

SUPPLY, DEMAND, AND THE BRAIN DRAIN

Roaming the world in search of the best salaries and working conditions, talented professionals create shortages of brainpower in their own countries. It is time for an international agreement on the exchange of human resources.

by NURI EREN

The businessman left Turkey to negotiate the construction of a fertilizer plant with investors from Germany and the United States. In Frankfurt, the designer of the prospective plant turned out to be a South African and the construction engineer an Iranian. At the airport in New York, the businessman was met by the export manager of his company—an Indian. In New Jersey, a Turkish chemist guided the tour of a factory. When we saw the businessman that evening, he complained bitterly of the impossibility of finding professional help for his industrial ventures in Turkey.

His was not a unique experience. Individual entrepreneurs as well as governments in the lesser-developed countries have encountered increasing difficulties as a result of the exodus of their professional men. The plight has become so desperate that President Bongo of Gabon felt forced to broadcast an appeal to the world. The new countries of Africa plagued by disease have been left with a handful of doctors and practically no nurses, while hundreds of their nationals practice in Europe. This drain of trained talent has alarmed the international organizations. UNESCO, the Organization for Economic Cooperation and Development, the International Labor Organ-

ization, and the Pan American Health Organization have initiated studies of the problem. In the General Assembly of the United Nations, the lesser-developed countries have accused the West of transferring its exploitive urges from physical to human resources. The representative of Dahomey has called it an "odious bleeding" of Africa, a continuation of slave trade. The Assembly has passed a resolution conceding the seriousness of the problem and expressing grave concern.

The gravity of the situation appeared beyond contest. In the four years between 1962-66, 51.9 per cent of all the engineering graduates of Iran, 14.1 per cent of the scientists, and 10 per cent of the physicians left their country for work abroad. Likewise, 35.5 per cent of the Lebanese and 30.3 per cent of the Chilean engineers, 15.2 per cent of the Turkish physicians, and 19.3 per cent of the Filipino doctors had obtained employment in other lands. The percentages for African engineers, doctors, nurses, and natural scientists working outside their native countries reached much higher proportions. Of the 150 Cameroons trained as doctors, 100 were working in France as against only forty-seven on their native soil.

This world-wide movement was spawned by the revolution in communications. The revolution created an individual mobility unprecedented in the history of mankind. At the same time it fostered a universal knowledgeability about the intimