indies	1	1	–	1	2	3	1	–
Costa Rica	–	–	–	–	–	–	–	–
El Salvador	–	–	–	–	–	–	–	–
Guatemala	–	–	–	–	–	–	–	–
Honduras	–	–	–	–	–	–	–	–
Nicaragua	–	–	–	–	–	–	–	–
Panama	–	–	–	–	–	–	–	–
Other Central America	–	–	–	–	–	–	–	–
South America	11	2	2	3	6	5	4	2
Argentina	1	–	–	–	2	1	3	1
Bolivia	2	–	–	–	–	–	–	–
Brazil	–	–	1	2	2	1	–	–
Chile	–	–	–	–	1	1	–	–
Colombia	4	1	–	–	1	–	1	–
Ecuador	–	1	–	–	–	–	–	–
Paraguay	–	–	–	–	–	–	–	–
Peru	1	–	1	1	–	2	–	1
Uruguay	–	–	–	–	–	–	–	–
Venezuela	3	–	–	–	–	–	–	–
Other South America	–	–	–	–	–	–	–	–
Africa	2	–	–	–	1	1	–	–
Algeria	–	–	–	–	–	–	–	–
Ethiopia	–	–	–	–	–	–	–	–
Ghana	–	–	–	–	–	–	–	–
Kenya	–	–	–	–	–	–	–	–
Morocco	–	–	–	–	–	–	–	–
Nigeria	–	–	–	–	–	–	–	–
Tunisia	–	–	–	–	–	–	–	–
U.A.R. (Egypt)	2	–	–	–	–	1	–	–
Other Africa	–	–	–	–	1	–	–	–
All Other Countries	–	–	–	–	–	–	–	–

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
		172	035	173	050	175	053
ALL COUNTRIES	341	126	38	63	34	29	51
TOTAL DEVELOPED COUNTRIES	190	82	15	43	18	17	15
Europe	115	55	9	21	10	11	9
Austria	1	–	–	–	1	–	–
Belgium	2	2	–	–	–	–	–
Denmark	1	–	–	1	–	–	–
Finland	1	–	–	1	–	–	–
France	7	6	–	–	–	1	–
Germany	17	8	5	1	–	1	2
Greece	3	–	–	1	–	1	1
Ireland	2	–	1	–	–	1	–
Italy	8	5	–	1	1	–	1
Netherlands	3	–	–	2	–	–	1
Norway	6	–	–	4	1	1	–
Portugal	1	–	–	–	1	–	–
Spain	4	1	–	–	1	–	2
Sweden	6	5	–	–	–	1	–
Switzerland	6	4	–	1	–	1	–
United Kingdom	32	11	3	9	4	3	2
Other Europe	15	13	–	–	1	1	–
Asia	4	–	1	1	1	–	1
Japan	4	–	1	1	1	–	1
North America	62	26	4	19	5	4	4
Canada	62	26	4	19	5	4	4
Africa	–	–	–	–	–	–	–
South Africa	–	–	–	–	–	–	–
Oceania	9	1	1	2	2	2	1
Australia	6	1	1	1	2	1	–
New Zealand	3	–	–	1	–	1	1
TOTAL DEVELOPING COUNTRIES	151	44	23	20	16	12	36
Europe	1	–	–	–	–	1	–
Turkey (includes Asia)	1	–	–	–	–	1	–

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
	172	035	173	050	175	053	
Asia	82	11	16	9	12	7	27
Burma	1	–	–	–	–	–	1
China (includes Taiwan)	8	–	4	–	–	–	4
Hong Kong	3	–	–	–	2	–	1
India	21	2	6	1	3	1	8
Indonesia	–	–	–	–	–	–	–
Iran	3	–	–	1	–	–	2
Iraq	1	–	–	–	–	–	1
Israel	11	3	–	5	–	3	–
Jordan (incs. Arab Palestine)	–	–	–	–	–	–	–
Korea	15	2	4	–	2	–	7
Lebanon	5	3	–	–	1	–	1
Malaysia	–	–	–	–	–	–	–
Pakistan	1	–	–	–	–	1	–
Philippines	10	1	–	2	4	1	2
Syrian Arab Republic	2	–	2	–	–	–	–
Thailand	1	–	–	–	–	1	–
Vietnam	–	–	–	–	–	–	–
Other Asia	–	–	–	–	–	–	–
North America	26	11	3	3	4	2	3
Mexico	5	1	1	–	1	1	1
Other North America	5	1	1	–	1	1	1
Dominican Republic	1	–	–	1	–	–	–
Haiti	1	1	–	–	–	–	–
Other West Indies	8	6	1	1	–	–	–
Costa Rica	–	–	–	–	–	–	–
El Salvador	–	–	–	–	–	–	–
Guatemala	2	–	–	–	2	–	–
Honduras	2	2	–	–	–	–	–
Nicaragua	–	–	–	–	–	–	–
Panama	1	–	–	1	–	–	–
Other Central America	1	–	–	–	–	–	1
South America	34	19	3	5	–	1	6
Argentina	7	–	–	3	–	1	3
Bolivia	1	1	–	–	–	–	–
Brazil	3	2	–	1	–	–	–
Chile	3	1	–	–	–	–	2
Colombia	17	14	1	1	–	–	1
Ecuador	–	–	–	–	–	–	–
Paraguay	–	–	–	–	–	–	–
Peru	1	–	1	–	–	–	–
Uruguay	–	–	–	–	–	–	–
Venezuela	2	1	1	–	–	–	–
Other South America	–	–	–	–	–	–	–
Africa	7	3	1	2	–	1	–
Algeria	–	–	–	–	–	–	–
Ethiopia	1	1	–	–	–	–	–
Ghana	–	–	–	–	–	–	–
Kenya	–	–	–	–	–	–	–
Morocco	–	–	–	–	–	–	–
Nigeria	–	–	–	–	–	–	–
Tunisia	–	–	–	–	–	–	–
U.A.R. (Egypt)	2	–	–	2	–	–	–
Other Africa	4	2	1	–	–	1	–
All Other Countries	1	–	–	1	–	–	–

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
		162	071	150	151
ALL COUNTRIES	6,335	2,552	209	3,430	144
TOTAL DEVELOPED COUNTRIES	3,722	1,075	72	2,459	116
Europe	1,932	613	54	1,209	56
Austria	49	16	5	28	-
Belgium	34	17	2	15	-
Denmark	41	2	1	33	5
Finland	13	3	-	10	-
France	61	24	3	30	4
Germany	252	81	5	156	10
Greece	53	38	2	12	1
Ireland	134	22	2	108	2
Italy	70	43	4	23	-
Netherlands	55	11	-	44	-
Norway	73	6	4	60	3
Portugal	10	4	-	4	2
Spain	81	56	10	13	2
Sweden	94	20	2	63	9
Switzerland	63	27	1	35	-
United Kingdom	732	187	5	523	17
Other Europe	117	56	8	52	1
Asia	45	31	1	13	-
Japan	45	31	1	13	-
North America	1,660	393	16	1,193	58
Canada	1,660	393	16	1,193	58
Africa	22	15	1	6	-
South Africa	22	15	1	6	-
Oceania	63	23	-	38	2
Australia	54	21	-	32	1
New Zealand	9	2	-	6	1
TOTAL DEVELOPING COUNTRIES	2,613	1,477	137	971	28
Europe	61	57	-	4	-
Turkey (includes Asia)	61	57	-	4	-

TABLE I—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1966

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
		162	071	150	151
Asia	913	557	32	314	10
Burma	7	5	-	2	-
China (includes Taiwan)	35	16	1	18	-
Hong Kong	71	26	3	38	4
India	50	40	2	7	1
Indonesia	-	-	-	-	-
Iran	86	78	2	6	-
Iraq	7	5	-	2	-
Israel	58	31	1	26	-
Jordan (incs. Arab Palestine)	7	6	-	1	-
Korea	54	35	-	17	2
Lebanon	25	14	2	9	-
Malaysia	10	5	-	5	-
Pakistan	11	11	-	-	-
Philippines	419	259	21	137	2
Syrian Arab Republic	11	9	-	2	-
Thailand	47	11	-	35	1
Vietnam	7	1	-	6	-
Other Asia	8	5	-	3	-
North America	993	462	58	457	16
Mexico	170	119	9	41	1
Other North America	65	49	4	9	3
Dominican Republic	91	59	6	26	-
Haiti	62	29	6	26	1
Other West Indies	471	177	30	257	7
Costa Rica	17	3	1	13	-
El Salvador	22	4	-	16	2
Guatemala	31	8	-	22	1
Honduras	25	4	1	19	1
Nicaragua	13	6	-	7	-
Panama	12	3	-	9	-
Other Central America	14	1	1	12	-
South America	576	355	44	175	2
Argentina	151	115	11	25	-
Bolivia	24	19	3	2	-
Brazil	57	33	9	15	-
Chile	24	11	1	12	-
Colombia	123	80	10	33	-
Ecuador	57	23	4	29	1
Paraguay	6	6	-	-	-
Peru	64	46	1	17	-
Uruguay	12	7	2	3	-
Venezuela	19	11	3	5	-
Other South America	39	4	-	34	1
Africa	67	45	3	19	-
Algeria	3	2	-	1	-
Ethiopia	4	4	-	-	-
Ghana	2	-	-	2	-
Kenya	2	1	-	1	-
Morocco	5	2	-	3	-
Nigeria	3	2	-	1	-
Tunisia	2	2	-	-	-
U.A.R. (Egypt)	27	23	2	2	-
Other Africa	19	9	1	9	-
All Other Countries	3	1	-	2	-

TABLE II

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
ALL COUNTRIES	11,749	3,455	69	162	401	446	134
TOTAL DEVELOPED COUNTRIES	8,145	2,403	56	112	207	326	81
Europe	4,806	1,429	25	64	122	191	45
Austria	88	29	-	1	4	6	-
Belgium	67	19	1	1	1	3	-
Denmark	97	39	-	5	5	9	-
Finland	10	2	-	1	-	1	-
France	168	77	1	4	8	11	4
Germany	761	225	4	7	7	24	8
Greece	84	33	-	1	1	8	3
Ireland	345	28	-	2	5	5	2
Italy	98	28	1	-	2	3	2
Netherlands	171	44	1	2	3	8	1
Norway	161	58	-	2	24	3	1
Portugal	5	1	-	-	-	-	-
Spain	103	16	1	2	2	3	-
Sweden	253	94	-	2	12	3	5
Switzerland	262	113	1	6	7	13	1
United Kingdom	1,926	574	15	25	37	87	15
Other Europe	207	49	-	3	4	4	3
Asia	44	15	1	1	1	3	-
Japan	44	15	1	1	1	3	-
North America	3,137	906	29	45	76	126	36
Canada	3,137	906	29	45	76	126	36
Africa	39	8	-	1	-	1	-
South Africa	39	8	-	1	-	1	-
Oceania	119	45	1	1	8	5	-
Australia	99	43	1	1	7	5	-
New Zealand	20	2	-	-	1	-	-
TOTAL DEVELOPING COUNTRIES	3,604	1,052	13	50	194	120	53
Europe	74	28	-	-	4	4	1
Turkey (includes Asia)	74	28	-	-	4	4	1

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
Asia	856	322	8	16	49	34	20
Burma	7	4	-	-	-	-	-
China (includes Taiwan)	57	25	-	1	2	1	1
Hong Kong	50	33	3	1	4	4	2
India	103	59	-	4	5	4	7
Indonesia	7	3	-	1	-	2	-
Iran	85	40	-	1	10	4	1
Iraq	31	14	-	-	6	1	2
Israel	120	37	1	3	2	4	3
Jordan (incs. Arab Palestine)	25	14	-	2	3	2	2
Korea	35	12	-	-	1	2	-
Lebanon	59	27	4	1	6	2	1
Malaysia	34	11	-	-	1	3	-
Pakistan	11	7	-	1	1	1	-
Philippines	134	12	-	1	2	1	-
Syrian Arab Republic	16	9	-	-	2	1	1
Thailand	53	4	-	-	1	-	-
Vietnam	4	2	-	-	-	-	-
Other Asia	25	9	-	-	3	2	-
North America	1,475	360	2	17	88	51	10
Mexico	269	59	1	2	13	14	3
Other North America	134	52	-	2	9	9	1
Dominican Republic	86	16	-	-	2	1	-
Haiti	86	28	-	-	8	4	1
Other West Indies	663	154	-	11	43	17	3
Costa Rica	60	10	-	-	1	2	1
El Salvador	36	5	-	-	2	-	-
Guatemala	34	7	-	1	2	-	-
Honduras	46	12	1	-	1	1	1
Nicaragua	21	5	-	-	2	1	-
Panama	28	8	-	-	4	2	-
Other Central America	12	4	-	1	1	-	-
South America	1,091	301	3	16	49	28	21
Argentina	331	88	2	2	12	5	6
Bolivia	53	10	-	-	1	-	1
Brazil	121	38	-	1	6	5	5
Chile	71	29	-	-	7	2	2
Colombia	267	71	-	7	12	10	5
Ecuador	70	13	-	1	4	2	-
Paraguay	8	1	-	-	-	-	-
Peru	74	16	-	1	3	2	1
Uruguay	12	6	-	-	-	-	1
Venezuela	58	24	1	3	4	2	-
Other South America	26	5	-	1	-	-	-
Africa	98	38	-	1	4	3	1
Algeria	2	2	-	-	-	-	-
Ethiopia	2	1	-	-	1	-	-
Ghana	5	3	-	-	-	-	-
Kenya	3	-	-	-	-	-	-
Morocco	6	2	-	-	-	-	-
Nigeria	15	2	-	-	-	-	-
Tunisia	3	-	-	-	-	-	-
U.A.R. (Egypt)	23	10	-	-	-	1	-
Other Africa	39	18	-	1	3	2	1
All Other Countries	10	3	-	-	-	-	-

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092	093	040
ALL COUNTRIES	372	81	43	51	1,650	46
TOTAL DEVELOPED COUNTRIES	234	45	35	48	1,231	28
Europe	128	26	10	17	787	14
Austria	2	1	1	–	14	–
Belgium	2	1	–	1	9	–
Denmark	6	–	–	1	13	–
Finland	–	–	–	–	–	–
France	2	1	3	1	42	–
Germany	13	4	–	2	153	3
Greece	1	–	–	–	18	1
Ireland	1	–	–	–	12	1
Italy	–	–	–	2	17	1
Netherlands	3	–	1	1	24	–
Norway	3	–	–	–	23	2
Portugal	–	–	–	–	–	1
Spain	1	–	–	–	7	–
Sweden	5	–	–	–	65	2
Switzerland	10	2	–	–	73	–
United Kingdom	76	15	3	9	289	3
Other Europe	3	2	2	–	28	–
Asia	1	–	–	–	8	–
Japan	1	–	–	–	8	–
North America	98	18	23	29	412	14
Canada	98	18	23	29	412	14
Africa	2	–	2	–	2	–
South Africa	2	–	2	–	2	–
Oceania	5	1	–	2	22	–
Australia	4	1	–	2	22	–
New Zealand	1	–	–	–	–	–
TOTAL DEVELOPING COUNTRIES	138	36	8	3	419	18
Europe	5	–	1	–	12	1
Turkey (includes Asia)	5	–	1	–	12	1

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092	093	040
Asia	30	6	2	-	148	9
Burma	-	1	-	-	3	-
China (includes Taiwan)	1	2	-	-	16	1
Hong Kong	2	-	-	-	16	1
India	6	1	1	-	28	3
Indonesia	-	-	-	-	-	-
Iran	2	1	-	-	21	-
Iraq	2	-	-	-	3	-
Israel	5	-	-	-	18	1
Jordan (incs. Arab Palestine)	-	-	-	-	4	1
Korea	1	-	-	-	7	1
Lebanon	3	-	-	-	10	-
Malaysia	1	-	-	-	6	-
Pakistan	1	-	-	-	3	-
Philippines	4	-	1	-	2	1
Syrian Arab Republic	-	-	-	-	5	-
Thailand	-	-	-	-	3	-
Vietnam	1	1	-	-	-	-
Other Asia	1	-	-	-	3	-
North America	61	5	1	2	118	5
Mexico	7	1	-	-	17	1
Other North America	5	2	-	1	20	3
Dominican Republic	2	1	-	-	10	-
Haiti	-	-	-	-	15	-
Other West Indies	37	1	1	1	39	1
Costa Rica	4	-	-	-	2	-
El Salvador	-	-	-	-	3	-
Guatemala	1	-	-	-	3	-
Honduras	3	-	-	-	5	-
Nicaragua	1	-	-	-	1	-
Panama	-	-	-	-	2	-
Other Central America	1	-	-	-	1	-
South America	36	23	3	1	119	2
Argentina	10	13	1	-	37	-
Bolivia	4	1	-	-	3	-
Brazil	7	4	-	-	9	1
Chile	3	3	-	-	12	-
Colombia	6	-	1	1	28	1
Ecuador	1	-	-	-	5	-
Paraguay	-	-	-	-	1	-
Peru	3	-	1	-	5	-
Uruguay	-	2	-	-	3	-
Venezuela	2	-	-	-	12	-
Other South America	-	-	-	-	4	-
Africa	6	2	1	-	19	1
Algeria	-	-	-	-	2	-
Ethiopia	-	-	-	-	-	-
Ghana	-	1	-	-	2	-
Kenya	-	-	-	-	-	-
Morocco	-	-	-	-	2	-
Nigeria	1	-	-	-	1	-
Tunisia	-	-	-	-	-	-
U.A.R. (Egypt)	1	1	-	-	6	1
Other Africa	4	-	1	-	6	-
All Other Countries	-	-	-	-	3	-

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
ALL COUNTRIES	1,549	132	32	16	120	24	28	696
TOTAL DEVELOPED COUNTRIES	1,131	68	27	8	77	17	20	513
Europe	802	56	15	4	52	10	11	391
Austria	23	-	1	-	2	-	-	12
Belgium	14	1	-	-	1	-	-	7
Denmark	4	-	-	-	-	1	-	2
Finland	-	-	-	-	-	-	-	-
France	26	3	-	-	-	-	-	11
Germany	145	6	1	-	5	1	2	77
Greece	11	4	-	-	-	-	-	5
Ireland	18	1	-	1	2	-	-	7
Italy	30	3	1	-	2	-	-	15
Netherlands	36	7	-	2	1	-	-	14
Norway	15	4	-	-	3	-	-	2
Portugal	2	1	1	-	-	-	-	-
Spain	7	3	-	-	-	-	-	3
Sweden	12	2	1	-	-	-	-	3
Switzerland	59	-	-	-	1	1	-	47
United Kingdom	367	19	4	-	33	6	9	171
Other Europe	33	2	6	1	2	1	-	15
Asia	8	1	-	-	1	-	-	1
Japan	8	1	-	-	1	-	-	1
North America	283	10	11	3	20	4	5	111
Canada	283	10	11	3	20	4	5	111
Africa	7	-	-	1	-	-	1	3
South Africa	7	-	-	1	-	-	1	3
Oceania	31	1	1	-	4	3	3	7
Australia	22	1	-	-	1	2	1	7
New Zealand	9	-	1	-	3	1	2	-
TOTAL DEVELOPING COUNTRIES	418	64	5	8	43	7	8	183
Europe	3	-	-	-	-	-	-	1
Turkey (includes Asia)	3	-	-	-	-	-	-	1

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
Asia	134	9	1	2	15	3	2	62
Burma	-	-	-	-	-	-	-	-
China (includes Taiwan)	18	1	1	-	-	1	-	11
Hong Kong	5	-	-	-	1	-	-	4
India	29	1	-	-	5	1	2	12
Indonesia	3	-	-	-	-	-	-	2
Iran	10	-	-	-	1	-	-	7
Iraq	7	1	-	1	1	1	-	1
Israel	14	1	-	-	2	-	-	6
Jordan (incs. Arab Palestine)	5	-	-	-	-	-	-	3
Korea	7	-	-	-	-	-	-	2
Lebanon	9	-	-	1	2	-	-	3
Malaysia	5	-	-	-	-	-	-	3
Pakistan	3	-	-	-	1	-	-	1
Philippines	8	2	-	-	1	-	-	3
Syrian Arab Republic	4	-	-	-	-	-	-	3
Thailand	-	-	-	-	-	-	-	-
Vietnam	1	-	-	-	-	-	-	-
Other Asia	6	3	-	-	1	-	-	1
North America	128	32	1	2	5	2	1	57
Mexico	35	9	1	-	2	-	-	19
Other North America	10	-	-	-	1	-	-	5
Dominican Republic	6	-	-	-	-	-	-	3
Haiti	12	6	-	2	-	-	-	-
Other West Indies	49	9	-	-	1	-	1	26
Costa Rica	5	3	-	-	1	-	-	1
El Salvador	1	-	-	-	-	-	-	1
Guatemala	1	1	-	-	-	-	-	-
Honduras	6	2	-	-	-	2	-	2
Nicaragua	3	2	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-	-
Other Central America	-	-	-	-	-	-	-	-
South America	133	21	3	3	18	1	4	60
Argentina	37	3	-	-	3	-	2	20
Bolivia	3	2	-	-	-	-	-	1
Brazil	20	5	-	-	3	-	1	8
Chile	10	3	1	-	1	-	1	2
Colombia	28	4	2	1	9	1	-	6
Ecuador	10	2	-	1	-	-	-	4
Paraguay	3	-	-	-	-	-	-	3
Peru	7	2	-	1	-	-	-	4
Uruguay	-	-	-	-	-	-	-	-
Venezuela	13	-	-	-	2	-	-	10
Other South America	2	-	-	-	-	-	-	2
Africa	17	2	-	1	4	1	1	2
Algeria	-	-	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	-
Ghana	2	-	-	-	1	-	-	-
Kenya	-	-	-	-	-	-	-	-
Morocco	-	-	-	-	-	-	-	-
Nigeria	2	-	-	1	-	1	-	-
Tunisia	1	-	-	-	-	-	-	-
U.A.R. (Egypt)	6	-	-	-	2	-	-	2
Other Africa	6	2	-	-	1	-	1	-
All Other Countries	3	-	-	-	1	-	-	1

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	134	174	140	045	145	052
ALL COUNTRIES	103	10	42	48	215	17	50	16
TOTAL DEVELOPED COUNTRIES	87	8	35	26	194	7	33	11
Europe	25	1	27	16	155	3	27	9
Austria	1	-	-	1	5	-	1	-
Belgium	1	1	-	-	2	-	1	-
Denmark	-	-	-	-	1	-	-	-
Finland	-	-	-	-	-	-	-	-
France	1	-	1	-	5	2	1	2
Germany	1	-	6	-	40	-	4	2
Greece	-	-	1	1	-	-	-	-
Ireland	-	-	-	-	5	-	2	-
Italy	2	-	2	2	3	-	-	-
Netherlands	3	-	1	2	4	-	2	-
Norway	-	-	1	-	3	-	1	1
Portugal	-	-	-	-	-	-	-	-
Spain	-	-	-	-	1	-	-	-
Sweden	-	-	1	-	3	-	2	-
Switzerland	-	-	1	-	7	-	1	1
United Kingdom	15	-	12	10	74	1	10	3
Other Europe	1	-	1	-	2	-	2	-
Asia	-	-	-	-	3	1	1	-
Japan	-	-	-	-	3	1	1	-
North America	60	5	7	10	30	2	4	1
Canada	60	5	7	10	30	2	4	1
Africa	1	-	-	-	-	1	-	-
South Africa	1	-	-	-	-	1	-	-
Oceania	1	2	1	-	6	-	1	1
Australia	1	2	1	-	5	-	1	-
New Zealand	-	-	-	-	1	-	-	1
TOTAL DEVELOPING COUNTRIES	16	2	7	22	21	10	17	5
Europe	-	-	-	2	-	-	-	-
Turkey (includes Asia)	-	-	-	2	-	-	-	-

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	134	174	140	045	145	052
Asia	6	-	4	7	7	5	9	2
Burma	-	-	-	-	-	-	-	-
China (includes Taiwan)	1	-	-	2	-	-	1	-
Hong Kong	-	-	-	-	-	-	-	-
India	1	-	-	-	3	2	1	1
Indonesia	1	-	-	-	-	-	-	-
Iran	1	-	-	1	-	-	-	-
Iraq	-	-	-	-	-	1	-	1
Israel	-	-	2	1	1	-	1	-
Jordan (incs. Arab Palestine)	1	-	-	1	-	-	-	-
Korea	1	-	1	1	1	-	1	-
Lebanon	-	-	-	-	1	1	1	-
Malaysia	-	-	-	-	1	-	1	-
Pakistan	-	-	-	-	-	-	1	-
Philippines	-	-	-	1	-	-	1	-
Syrian Arab Republic	-	-	1	-	-	-	-	-
Thailand	-	-	-	-	-	-	-	-
Vietnam	-	-	-	-	-	1	-	-
Other Asia	-	-	-	-	-	-	1	-
North America	3	1	1	10	6	4	1	2
Mexico	-	1	1	-	2	-	-	-
Other North America	-	-	-	2	1	1	-	-
Dominican Republic	-	-	-	2	-	-	-	1
Haiti	1	-	-	3	-	-	-	-
Other West Indies	2	-	-	3	2	3	1	1
Costa Rica	-	-	-	-	-	-	-	-
El Salvador	-	-	-	-	-	-	-	-
Guatemala	-	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	-	-	-
Nicaragua	-	-	-	-	1	-	-	-
Panama	-	-	-	-	-	-	-	-
Other Central America	-	-	-	-	-	-	-	-
South America	4	-	2	2	7	-	7	1
Argentina	1	-	1	-	3	-	3	1
Bolivia	-	-	-	-	-	-	-	-
Brazil	1	-	-	-	2	-	-	-
Chile	1	-	-	1	-	-	-	-
Colombia	1	-	1	-	1	-	2	-
Ecuador	-	-	-	-	1	-	2	-
Paraguay	-	-	-	-	-	-	-	-
Peru	-	-	-	-	-	-	-	-
Uruguay	-	-	-	-	-	-	-	-
Venezuela	-	-	-	1	-	-	-	-
Other South America	-	-	-	-	-	-	-	-
Africa	3	1	-	-	1	1	-	-
Algeria	-	-	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	-
Ghana	1	-	-	-	-	-	-	-
Kenya	-	-	-	-	-	-	-	-
Morocco	-	-	-	-	-	-	-	-
Nigeria	-	-	-	-	-	-	-	-
Tunisia	-	-	-	-	1	-	-	-
U.A.R. (Egypt)	1	1	-	-	-	-	-	-
Other Africa	1	-	-	-	-	1	-	-
All Other Countries	-	-	-	1	-	-	-	-

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
		172	035	173	050	175	053
ALL COUNTRIES	304	154	21	56	24	15	34
TOTAL DEVELOPED COUNTRIES	191	95	13	42	19	12	10
Europe	119	65	8	16	12	11	7
Austria	3	2	-	-	-	-	1
Belgium	4	1	1	1	-	-	1
Denmark	2	2	-	-	-	-	-
Finland	2	2	-	-	-	-	-
France	7	4	-	-	1	1	1
Germany	18	13	-	-	5	-	-
Greece	5	2	2	1	-	-	-
Ireland	2	-	-	1	-	1	-
Italy	2	1	-	-	-	-	1
Netherlands	9	4	1	3	1	-	-
Norway	4	2	1	1	-	-	-
Portugal	-	-	-	-	-	-	-
Spain	5	2	-	1	-	1	1
Sweden	9	8	-	1	-	-	-
Switzerland	4	1	-	1	-	1	1
United Kingdom	32	13	3	6	3	6	1
Other Europe	11	8	-	-	2	1	-
Asia	1	-	-	-	1	-	-
Japan	1	-	-	-	1	-	-
North America	67	30	4	24	5	1	3
Canada	67	30	4	24	5	1	3
Africa	1	-	-	1	-	-	-
South Africa	1	-	-	1	-	-	-
Oceania	3	-	1	1	1	-	-
Australia	3	-	1	1	1	-	-
New Zealand	-	-	-	-	-	-	-
TOTAL DEVELOPING COUNTRIES	113	59	8	14	5	3	24
Europe	4	1	-	2	-	-	1
Turkey (includes Asia)	4	1	-	2	-	-	1

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
		172	035	173	050	175	053
Asia	27	14	3	6	–	1	3
Burma	–	–	–	–	–	–	–
China (includes Taiwan)	2	1	–	–	–	–	1
Hong Kong	–	–	–	–	–	–	–
India	1	–	–	1	–	–	–
Indonesia	–	–	–	–	–	–	–
Iran	2	2	–	–	–	–	–
Iraq	–	–	–	–	–	–	–
Israel	11	5	2	3	–	1	–
Jordan (incs. Arab Palestine)	–	–	–	–	–	–	–
Korea	3	2	–	1	–	–	–
Lebanon	2	1	–	–	–	–	1
Malaysia	3	2	1	–	–	–	–
Pakistan	–	–	–	–	–	–	–
Philippines	2	–	–	1	–	–	1
Syrian Arab Republic	–	–	–	–	–	–	–
Thailand	–	–	–	–	–	–	–
Vietnam	–	–	–	–	–	–	–
Other Asia	1	1	–	–	–	–	–
North America	34	10	3	3	4	1	13
Mexico	6	5	–	–	1	–	–
Other North America	9	–	1	1	1	–	6
Dominican Republic	–	–	–	–	–	–	–
Haiti	2	1	1	–	–	–	–
Other West Indies	14	3	1	2	1	1	6
Costa Rica	1	1	–	–	–	–	–
El Salvador	–	–	–	–	–	–	–
Guatemala	–	–	–	–	–	–	–
Honduras	2	–	–	–	1	–	1
Nicaragua	–	–	–	–	–	–	–
Panama	–	–	–	–	–	–	–
Other Central America	–	–	–	–	–	–	–
South America	44	33	1	3	1	1	5
Argentina	12	9	–	3	–	–	–
Bolivia	–	–	–	–	–	–	–
Brazil	4	3	–	–	–	–	1
Chile	3	–	–	–	1	1	1
Colombia	16	14	–	–	–	–	2
Ecuador	2	2	–	–	–	–	–
Paraguay	–	–	–	–	–	–	–
Peru	4	3	1	–	–	–	–
Uruguay	–	–	–	–	–	–	–
Venezuela	2	2	–	–	–	–	–
Other South America	1	–	–	–	–	–	1
Africa	4	1	1	–	–	–	2
Algeria	–	–	–	–	–	–	–
Ethiopia	–	–	–	–	–	–	–
Ghana	–	–	–	–	–	–	–
Kenya	–	–	–	–	–	–	–
Morocco	–	–	–	–	–	–	–
Nigeria	1	–	1	–	–	–	–
Tunisia	–	–	–	–	–	–	–
U.A.R. (Egypt)	1	–	–	–	–	–	1
Other Africa	2	1	–	–	–	–	1
All Other Countries	–	–	–	–	–	–	–

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
		162	071	150	151
ALL COUNTRIES	6,441	2,012	182	4,071	176
TOTAL DEVELOPED COUNTRIES	4,420	951	63	3,256	150
Europe	2,456	532	43	1,798	83
Austria	33	17	4	12	-
Belgium	30	17	1	12	-
Denmark	52	4	1	40	7
Finland	6	1	-	5	-
France	58	28	2	28	-
Germany	373	75	7	276	15
Greece	35	25	2	8	-
Ireland	297	29	-	265	3
Italy	38	22	2	13	1
Netherlands	82	13	3	65	1
Norway	84	6	1	72	5
Portugal	2	1	-	1	-
Spain	75	52	4	19	-
Sweden	138	18	5	103	12
Switzerland	86	37	-	49	-
United Kingdom	953	147	6	761	39
Other Europe	114	40	5	69	-
Asia	20	11	1	8	-
Japan	20	11	1	8	-
North America	1,881	380	17	1,419	65
Canada	1,881	380	17	1,419	65
Africa	23	17	-	5	1
South Africa	23	17	-	5	1
Oceania	40	11	2	26	1
Australia	31	9	2	19	1
New Zealand	9	2	-	7	-
TOTAL DEVELOPING COUNTRIES	2,021	1,061	119	815	26
Europe	39	36	1	2	-
Turkey (includes Asia)	39	36	1	2	-

TABLE II—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1965

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
		162	071	150	151
Asia	373	194	11	161	7
Burma	3	2	-	1	-
China (includes Taiwan)	12	4	-	8	-
Hong Kong	12	4	-	7	1
India	14	11	1	2	-
Indonesia	1	-	-	1	-
Iran	33	23	1	9	-
Iraq	10	8	-	2	-
Israel	58	30	2	25	1
Jordan (incs. Arab Palestine)	6	1	1	4	-
Korea	13	11	-	2	-
Lebanon	21	12	1	6	2
Malaysia	15	9	-	5	1
Pakistan	1	1	-	-	-
Philippines	112	66	4	41	1
Syrian Arab Republic	3	2	-	1	-
Thailand	49	5	1	42	1
Vietnam	1	-	-	1	-
Other Asia	9	5	-	4	-
North America	953	468	61	412	12
Mexico	169	110	14	41	4
Other North America	63	44	4	15	-
Dominican Republic	64	32	4	28	-
Haiti	44	20	7	17	-
Other West Indies	446	223	27	194	2
Costa Rica	44	8	-	33	3
El Salvador	30	6	2	21	1
Guatemala	26	6	-	20	-
Honduras	26	5	1	19	1
Nicaragua	13	6	-	7	-
Panama	20	8	2	9	1
Other Central America	8	-	-	8	-
South America	613	348	45	215	5
Argentina	194	140	11	43	-
Bolivia	40	28	2	10	-
Brazil	59	37	3	18	1
Chile	29	8	4	17	-
Colombia	152	82	12	56	2
Ecuador	45	13	4	27	1
Paraguay	4	2	1	1	-
Peru	47	25	4	17	1
Uruguay	6	1	3	2	-
Venezuela	19	10	1	8	-
Other South America	18	2	-	16	-
Africa	39	14	-	24	1
Algeria	-	-	-	-	-
Ethiopia	1	1	-	-	-
Ghana	-	-	-	-	-
Kenya	3	-	-	3	-
Morocco	4	2	-	2	-
Nigeria	10	3	-	7	-
Tunisia	2	-	-	2	-
U.A.R. (Egypt)	6	4	-	2	-
Other Africa	13	4	-	8	1
All Other Countries	4	1	1	1	1

TABLE III

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
ALL COUNTRIES	12,323	3,725	64	197	422	559	145
TOTAL DEVELOPED COUNTRIES	8,171	2,354	49	112	211	337	78
Europe	4,863	1,491	24	62	122	207	45
Austria	67	17	-	-	3	1	1
Belgium	59	17	-	1	1	4	1
Denmark	96	37	-	6	7	7	1
Finland	26	6	-	1	-	-	-
France	162	51	1	4	2	9	1
Germany	785	283	1	7	9	17	8
Greece	107	49	1	1	3	13	1
Ireland	381	27	1	1	7	4	1
Italy	73	25	-	1	-	6	1
Netherlands	138	37	-	-	5	2	4
Norway	176	91	1	3	37	5	1
Portugal	13	4	-	-	-	1	1
Spain	166	13	-	1	3	-	-
Sweden	185	73	-	6	15	2	1
Switzerland	240	88	-	5	4	15	1
United Kingdom	2,017	629	19	22	23	116	21
Other Europe	172	44	-	3	3	5	1
Asia	49	19	-	-	1	4	1
Japan	49	19	-	-	1	4	1
North America	3,108	796	23	48	85	120	31
Canada	3,108	796	23	48	85	120	31
Africa	42	10	-	-	1	1	-
South Africa	42	10	-	-	1	1	-
Oceania	109	38	2	2	2	5	1
Australia	88	36	2	2	2	5	1
New Zealand	21	2	-	-	-	-	-
TOTAL DEVELOPING COUNTRIES	4,152	1,371	15	85	211	222	67
Europe	76	31	-	-	5	4	3
Turkey (includes Asia)	76	31	-	-	5	4	3

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
Asia	1,312	625	4	47	84	90	29
Burma	4	2	-	-	-	2	-
China (includes Taiwan)	499	298	3	23	39	45	8
Hong Kong	44	19	-	1	2	2	3
India	115	76	-	8	12	8	3
Indonesia	10	7	-	-	2	1	-
Iran	90	42	-	1	8	7	4
Iraq	34	23	-	2	7	2	-
Israel	117	45	-	3	2	7	4
Jordan (incs. Arab Palestine)	22	8	-	1	1	-	-
Korea	51	19	-	1	2	4	1
Lebanon	54	30	1	2	3	8	1
Malaysia	4	-	-	-	-	-	-
Pakistan	23	14	-	-	1	-	3
Philippines	134	14	-	2	1	-	1
Syrian Arab Republic	18	13	-	2	3	1	1
Thailand	58	1	-	-	-	1	-
Vietnam	4	3	-	-	-	1	-
Other Asia	31	11	-	1	1	1	-
North America	1,360	313	6	18	54	69	10
Mexico	196	42	-	2	5	4	4
Other North America	127	40	-	3	8	5	1
Dominican Republic	90	18	-	-	4	3	-
Haiti	57	10	-	-	4	1	-
Other West Indies	664	162	3	13	24	51	4
Costa Rica	61	14	2	-	3	-	-
El Salvador	36	6	-	-	2	2	-
Guatemala	33	3	-	-	-	-	-
Honduras	37	6	-	-	1	2	-
Nicaragua	20	4	-	-	1	1	-
Panama	16	5	1	-	1	-	1
Other Central America	23	3	-	-	1	-	-
South America	1,283	364	3	20	63	52	24
Argentina	384	122	1	7	20	20	6
Bolivia	55	13	-	1	4	1	2
Brazil	119	38	-	3	2	7	2
Chile	67	28	1	2	6	4	3
Colombia	336	65	1	3	15	10	5
Ecuador	63	17	-	-	2	1	-
Paraguay	9	1	-	-	1	-	-
Peru	110	35	-	2	4	2	4
Uruguay	9	5	-	-	1	1	1
Venezuela	91	35	-	2	7	5	1
Other South America	40	5	-	-	1	1	-
Africa	115	37	2	-	5	7	1
Algeria	-	-	-	-	-	-	-
Ethiopia	7	1	-	-	-	1	-
Ghana	3	2	-	-	1	-	-
Kenya	6	5	-	-	-	3	-
Morocco	1	-	-	-	-	-	-
Nigeria	18	5	-	-	1	1	-
Tunisia	1	-	-	-	-	-	-
U.A.R. (Egypt)	36	13	-	-	2	1	1
Other Africa	43	11	2	-	1	1	-
All Other Countries	6	1	-	-	-	-	-

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092	093	040
ALL COUNTRIES	419	66	45	57	1,686	65
TOTAL DEVELOPED COUNTRIES	258	40	26	46	1,171	26
Europe	152	24	5	24	808	18
Austria	2	-	1	-	7	2
Belgium	2	-	-	-	7	1
Denmark	9	-	-	1	6	-
Finland	1	-	-	-	4	-
France	4	2	-	2	25	1
Germany	27	2	-	1	211	-
Greece	3	-	-	-	25	2
Ireland	4	-	-	-	9	-
Italy	4	-	-	-	13	-
Netherlands	8	1	-	-	16	1
Norway	6	-	-	-	37	1
Portugal	1	-	-	-	1	-
Spain	2	2	-	-	4	1
Sweden	1	-	-	2	46	-
Switzerland	8	-	-	2	52	1
United Kingdom	65	15	4	16	321	7
Other Europe	5	2	-	-	24	1
Asia	1	-	-	-	12	-
Japan	1	-	-	-	12	-
North America	99	16	21	21	325	7
Canada	99	16	21	21	325	7
Africa	-	-	-	-	8	-
South Africa	-	-	-	-	8	-
Oceania	6	-	-	1	18	1
Australia	6	-	-	1	16	1
New Zealand	-	-	-	-	2	-
TOTAL DEVELOPING COUNTRIES	161	26	19	11	515	39
Europe	2	1	1	-	13	2
Turkey (includes Asia)	2	1	1	-	13	2

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092	093	040
Asia	72	10	2	2	261	24
Burma	-	-	-	-	-	-
China (includes Taiwan)	33	7	-	-	121	19
Hong Kong	1	-	-	1	9	-
India	4	1	-	1	38	1
Indonesia	1	-	-	-	3	-
Iran	4	1	-	-	16	1
Iraq	2	1	-	-	9	-
Israel	10	-	-	-	18	1
Jordan (incs. Arab Palestine)	1	-	-	-	5	-
Korea	-	-	1	-	9	1
Lebanon	3	-	-	-	11	1
Malaysia	-	-	-	-	-	-
Pakistan	1	-	-	-	9	-
Philippines	4	-	1	-	5	-
Syrian Arab Republic	4	-	-	-	2	-
Thailand	-	-	-	-	-	-
Vietnam	-	-	-	-	2	-
Other Asia	4	-	-	-	4	-
North America	33	2	4	7	102	8
Mexico	4	1	-	-	18	4
Other North America	8	-	1	1	12	1
Dominican Republic	2	-	-	-	8	1
Haiti	-	-	-	-	5	-
Other West Indies	17	1	3	4	41	1
Costa Rica	1	-	-	-	8	-
El Salvador	1	-	-	-	1	-
Guatemala	-	-	-	1	2	-
Honduras	-	-	-	1	1	1
Nicaragua	-	-	-	-	2	-
Panama	-	-	-	-	2	-
Other Central America	-	-	-	-	2	-
South America	47	13	12	2	123	5
Argentina	20	10	2	1	34	1
Bolivia	-	-	-	-	4	1
Brazil	11	1	-	-	12	-
Chile	4	-	1	-	7	-
Colombia	4	1	2	1	21	2
Ecuador	1	-	-	-	12	1
Paraguay	-	-	-	-	-	-
Peru	2	1	4	-	16	-
Uruguay	1	-	-	-	1	-
Venezuela	3	-	3	-	14	-
Other South America	1	-	-	-	2	-
Africa	7	-	-	-	15	-
Algeria	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-
Ghana	1	-	-	-	-	-
Kenya	1	-	-	-	1	-
Morocco	-	-	-	-	-	-
Nigeria	-	-	-	-	3	-
Tunisia	-	-	-	-	-	-
U.A.R. (Egypt)	1	-	-	-	8	-
Other Africa	4	-	-	-	3	-
All Other Countries	-	-	-	-	1	-

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
ALL COUNTRIES	1,676	110	35	8	112	24	26	825
TOTAL DEVELOPED COUNTRIES	1,129	51	30	4	72	16	17	533
Europe	786	32	14	-	43	10	7	399
Austria	17	1	-	-	1	-	-	7
Belgium	8	-	-	-	1	-	-	4
Denmark	4	-	1	-	1	-	-	-
Finland	3	1	1	-	-	-	-	1
France	31	3	1	-	3	-	-	16
Germany	142	-	1	-	3	-	-	93
Greece	18	1	-	-	1	-	1	9
Ireland	24	-	-	-	3	-	1	17
Italy	13	2	-	-	1	-	-	7
Netherlands	23	3	-	-	2	-	-	12
Norway	9	1	-	-	-	2	1	1
Portugal	4	1	-	-	1	-	-	2
Spain	14	5	-	-	-	1	-	5
Sweden	17	-	3	-	-	1	-	8
Switzerland	56	1	-	-	2	-	-	41
United Kingdom	377	12	4	-	21	4	4	164
Other Europe	26	1	3	-	3	2	-	12
Asia	20	6	-	1	1	1	1	3
Japan	20	6	-	1	1	1	1	3
North America	288	11	16	2	23	3	6	121
Canada	288	11	16	2	23	3	6	121
Africa	5	-	-	-	-	-	-	1
South Africa	5	-	-	-	-	-	-	1
Oceania	30	2	-	1	5	2	3	9
Australia	23	1	-	1	4	1	3	6
New Zealand	7	1	-	-	1	1	-	3
TOTAL DEVELOPING COUNTRIES	547	59	5	4	40	8	9	292
Europe	7	1	-	-	-	-	-	4
Turkey (includes Asia)	7	1	-	-	-	-	-	4

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
Asia	260	5	-	4	14	3	5	157
Burma	-	-	-	-	-	-	-	-
China (includes Taiwan)	140	1	-	3	8	-	3	91
Hong Kong	13	-	-	-	-	-	-	10
India	26	1	-	1	-	1	1	13
Indonesia	1	-	-	-	-	-	-	1
Iran	12	-	-	-	-	-	-	10
Iraq	5	1	-	-	-	1	-	-
Israel	12	1	-	-	1	-	-	7
Jordan (incs. Arab Palestine)	7	-	-	-	1	-	-	5
Korea	14	-	-	-	1	1	1	5
Lebanon	6	1	-	-	-	-	-	4
Malaysia	2	-	-	-	-	-	-	2
Pakistan	6	-	-	-	1	-	-	2
Philippines	7	-	-	-	1	-	-	5
Syrian Arab Republic	4	-	-	-	1	-	-	2
Thailand	2	-	-	-	-	-	-	-
Vietnam	-	-	-	-	-	-	-	-
Other Asia	3	-	-	-	-	-	-	-
North America	124	35	3	-	10	-	3	50
Mexico	25	5	-	-	2	-	-	12
Other North America	17	1	-	-	2	-	3	8
Dominican Republic	4	3	-	-	-	-	-	1
Haiti	7	4	-	-	1	-	-	-
Other West Indies	47	9	2	-	3	-	-	25
Costa Rica	7	4	-	-	-	-	-	1
El Salvador	5	2	-	-	-	-	-	2
Guatemala	2	1	-	-	-	-	-	-
Honduras	3	3	-	-	-	-	-	-
Nicaragua	4	3	-	-	1	-	-	-
Panama	1	-	-	-	1	-	-	-
Other Central America	2	-	1	-	-	-	-	1
South America	139	17	1	-	14	4	1	78
Argentina	49	2	-	-	-	-	-	37
Bolivia	4	1	-	-	-	-	-	3
Brazil	17	-	-	-	1	2	-	10
Chile	4	1	-	-	-	-	-	3
Colombia	31	4	-	-	13	1	-	10
Ecuador	11	5	-	-	-	-	-	5
Paraguay	-	-	-	-	-	-	-	-
Peru	8	2	-	-	-	-	1	2
Uruguay	1	-	-	-	-	-	-	-
Venezuela	11	-	1	-	-	1	-	7
Other South America	3	2	-	-	-	-	-	1
Africa	14	1	1	-	2	1	-	3
Algeria	-	-	-	-	-	-	-	-
Ethiopia	1	1	-	-	-	-	-	-
Ghana	-	-	-	-	-	-	-	-
Kenya	1	-	1	-	-	-	-	-
Morocco	-	-	-	-	-	-	-	-
Nigeria	1	-	-	-	-	1	-	-
Tunisia	1	-	-	-	-	-	-	-
U.A.R. (Egypt)	4	-	-	-	-	-	-	3
Other Africa	6	-	-	-	2	-	-	-
All Other Countries	3	-	-	-	-	-	-	-

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	135	174	140	045	145	052
ALL COUNTRIES	85	13	50	53	242	32	44	17
TOTAL DEVELOPED COUNTRIES	62	11	36	28	203	23	33	10
Europe	23	3	26	15	169	18	20	7
Austria	2	-	-	1	5	-	-	-
Belgium	-	-	1	-	1	-	1	-
Denmark	-	-	-	-	2	-	-	-
Finland	-	-	-	-	-	-	-	-
France	1	-	2	1	4	-	-	-
Germany	2	1	4	1	33	3	1	-
Greece	-	-	1	1	1	2	-	1
Ireland	-	-	-	-	2	-	1	-
Italy	-	-	2	-	1	-	-	-
Netherlands	-	1	2	1	2	-	-	-
Norway	-	-	-	-	4	-	-	-
Portugal	-	-	-	-	-	-	-	-
Spain	1	-	1	-	1	-	-	-
Sweden	-	-	-	1	1	1	2	-
Switzerland	-	-	2	1	7	1	1	-
United Kingdom	15	-	10	8	104	11	14	6
Other Europe	2	1	1	-	1	-	-	-
Asia	2	1	-	-	1	1	2	-
Japan	2	1	-	-	1	1	2	-
North America	35	5	8	12	29	3	11	3
Canada	35	5	8	12	29	3	11	3
Africa	-	-	1	1	2	-	-	-
South Africa	-	-	1	1	2	-	-	-
Oceania	2	2	1	-	2	1	-	-
Australia	2	1	1	-	2	1	-	-
New Zealand	-	1	-	-	-	-	-	-
TOTAL DEVELOPING COUNTRIES	23	2	14	25	39	9	11	7
Europe	-	1	-	-	-	-	-	1
Turkey (includes Asia)	-	1	-	-	-	-	-	1

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	135	174	140	045	145	052
Asia	8	-	10	15	23	8	4	4
Burma	-	-	-	-	-	-	-	-
China (includes Taiwan)	2	-	7	7	12	2	2	2
Hong Kong	-	-	-	1	1	1	-	-
India	1	-	-	2	3	1	-	2
Indonesia	-	-	-	-	-	-	-	-
Iran	2	-	-	-	-	-	-	-
Iraq	-	-	-	2	-	-	-	-
Israel	-	-	1	1	1	-	-	-
Jordan (incs. Arab Palestine)	1	-	-	-	-	-	-	-
Korea	-	-	1	1	1	2	1	-
Lebanon	-	-	-	-	1	-	-	-
Malaysia	-	-	-	-	-	-	-	-
Pakistan	-	-	-	-	2	1	-	-
Philippines	-	-	-	-	1	-	-	-
Syrian Arab Republic	-	-	1	-	-	-	-	-
Thailand	-	-	-	-	-	1	1	-
Vietnam	-	-	-	-	-	-	-	-
Other Asia	2	-	-	-	1	-	-	-
North America	3	1	3	6	7	-	2	1
Mexico	-	1	1	-	3	-	1	-
Other North America	2	-	1	-	-	-	-	-
Dominican Republic	-	-	-	-	-	-	-	-
Haiti	-	-	-	1	-	-	1	-
Other West Indies	1	-	1	4	1	-	-	1
Costa Rica	-	-	-	-	2	-	-	-
El Salvador	-	-	-	1	-	-	-	-
Guatemala	-	-	-	-	1	-	-	-
Honduras	-	-	-	-	-	-	-	-
Nicaragua	-	-	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-	-
Other Central America	-	-	-	-	-	-	-	-
South America	9	-	-	3	7	-	4	1
Argentina	1	-	-	1	5	-	2	1
Bolivia	-	-	-	-	-	-	-	-
Brazil	3	-	-	-	1	-	-	-
Chile	-	-	-	-	-	-	-	-
Colombia	1	-	-	1	-	-	1	-
Ecuador	-	-	-	-	-	-	1	-
Paraguay	-	-	-	-	-	-	-	-
Peru	3	-	-	-	-	-	-	-
Uruguay	-	-	-	-	1	-	-	-
Venezuela	1	-	-	1	-	-	-	-
Other South America	-	-	-	-	-	-	-	-
Africa	3	-	1	-	2	-	-	-
Algeria	-	-	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	-
Ghana	-	-	-	-	-	-	-	-
Kenya	-	-	-	-	-	-	-	-
Morocco	-	-	-	-	-	-	-	-
Nigeria	-	-	-	-	-	-	-	-
Tunisia	-	-	1	-	-	-	-	-
U.A.R. (Egypt)	-	-	-	-	1	-	-	-
Other Africa	3	-	-	-	1	-	-	-
All Other Countries	-	-	-	1	-	1	1	-

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
		172	035	173	050	175	053
ALL COUNTRIES	283	109	27	59	39	15	34
TOTAL DEVELOPED COUNTRIES	166	67	14	38	21	12	14
Europe	104	55	9	16	8	7	9
Austria	2	-	-	1	1	-	-
Belgium	7	3	2	-	1	-	1
Denmark	1	-	1	-	-	-	-
Finland	-	-	-	-	-	-	-
France	4	2	1	-	-	1	-
Germany	22	14	1	4	3	-	-
Greece	1	-	1	-	-	-	-
Ireland	2	-	-	-	1	-	1
Italy	3	1	-	1	-	-	1
Netherlands	7	2	-	-	1	3	1
Norway	3	2	-	1	-	-	-
Portugal	1	-	-	1	-	-	-
Spain	2	-	-	1	-	1	-
Sweden	4	2	-	-	1	-	1
Switzerland	5	3	1	1	-	-	-
United Kingdom	27	14	2	6	-	1	4
Other Europe	13	12	-	-	-	1	-
Asia	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-
North America	55	12	4	18	12	4	5
Canada	55	12	4	18	12	4	5
Africa	1	-	-	1	-	-	-
South Africa	1	-	-	1	-	-	-
Oceania	6	-	1	3	1	1	-
Australia	3	-	1	1	1	-	-
New Zealand	3	-	-	2	-	1	-
TOTAL DEVELOPING COUNTRIES	117	42	13	21	18	3	20
Europe	4	1	2	1	-	-	-
Turkey (includes Asia)	4	1	2	1	-	-	-

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
		172	035	173	050	175	053
Asia	34	9	8	7	1	1	8
Burma	-	-	-	-	-	-	-
China (includes Taiwan)	18	5	5	3	-	-	5
Hong Kong	2	-	-	-	-	1	1
India	4	-	3	1	-	-	-
Indonesia	1	1	-	-	-	-	-
Iran	-	-	-	-	-	-	-
Iraq	-	-	-	-	-	-	-
Israel	4	3	-	1	-	-	-
Jordan (incs. Arab Palestine)	1	-	-	-	-	-	1
Korea	1	-	-	-	1	-	-
Lebanon	1	-	-	-	-	-	1
Malaysia	-	-	-	-	-	-	-
Pakistan	-	-	-	-	-	-	-
Philippines	1	-	-	1	-	-	-
Syrian Arab Republic	-	-	-	-	-	-	-
Thailand	-	-	-	-	-	-	-
Vietnam	1	-	-	1	-	-	-
Other Asia	-	-	-	-	-	-	-
North America	33	8	1	6	12	2	4
Mexico	12	3	-	1	6	1	1
Other North America	3	1	-	2	-	-	-
Dominican Republic	3	1	-	-	2	-	-
Haiti	-	-	-	-	-	-	-
Other West Indies	10	3	-	2	1	1	3
Costa Rica	1	-	-	1	-	-	-
El Salvador	1	-	-	-	1	-	-
Guatemala	2	-	-	-	2	-	-
Honduras	-	-	-	-	-	-	-
Nicaragua	-	-	-	-	-	-	-
Panama	1	-	1	-	-	-	-
Other Central America	-	-	-	-	-	-	-
South America	42	24	1	7	5	-	5
Argentina	6	1	1	3	1	-	-
Bolivia	1	1	-	-	-	-	-
Brazil	5	3	-	1	1	-	-
Chile	3	1	-	1	1	-	-
Colombia	16	14	-	1	-	-	1
Ecuador	3	1	-	-	-	-	2
Paraguay	1	-	-	-	1	-	-
Peru	3	1	-	1	-	-	1
Uruguay	-	-	-	-	-	-	-
Venezuela	3	2	-	-	1	-	-
Other South America	1	-	-	-	-	-	1
Africa	4	-	1	-	-	-	3
Algeria	-	-		-	-	-	-
Ethiopia	-	-	-	-	-	-	-
Ghana	-	-	-	-	-	-	-
Kenya	-	-	-	-	-	-	-
Morocco	-	-	-	-	-	-	-
Nigeria	1	-	-	-	-	-	1
Tunisia	-	-	-	-	-	-	-
U.A.R. (Egypt)	2	-	-	-	-	-	2
Other Africa	1	-	1	-	-	-	-
All Other Countries	-	-	-	-	-	-	-

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
		162	071	150	151
ALL COUNTRIES	6,639	2,249	160	4,037	193
TOTAL DEVELOPED COUNTRIES	4,522	1,068	56	3,226	172
Europe	2,482	594	46	1,755	87
Austria	31	14	2	12	3
Belgium	27	15	-	12	-
Denmark	54	4	2	46	2
Finland	17	1	-	15	1
France	76	34	3	38	1
Germany	338	82	10	237	9
Greece	39	30	2	7	-
Ireland	328	23	-	298	7
Italy	32	22	-	10	-
Netherlands	71	15	1	54	1
Norway	73	3	2	67	1
Portugal	4	4	-	-	-
Spain	137	108	8	21	-
Sweden	91	7	-	68	16
Switzerland	91	31	1	57	2
United Kingdom	984	165	12	765	42
Other Europe	89	36	3	48	2
Asia	10	4	-	6	-
Japan	10	4	-	6	-
North America	1,969	440	8	1,436	85
Canada	1,969	440	8	1,436	85
Africa	26	20	-	6	-
South Africa	26	20	-	6	-
Oceania	35	10	2	23	-
Australia	26	8	2	16	-
New Zealand	9	2	-	7	-
TOTAL DEVELOPING COUNTRIES	2,117	1,181	104	811	21
Europe	34	29	-	5	-
Turkey (includes Asia)	34	29	-	5	-

TABLE III—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1964

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
	162	071	150	151	
Asia	393	200	13	177	3
Burma	2	2	-	-	-
China (includes Taiwan)	43	17	-	26	-
Hong Kong	10	2	-	8	-
India	9	8	1	-	-
Indonesia	1	1	-	-	-
Iran	36	31	1	4	-
Iraq	6	4	-	2	-
Israel	56	31	3	22	-
Jordan (incs. Arab Palestine)	6	2	-	4	-
Korea	17	10	-	7	-
Lebanon	17	9	2	6	-
Malaysia	2	1	-	1	-
Pakistan	3	2	-	1	-
Philippines	112	63	5	43	1
Syrian Arab Republic	1	1	-	-	-
Thailand	55	5	-	48	2
Vietnam	-	-	-	-	-
Other Asia	17	11	1	5	-
North America	890	469	36	371	14
Mexico	117	77	8	28	4
Other North America	67	51	3	11	2
Dominican Republic	65	39	-	26	-
Haiti	40	17	5	17	1
Other West Indies	445	248	19	176	2
Costa Rica	39	9	1	29	-
El Salvador	24	6	-	18	-
Guatemala	26	4	-	22	-
Honduras	28	8	-	18	2
Nicaragua	12	3	-	9	-
Panama	9	3	-	6	-
Other Central America	18	4	-	11	3
South America	738	454	52	228	4
Argentina	207	151	10	45	1
Bolivia	37	24	8	5	-
Brazil	59	26	4	29	-
Chile	32	15	3	14	-
Colombia	224	158	14	51	1
Ecuador	32	10	3	19	-
Paraguay	7	6	-	1	-
Peru	64	32	4	27	1
Uruguay	3	2	-	1	-
Venezuela	42	24	4	14	-
Other South America	31	6	2	22	1
Africa	60	29	3	28	-
Algeria	-	-	-	-	-
Ethiopia	5	4	-	1	-
Ghana	1	1	-	-	-
Kenya	-	-	-	-	-
Morocco	1	-	-	1	-
Nigeria	11	2	-	9	-
Tunisia	-	-	-	-	-
U.A.R. (Egypt)	17	14	2	1	-
Other Africa	25	8	1	16	-
All Other Countries	2	-	-	2	-

TABLE IV

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
ALL COUNTRIES	12,482	4,014	128	194	459	656	142
TOTAL DEVELOPED COUNTRIES	8,138	2,373	103	94	206	397	68
Europe	4,621	1,370	43	49	89	230	34
Austria	66	11	-	-	-	2	-
Belgium	51	17	2	-	3	-	1
Denmark	83	34	-	3	5	7	-
Finland	15	3	-	-	-	1	-
France	141	59	2	2	2	11	-
Germany	681	208	1	4	4	23	5
Greece	136	52	2	2	2	23	1
Ireland	480	22	1	1	4	4	1
Italy	123	20	-	1	3	4	2
Netherlands	148	48	1	4	3	8	2
Norway	130	64	1	1	20	8	2
Portugal	4	-	-	-	-	-	-
Spain	95	21	-	3	1	1	2
Sweden	196	62	1	-	10	5	3
Switzerland	211	83	1	4	1	15	1
United Kingdom	1,918	626	30	23	30	110	13
Other Europe	143	40	1	1	1	8	1
Asia	135	45	5	4	5	6	2
Japan	135	45	5	4	5	6	2
North America	3,219	897	51	40	103	150	30
Canada	3,219	897	51	40	103	150	30
Africa	52	19	1	1	2	3	2
South Africa	52	19	1	1	2	3	2
Oceania	111	42	3	-	7	8	-
Australia	85	32	1	-	5	8	-
New Zealand	26	10	2	-	2	-	-
TOTAL DEVELOPING COUNTRIES	4,344	1,641	25	100	253	259	74
Europe	194	116	2	3	29	19	3
Turkey (includes Asia)	194	116	2	3	29	19	3

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
Asia	1,651	839	8	55	115	131	36
Burma	5	3	-	-	1	-	-
China (includes Taiwan)	203	129	2	5	12	26	2
Hong Kong	119	65	-	6	10	6	4
India	362	256	3	18	28	35	11
Indonesia	2	-	-	-	-	-	-
Iran	73	39	-	-	11	5	2
Iraq	28	18	-	1	5	4	-
Israel	147	63	1	4	10	9	2
Jordan (incs. Arab Palestine)	23	11	-	-	2	2	-
Korea	176	85	1	6	6	20	4
Lebanon	72	34	1	1	8	5	1
Malaysia	16	5	-	-	-	1	-
Pakistan	23	11	-	1	1	1	-
Philippines	306	80	-	13	17	9	9
Syrian Arab Republic	25	20	-	-	2	4	1
Thailand	42	5	-	-	-	2	-
Vietnam	10	6	-	-	1	1	-
Other Asia	19	9	-	-	1	1	-
North America	1,280	312	7	28	55	65	9
Mexico	244	57	-	12	8	15	3
Other North America	112	40	-	3	6	9	1
Dominican Republic	155	35	-	1	10	3	-
Haiti	65	12	-	-	3	1	-
Other West Indies	521	123	7	9	16	31	3
Costa Rica	44	10	-	-	2	2	1
El Salvador	27	3	-	-	1	1	-
Guatemala	25	4	-	1	1	-	-
Honduras	23	7	-	1	2	1	-
Nicaragua	25	8	-	-	1	1	-
Panama	25	10	-	-	4	1	1
Other Central America	14	3	-	1	1	-	-
South America	1,096	325	7	13	44	41	24
Argentina	304	96	4	3	13	8	11
Bolivia	27	4	-	-	-	-	-
Brazil	116	41	-	3	6	4	1
Chile	69	25	1	1	4	5	1
Colombia	229	48	1	2	8	8	4
Ecuador	68	13	-	-	-	4	-
Paraguay	5	1	-	-	1	-	-
Peru	89	35	-	1	4	3	3
Uruguay	9	5	-	-	-	-	-
Venezuela	125	52	1	2	7	8	4
Other South America	55	5	-	1	1	1	-
Africa	108	40	1	1	9	2	2
Algeria	1	1	1	-	-	-	-
Ethiopia	6	3	-	-	2	-	-
Ghana	3	1	-	-	-	-	-
Kenya	4	3	-	-	2	-	-
Morocco	7	4	-	-	1	-	-
Nigeria	4	-	-	-	-	-	-
Tunisia	2	-	-	-	-	-	-
U.A.R. (Egypt)	48	14	-	1	1	1	1
Other Africa	33	14	-	-	3	1	1
All Other Countries	15	9	-	-	1	1	-

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092	093	040
ALL COUNTRIES	398	83	27	52	1,827	48
TOTAL DEVELOPED COUNTRIES	218	60	16	36	1,168	7
Europe	114	31	7	13	757	3
Austria	1	-	-	1	7	-
Belgium	-	-	-	-	10	1
Denmark	9	-	-	-	10	-
Finland	1	-	-	-	1	-
France	2	3	-	1	36	-
Germany	15	2	1	1	152	-
Greece	6	1	-	1	13	1
Ireland	3	-	-	-	8	-
Italy	1	-	-	-	9	-
Netherlands	5	1	-	-	24	-
Norway	2	1	-	1	27	1
Portugal	-	-	-	-	-	-
Spain	6	-	2	-	6	-
Sweden	2	-	1	-	40	-
Switzerland	4	1	-	2	54	-
United Kingdom	53	19	3	6	339	-
Other Europe	4	3	-	-	21	-
Asia	3	-	-	-	19	1
Japan	3	-	-	-	19	1
North America	93	26	8	23	370	3
Canada	93	26	8	23	370	3
Africa	3	1	1	-	5	-
South Africa	3	1	1	-	5	-
Oceania	5	2	-	-	17	-
Australia	3	2	-	-	13	-
New Zealand	2	-	-	-	4	-
TOTAL DEVELOPING COUNTRIES	180	23	11	16	659	41
Europe	9	-	-	-	44	7
Turkey (includes Asia)	9	-	-	-	44	7

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092	093	040
Asia	89	17	3	10	353	22
Burma	–	–	–	1	1	–
China (includes Taiwan)	15	4	–	3	54	6
Hong Kong	7	4	–	–	27	1
India	26	4	–	1	119	11
Indonesia	–	–	–	–	–	–
Iran	8	–	–	–	13	–
Iraq	2	–	–	–	5	1
Israel	11	2	–	–	24	–
Jordan (incs. Arab Palestine)	–	–	–	–	7	–
Korea	7	3	2	–	35	1
Lebanon	3	–	–	–	13	2
Malaysia	–	–	–	–	4	–
Pakistan	1	–	–	1	6	–
Philippines	6	–	–	3	23	–
Syrian Arab Republic	3	–	–	–	10	–
Thailand	–	–	1	–	2	–
Vietnam	–	–	–	–	4	–
Other Asia	–	–	–	1	6	–
North America	39	–	1	5	95	8
Mexico	6	–	–	–	10	3
Other North America	6	–	–	–	15	–
Dominican Republic	4	–	–	1	15	1
Haiti	1	–	–	–	7	–
Other West Indies	18	–	–	3	33	3
Costa Rica	–	–	–	–	5	–
El Salvador	–	–	–	–	–	1
Guatemala	–	–	–	–	2	–
Honduras	1	–	–	–	2	–
Nicaragua	2	–	1	–	3	–
Panama	1	–	–	1	2	–
Other Central America	–	–	–	–	1	–
South America	39	6	7	1	140	3
Argentina	14	4	–	–	39	–
Bolivia	–	–	1	–	3	–
Brazil	8	–	–	–	19	–
Chile	3	–	1	–	9	–
Colombia	4	–	–	1	20	–
Ecuador	2	–	–	–	7	–
Paraguay	–	–	–	–	–	–
Peru	4	1	3	–	16	–
Uruguay	1	–	–	–	4	–
Venezuela	3	1	2	–	21	3
Other South America	–	–	–	–	2	–
Africa	2	–	–	–	22	1
Algeria	–	–	–	–	–	–
Ethiopia	–	–	–	–	1	–
Ghana	–	–	–	–	1	–
Kenya	–	–	–	–	1	–
Morocco	–	–	–	–	3	–
Nigeria	–	–	–	–	–	–
Tunisia	–	–	–	–	–	–
U.A.R. (Egypt)	2	–	–	–	8	–
Other Africa	–	–	–	–	8	1
All Other Countries	2	–	–	–	5	–

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
ALL COUNTRIES	1,612	87	34	12	81	21	34	814
TOTAL DEVELOPED COUNTRIES	1,049	46	32	8	51	9	17	514
Europe	715	32	16	4	28	6	12	380
Austria	22	-	-	-	1	1	-	13
Belgium	7	1	-	-	-	-	-	4
Denmark	7	-	1	1	1	-	-	1
Finland	3	-	1	-	1	-	-	-
France	30	2	-	-	1	-	-	14
Germany	145	2	1	1	2	1	-	90
Greece	36	2	3	-	-	1	1	22
Ireland	15	1	2	-	2	-	-	5
Italy	33	9	-	-	-	-	3	11
Netherlands	24	1	-	-	-	-	-	15
Norway	5	-	3	-	1	-	-	1
Portugal	1	1	-	-	-	-	-	-
Spain	10	1	-	-	-	-	-	5
Sweden	19	1	-	-	3	1	3	5
Switzerland	54	2	-	-	1	-	1	40
United Kingdom	284	6	4	1	13	2	4	143
Other Europe	20	3	1	1	2	-	-	11
Asia	36	3	1	-	1	-	1	17
Japan	36	3	1	-	1	-	1	17
North America	260	9	12	3	18	2	3	105
Canada	260	9	12	3	18	2	3	105
Africa	7	1	-	-	1	1	-	1
South Africa	7	1	-	-	1	1	-	1
Oceania	31	1	3	1	3	-	1	11
Australia	26	1	3	1	2	-	1	9
New Zealand	5	-	-	-	1	-	-	2
TOTAL DEVELOPING COUNTRIES	563	41	2	4	30	12	17	300
Europe	7	-	-	-	-	-	-	3
Turkey (includes Asia)	7	-	-	-	-	-	-	3

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
Asia	318	9	1	3	12	9	9	183
Burma	2	-	-	-	-	1	-	-
China (includes Taiwan)	49	1	-	1	3	1	1	26
Hong Kong	23	-	-	-	1	-	-	15
India	76	2	-	1	2	4	-	41
Indonesia	1	-	-	-	-	-	-	1
Iran	9	-	-	-	-	-	-	8
Iraq	6	-	-	-	-	-	-	4
Israel	27	2	-	-	1	2	1	14
Jordan (incs. Arab Palestine)	9	1	-	-	-	-	-	7
Korea	51	2	-	1	1	1	2	27
Lebanon	14	-	-	-	-	-	2	9
Malaysia	4	-	-	-	-	-	-	2
Pakistan	5	-	-	-	-	-	1	4
Philippines	30	-	-	-	2	-	2	21
Syrian Arab Republic	5	-	-	-	1	-	-	3
Thailand	1	-	-	-	1	-	-	-
Vietnam	2	-	-	-	-	-	-	-
Other Asia	4	1	1	-	-	-	-	1
North America	90	19	-	1	3	1	4	42
Mexico	28	4	-	-	-	-	3	18
Other North America	8	-	-	-	2	-	-	4
Dominican Republic	4	2	-	-	-	-	-	-
Haiti	4	1	-	-	-	-	-	1
Other West Indies	24	1	-	-	1	1	1	15
Costa Rica	6	3	-	-	-	-	-	1
El Salvador	6	2	-	-	-	-	-	1
Guatemala	3	3	-	-	-	-	-	-
Honduras	5	3	-	-	-	-	-	1
Nicaragua	-	-	-	-	-	-	-	-
Panama	1	-	-	1	-	-	-	-
Other Central America	1	-	-	-	-	-	-	1
South America	131	11	1	-	15	2	3	64
Argentina	42	1	-	-	2	-	1	30
Bolivia	1	-	-	-	-	-	-	-
Brazil	22	1	1	-	2	1	-	11
Chile	12	1	-	-	1	-	-	7
Colombia	25	5	-	-	7	-	1	7
Ecuador	5	1	-	-	1	-	-	2
Paraguay	-	-	-	-	-	-	-	-
Peru	2	-	-	-	-	-	-	1
Uruguay	1	-	-	-	-	-	-	-
Venezuela	17	2	-	-	1	1	-	5
Other South America	4	-	-	-	1	-	1	1
Africa	16	2	-	-	-	-	1	7
Algeria	-	-	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	-
Ghana	-	-	-	-	-	-	-	-
Kenya	-	-	-	-	-	-	-	-
Morocco	1	-	-	-	-	-	-	-
Nigeria	1	-	-	-	-	-	-	-
Tunisia	-	-	-	-	-	-	-	-
U.A.R. (Egypt)	11	1	-	-	-	-	1	7
Other Africa	3	1	-	-	-	-	-	-
All Other Countries	1	-	-	-	-	-	-	1

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	134	174	140	045	145	052
ALL COUNTRIES	73	14	56	60	216	46	36	28
TOTAL DEVELOPED COUNTRIES	60	13	32	35	180	17	20	15
Europe	14	5	25	18	142	10	14	9
Austria	-	1	1	-	4	-	1	-
Belgium	1	-	1	-	-	-	-	-
Denmark	-	-	-	-	2	1	-	-
Finland	-	-	-	1	-	-	-	-
France	1	-	1	2	5	-	2	2
Germany	1	-	6	2	33	5	1	-
Greece	-	-	3	2	2	-	-	-
Ireland	1	-	-	-	2	-	1	1
Italy	3	-	1	2	3	-	1	-
Netherlands	1	-	-	1	4	-	2	-
Norway	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-
Spain	1	-	-	2	1	-	-	-
Sweden	1	1	1	1	-	-	2	-
Switzerland	-	-	-	-	6	2	-	2
United Kingdom	3	3	10	5	80	2	4	4
Other Europe	1	-	1	-	-	-	-	-
Asia	-	-	2	-	6	2	2	1
Japan	-	-	2	-	6	2	2	1
North America	43	7	5	16	27	4	2	4
Canada	43	7	5	16	27	4	2	4
Africa	1	-	-	1	-	-	1	-
South Africa	1	-	-	1	-	-	1	-
Oceania	2	1	-	-	5	1	1	1
Australia	2	-	-	-	4	1	1	1
New Zealand	-	1	-	-	1	-	-	-
TOTAL DEVELOPING COUNTRIES	13	1	24	25	36	29	16	13
Europe	-	1	-	1	-	1	-	1
Turkey (includes Asia)	-	1	-	1	-	1	-	1

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	135	174	140	045	145	052
Asia	4	-	18	13	31	16	5	5
Burma	-	-	-	-	1	-	-	-
China (includes Taiwan)	-	-	4	5	3	1	2	1
Hong Kong	1	-	3	1	1	1	-	-
India	2	-	5	2	6	7	2	2
Indonesia	-	-	-	-	-	-	-	-
Iran	1	-	-	-	-	-	-	-
Iraq	-	-	1	-	1	-	-	-
Israel	-	-	1	1	3	1	-	1
Jordan (incs. Arab Palestine)	-	-	-	-	1	-	-	-
Korea	-	-	2	1	9	5	-	-
Lebanon	-	-	1	-	1	1	-	-
Malaysia	-	-	-	-	1	-	1	-
Pakistan	-	-	-	-	-	-	-	-
Philippines	-	-	-	3	2	-	-	-
Syrian Arab Republic	-	-	-	-	1	-	-	-
Thailand	-	-	-	-	-	-	-	-
Vietnam	-	-	-	-	1	-	-	1
Other Asia	-	-	1	-	-	-	-	-
North America	1	-	1	2	3	3	6	4
Mexico	-	-	-	-	-	1	-	2
Other North America	1	-	-	-	1	-	-	-
Dominican Republic	-	-	-	-	-	1	-	1
Haiti	-	-	-	1	-	1	-	-
Other West Indies	-	-	1	1	1	-	2	-
Costa Rica	-	-	-	-	-	-	1	1
El Salvador	-	-	-	-	1	-	2	-
Guatemala	-	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	-	1	-
Nicaragua	-	-	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-	-
Other Central America	-	-	-	-	-	-	-	-
South America	6	-	4	7	2	9	4	3
Argentina	3	-	1	-	1	1	-	2
Bolivia	-	-	-	-	-	1	-	-
Brazil	1	-	2	-	-	2	1	-
Chile	2	-	-	1	-	-	-	-
Colombia	-	-	-	2	-	-	3	-
Ecuador	-	-	-	-	-	1	-	-
Paraguay	-	-	-	-	-	-	-	-
Peru	-	-	-	1	-	-	-	-
Uruguay	-	-	1	-	-	-	-	-
Venezuela	-	-	-	3	1	4	-	-
Other South America	-	-	-	-	-	-	-	1
Africa	2	-	1	2	-	-	1	-
Algeria	-	-	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-	-
Ghana	-	-	-	-	-	-	-	-
Kenya	-	-	-	-	-	-	-	-
Morocco	-	-	1	-	-	-	-	-
Nigeria	1	-	-	-	-	-	-	-
Tunisia	-	-	-	-	-	-	-	-
U.A.R. (Egypt)	-	-	-	2	-	-	-	-
Other Africa	1	-	-	-	-	-	1	-
All Other Countries	-	-	-	-	-	-	-	-

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
		172	035	173	050	175	053
ALL COUNTRIES	231	102	18	51	32	7	21
TOTAL DEVELOPED COUNTRIES	138	60	8	35	19	4	12
Europe	82	40	3	14	12	4	9
Austria	3	1	–	1	–	–	1
Belgium	1	1	–	–	–	–	–
Denmark	4	3	1	–	–	–	–
Finland	2	2	–	–	–	–	–
France	2	1	–	1	–	–	–
Germany	20	12	–	3	4	–	1
Greece	1	–	–	–	1	–	–
Ireland	–	–	–	–	–	–	–
Italy	3	–	–	–	1	–	2
Netherlands	5	3	–	1	–	1	–
Norway	3	1	–	1	1	–	–
Portugal	–	–	–	–	–	–	–
Spain	5	1	1	–	1	–	2
Sweden	1	1	–	–	–	–	–
Switzerland	5	2	–	2	1	–	–
United Kingdom	22	7	1	5	3	3	3
Other Europe	5	5	–	–	–	–	–
Asia	2	1	–	–	1	–	–
Japan	2	1	–	–	1	–	–
North America	50	17	5	20	6	–	2
Canada	50	17	5	20	6	–	2
Africa	1	–	–	–	–	–	1
South Africa	1	–	–	–	–	–	1
Oceania	3	2	–	1	–	–	–
Australia	3	2	–	1	–	–	–
New Zealand	–	–	–	–	–	–	–
TOTAL DEVELOPING COUNTRIES	93	42	10	16	13	3	9
Europe	4	–	–	4	–	–	–
Turkey (includes Asia)	4	–	–	4	–	–	–

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
		172	035	173	050	175	053
Asia	41	17	8	5	4	-	7
Burma	-	-	-	-	-	-	-
China (includes Taiwan)	5	1	2	-	1	-	1
Hong Kong	2	-	-	-	1	-	1
India	8	4	1	1	-	-	2
Indonesia	-	-	-	-	-	-	-
Iran	1	-	-	-	1	-	-
Iraq	-	-	-	-	-	-	-
Israel	8	4	1	1	1	-	1
Jordan (incs. Arab Palestine)	1	1	-	-	-	-	-
Korea	11	3	4	2	-	-	2
Lebanon	-	-	-	-	-	-	-
Malaysia	-	-	-	-	-	-	-
Pakistan	-	-	-	-	-	-	-
Philippines	5	4	-	1	-	-	-
Syrian Arab Republic	-	-	-	-	-	-	-
Thailand	-	-	-	-	-	-	-
Vietnam	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-
North America	19	9	-	5	5	-	-
Mexico	5	1	-	1	3	-	-
Other North America	2	-	-	2	-	-	-
Dominican Republic	3	3	-	-	-	-	-
Haiti	-	-	-	-	-	-	-
Other West Indies	9	5	-	2	2	-	-
Costa Rica	-	-	-	-	-	-	-
El Salvador	-	-	-	-	-	-	-
Guatemala	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	-	-
Nicaragua	-	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-
Other Central America	-	-	-	-	-	-	-
South America	25	15	1	2	4	2	1
Argentina	4	1	-	-	2	-	1
Bolivia	1	-	-	-	1	-	-
Brazil	3	2	-	-	-	1	-
Chile	1	1	-	-	-	-	-
Colombia	8	6	-	2	-	-	-
Ecuador	2	2	-	-	-	-	-
Paraguay	-	-	-	-	-	-	-
Peru	1	1	-	-	-	-	-
Uruguay	-	-	-	-	-	-	-
Venezuela	3	1	1	-	-	1	-
Other South America	2	1	-	-	1	-	-
Africa	4	1	1	-	-	1	1
Algeria	-	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-
Ghana	-	-	-	-	-	-	-
Kenya	-	-	-	-	-	-	-
Morocco	-	-	-	-	-	-	-
Nigeria	-	-	-	-	-	-	-
Tunisia	1	-	-	-	-	1	-
U.A.R. (Egypt)	2	1	1	-	-	-	-
Other Africa	1	-	-	-	-	-	1
All Other Countries	-	-	-	-	-	-	-

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
		162	071	150	151
ALL COUNTRIES	6,625	2,093	177	4,135	220
TOTAL DEVELOPED COUNTRIES	4,578	1,050	62	3,292	174
Europe	2,454	520	45	1,788	101
Austria	30	15	3	12	-
Belgium	26	16	1	8	1
Denmark	38	4	4	29	1
Finland	7	2	-	5	-
France	50	24	2	23	1
Germany	308	71	6	217	14
Greece	47	31	5	10	1
Ireland	443	27	-	400	16
Italy	67	49	2	16	-
Netherlands	71	16	1	50	4
Norway	58	1	2	50	5
Portugal	3	1	-	2	-
Spain	59	47	1	11	-
Sweden	114	9	4	88	13
Switzerland	69	28	1	38	2
United Kingdom	986	154	5	786	41
Other Europe	78	25	8	43	2
Asia	52	35	2	14	1
Japan	52	35	2	14	1
North America	2,012	467	13	1,461	71
Canada	2,012	467	13	1,461	71
Africa	25	20	2	3	-
South Africa	25	20	2	3	-
Oceania	35	8	-	26	1
Australia	24	4	-	19	1
New Zealand	11	4	-	7	-
TOTAL DEVELOPING COUNTRIES	2,047	1,043	115	843	46
Europe	67	55	1	10	1
Turkey (includes Asia)	67	55	1	10	1

TABLE IV—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1963

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
	162	071	150	151	
Asia	453	225	20	200	8
Burma	-	-	-	-	-
China (includes Taiwan)	20	12	-	7	1
Hong Kong	29	15	-	13	1
India	22	16	1	5	-
Indonesia	1	-	-	1	-
Iran	24	16	2	6	-
Iraq	4	2	-	2	-
Israel	49	18	4	27	-
Jordan (incs. Arab Palestine)	2	1	-	1	-
Korea	29	19	-	10	-
Lebanon	24	8	4	11	1
Malaysia	7	5	-	2	-
Pakistan	7	4	-	2	1
Philippines	191	101	9	79	2
Syrian Arab Republic	-	-	-	-	-
Thailand	36	4	-	30	2
Vietnam	2	-	-	2	-
Other Asia	6	4	-	2	-
North America	859	406	36	391	26
Mexico	154	97	9	42	6
Other North America	62	49	2	8	3
Dominican Republic	113	65	7	40	1
Haiti	49	7	2	39	1
Other West Indies	365	169	12	177	7
Costa Rica	28	6	1	21	-
El Salvador	18	-	-	17	1
Guatemala	18	1	1	16	-
Honduras	11	4	1	5	1
Nicaragua	17	6	-	8	3
Panama	14	1	-	11	2
Other Central America	10	1	1	7	1
South America	615	327	58	220	10
Argentina	162	116	13	31	2
Bolivia	21	9	4	8	-
Brazil	50	29	8	12	1
Chile	31	8	4	17	2
Colombia	148	90	16	41	1
Ecuador	48	15	8	24	1
Paraguay	4	4	-	-	-
Peru	51	22	1	27	1
Uruguay	3	2	-	1	-
Venezuela	53	27	4	21	1
Other South America	44	5	-	38	1
Africa	48	29	-	18	1
Algeria	-	-	-	-	-
Ethiopia	3	3	-	-	-
Ghana	2	-	-	2	-
Kenya	1	1	-	-	-
Morocco	2	2	-	-	-
Nigeria	3	1	-	2	-
Tunisia	1	1	-	-	-
U.A.R. (Egypt)	21	14	-	6	1
Other Africa	15	7	-	8	-
All Other Countries	5	1	-	4	-

TABLE V

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
ALL COUNTRIES	9,848	2,940	108	164	346	417	92
TOTAL DEVELOPED COUNTRIES	6,651	1,955	91	108	153	297	58
Europe	3,774	1,076	38	58	76	161	23
Austria	44	15	-	1	2	1	-
Belgium	50	11	-	-	-	2	-
Denmark	86	24	-	1	2	3	2
Finland	17	3	-	-	-	-	-
France	102	35	1	3	2	4	-
Germany	574	172	-	5	7	17	1
Greece	103	43	1	3	2	7	2
Ireland	275	17	1	-	-	3	1
Italy	126	28	-	1	4	5	-
Netherlands	213	78	-	8	2	10	-
Norway	126	56	2	3	14	7	1
Portugal	14	2	-	-	1	-	-
Spain	87	14	-	2	1	3	1
Sweden	148	45	1	3	9	1	-
Switzerland	157	63	1	7	5	10	2
United Kingdom	1,488	418	31	19	20	82	12
Other Europe	164	52	-	2	5	6	1
Asia	43	17	-	2	2	4	-
Japan	43	17	-	2	2	4	-
North America	2,711	823	51	46	71	125	33
Canada	2,711	823	51	46	71	125	33
Africa	33	10	-	1	-	3	-
South Africa	33	10	-	1	-	3	-
Oceania	90	29	2	1	4	4	2
Australia	77	25	1	-	3	4	2
New Zealand	13	4	1	1	1	-	-
TOTAL DEVELOPING COUNTRIES	3,197	985	17	56	193	120	34
Europe	79	36	-	1	9	2	1
Turkey (includes Asia)	79	36	-	1	9	2	1

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
Asia	829	273	9	12	36	33	8
Burma	5	5	-	-	-	1	-
China (includes Taiwan)	44	21	1	2	2	2	-
Hong Kong	28	13	-	-	2	3	1
India	71	38	1	3	10	3	-
Indonesia	1	-	-	-	-	-	-
Iran	96	29	2	-	2	1	-
Iraq	27	15	1	-	1	1	2
Israel	110	49	-	2	6	8	-
Jordan (incs. Arab Palestine)	22	9	1	-	2	-	1
Korea	57	16	2	3	-	2	2
Lebanon	47	19	1	-	5	1	-
Malaysia	6	2	-	-	-	-	-
Pakistan	17	9	-	-	1	2	-
Philippines	205	13	-	1	2	3	-
Syrian Arab Republic	29	15	-	-	1	2	2
Thailand	33	1	-	-	-	-	-
Vietnam	9	6	-	1	-	2	-
Other Asia	22	13	-	-	2	2	-
North America	1,347	381	6	28	90	53	9
Mexico	209	52	1	4	5	5	3
Other North America	137	43	3	3	4	6	-
Dominican Republic	134	44	-	-	18	3	-
Haiti	80	5	-	-	1	1	-
Other West Indies	573	186	1	17	52	33	4
Costa Rica	52	11	1	2	2	-	-
El Salvador	30	1	-	-	-	-	1
Guatemala	33	12	-	1	1	2	-
Honduras	27	8	-	-	3	-	-
Nicaragua	21	5	-	-	-	1	-
Panama	40	11	-	1	4	2	1
Other Central America	11	3	-	-	-	-	-
South America	857	262	2	15	51	29	16
Argentina	199	59	1	6	7	5	6
Bolivia	27	7	-	-	4	-	-
Brazil	97	45	1	4	6	7	3
Chile	55	18	-	-	6	2	1
Colombia	169	41	-	2	9	5	1
Ecuador	45	11	-	-	4	1	-
Paraguay	18	1	-	-	-	-	-
Peru	87	23	-	2	2	1	2
Uruguay	4	1	-	-	-	-	-
Venezuela	130	55	-	1	13	8	3
Other South America	26	1	-	-	-	-	-
Africa	79	29	-	-	7	3	-
Algeria	1	1	-	-	1	-	-
Ethiopia	2	1	-	-	-	-	-
Ghana	2	1	-	-	-	-	-
Kenya	3	2	-	-	-	-	-
Morocco	5	1	-	-	-	-	-
Nigeria	4	3	-	-	3	-	-
Tunisia	3	1	-	-	-	-	-
U.A.R. (Egypt)	27	10	-	-	2	1	-
Other Africa	32	9	-	-	1	2	-
All Other Countries	6	4	-	-	-	-	-

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092	093	040
ALL COUNTRIES	316	52	30	59	1,325	31
TOTAL DEVELOPED COUNTRIES	184	33	16	51	950	14
Europe	94	15	4	16	585	6
Austria	-	-	-	-	11	-
Belgium	-	-	-	-	9	-
Denmark	9	-	-	-	7	-
Finland	-	-	-	-	3	-
France	1	1	-	1	22	-
Germany	18	3	-	3	116	2
Greece	3	-	-	-	23	2
Ireland	1	-	-	-	11	-
Italy	3	2	-	-	13	-
Netherlands	3	-	1	1	53	-
Norway	4	-	-	-	25	-
Portugal	-	-	-	1	-	-
Spain	-	-	-	-	7	-
Sweden	3	-	-	-	28	-
Switzerland	5	-	-	1	32	-
United Kingdom	42	9	3	9	190	1
Other Europe	2	-	-	-	35	1
Asia	1	-	-	-	7	1
Japan	1	-	-	-	7	1
North America	87	18	11	35	339	7
Canada	87	18	11	35	339	7
Africa	-	-	-	-	6	-
South Africa	-	-	-	-	6	-
Oceania	2	-	1	-	13	-
Australia	2	-	1	-	12	-
New Zealand	-	-	-	-	1	-
TOTAL DEVELOPING COUNTRIES	132	19	14	8	375	17
Europe	5	1	-	-	17	-
Turkey (includes Asia)	5	1	-	-	17	-

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092	093	040
Asia	43	7	5	3	109	8
Burma	1	-	1	-	2	-
China (includes Taiwan)	1	-	-	-	13	-
Hong Kong	1	-	1	1	4	-
India	4	2	1	-	14	-
Indonesia	-	-	-	-	-	-
Iran	9	-	-	1	13	1
Iraq	3	-	-	-	6	1
Israel	11	2	1	-	17	2
Jordan (incs. Arab Palestine)	2	-	-	-	2	1
Korea	1	1	-	-	5	-
Lebanon	1	-	-	1	10	-
Malaysia	-	-	-	-	2	-
Pakistan	1	-	-	-	4	1
Philippines	2	-	1	-	4	-
Syrian Arab Republic	2	-	-	-	7	1
Thailand	1	-	-	-	-	-
Vietnam	-	-	-	-	3	-
Other Asia	3	2	-	-	3	1
North America	40	5	4	3	137	6
Mexico	7	2	2	1	19	3
Other North America	7	-	2	-	18	-
Dominican Republic	1	1	-	-	20	1
Haiti	1	-	-	-	2	-
Other West Indies	21	-	-	2	55	1
Costa Rica	2	1	-	-	3	-
El Salvador	-	-	-	-	-	-
Guatemala	-	-	-	-	8	-
Honduras	-	-	-	-	5	-
Nicaragua	-	1	-	-	3	-
Panama	-	-	-	-	3	-
Other Central America	1	-	-	-	1	1
South America	41	5	4	2	96	1
Argentina	8	5	1	-	20	-
Bolivia	1	-	-	-	2	-
Brazil	4	-	-	-	20	-
Chile	2	-	-	-	6	1
Colombia	10	-	-	1	13	-
Ecuador	3	-	-	-	3	-
Paraguay	-	-	-	-	1	-
Peru	5	-	1	-	10	-
Uruguay	1	-	-	-	-	-
Venezuela	7	-	2	1	20	-
Other South America	-	-	-	-	1	-
Africa	2	1	-	-	14	2
Algeria	-	-	-	-	-	-
Ethiopia	-	-	-	-	1	-
Ghana	-	-	-	-	1	-
Kenya	-	-	-	-	2	-
Morocco	1	-	-	-	-	-
Nigeria	-	-	-	-	-	-
Tunisia	-	-	-	-	1	-
U.A.R. (Egypt)	1	1	-	-	4	1
Other Africa	-	-	-	-	5	1
All Other Countries	1	-	1	-	2	-

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
ALL COUNTRIES	1,104	79	17	8	49	21	17	474
TOTAL DEVELOPED COUNTRIES	807	43	15	3	31	14	9	347
Europe	541	33	6	-	20	9	5	255
Austria	5	-	-	-	-	1	-	1
Belgium	7	-	1	-	-	-	-	4
Denmark	7	1	-	-	-	-	-	2
Finland	1	-	-	-	-	-	-	-
France	12	4	-	-	1	1	-	3
Germany	105	1	-	-	4	-	1	64
Greece	10	-	1	-	-	-	-	7
Ireland	9	-	1	-	-	-	-	7
Italy	34	10	-	-	3	-	1	13
Netherlands	35	2	-	-	1	-	-	21
Norway	7	-	-	-	1	-	-	2
Portugal	7	4	-	-	-	-	-	-
Spain	5	-	-	-	-	-	-	3
Sweden	8	-	-	-	-	-	1	3
Switzerland	33	-	-	-	1	1	1	19
United Kingdom	241	11	2	-	9	6	1	96
Other Europe	15	-	1	-	-	-	-	10
Asia	12	2	1	-	2	-	-	4
Japan	12	2	1	-	2	-	-	4
North America	231	8	6	2	7	5	4	81
Canada	231	8	6	2	7	5	4	81
Africa	4	-	-	1	-	-	-	2
South Africa	4	-	-	1	-	-	-	2
Oceania	19	-	2	-	2	-	-	5
Australia	14	-	2	-	1	-	-	3
New Zealand	5	-	-	-	1	-	-	2
TOTAL DEVELOPING COUNTRIES	297	36	2	5	18	7	8	127
Europe	5	-	-	-	-	-	2	1
Turkey (includes Asia)	5	-	-	-	-	-	2	1

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
Asia	106	4	–	3	3	6	2	48
Burma	–	–	–	–	–	–	–	–
China (includes Taiwan)	10	–	–	–	–	–	–	6
Hong Kong	2	–	–	–	–	–	–	1
India	15	1	–	1	1	1	1	2
Indonesia	1	–	–	–	–	–	–	1
Iran	13	2	–	–	–	–	–	7
Iraq	8	–	–	1	–	2	–	5
Israel	7	–	–	1	–	–	–	3
Jordan (incs. Arab Palestine)	8	–	–	–	1	2	–	3
Korea	17	1	–	–	–	–	–	10
Lebanon	6	–	–	–	1	–	1	–
Malaysia	1	–	–	–	–	–	–	–
Pakistan	6	–	–	–	–	1	–	3
Philippines	5	–	–	–	–	–	–	1
Syrian Arab Republic	4	–	–	–	–	–	–	4
Thailand	2	–	–	–	–	–	–	1
Vietnam	–	–	–	–	–	–	–	–
Other Asia	1	–	–	–	–	–	–	1
North America	103	24	1	–	6	1	1	42
Mexico	18	3	–	–	1	–	1	7
Other North America	13	3	–	–	–	1	–	4
Dominican Republic	7	2	–	–	–	–	–	3
Haiti	3	1	–	–	–	–	–	–
Other West Indies	45	7	1	–	4	–	–	24
Costa Rica	2	1	–	–	–	–	–	1
El Salvador	5	4	–	–	–	–	–	–
Guatemala	2	1	–	–	1	–	–	–
Honduras	2	1	–	–	–	–	–	1
Nicaragua	2	1	–	–	–	–	–	–
Panama	2	–	–	–	–	–	–	2
Other Central America	2	–	–	–	–	–	–	–
South America	73	6	1	1	7	–	3	31
Argentina	13	–	–	–	1	–	1	7
Bolivia	6	1	–	–	–	–	–	–
Brazil	13	3	–	1	–	–	1	7
Chile	9	2	1	–	–	–	–	2
Colombia	8	–	–	–	4	–	–	4
Ecuador	5	–	–	–	–	–	1	2
Paraguay	1	–	–	–	–	–	–	1
Peru	2	–	–	–	–	–	–	–
Uruguay	–	–	–	–	–	–	–	–
Venezuela	15	–	–	–	2	–	–	7
Other South America	1	–	–	–	–	–	–	1
Africa	9	2	–	–	2	–	–	5
Algeria	–	–	–	–	–	–	–	–
Ethiopia	–	–	–	–	–	–	–	–
Ghana	–	–	–	–	–	–	–	–
Kenya	1	1	–	–	–	–	–	–
Morocco	–	–	–	–	–	–	–	–
Nigeria	–	–	–	–	–	–	–	–
Tunisia	2	1	–	–	1	–	–	–
U.A.R. (Egypt)	3	–	–	–	–	–	–	3
Other Africa	3	–	–	–	1	–	–	2
All Other Countries	1	–	–	1	–	–	–	–

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	135	174	140	045	145	052
ALL COUNTRIES	88	16	39	34	187	31	29	15
TOTAL DEVELOPED COUNTRIES	64	12	32	22	163	19	24	9
Europe	17	9	22	8	122	13	17	5
Austria	-	1	-	-	2	-	-	-
Belgium	-	-	-	-	-	1	1	-
Denmark	1	-	-	-	2	1	-	-
Finland	-	-	-	-	1	-	-	-
France	-	-	-	1	2	-	-	-
Germany	3	-	2	-	25	2	3	-
Greece	-	-	-	1	1	-	-	-
Ireland	1	-	-	-	-	-	-	-
Italy	1	-	1	1	3	-	1	-
Netherlands	3	-	3	1	2	-	2	-
Norway	1	-	-	-	3	-	-	-
Portugal	-	3	-	-	-	-	-	-
Spain	-	-	-	-	2	-	-	-
Sweden	-	-	-	1	2	-	1	-
Switzerland	2	-	-	-	8	-	-	1
United Kingdom	4	5	15	2	68	9	9	4
Other Europe	1	-	1	1	1	-	-	-
Asia	-	-	-	-	1	1	-	1
Japan	-	-	-	-	1	1	-	1
North America	47	3	8	14	33	5	5	3
Canada	47	3	8	14	33	5	5	3
Africa	-	-	-	-	1	-	-	-
South Africa	-	-	-	-	1	-	-	-
Oceania	-	-	2	-	6	-	2	-
Australia	-	-	2	-	4	-	2	-
New Zealand	-	-	-	-	2	-	-	-
TOTAL DEVELOPING COUNTRIES	24	4	7	12	24	12	5	6
Europe	-	-	-	1	1	-	-	-
Turkey (includes Asia)	-	-	-	1	1	-	-	-

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	135	174	140	045	145	052
Asia	5	1	5	4	15	6	1	3
Burma	–	–	–	–	–	–	–	–
China (includes Taiwan)	1	–	1	2	–	–	–	–
Hong Kong	–	–	–	–	1	–	–	–
India	1	–	2	–	3	2	–	–
Indonesia	–	–	–	–	–	–	–	–
Iran	2	1	–	–	1	–	–	–
Iraq	–	–	–	–	–	–	–	–
Israel	–	–	–	1	2	–	–	–
Jordan (incs. Arab Palestine)	–	–	1	–	1	–	–	–
Korea	1	–	–	–	3	1	1	–
Lebanon	–	–	1	–	1	1	–	1
Malaysia	–	–	–	–	1	–	–	–
Pakistan	–	–	–	–	–	2	–	–
Philippines	–	–	–	1	1	–	–	2
Syrian Arab Republic	–	–	–	–	–	–	–	–
Thailand	–	–	–	–	1	–	–	–
Vietnam	–	–	–	–	–	–	–	–
Other Asia	–	–	–	–	–	–	–	–
North America	6	2	1	5	6	3	4	1
Mexico	3	1	–	1	1	–	–	–
Other North America	1	–	1	–	2	1	–	–
Dominican Republic	–	1	–	1	–	–	–	–
Haiti	–	–	–	–	–	–	2	–
Other West Indies	1	–	–	2	2	2	1	1
Costa Rica	–	–	–	–	–	–	–	–
El Salvador	1	–	–	–	–	–	–	–
Guatemala	–	–	–	–	–	–	–	–
Honduras	–	–	–	–	–	–	–	–
Nicaragua	–	–	–	–	1	–	–	–
Panama	–	–	–	–	–	–	–	–
Other Central America	–	–	–	1	–	–	1	–
South America	13	1	1	2	2	3	–	2
Argentina	3	–	–	–	1	–	–	–
Bolivia	4	–	–	1	–	–	–	–
Brazil	–	1	–	–	–	–	–	–
Chile	–	–	–	1	1	–	–	2
Colombia	–	–	–	–	–	–	–	–
Ecuador	1	–	–	–	–	1	–	–
Paraguay	–	–	–	–	–	–	–	–
Peru	1	–	–	–	–	1	–	–
Uruguay	–	–	–	–	–	–	–	–
Venezuela	4	–	1	–	–	1	–	–
Other South America	–	–	–	–	–	–	–	–
Africa	–	–	–	–	–	–	–	–
Algeria	–	–	–	–	–	–	–	–
Ethiopia	–	–	–	–	–	–	–	–
Ghana	–	–	–	–	–	–	–	–
Kenya	–	–	–	–	–	–	–	–
Morocco	–	–	–	–	–	–	–	–
Nigeria	–	–	–	–	–	–	–	–
Tunisia	–	–	–	–	–	–	–	–
U.A.R. (Egypt)	–	–	–	–	–	–	–	–
Other Africa	–	–	–	–	–	–	–	–
All Other Countries	–	–	–	–	–	–	–	–

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
		172	035	173	050	175	053
ALL COUNTRIES	192	86	9	43	30	6	18
TOTAL DEVELOPED COUNTRIES	119	53	5	31	15	5	10
Europe	79	40	3	14	10	5	7
Austria	2	–	–	1	–	1	–
Belgium	1	–	–	–	–	–	1
Denmark	2	2	–	–	–	–	–
Finland	1	–	–	1	–	–	–
France	1	–	–	–	1	–	–
Germany	19	12	2	3	1	–	1
Greece	4	2	–	1	–	–	1
Ireland	2	1	–	–	1	–	–
Italy	2	–	–	–	1	–	1
Netherlands	5	4	–	1	–	–	–
Norway	–	–	–	–	–	–	–
Portugal	1	–	–	–	1	–	–
Spain	6	3	–	1	1	–	1
Sweden	2	2	–	–	–	–	–
Switzerland	3	2	1	–	–	–	–
United Kingdom	23	9	–	5	3	4	2
Other Europe	5	3	–	1	1	–	–
Asia	3	1	1	1	–	–	–
Japan	3	1	1	1	–	–	–
North America	35	12	1	14	5	–	3
Canada	35	12	1	14	5	–	3
Africa	1	–	–	1	–	–	–
South Africa	1	–	–	1	–	–	–
Oceania	1	–	–	1	–	–	–
Australia	1	–	–	1	–	–	–
New Zealand	–	–	–	–	–	–	–
TOTAL DEVELOPING COUNTRIES	73	33	4	12	15	1	8
Europe	1	–	–	1	–	–	–
Turkey (includes Asia)	1	–	–	1	–	–	–

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
		172	035	173	050	175	053
Asia	21	4	3	8	3	-	3
Burma	-	-	-	-	-	-	-
China (includes Taiwan)	-	-	-	-	-	-	-
Hong Kong	1	-	-	1	-	-	-
India	4	1	-	3	-	-	-
Indonesia	-	-	-	-	-	-	-
Iran	4	1	1	2	-	-	-
Iraq	-	-	-	-	-	-	-
Israel	1	-	-	1	-	-	-
Jordan (incs. Arab Palestine)	1	-	-	-	-	-	1
Korea	4	2	-	-	-	-	2
Lebanon	1	-	-	1	-	-	-
Malaysia	-	-	-	-	-	-	-
Pakistan	-	-	-	-	-	-	-
Philippines	3	-	-	-	3	-	-
Syrian Arab Republic	-	-	-	-	-	-	-
Thailand	1	-	1	-	-	-	-
Vietnam	-	-	-	-	-	-	-
Other Asia	1	-	1	-	-	-	-
North America	22	11	-	1	7	1	2
Mexico	6	2	-	-	4	-	-
Other North America	1	1	-	-	-	-	-
Dominican Republic	1	1	-	-	-	-	-
Haiti	2	1	-	-	-	-	1
Other West Indies	10	5	-	1	3	1	-
Costa Rica	1	1	-	-	-	-	-
El Salvador	-	-	-	-	-	-	-
Guatemala	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	-	-
Nicaragua	1	-	-	-	-	-	1
Panama	-	-	-	-	-	-	-
Other Central America	-	-	-	-	-	-	-
South America	28	18	-	2	5	-	3
Argentina	4	1	-	-	1	-	2
Bolivia	2	2	-	-	-	-	-
Brazil	2	2	-	-	-	-	-
Chile	3	2	-	-	1	-	-
Colombia	6	4	-	-	2	-	-
Ecuador	-	-	-	-	-	-	-
Paraguay	-	-	-	-	-	-	-
Peru	3	1	-	1	-	-	1
Uruguay	-	-	-	-	-	-	-
Venezuela	7	6	-	-	1	-	-
Other South America	1	-	-	1	-	-	-
Africa	1	-	1	-	-	-	-
Algeria	-	-	-	-	-	-	-
Ethiopia	-	-	-	-	-	-	-
Ghana	-	-	-	-	-	-	-
Kenya	-	-	-	-	-	-	-
Morocco	-	-	-	-	-	-	-
Nigeria	-	-	-	-	-	-	-
Tunisia	-	-	-	-	-	-	-
U.A.R. (Egypt)	1	-	1	-	-	-	-
Other Africa	-	-	-	-	-	-	-
All Other Countries	-	-	-	-	-	-	-

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
		162	071	150	151
ALL COUNTRIES	5,612	1,797	115	3,429	271
TOTAL DEVELOPED COUNTRIES	3,770	779	32	2,752	207
Europe	2,078	471	26	1,455	126
Austria	22	6	-	14	2
Belgium	31	12	1	16	2
Denmark	53	5	-	45	3
Finland	12	2	-	8	2
France	54	25	1	27	1
Germany	278	73	9	179	17
Greece	46	31	1	13	1
Ireland	247	21	-	215	11
Italy	62	47	3	11	1
Netherlands	95	14	-	73	8
Norway	63	1	1	59	2
Portugal	4	3	-	1	-
Spain	62	47	1	14	-
Sweden	93	10	1	62	20
Switzerland	58	21	1	32	4
United Kingdom	806	119	3	635	49
Other Europe	92	34	4	51	3
Asia	11	8	-	2	1
Japan	11	8	-	2	1
North America	1,622	280	6	1,259	77
Canada	1,622	280	6	1,259	77
Africa	18	12	-	6	-
South Africa	18	12	-	6	-
Oceania	41	8	-	30	3
Australia	37	6	-	28	3
New Zealand	4	2	-	2	-
TOTAL DEVELOPING COUNTRIES	1,842	1,018	83	677	64
Europe	37	31	1	5	-
Turkey (includes Asia)	37	31	1	5	-

TABLE V—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1962

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
		162	071	150	151
Asia	429	257	13	152	7
Burma	-	-	-	-	-
China (includes Taiwan)	13	4	1	7	1
Hong Kong	12	3	-	9	-
India	14	12	2	-	-
Indonesia	-	-	-	-	-
Iran	50	40	1	7	2
Iraq	4	3	1	-	-
Israel	53	28	2	23	-
Jordan (incs. Arab Palestine)	4	2	-	2	-
Korea	20	18	1	1	-
Lebanon	21	7	1	13	-
Malaysia	3	2	-	1	-
Pakistan	2	1	-	1	-
Philippines	184	119	4	58	3
Syrian Arab Republic	10	7	-	3	-
Thailand	29	7	-	21	1
Vietnam	3	-	-	3	-
Other Asia	7	4	-	3	-
North America	841	412	35	343	51
Mexico	133	70	-	50	13
Other North America	80	65	2	11	2
Dominican Republic	82	67	4	10	1
Haiti	70	8	4	34	24
Other West Indies	332	165	16	145	6
Costa Rica	38	9	4	23	2
El Salvador	24	6	2	16	-
Guatemala	19	3	1	15	-
Honduras	17	5	1	11	-
Nicaragua	13	4	1	7	1
Panama	27	10	-	16	1
Other Central America	6	-	-	5	1
South America	494	298	34	156	6
Argentina	123	94	4	23	2
Bolivia	12	5	1	5	1
Brazil	37	24	5	8	-
Chile	25	5	2	16	2
Colombia	114	75	7	32	-
Ecuador	29	6	5	17	1
Paraguay	16	7	1	8	-
Peru	59	43	6	10	-
Uruguay	3	1	-	2	-
Venezuela	53	38	3	12	-
Other South America	23	-	-	23	-
Africa	40	20	-	20	-
Algeria	-	-	-	-	-
Ethiopia	1	1	-	-	-
Ghana	1	-	-	1	-
Kenya	-	-	-	-	-
Morocco	4	1	-	3	-
Nigeria	1	1	-	-	-
Tunisia	-	-	-	-	-
U.A.R. (Egypt)	13	10	-	3	-
Other Africa	20	7	-	13	-
All Other Countries	1	-	-	1	-

TABLE VI

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
ALL COUNTRIES	8,539	2,804	118	142	240	278	61
TOTAL DEVELOPED COUNTRIES	6,308	2,092	100	92	148	205	42
Europe	3,635	1,252	51	47	92	128	12
Austria	105	26	-	-	1	3	-
Belgium	36	12	-	-	2	3	-
Denmark	100	57	-	4	17	4	-
Finland	13	2	-	-	-	-	-
France	140	36	1	4	1	1	-
Germany	900	253	2	4	11	22	1
Greece	145	66	1	3	8	5	-
Ireland	183	20	2	-	2	1	-
Italy	198	35	1	3	2	4	1
Netherlands	200	67	6	8	3	3	-
Norway	140	72	2	3	6	7	1
Portugal	5	2	-	-	-	-	-
Spain	22	4	-	-	-	-	-
Sweden	219	134	7	9	9	6	2
Switzerland	255	106	-	2	7	19	2
United Kingdom	901	332	27	6	22	46	5
Other Europe	73	28	2	1	1	4	-
Asia	27	6	1	-	-	1	-
Japan	27	6	1	-	-	1	-
North America	2,546	795	46	41	50	73	28
Canada	2,546	795	46	41	50	73	28
Africa	19	6	-	-	1	-	1
South Africa	19	6	-	-	1	-	1
Oceania	81	33	2	4	5	3	1
Australia	68	30	1	4	5	3	-
New Zealand	13	3	1	-	-	-	1
TOTAL DEVELOPING COUNTRIES	2,231	712	18	50	92	73	19
Europe	29	19	-	2	6	3	-
Turkey (includes Asia)	29	19	-	2	6	3	-

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	TOTAL Engineers, Scientists, and Medical Personnel	Total Engineers	Engineers				
			Aeronautical	Chemical	Civil	Electrical	Industrial
			080	081	082	083	084
Asia	528	222	7	17	35	31	5
Burma 2/							
China (includes Taiwan)	132	59	2	8	8	8	2
Hong Kong	49	24	1	3	5	1	–
India	44	23	–	–	1	5	1
Indonesia	8	4	–	–	–	1	–
Iran	29	12	–	1	2	2	–
Iraq	13	4	–	–	2	–	1
Israel	89	47	3	1	9	7	1
Jordan (incs. Arab Palestine)	15	8	1	1	–	1	–
Korea	7	2	–	–	1	–	–
Lebanon	28	11	–	–	3	2	–
Malaysia 2/							
Pakistan 2/							
Philippines	66	2	–	1	–	–	–
Syrian Arab Republic	5	3	–	–	–	2	–
Thailand 2/							
Vietnam 2/							
Other Asia	43	23	–	2	4	2	–
North America	1,007	191	7	9	21	16	8
Mexico	299	47	1	2	6	3	2
Other North America	189	80	6	3	9	9	5
Dominican Republic	33	4	–	1	–	–	–
Haiti	22	3	–	–	–	–	–
Other West Indies	367	33	–	3	3	2	1
Costa Rica	20	4	–	–	–	–	–
El Salvador	11	2	–	–	–	1	–
Guatemala	9	3	–	–	1	–	–
Honduras	19	9	–	–	2	1	–
Nicaragua	18	2	–	–	–	–	–
Panama	16	3	–	–	–	–	–
Other Central America	4	1	–	–	–	–	–
South America	598	248	4	18	29	18	6
Argentina	158	71	1	4	7	1	1
Bolivia	25	10	–	1	–	1	1
Brazil	132	56	2	3	6	9	1
Chile	38	14	–	4	1	–	–
Colombia	86	30	–	2	3	2	–
Ecuador	29	8	–	–	2	1	2
Paraguay 4/							
Peru	72	30	–	4	5	–	–
Uruguay 4/							
Venezuela	36	20	–	–	2	4	1
Other South America	22	9	1	–	3	–	–
Africa	66	30	–	4	1	5	–
Algeria	2	2	–	1	–	–	–
Ethiopia 3/							
Ghana 3/							
Kenya 3/							
Morocco 3/							
Nigeria	1	–	–	–	–	–	–
Tunisia 3/							
U.A.R. (Egypt)	28	11	–	1	–	4	–
Other Africa	35	17	–	2	1	1	–
All Other Countries	3	2	–	–	–	–	–

2/ Included in Other Asia
3/ Included in Other Africa
4/ Included in Other South America

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	Engineers (cont'd.)					
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors
	085	090	091	092 1/	093	040
ALL COUNTRIES	307	45	28	-	1,575	10
TOTAL DEVELOPED COUNTRIES	228	35	23	-	1,213	6
Europe	125	15	11	-	769	2
Austria	-	1	-	-	21	-
Belgium	-	-	-	-	7	-
Denmark	4	-	-	-	28	-
Finland	-	-	-	-	2	-
France	1	-	-	-	28	-
Germany	18	1	2	-	192	-
Greece	5	-	-	-	44	-
Ireland	-	-	-	-	15	-
Italy	4	1	1	-	17	1
Netherlands	17	-	3	-	27	-
Norway	10	1	-	-	42	-
Portugal	-	-	-	-	2	-
Spain	-	-	-	-	4	-
Sweden	19	-	2	-	80	-
Switzerland	14	2	-	-	60	-
United Kingdom	31	9	3	-	182	1
Other Europe	2	-	-	-	18	-
Asia	-	-	-	-	4	-
Japan	-	-	-	-	4	-
North America	99	20	12	-	422	4
Canada	99	20	12	-	422	4
Africa	1	-	-	-	3	-
South Africa	1	-	-	-	3	-
Oceania	3	-	-	-	15	-
Australia	2	-	-	-	15	-
New Zealand	1	-	-	-	-	-
TOTAL DEVELOPING COUNTRIES	79	10	5	-	362	4
Europe	1	-	-	-	7	-
Turkey (includes Asia)	1	-	-	-	7	-

1/ Included in Other Engineers prior to 1960

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	Engineers (cont'd.)						
	Mechanical	Metallurgical and Metallurgists	Mining	Sales	Other Engineers	Professors and Instructors	
	085	090	091	092 1/	093	040	
Asia	34	3	-	-	90	-	
Burma							
China (includes Taiwan)	10	1	-	-	20	-	
Hong Kong	2	-	-	-	12	-	
India	7	1	-	-	8	-	
Indonesia	-	-	-	-	3	-	
Iran	1	-	-	-	6	-	
Iraq	-	-	-	-	1	-	
Israel	9	-	-	-	17	-	
Jordan (incs. Arab Palestine)	-	-	-	-	5	-	
Korea	-	-	-	-	1	-	
Lebanon	1	-	-	-	5	-	
Malaysia							
Pakistan							
Philippines	1	-	-	-	-	-	
Syrian Arab Republic	-	-	-	-	1	-	
Thailand							
Vietnam							
Other Asia	3	1	-	-	11	-	
North America	22	2	2	-	101	3	
Mexico	9	-	1	-	23	-	
Other North America	8	1	1	-	36	2	
Dominican Republic	1	-	-	-	2	-	
Haiti	-	-	-	-	3	-	
Other West Indies	2	-	-	-	21	1	
Costa Rica	-	-	-	-	4	-	
El Salvador	-	-	-	-	1	-	
Guatemala	-	-	-	-	2	-	
Honduras	1	-	-	-	5	-	
Nicaragua	1	-	-	-	1	-	
Panama	-	1	-	-	2	-	
Other Central America	-	-	-	-	1	-	
South America	17	4	2	-	150	-	
Argentina	4	1	-	-	52	-	
Bolivia	-	-	-	-	7	-	
Brazil	5	2	-	-	28	-	
Chile	-	1	1	-	7	-	
Colombia	5	-	-	-	18	-	
Ecuador	-	-	-	-	3	-	
Paraguay							
Peru	1	-	-	-	20	-	
Uruguay							
Venezuela	1	-	-	-	12	-	
Other South America	1	-	1	-	3	-	
Africa	3	1	1	-	14	1	
Algeria	-	-	-	-	1	-	
Ethiopia							
Ghana							
Kenya							
Morocco							
Nigeria	-	-	-	-	-	-	
Tunisia							
U.A.R. (Egypt)	1	-	-	-	4	1	
Other Africa	2	1	1	-	9	-	
All Other Countries	2	-	-	-	-	-	

1/ Included in Other Engineers Prior to 1960

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
ALL COUNTRIES	1,022	222	43	5	35	6	4	494
TOTAL DEVELOPED COUNTRIES	665	72	40	4	17	5	3	344
Europe	427	58	27	1	6	1	3	226
Austria	19	1	1	–	–	–	–	12
Belgium	6	–	–	–	–	–	–	6
Denmark	3	–	–	–	–	–	–	1
Finland	3	–	3	–	–	–	–	–
France	43	27	–	–	1	1	–	10
Germany	86	7	7	1	1	–	–	47
Greece	19	4	3	–	–	–	–	9
Ireland	8	–	1	–	–	–	–	7
Italy	37	3	4	–	1	–	–	19
Netherlands	38	8	2	–	–	–	–	19
Norway	3	1	1	–	1	–	–	–
Portugal	–	–	–	–	–	–	–	–
Spain	–	–	–	–	–	–	–	–
Sweden	10	2	–	–	–	–	1	6
Switzerland	43	1	–	–	–	–	–	25
United Kingdom	101	3	4	–	2	–	1	61
Other Europe	8	1	1	–	–	–	1	4
Asia	11	6	–	–	–	–	–	1
Japan	11	6	–	–	–	–	–	1
North America	208	5	12	3	10	4	–	112
Canada	208	5	12	3	10	4	–	112
Africa	3	1	–	–	–	–	–	1
South Africa	3	1	–	–	–	–	–	1
Oceania	16	2	1	–	1	–	–	4
Australia	12	1	1	–	1	–	–	3
New Zealand	4	1	–	–	–	–	–	1
TOTAL DEVELOPING COUNTRIES	357	150	3	1	18	1	1	150
Europe	2	–	–	–	–	–	–	1
Turkey (includes Asia)	2	–	–	–	–	–	–	1

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	Total Natural Scientists	Natural Scientists						
		Agricultural Scientists	Foresters and Conservationists	Professors and Instructors - Agricultural Science	Biologists	Professors and Instructors - Biological Science	Professors and Instructors - Medical Science	Chemists
		130	103	031	131	032	043	021
Asia	66	16	1	1	5	-	1	32
Burma								
China (includes Taiwan)	18	-	-	1	1	-	-	15
Hong Kong	5	2	-	-	1	-	-	2
India	17	6	-	-	1	-	-	4
Indonesia	1	1	-	-	-	-	-	-
Iran	2	-	-	-	-	-	-	2
Iraq	-	-	-	-	-	-	-	-
Israel	8	1	1	-	2	-	-	4
Jordan (incs. Arab Palestine)	-	-	-	-	-	-	-	-
Korea	1	-	-	-	-	-	-	1
Lebanon	1	1	-	-	-	-	-	-
Malaysia								
Pakistan								
Philippines	5	4	-	-	-	-	-	-
Syrian Arab Republic	1	-	-	-	-	-	-	1
Thailand								
Vietnam								
Other Asia	7	1	-	-	-	-	1	3
North America	210	127	1	-	7	-	-	68
Mexico	84	62	-	-	2	-	-	17
Other North America	18	-	-	-	2	-	-	15
Dominican Republic	6	5	-	-	-	-	-	1
Haiti	4	4	-	-	-	-	-	-
Other West Indies	90	54	1	-	1	-	-	32
Costa Rica	4	1	-	-	1	-	-	1
El Salvador	-	-	-	-	-	-	-	-
Guatemala	1	-	-	-	1	-	-	-
Honduras	-	-	-	-	-	-	-	-
Nicaragua	2	1	-	-	-	-	-	1
Panama	1	-	-	-	-	-	-	1
Other Central America	-	-	-	-	-	-	-	-
South America	69	5	1	-	5	1	-	43
Argentina	19	-	-	-	-	-	-	15
Bolivia	2	-	-	-	-	-	-	1
Brazil	10	1	-	-	-	-	-	9
Chile	2	-	-	-	-	-	-	2
Colombia	18	3	-	-	4	-	-	6
Ecuador	4	-	-	-	-	-	-	4
Paraguay								
Peru	9=	1	1	-	1	1	-	3
Uruguay								
Venezuela	3	-	-	-	-	-	-	1
Other South America	2	-	-	-	-	-	-	2
Africa	10	2	-	-	1	-	-	6
Algeria	-	-	-	-	-	-	-	-
Ethiopia								
Ghana								
Kenya								
Morocco								
Nigeria	-	-	-	-	-	-	-	-
Tunisia								
U.A.R. (Egypt)	6	2	-	-	1	-	-	2
Other Africa	4	-	-	-	-	-	-	4
All Other Countries	-	-	-	-	-	-	-	-

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	135	174	140	045	145	052
ALL COUNTRIES	51	5	17	13	75	11	36	5
TOTAL DEVELOPED COUNTRIES	40	2	17	12	68	10	28	3
Europe	10	–	14	4	47	7	21	2
Austria	–	–	–	–	5	–	–	–
Belgium	–	–	–	–	–	–	–	–
Denmark	–	–	–	–	1	–	1	–
Finland	–	–	–	–	–	–	–	–
France	–	–	–	1	1	–	2	–
Germany	1	–	2	–	15	2	3	–
Greece	–	–	–	–	–	–	3	–
Ireland	–	–	–	–	–	–	–	–
Italy	–	–	7	–	–	–	3	–
Netherlands	5	–	–	–	4	–	–	–
Norway	–	–	–	–	–	–	–	–
Portugal	–	–	–	–	–	–	–	–
Spain	–	–	–	–	–	–	–	–
Sweden	–	–	–	–	–	1	–	–
Switzerland	3	–	2	–	8	2	1	1
United Kingdom	1	–	2	3	13	2	8	1
Other Europe	–	–	1	–	–	–	–	–
Asia	4	–	–	–	–	–	–	–
Japan	4	–	–	–	–	–	–	–
North America	21	2	2	8	20	2	6	1
Canada	21	2	2	8	20	2	6	1
Africa	–	–	–	–	1	–	–	–
South Africa	–	–	–	–	1	–	–	–
Oceania	5	–	1	–	–	1	1	–
Australia	3	–	1	–	–	1	1	–
New Zealand	2	–	–	–	–	–	–	–
TOTAL DEVELOPING COUNTRIES	11	3	–	1	7	1	8	2
Europe	1	–	–	–	–	–	–	–
Turkey (includes Asia)	1	–	–	–	–	–	–	–

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	Natural Scientists (cont'd.)							
	Geologists and Geophysicists	Professors and Instructors - Geology and Geophysics	Mathematicians	Statisticians and Actuaries	Physicists	Professors and Instructors - Physics	Other Natural Scientists	Professors and Instructors - Other Natural Sciences
	134	041	135	174	140	045	145	052
Asia	1	1	-	1	2	-	4	1
Burma								
China (includes Taiwan)	-	-	-	-	-	-	-	1
Hong Kong	-	-	-	-	-	-	-	-
India	1	-	-	1	1	-	3	-
Indonesia	-	-	-	-	-	-	-	-
Iran	-	-	-	-	-	-	-	-
Iraq	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	-	-
Jordan (incs. Arab Palestine)	-	-	-	-	-	-	-	-
Korea	-	-	-	-	-	-	-	-
Lebanon	-	-	-	-	-	-	-	-
Malaysia								
Pakistan								
Philippines	-	-	-	-	-	-	1	-
Syrian Arab Republic	-	-	-	-	-	-	-	-
Thailand								
Vietnam								
Other Asia	-	1	-	-	1	-	-	-
North America	1	-	-	-	3	1	2	-
Mexico	-	-	-	-	2	-	1	-
Other North America	-	-	-	-	1	-	-	-
Dominican Republic	-	-	-	-	-	-	-	-
Haiti	-	-	-	-	-	-	-	-
Other West Indies	1	-	-	-	-	-	1	-
Costa Rica	-	-	-	-	-	1	-	-
El Salvador	-	-	-	-	-	-	-	-
Guatemala	-	-	-	-	-	-	-	-
Honduras	-	-	-	-	-	-	-	-
Nicaragua	-	-	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-	-
Other Central America	-	-	-	-	-	-	-	-
South America	7	2	-	-	2	-	2	1
Argentina	-	1	-	-	1	-	2	-
Bolivia	1	-	-	-	-	-	-	-
Brazil	-	-	-	-	-	-	-	-
Chile	-	-	-	-	-	-	-	-
Colombia	4	1	-	-	-	-	-	-
Ecuador	-	-	-	-	-	-	-	-
Paraguay								
Peru	-	-	-	-	1	-	-	1
Uruguay								
Venezuela	2	-	-	-	-	-	-	-
Other South America	-	-	-	-	-	-	-	-
Africa	1	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-	-
Ethiopia								
Ghana								
Kenya								
Morocco								
Nigeria	-	-	-	-	-	-	-	-
Tunisia								
U.A.R. (Egypt)	1	-	-	-	-	-	-	-
Other Africa	-	-	-	-	-	-	-	-
All Other Countries	-	-	-	-	-	-	-	-

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
		172	035	173	050	175	053
ALL COUNTRIES	102	53	5	17	7	17	3
TOTAL DEVELOPED COUNTRIES	78	35	4	14	5	17	3
Europe	54	31	2	7	2	11	1
Austria	–	–	–	–	–	–	–
Belgium	1	1	–	–	–	–	–
Denmark	–	–	–	–	–	–	–
Finland	3	1	1	1	–	–	–
France	2	2	–	–	–	–	–
Germany	18	10	1	2	1	4	–
Greece	1	–	–	–	–	1	–
Ireland	–	–	–	–	–	–	–
Italy	1	1	–	–	–	–	–
Netherlands	6	4	–	–	–	2	–
Norway	1	–	–	1	–	–	–
Portugal	–	–	–	–	–	–	–
Spain	1	1	–	–	–	–	–
Sweden	3	2	–	1	–	–	–
Switzerland	8	6	–	1	–	1	–
United Kingdom	7	3	–	1	1	2	–
Other Europe	2	–	–	–	–	1	1
Asia	4	–	1	–	–	3	–
Japan	4	–	1	–	–	3	–
North America	17	4	1	6	2	3	1
Canada	17	4	1	6	2	3	1
Africa	1	–	–	1	–	–	–
South Africa	1	–	–	1	–	–	–
Oceania	2	–	–	–	1	–	1
Australia	1	–	–	–	–	–	1
New Zealand	1	–	–	–	1	–	–
TOTAL DEVELOPING COUNTRIES	24	18	1	3	2	–	–
Europe	–	–	–	–	–	–	–
Turkey (includes Asia)	–	–	–	–	–	–	–

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	Total Social Scientists	Social Scientists					
		Economists	Professors and Instructors - Economics	Psychologists	Professors and Instructors - Psychology	Other Social Scientists	Professors and Instructors - Other Social Sciences
	172	035		173	050	175	053
Asia	8	5	1	2	-	-	-
Burma							
China (includes Taiwan)	1	-	-	1	-	-	-
Hong Kong	-	-	-	-	-	-	-
India	1	1	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-
Iran	1	1	-	-	-	-	-
Iraq	-	-	-	-	-	-	-
Israel	2	1	1	-	-	-	-
Jordan (incs. Arab Palestine)	-	-	-	-	-	-	-
Korea	1	1	-	-	-	-	-
Lebanon	1	1	-	-	-	-	-
Malaysia							
Pakistan							
Philippines	-	-	-	-	-	-	-
Syrian Arab Republic	-	-	-	-	-	-	-
Thailand							
Vietnam							
Other Asia	1	-	-	1	-	-	-
North America	3	2	-	-	1	-	-
Mexico	1	1	-	-	-	-	-
Other North America	1	-	-	-	1	-	-
Dominican Republic	-	-	-	-	-	-	-
Haiti	-	-	-	-	-	-	-
Other West Indies	-	-	-	-	-	-	-
Costa Rica	-	-	-	-	-	-	-
El Salvador	-	-	-	-	-	-	-
Guatemala	-	-	-	-	-	-	-
Honduras	1	1	-	-	-	-	-
Nicaragua	-	-	-	-	-	-	-
Panama	-	-	-	-	-	-	-
Other Central America	-	-	-	-	-	-	-
South America	13	11	-	1	1	-	-
Argentina	5	4	-	-	1	-	-
Bolivia	-	-	-	-	-	-	-
Brazil	2	1	-	1	-	-	-
Chile	-	-	-	-	-	-	-
Colombia	6	6	-	-	-	-	-
Ecuador	-	-	-	-	-	-	-
Paraguay							
Peru	-	-	-	-	-	-	-
Uruguay							
Venezuela	-	-	-	-	-	-	-
Other South America	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-
Algeria	-	-	-	-	-	-	-
Ethiopia							
Ghana							
Kenya							
Morocco							
Nigeria	-	-	-	-	-	-	-
Tunisia							
U.A.R. (Egypt)	-	-	-	-	-	-	-
Other Africa	-	-	-	-	-	-	-
All Other Countries	-	-	-	-	-	-	-

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
		162	071	150	151
ALL COUNTRIES	4,611	1,388	159	2,934	130
TOTAL DEVELOPED COUNTRIES	3,473	761	86	2,508	118
Europe	1,902	591	70	1,166	75
Austria	60	33	5	19	3
Belgium	17	6	1	10	-
Denmark	40	8	2	30	-
Finland	5	2	1	1	1
France	59	30	4	25	-
Germany	543	179	30	316	18
Greece	59	34	7	18	-
Ireland	155	22	1	125	7
Italy	125	100	-	23	2
Netherlands	89	35	-	46	8
Norway	64	5	1	57	1
Portugal	3	1	-	2	-
Spain	17	8	-	9	-
Sweden	72	12	4	51	5
Switzerland	98	23	3	69	3
United Kingdom	461	76	6	352	27
Other Europe	35	17	5	13	-
Asia	6	3	1	2	-
Japan	6	3	1	2	-
North America	1,526	151	14	1,320	41
Canada	1,526	151	14	1,320	41
Africa	9	6	-	3	-
South Africa	9	6	-	3	-
Oceania	30	10	1	17	2
Australia	25	8	1	15	1
New Zealand	5	2	-	2	1
TOTAL DEVELOPING COUNTRIES	1,138	627	73	426	12
Europe	8	4	-	4	-
Turkey (includes Asia)	8	4	-	4	-

TABLE VI—*Continued*

IMMIGRATION INTO THE UNITED STATES OF SCIENTISTS, ENGINEERS, AND MEDICAL PERSONNEL
BY COUNTRY OF LAST RESIDENCE
FISCAL YEAR 1956

Country or Region of Last Residence	Total Medical Personnel	Medical Personnel			
		Physicians and Surgeons	Dentists	Nurses - Professional	Nurses - Student
		162	071	150	151
Asia	232	136	13	81	2
Burma					
China (includes Taiwan)	54	37	3	13	1
Hong Kong	20	11	1	8	-
India	3	3	-	-	-
Indonesia	3	2	-	1	-
Iran	14	12	1	1	-
Iraq	9	8	-	1	-
Israel	32	12	4	16	-
Jordan (incs. Arab Palestine)	7	1	-	5	1
Korea	3	3	-	-	-
Lebanon	15	11	-	4	-
Malaysia					
Pakistan					
Philippines	59	27	4	28	-
Syrian Arab Republic	1	1	-	-	-
Thailand					
Vietnam					
Other Asia	12	8	-	4	-
North America	603	314	37	243	9
Mexico	167	93	5	67	2
Other North America	90	58	3	24	5
Dominican Republic	23	13	5	5	-
Haiti	15	6	2	7	-
Other West Indies	244	122	20	102	-
Costa Rica	12	5	-	7	-
El Salvador	9	3	-	6	-
Guatemala	5	-	-	5	-
Honduras	9	2	-	7	-
Nicaragua	14	9	1	3	1
Panama	12	2	1	8	1
Other Central America	3	1	-	2	-
South America	268	159	23	85	1
Argentina	63	37	8	18	-
Bolivia	13	2	2	9	-
Brazil	64	48	7	9	-
Chile	22	11	2	9	-
Colombia	32	15	2	15	-
Ecuador	17	12	-	5	-
Paraguay					
Peru	33	26	1	6	-
Uruguay					
Venezuela	13	6	-	7	-
Other South America	11	2	1	7	1
Africa	26	13	-	13	-
Algeria	-	-	-	-	-
Ethiopia					
Ghana					
Kenya					
Morocco					
Nigeria	1	-	-	1	-
Tunisia					
U.A.R. (Egypt)	11	9	-	2	-
Other Africa	14	4	-	10	-
All Other Countries	1	1	-	-	-

TABLE VII.—*Immigration of professional, technical, and kindred workers, fiscal years 1956, 1962–66*

Fiscal year:	*Number*
1956	18,995
1962	23,710
1963	27,930
1964	28,756
1965	28,790
1966	30,039

Source: Annual reports of the Immigration and Naturalization Service, table 8A: Beneficiaries of Occupational Preferences and Other Immigrants Admitted, by Occupation, Fiscal Years 1956, 1962–66.

Appendix B

Statement of Assistant Secretary of State Charles Frankel Before the Senate Judiciary Subcommittee on Immigration and Naturalization, March 6, 1967

I welcome this opportunity to appear before this distinguished committee, and to be accorded the privilege of discussing with you the migration of talent and skills to the United States. The inquiries that you are launching deal with a matter of considerable importance in the present state of the world, and in the relations of our country to other countries. Legal and technical questions are involved, and complex sociological problems as well. Indeed, beyond the questions of fact and of law which the so-called brain drain raises, it also raises certain philosophical and moral issues.

As Assistant Secretary of State for Educational and Cultural Affairs, I am interested in this matter particularly as it involves immigrants and visitors to the United States in educational, scientific, and cultural fields. This interest goes beyond the particular educational exchange programs directly managed by the Department of State, since, as the representative of the Secretary of State, I have the further responsibility of exercising policy guidance with regard to the international educational activities of many other agencies of the Federal Government.

THE INTERAGENCY COUNCIL ON INTERNATIONAL EDUCATIONAL AND CULTURAL AFFAIRS

I fulfill this responsibility through my chairmanship of the Interagency Council on International Educational and Cultural Affairs. This Council was formed in 1964 to improve the coordination of Government educational and cultural programs which are international in purpose and impact. It is composed of representatives from the Agency for International Development, the Department of Defense, the Peace Corps, the U.S. Information Agency, the Department of Health, Education, and Welfare, the Bureau of the Budget, and the Smithsonian Institution, in liaison with the Federal Council for Science and Technology. Other agencies of the Government also work with us when the problems with which we deal concern them.

For the past 2 years, both the Department of State and the other agencies which are associated with the Council have been concerned about the migration of talents and skills to the United States. The Council has conducted studies, has made certain findings and recommendations, and has launched actions designed to deal with the problems it has discovered. A statement by the Council covering these findings and actions is being submitted to you as part of this record for your study.

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What I shall say is based upon this work. I hope, in my statement, to help identify such problems as exist, to put them in perspective, and to indicate the pros and cons of various strategies that have been proposed for dealing with them. I also hope that this distinguished committee will understand the spirit in which I offer this statement. It contains, I think, as many questions as answers. It suggests some ideas about how to think about the problem; it does not offer any grand formula for solving the problem easily or quickly. To my mind, any reasonable man who devotes time to thinking about the issues raised by the so-called brain drain will discover that they are thorny and difficult.

With your permission, Mr. Chairman and members of the committee, I wish to consider the following five questions:

(1) Are the often repeated stories that the United States is "draining off" talent that is needed in other countries really true? Do they exaggerate or do they tell less than the whole story? What, in short, are the facts?

(2) What is the relationship of the U.S. Government-sponsored educational and cultural exchange programs to these facts?

(3) What relation does our immigration law have to these facts?

(4) What steps need to be taken?

(5) What, in general, is the posture which our Government should take toward the "brain drain"?

INSUFFICIENCY OF DATA

Let me turn, first, to the facts. Unfortunately, I must report at the outset that data to determine accurately the nature and dimensions of the "brain drain" are at present insufficient. Two years ago, before the Interagency Council began its study of the problem, they were almost nonexistent. Two obstacles must be overcome before definitive findings can be made.

First, in the foreign countries involved, manpower needs must be measured more systematically. We require better information from these countries about the general outflow of their manpower, stated in terms of their needs, carefully and realistically defined. This information is necessary because the inflow of people to the United States is only a part of the problem. Even if the United States should take action to control the inflow to its shores, this might affect the outflow from other countries only marginally, since people emigrate elsewhere as well. At present, however, we have to depend on specialized reports, partial and limited, with regard to most questions about the outflow from other countries of their needed manpower.

Second, our own statistical systems are also less than adequate. Our records were not set up to measure the "brain drain" from other countries or the technological gap with which it is frequently associated. To cull out the information that is needed is at best a laborious process, and is often one that leads down blind alleys.

We have compiled, however, some basic statistics on the inflow of talent to the United States. They have been furnished us, at our request, by the Immigration and Naturalization Service, in cooperation with the Department of Health, Education, and Welfare, and by the Visa Office of the Department of State. We hope to obtain more such information, and on the regular, systematic basis, so that we may be better

able to measure the dimensions of the problem on a country-by-country basis.

On the basis of the information we have in hand, certain basic findings emerge.

BASIC FINDINGS

First, there is a "brain drain," if we mean by this expression a flow of skilled and talented people to our country from other countries. However, the size of this "drain" is considerably less than most discussions would suggest.

Second, the impact of the "brain drain" on other countries varies widely. Even from the point of view of other countries, it cannot be assumed that the "brain drain" is invariably a problem calling for a remedy. To say that a skilled person has come to our country is not necessarily to say that some other country has suffered a loss. We do not know if his skills were needed or whether, if needed, they would actually have been used. The impact on each country has to be considered on a case-by-case basis. Indeed, even the types of skills that should be counted as part of a "drain" will be different from country to country, and from one time to another.

Third, the exchange programs financed by the U.S. Government have next to no influence on the "brain drain." Less than 1 percent of all those who come to the United States to study, teach, or train under the official Government-sponsored exchange programs conducted by the Department of State and AID adjust their status to that of permanent resident.

Fourth, the drain among foreign students who come here to study on other than U.S. Government grants is larger, but is still limited. It amounts to 8.3 percent.

Fifth, the largest part of the "brain drain" involves the recruitment of trained adults by American industry, universities, hospitals, and research organizations.

Of the total of skilled persons who immigrated in fiscal year 1966—30,039—only one-sixth were temporary visitors (students, exchangees, etc.) who had adjusted their status to that of immigrants.

Indeed, study by foreigners in this country, far from increasing the "brain drain," probably contributes to its diminution. The overwhelming number of the people who are trained here return home to help the development of their own countries. They thus help to alleviate the conditions that are the fundamental reasons for emigration from their countries.

In addition to these general findings, certain other more detailed conclusions, which are somewhat more tentative, also emerge from the studies that have been conducted in the executive branch, largely by Immigration and Naturalization Service and to some extent by the Department's Visa Office.

TENTATIVE CONCLUSIONS

On the basis of what we know and what we estimate, I can report the following:

(1) In fiscal year 1966, of the total number of immigrants (323,040) only 9.3 percent (30,039) were professional, technical, and kindred workers.

In fiscal year 1966, the old Immigration Act was in effect for 5 months, and the new Immigration Act for 7. Even so, the increase since the passage of the new Act does not seem notably large. In 1965, it was 28,790; in 1964, 28,756, and in 1963, 27,930.

(2) The "third" and "sixth preference" provisions of the new law (sec. 203 (a), 3, and 6) account for only a modest portion of the total number of skilled immigrants. In fact, of the 30,039 so described, only 15 percent (4, 548) entered under these occupational preferences.

(3) Most of the skilled immigrants are adults whose formal training and education had already been completed before they came. All those admitted as immigrants (24,953) are clearly such. Those admitted as temporary visitors (with H–1, H–3, F, and J visas) who adjusted their status (5,086) amounted to only one-sixth (16.66 percent) of the total number of skilled immigrants. During the past 10 years, of the exchange visitors who adjusted status, about one-tenth had not come to this country to study, but as professional workers and trainees or as exchange visitors who were not students.

THE FOREIGN AREAS AFFECTED

Thus far we have considered the inflow of talented personnel to the United States only in its entirety. Now we turn to our findings on the foreign areas from which they come.

(1) More than two-thirds (69 percent) of the skilled immigrants (30,039) come from areas generally considered economically and socially "well developed"; that is, from Europe and North America. Adding those from certain "developed" countries in other areas—Japan, New Zealand, and Australia—we find that well over 70 percent of our skilled immigrants are from developed areas, and less than 30 percent from the less-developed areas of the world.

(2) The number of skilled immigrants in fiscal year 1966, when compared with those for the previous 4 years, and especially 1965, indicate no appreciable increase, except for Oceania and Africa, which have been slight, and Asia, which has been substantial (5,931 in fiscal year 1966 as compared to 2,113 in fiscal year 1965). Even for Asia, however, this increase is expected to level off after the current "pool" of "extra quota" places has been abolished that is, on July 1, 1968.

(3) Skilled personnel form a modest percentage of the total number of immigrants from the several major areas of the world. For Europe and the Americas, it is less than 10 percent (6.7 percent for North America and slightly over 9 percent for Europe and South America). For Africa, Oceania, and Asia, it is 19 percent, 15.9 percent, and 14.8 percent, respectively. Hence from the point of view of inflow to the United States from particular areas, the "drain" on their skilled manpower is limited, particularly when one adds to these figures those for the dependents of such people, which must also be included. It is also worth noticing that to curb this kind of flow from non-European areas of the Eastern Hemisphere, might seem in effect to recreate the kind of discrimination which the new act was designed to abolish.

(4) In general, of course, we do know that there is a flight of manpower, and we know some of the conditions in such countries that stimulate it. We have also learned that the governments of other countries vary greatly in their awareness and concern with the problem.

Last fall the Department sent a circular to some 80 posts which have or have had AID programs, requesting them to comment on this issue. Of the 64 replies received to date, 45 posts reported either that no problem seems to exist or that the migration of certain persons with talent and skills to the United States seemed to be inconsequential. Many countries are not yet well aware of the problem as it affects them. Others are aware of it but have done little about it, either because they are not in a position to do so, or are not sufficiently interested. Still others are beginning to attempt to eliminate its causes.

(We are also submitting for the record estimates by the Visa Office of visa issuances and adjustments for fiscal year 1967. In addition to these estimates, we are submitting a country breakdown of third and sixth preference immigrant visas issued and adjustments of status for the first half of fiscal year 1967. These tables were also prepared by the Visa Office. In analyzing this data, it must be remembered that Visa Office figures represent permits to enter the United States as distinct from INS figures which represent actual arrivals.)

THE RELATIONSHIP OF GOVERNMENT-SPONSORED EXCHANGE PROGRAMS TO THE "BRAIN DRAIN"

Against this background, let me turn to a more specific answer to the question: "What is the relationship of Government-sponsored exchange programs to the "brain drain"?

The facts indicate overwhelmingly that Government-sponsored programs have no significant effect on the "brain drain." As I have already remarked, students, trainees, and others who come here with grants provided either by the Department of State or AID leave the United States, when their studies or work are completed, in over 99 percent of the cases.

Moreover, even where the Federal Government's relationship is indirect, the figures are almost equally reassuring. The Department of State, through my Bureau, gives official recognition as exchange visitor programs to a selected number of programs conducted by nongovernmental institutions that request such identification. Those who enter the country either as participants in such programs or as U.S. Government grantees receive "exchange visitor" or "J" visas. In this entire category, public and private, more than 97 percent of our foreign visitors leave our shores when their program is completed, as they are required by the law to do.

In short, where the Government is involved, the drain is clearly controlled. Our exchange programs are not self-defeating with respect to our efforts to assist the social and economic development of other countries. The basic reason for this does not lie simply in the functioning of the law. It lies in the fact that participants or grantees in U.S. Government programs, commonly, are more carefully selected before they come, more carefully supervised while here, and more often chosen under circumstances which allow us to know that there are specific positions waiting for them when they return to their homes.

One further fact is noteworthy. Within the 2.7 percent of exchange visitors who are permitted to change their status to that of resident or immigrant, approximately half are physicians and nurses. (This is based on figures since June 1956.) If this group did not exist, only

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slightly more than 1 percent of all exchange visitors would fail to leave the country. Even with this group included, about three out of four are granted permission to stay for hardship reasons, and I would presume that we would wish to continue to exercise this kind of humanitarian discretion. The remaining—about one-fourth of 2.7 percent of all exchange visitors—have their status changed as a result of requests for waivers from various Government agencies. In fiscal year 1966, this amounted to 290 individuals.

With regard to all the above statements, however, a qualification must be added. Our data mainly reflects information about the exit from the United States of exchange visitors. All that the law requires for exchange visitors is that they leave the country when they finish their programs, and that they wait 2 years if they wish to apply for reentry as immigrants. We can thus report with reasonable accuracy that exchange visitors leave our shores. We cannot report where they go or whether they return home, and we have only spotty data about how many of them eventually return as immigrants.

In the case of U.S. Government-financed exchange visitors, our followup of these people does indicate that those who do not return to their homes are extremely rare. In the case of exchange visitors as a whole, however, we know that some go to Canada and to other developed countries. We do not know how many, although we are on the verge of being able to make more educated guesses. The best guess is that this group is not large across the board, but that it is large with respect to people from certain countries; for example, the Philippines and Iran.

A second and even more important consideration is that figures about students and exchange visitors tell only a small part of the story. What "drain" exists is in its vastest part, to repeat, a drain of adults, most of them trained abroad, who are recruited by American businesses, universities, hospitals, and research organizations for work in this country, and who enter as permanent immigrants.

Finally, it is important, in the interests of accuracy, to recall that U.S. Government funds may have an indirect and unintended impact on the "brain drain." We do not know the figures, which by their very essence would be hard to get at. Undoubtedly, however, foreigners do come to our country, and occupy positions in laboratories, hospitals, universities, and the like—positions that exist because the U.S. Government, through its general assistance to research, development, and educational activities in the national interest, has provided financial resources. In this sense, there is probably an indirect Government contribution to the "brain drain." But the extent of this contribution is naturally hard to measure, and its significance is even harder to appraise.

THE IMMIGRATION LAW AND THE "BRAIN DRAIN"

I turn now to the third question I mentioned at the beginning—the relation of the Immigration and Nationality Act of 1965 to the "brain drain." Let me point out that figures for the first year under the new act are, in some respects, not typical of what may be expected in the future. The use of "pooled places" resulting from unused national quotas account for certain increases, especially from Asia.

Let me discuss the smaller problem first—the impact on students, particularly those in the "nonexchange" category.

NONSPONSORED FOREIGN STUDENTS (F VISA)

During the past 5 years, 231,296 nonsponsored students with "F" visas arrived in the United States. During the same period, 19,354, or roughly 8.3 percent, adjusted their status to permanent residence. This relatively larger number is readily understandable. Students with F visas are those who come to the United States in accordance with our longstanding policy of admitting young people who wish to study in the numerous educational institutions which welcome them—a policy which the new Immigration Act continues and confirms. Some of these visitors, like students everywhere—including Americans who may come from Seattle to study in New York and end up practicing law in Washington—discover new interests, personal and professional, that prompt them to adjust their status to that of immigrants. When they do so, they must fulfill, of course, the same requirements of the law as if they had applied from their own countries for admission as immigrants.

I want to stress the fact that the "F" visa category includes those who come here to study as individuals, normally paying their own way and not obligated to fit in subsequently with any particular plan or fill any specific need in their countries of origin. This category excludes student participants in the exchange visitor programs, already described, whose agency or organizational sponsorship implies a commitment to work abroad on completion of their stay here.

THE MOVEMENT OF SKILLED PEOPLE

When we turn to the larger question of the impact of our immigration law on the migration of trained and skilled people away from countries where they are needed into the United States, the situation, I believe, is much more complex. Quite clearly, the new immigration law gives preferences to the skilled. Equally clearly, by eliminating hitherto existing provisions setting quotas in terms of national origins, the law makes it easier than heretofore for people from certain areas of the world, including many underdeveloped areas, to enter the United States. There is thus a prima facie case for the proposition that our new immigration policies may aggravate the problems of many countries that are seeking to progress, and that need leaders and trained people to show the way.

However, prima facie appearances may be misleading with respect to the realities. Certain fundamental distinctions must be held firmly in mind. There is a difference, in the first place, between a theoretical, though entirely accurate, demonstration that a given country needs, say, 10,000 more doctors, and the practical possibility of actually putting such doctors to work if the country had them. In many parts of the world, people with certain skills that are badly needed are nevertheless unemployed or underemployed. If by the "brain drain" we mean the migration of skills and talents away from where they are needed, the "brain drain" goes on within individual countries, too. It does not start at the border.

Secondly, with regard to certain skills, including some of the rarest and most valuable, it is a mistake to say, without qualification, that a man's talents have been lost to his own country if he lives and works elsewhere. The creative mathematician, nuclear physicist, or specialist

in cancer research from a small country who finds that he needs the intellectual contacts and research facilities available in a larger country in order to produce the best work of which he is capable may be making more of a contribution to his own country than if he stayed home. The results of his work flow outward and benefit his country as well as the country where he works.

To be sure, it can be argued that even if his scientific work were only to be second level if he stayed home, he would still be of greater help to his country if he were there as a leader, a teacher, practical worker, and everyday citizen. It is possible that this is true. The point of this illustration is merely to suggest that we are dealing with intangibles that are hard to measure. It is useful to bear this in mind when the "brain drain" is defined in simple terms. Nor is this making too much of exceptional cases. Cases of this sort are not infrequent; and they are the conspicuous cases which often generate the most discussion about the "brain drain."

THE FREE MOVEMENT OF PEOPLE

To these considerations, I would add one other. There are two points of view to be taken toward the problem posed by the migration of skilled and talented people. One point of view is the economist's. From this point of view, the question is one of "manpower," and the problem is that of properly distributing manpower resources that are in short supply. But from a second point of view, which must also be recognized, the problem is not one of "manpower" but of individual men and women with individual lives to lead, with individual troubles and individual aspirations.

These real human beings—and not units on a statistical chart—are the ones who ask to come to our country, and it has been a tradition of the United States to receive such people. Our recently enacted immigration law embodies this principle of the free flow of people across the borders. It accepts the idea, subject to the capacity of our Nation to absorb him, that a man should have a right to seek his fortune where he pleases. I do not say that the "manpower" problem can be overlooked. I say merely that it is not the whole problem. In trying to deal with it, we must also recall that there is a controlling principle—the free movement of people—which must also be taken into account. The place that this principle has occupied in our own history is too important for it to be disregarded.

I believe, indeed, that this is not simply a moral or philosophical principle, but one that may have considerable practical importance from the long-range economic point of view. The long-range growth of a nation rests on its ability to develop institutions in the major sectors of its life that are capable of attracting, stimulating, and rewarding talented individuals. To widen the range of choice available to people is a goal of development. But it is also a means. The right of the individual to select his career, his right even to leave his country, can be a stimulant to the development of institutions and incentives that permit a country to compete successfully in the human market. Legal crutches may well inhibit the growth of such institutions and incentives. They may thus retard development.

I do not conclude from all this that the United States is doing other nations a favor if it takes their best people away from them. We have

a responsibility to do what we can to alleviate the "brain drain" where it exists. But I believe that the idea of restraints on the free movement of people should be approached with the greatest caution. Not only has this idea an ancient pedigree in the history of free civilization, but there is something to be said on the practical side as well for the social utility of international competition for talent.

ARE AMENDMENTS TO THE IMMIGRATION LAW DESIRABLE?

The "brain drain," however, is not a problem which we can sweep away by enunciating such general principles, however sound these principles may be. To the fullest extent that is feasible and that is consistent with our principles, we ought to do what we can. What steps can we take?

With your permission, Mr. Chairman, I shall address myself first to the question whether statutory remedies are desirable.

A GENERAL AMENDMENT

One large possibility that presents itself is an amendment to the Immigration Act of 1965 which would withdraw the preferences that apply to skilled people if such people come from countries where their skills are in short supply.

Under such a proposal, it would not be necessary for the United States to take unilateral action to exclude skilled people from certain countries. The amendment could be so written that only those countries which enter into agreements with the Secretary of State would be on the list. Moreover, it could be laid down that the Secretary of State could enter into such agreements only when the other country concerned could give adequate assurances that it was taking steps to use the skills and talents of the people it wanted to keep at home.

Such a proposal, particularly with the qualifications I have outlined, undoubtedly has some merit. Nevertheless, my own view, and that of my colleagues in the executive branch with whom I have discussed this matter, including the Secretary of State, is that it would be a mistake to amend the law in this way. The arguments against it seems to us to outweigh the arguments for it.

Laudable as the purpose of such an amendment would be, it would restore the concept of country of origin to our immigation procedures. It would place skilled individuals from one country at a disadvantage in relation to individuals of the same skills from another country. It would involve the United States in a web of new international arrangements whose net effect was to limit individual choice and initiative. It would place upon us the difficult responsibility of distinguishing between countries in terms of their needs, and in terms of whether their efforts at self-development were successful or not. The United States, in my view, ought to resist being placed in this position of acting as a universal critic and judge.

Not less important, the practical and factual basis for making such arrangements is unclear. Discouraging individuals from less developed countries from entering the United States does not insure that they will not leave their countries. If their governments permit them, they may go elsewhere. Nor does turning them down at our door mean that they will find appropriate employment for their talents at home.

Even when good evidence can be produced to show that a government is providing general opportunities to them to use their talents, there are all sorts of special reasons why such opportunities may not be available to given individuals. Moreover, only 15 percent of the skilled immigrants admitted in fiscal year 1966 came under the legislative provisions for occupational preferences.

TEMPORARY VISITORS

If we do not seek such a wholesale remedy, are there more restricted ones that can be introduced through changing our laws? Much discussion of the "brain drain" has centered on exchange visitor programs, foreign students, and temporary workers who come to fill certain special positions presumably for limited periods of time. It is frequently suggested or implied that this category is one main source of the inflow of skilled people to our country.

Figures I have already put before you indicate, I believe, that this is erroneous, and that we confront here, at best, a marginal issue. Indeed, for the last 5 years, temporary visitors who have adjusted their status so that they can remain amount to less than 2 percent of the total number of immigrants. And only 5.7 percent of all temporary visitors in all categories—students, temporary workers, and exchange visitors—have adjusted to immigrant status. Anything we do, therefore, to make it harder for people in this group to stay will affect only a rather small part of the problem.

Nevertheless, marginal though this category may be, it is of course incumbent on us to review our laws and procedures to be sure that we are doing what we should to help other countries to obtain and retain the service of their best trained people.

With regard to people in the J visa or exchange visitor category, the Interagency Council on International Educational and Cultural Affairs took steps on March 24, 1965, to make sure that exchange visitor programs would not be used as regular channels for immigration. On that date, it established an interagency policy providing for the establishment of waiver review boards or offices in all agencies concerned, and for the use of comparable criteria in passing on waiver applications.

The gap in all these procedures, however, is that, under our present law, we merely require exchange visitors to leave the United States, and this does not, as I have already remarked, insure that they will return home. We know that some exchange visitors, after completing their programs in the United States, go to third countries with an intent to return to the United States as immigrants after fulfilling their 2-year foreign residence requirement. For example, between July 1 and December 31, 1966, 121 immigrant visas were issued to former exchange visitors who fulfilled the 2-year foreign residence requirement in Canada. Only 11 of these were Canadians. The rest were from other areas of the world.

At least three strategies present themselves for dealing with this sort of issue, assuming we think that it is an issue.

We could conceivably tell exchange visitors that they could not expect to be readmitted as immigrants unless they returned home. I find

this too hard a rule, for there will be many cases where individuals will have legitimate reasons for not wishing to return home.

Again, we could liberalize the rule by requiring only that exchange visitors go to some underdeveloped country where their skills are needed. Under this proposal, we would in effect be saying to exchange visitors that they owe a kind of service to the poorer countries in return for their education in the United States—at any rate, if they wish to reenter as permanent residents.

If this proposal were adopted, it might require, I believe, an amendment to existing law. At present, an individual who has been an exchange visitor and who does not return home but goes to a third country may be readmitted to the United States after 2 years only if the Secretary of State explicitly determines that his residence in the third country has fulfilled the purposes and intent of the Mutual Education and Cultural Exchange Act of 1961. A procedure such as the one I have described would require the Secretary of State to make such a determination in advance of the individual's actual residence in the third country. A determination is necessary as to whether the law would have to be rewritten to permit this to be done.

I am myself inclined to think that this proposal is inadvisable. Its merit is that it channels exchange visitors into service in the underdeveloped world. Its demerit is that it imposes still further requirements on them which are not imposed on other temporary visitors, and makes participation in exchange programs with the United States that much less attractive. And once again, as with the more general proposal I discussed earlier, it would put us in the role of manpower disposers and directors for the world. In the absence of firmer analyses than we now have, our grounds for determining that a particular specialist will be well employed in any given country on a list are uncertain. Moreover, we would also have to know how the countries concerned estimate their needs, and how they would look upon receiving foreigners from other countries for temporary employment. These are complicated and troublesome matters.

A third strategy, which is by far the simplest, is simply to amend the Immigration Act of 1965 to double the number of years that an exchange visitor has to wait before he can apply for readmission to the United States in the event that he does not return to his country of origin. If he had to wait 4 years instead of 2 if he did not return home, the advantage of returning home, it may be presumed, would be clearer.

This proposal would require a statutory change. Its simplicity is an argument for it. Its simplicity is also an argument against it. It would make no distinction between people from the developed and underdeveloped parts of the world. And within the underdeveloped part of the world, there are countries that appear to prefer that their trained people not return home until they are prepared to absorb them. They like to have, as it were, a bank of trained people elsewhere on which they can draw as they become ready.

For these reasons, I should myself be disinclined to see the adoption of this third proposal. All in all, it is well to remember that we are dealing with a small part of the problem. Any substantial amendment to the law aimed at this small problem seems to me unwarranted at this time.

THE STUDENT OR F VISA CATEGORY

When we turn to those who enter as students, we face a somewhat larger problem, since some 8.3 percent adjust their status to that of immigrants. One possible way of reducing this figure would be to eliminate the F visa, and to place all people who come to study in this country in the exchange-visitor category, thereby subjecting them to the 2-year exit requirement.

Once again, it does not seem to me that the dimensions of the problem, as we now perceive it, justify the use of such powerful medicine. Many foreign students come to our country using personal or family savings. They have not entered into any commitment, explicit or implicit, to return home. It is good for our society—good for the education of our students, teachers, and citizens—to have young people from other countries in our midst. It is good for the foreign relations of our country to have young people who know our country from having lived and studied here return home—and over 90 percent do. If we make the conditions for study here more binding—if we close off the options available to prospective students—there is the danger, it seems to me, that many of them will choose to study in other countries where their choices are not foreclosed. I should regard this as unfortunate.

There is, to be sure, a group of students who come here on "F" visas to whom these observations may possibly not apply. Some students who come here—we do not know how many—come with grants from their own governments. At present, we treat them just as we do other students. It would be possible to consider placing such students in the exchange visitor category if other governments so requested. This would not insure that they returned home, but it would increase the probability.

With regard to this proposal, I would defer to others who may know more about the administrative complexities involved. From the political and educational points of view, it has mixed advantages and disadvantages. On the positive side, we would help foreign governments who want their citizens to fulfill what the governments regard as legal and moral obligations. On the negative side, it would involve the U.S. Government, perhaps too often, in decisions requiring us to distinguish between different countries, or requiring official judgments about complex political, moral, and humanitarian issues affecting individual lives. No government can wholly avoid such questions, but it seems to me undesirable to bind the U.S. Government beforehand to a blanket answer to them.

OTHER APPROACHES

In sum, so far as the "brain drain" is concerned, statutory changes or administrative restrictions that would hamper the free movement of people seem to me to be mistaken. The problem deserves our best efforts but it is too complex and many-sided to be handled by broad codes or rules. In some of its aspects, no showing has been made that it is a problem at all. And overall, we have too much to gain, and, I believe, our fellows in other countries also have too much to gain, from the process of mutual education and exchange that goes with the free movement of people.

The direction of our efforts, therefore, should be constructive rather than statutory and administrative. The main locus of the problem, in the end, is not in the United States but in the countries from which people migrate. The migration, so far as we can determine, is a function of one or more factors, ranging from political instability and economic difficulties, through the greater attractiveness of professional opportunities in the United States to the great gap between the living standards of our country and the countries of the underdeveloped world.

On our side, at home, we can take action to train more Americans to fill the positions now filled by foreigners. An effort to increase the number of U.S. medical schools, for example, would be the best long-range approach to helping other countries retain the services of their own native physicians.

Abroad we can continue and intensify our help in building educational and research institutions in other countries, working toward the establishment of more adequate, more up-to-date facilities and organizational structure. We can work with our universities and philanthropic and voluntary organizations, reminding the sponsors of develepment-related projects of their responsibility to encourage the return of foreign visitors. Representatives of my bureau in the Department of State are attending regional meetings in various parts of the country—meetings of educators—to discuss this problem now.

We can also offer the assistance of our Government to foreign governments to enable them to recruit their own citizens in the United States for special jobs in needed categories in their home countries. We can enlist the cooperation of American institutions and American business firms with overseas branches to provide job opportunities for foreign nationals trained in the United States. American business firms that have not already done so could increase employment opportunities for skilled nationals to keep them from seeking better opportunities in the United States and other countries. At the same time, we can also encourage them to facilitate the training and retraining programs of foreign personnel through inservice projects in other countries on a bilateral and multilateral basis. In this list of possible measures, perhaps the most far reaching is increased emphasis on institution building in the developing countries, and the encouragement, by one means or another, of the development of research and educational institutions which would offer opportunities for the skilled to stay at home.

A PERSPECTIVE ON THE PROBLEM

I cannot help but think, however, that perhaps the first order of business, for us Americans and for those abroad with whom we are joined in a common effort at social progress, is to see this matter in historical perspective.

The "brain drain" is a difficult problem, because it is, in fact, a problem of long standing. It is a contemporary manifestation of a phenomenon common to all modernization—the movement of people away from the poorer and more isolated places toward the metropolitan centers of the world. And the "brain drain" is an important problem because it raises, in the most dramatic form, the question of the kind of world in which the United States wants to live a generation, or

even a half generation from now. Over the long run we cannot stand the burden of a world in which most people and most countries will have inadequate intellectual resources and leadership of their own, and will have to lean on us and one or two other giants for their own well-being. This is why the brain drain is an important matter, and why it behooves us to seek affirmative measures to alleviate it.

Among these measures, the most important may well be the encouragement and strengthening of educational exchange programs. When we look at the reasons why highly trained people leave their own countries, four pervasive factors seem to be involved:

(1) The scale of intellectual and cultural life is too small. It does not satisfy the need of professional and scientific people, and of teachers and intellectual leaders, for broad contacts and for opportunities for important work.

(2) The structure of intellectual and educational institutions is rigid and compartmentalized, frustrating the innovator.

(3) The language of the country limits the audience for the individual's work, and the possibilities for stimulation by contacts with people from the outside.

(4) The lack of mobility isolates the individual from the mainstream of international communication.

With regard to all these matters, exchange programs can have a profoundly constructive effect. Efforts to spread knowledge of English, arrangements for university-to-university partnerships, programs permitting attendance at international conferences—all these develop an infrastructure for international intellectual and professional life that can reduce the influence of conditions that make for a "brain drain." The "brain drain" is bad only because people move from one country to another and stay there. The remedy for it is a continuing international circulation of brains, still larger and more far reaching than is now going on. It is not by negative restrictions but by a renewed commitment to the free flow of people, and to the strengthening of intellectual resources and social institutions in other parts of the world, that we can find, I believe, any sort of answer to the problem we are discussing.

Thank you, Mr. Chairman and members of the committee.

STATEMENT OF DR. CHARLES V. KIDD, EXECUTIVE SECRETARY, FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY, OFFICE OF SCIENCE AND TECHNOLOGY, BEFORE THE SENATE IMMIGRATION AND NATURALIZATION SUBCOMMITTEE, MARCH 6, 1967

Mr. Chairman and members of the subcommittee, I appreciate this opportunity to discuss the migration of highly trained persons. This is an extremely complicated phenomenon, and one of the distinctions that must be drawn is between the richer and the poorer countries. Over the past year or so, I have had the opportunity to study in detail the flow of trained persons to and from Latin America. This study was carried out under the auspices of the Pan American Health Organization, which took the initiative in mounting the first full-scale investigation of migration of highly trained people of all kinds from Latin America to the United States. I served as chairman of a com-

mittee on migration which consisted of seven eminent Latin American scientists from Chile, Uruguay, Mexico, Brazil, Argentina, Peru, and Venezuela. They reviewed and approved a report from which this testimony is drawn.

The experience of these countries covers, I believe, the gamut of circumstances faced by the less developed countries. A brief review of their experience will suggest most of the problems generated by the migration of people from poorer to richer nations.

Before turning to the facts and some of their implications, an imtant term—migration—should be clarified. By migration, I mean people who leave their homeland permanently. This excludes students and visitors. So far as students are concerned, the record is clear. Training offered in the United States to foreign students is a clear net gain of large dimensions to both the students and the foreign countries. I believe that the long term consequences of the exposure of foreign students to the pattern of graduate education in the United States will prove over the long run to be one of the most pervasive and powerful forces for reform of graduate education not only in less developed but also in advanced countries.

Periods of study in this country do, of course, acquaint foreign students with the opportunities, the culture and the language of this country, and hence enhance the propensity and ability of some students to migrate after they finish their studies. But more fundamental "push" and "pull" forces account for permanent migration. It is this permanent migration which is of primary concern to us and to other countries.

With specific reference to Latin America, their net gain from movement of students to the United States is very large. About 9,500 Latin American students are in the United States. The investment of this country in their education is substantial, not only in the form of fellowships but also in the form of the unreimbursed expenditures of universities. Virtually all (99 percent plus) of all sponsored students return, but an unknown proportion of them remigrate. A higher but unknown proportion of unsponsored students remain in the United States.

RELEVANT FACTS

1. About 600 highly trained persons per year migrate

Turning to the facts, over the past 5 years (1961–65) about 3,000 scientists, engineers, and physicians—about 600 per year—have migrated permanently to the United States from all Latin American countries combined. This is a net figure which takes account of an estimated 25 percent return rate of the 4,000 who entered the United States with immigrant visas over that period—

> Assuming conservatively that it cost $20,000 per person to train those who have left, the loss to Latin America has averaged $12 million per year.

The costs in terms of loss of scientific and engineering ability, are not measurable, but are much higher. The primary difficulties generated for Latin America by migration come less from the loss of absolute numbers of people than from the loss of a crucial few highly qualified professional people—particularly university teacher-investigators.

As as long term trend, and in terms of totals, migration from Latin America to the United States is increasing. Given the causes of migration, the prospect is that migration rates will not decline and they may increase.

2. About 300 physicians migrate annually

The 300 physicians—50 percent of the total of 600 permanent migrants per year—is equal to the output of three large U.S. medical schools, and equals about 5 percent of all Latin American graduates per year. To produce 300 physicians per year, it would cost the United States at least $60 million to build three medical schools and at least $15 million per year to operate them. The loss of highly qualified physicians for research and teaching is higher. About 100 persons in this category are in the United States, and would return if suitable careers were available.

Migration of physicians is not from Latin America totally. Three out of four migrating physicians come from eight medical schools in six countries—Argentina, Colombia, Dominican Republic, Haiti, Mexico, and Peru.

A total of about 5,000 Latin American physicians are now in the United States—roughly the equivalent of 1 year's output of physicians in Latin America.

The effects of migration of physicians on Latin American countries varies widely. Here it is worth stressing that not all less developed countries actually lose the services of effective physicians when they migrate. Many countries produce more physicians than they can currently use. For example, the concentration of physicians in large cities is a worldwide phenomenon—as is the paucity of physicians outside the large cities. In numerous parts of the world, physicians cannot earn a decent living even though the need for their services is acute. For example, many physicians in Colombia cannot earn a living, and turn to Colombia to other livelihoods. Many of them migrate.

A generalization applicable to migration of highly skilled people from many less developed countries is that the United States gains more than they lose.

Of course, many countries do lose the services of highly trained people when they migrate. This is true, for example, of physicians who leave Mexico.

3. Migration rates—as well as numbers—are important

It is important to consider migration rates (that is, what proportion of the highly trained group migrate) as well as the number who migrate. For example, about the same number of highly trained people migrate to the United States from Argentina and from Colombia. But Colombia has only about a third as many highly trained persons as Argentina—for example, 7,000 engineers as compared with 22,000 in Argentina. Therefore, the effects of migration have been about three times as severe in Colombia as in Argentina.

There is no general drain of highly trained people from all Latin American countries. Migration rates of highly trained persons from Latin America to the United States varies widely from country to country—

Mexico, Venezuela, Guatemala, and Brazil, for example, lose relatively few people.

Argentina is not a heavy loser of people, nor is Chile, although migration from these countries has been most heavily publicized.

Colombia, Educador, and Peru are heavy losers, as are Haiti and the Dominican Republic.

The fact that migration rates vary widely among Latin American countries points to some significant conclusions.

First, since some countries have virtually no problem, the problem is not inherently insuperable in Latin America.

Second, since the attraction from the United States is exercised virtually uniformly on all Latin American countries, the differences in migration rates are produced by differences in the Latin American countries. The high rates of migration from certain countries are attributable primarily to conditions in those countries.

4. Latin America loses less than other areas of the world

Migration in terms of totals, and in terms of the proportion of the highly trained work force, is less from Latin America than from Western Europe. This is a most significant fact. The gaps between the economic status, growth rates, and cultures of Western European countries and the United States are smaller than those between Latin American countries and the United States. Therefore, even if Latin America were elevated to Western European levels it is quite likely that migration would continue, and perhaps even increase. From this, it seems virtually inevitable that migration of highly trained people from Latin America to the United States will not cease—or even substantially diminish—no matter what measures are taken—or what progress is made in Latin American development.

To lend further perspective on migration, it should be pointed out that many less developed areas and countries—for example, Iran, Turkey, Korea, Taiwan, and the Philippines—lose a higher proportion of their trained people to the United States than do the Latin American countries.

5. Relative complacency in Latin America

Migration of highly trained people has not been a significant source of political tension between the United States and Latin American countries—much less than between Western Europe and the United States. The Latin American countries have, with the exception of Argentina, Brazil, Chile, and Mexico paid virtually no attention to this migration. More attention is paid the "brain drain" in the United States than in any Latin American country—as measured by such indices as the number of studies of the subject, by press and magazine stories, and by official inquiries.

The reasons for this are not clear, but the general tendency in Latin America to undervalue the contribution of scientists, engineers, and physicians to national development may provide part of the answer not only for their relative complacency but also for migration itself.

WHY MIGRATION OCCURS

1. The "pull" forces

Highly trained people are "pulled" to the United States by such things as high incomes, personal freedom, political stability, a strong diversified research and development program in Government, universities, and industry.

The United States cannot weaken its economy, its political system, and its intellectual life in order to discourage migration. Therefore, the "pull" forces will remain strong.

The "pull" forces in the United States are exerted equally on all Latin American countries. Therefore, variations in the rates of migration among countries, which are extreme, are caused by conditions in the countries which lose people. If migration rates in all Latin American countries were as low as those for Brazil, Mexico, and Venezuela, there would be no problem.

The forces that draw highly trained people to the United States are not intended to attract migrants. The deliberate acts intended to induce people to migrate and to remain in this country—such as positive recruitment of engineers, physicians, and technicians—are a minor cause of migration. If these were completely eliminated, the effects on migration would be minor. The United States attracts people primarily by what it is and not by what it does.

2. The "push" forces

Highly trained persons are not only pulled to the United States, but are also pushed from their own countries. The fact that the pulling forces are not sufficient in themselves to initiate significant migration is demonstrated by the situation in Venezuela and Brazil, from which migration rates are extremely small.

The pushing forces include political instability and stable, but uncongenial, political environments. The effects of instability were dramatically illustrated by events in the fall of 1966 in Argentina. The effects of stable but uncongenial regimes are illustrated by Haiti and Cuba.

Institutional forces that prevent highly trained persons from making a decent living or from having satisfactory professional careers cause many persons to migrate. The institutional forces include rigid university structures that provide few opportunities for advancement, rigid and low salary scales fixed not by economic inability to pay but by strong traditions, and appointment and promotion based on status rather than ability.

The pushing forces are in part an inherent concomitant of the economic state of development of countries. In part, the forces—such as political instability—are a part of the political state of development.

In part, the forces—such as the role of status, family, and influence—are a part of cultural patterns. All three are, of course, interwoven to a degree. All three are most difficult to change. In short, the "push" forces are inherent in the process of development itself.

WHAT SHOULD BE DONE?

There is no solution for the problem of brain drain if by this is meant a state of affairs in which all parties concerned—the two countries and the individuals concerned—will be relaxed and happy. To draw a parallel between the life of nations and the life of individuals, the migration question should be considered as a chronic disorder for which no cure exists and not as an acute disorder for which a specific remedy exists. But as is true for many chronic disorders, it is possible to take measures which permit normal development and normal life.

The only effective way to stop migration of highly trained people from Latin America to the United States would be to stop them from leaving their native countries or to stop them from entering the United States. This solution would create more problems than it would solve, and is therefore unacceptable. However, short of overt control there are practical measures which might be taken both by the United States and by Latin American countries.

If effective action is taken, most of the action must be taken in Latin America, and most of the action must be by the Latin American countries. The following steps might be considered by Latin American countries—

(*a*) Review the relative income, professional opportunities, and status of categories of highly trained persons and consider selective measures to improve the lot of potential migrants;

(*b*) Review the numbers, characteristics, and terms of support of those who study abroad, and undertake to select students and to set terms of support in a way designed to insure their return; and

(*c*) Direct control of movement through control of passports, if they have such deep concern that they are willing to restrict severely the freedom of movement of their citizens.

To repatriate migrants—

(*a*) Offer migrants specific positions with favorable terms of employment;

(*b*) Offer specific incentives (such as are already provided by Argentina) for repatriation, such as relaxation of import taxes, or provision of housing; and

(*c*) Send recruiting teams to offer jobs to migrants.

The United States has under active consideration a number of positive steps to strengthen science and technology in Latin America. These include—

(*a*) Adopting as a stronger element of U.S. policy the principle that strong efforts to develop science and technology in Latin America are necessary for economic and social development. This development will require skills, and the generation of job opportunities will tend to keep Latin American scientists and engineers at home;

(*b*) Supporting a stronger role and status for science and technology in the Organization of American States;

(*c*) Specific support for the establishment of new, carefully selected, multinational centers for graduate education and research, and for selective strengthening and collaboration among existing strong points of science and technology in Latin America. These two devices combined would provide more, and more advanced, training opportunities in Latin America, and tend to reduce migration;

(*d*) More conscious consideration of and greater support for modes of collaboration and assistance to universities in less developed countries through AID or otherwise as a means of reducing the "push" forces;

(*e*) More effective efforts to measure the numbers and characteristics of migrants. In this connection, the resources available to the Immigration and Naturalization Service have not been

adequate to permit the preparation of data on those entering the United States and on aliens resident in this country; and

(*f*) Review of the effects on migration of employment of foreign students and scientists on federally financed research.

A combination of measures of this kind would represent, in my judgment, an optimum program. They will not, to repeat, stop migration, but stopping migration is not a rational goal from the viewpoint of Latin American countries, the United States, or the migrants.

In concluding, I would stress the fact that responsibility for moderating migration rests primarily with Latin American countries, that migration from many Latin American countries is quite moderate, that we have some responsibilities which we should take more seriously, and that migration is an inherent part of the process of development.

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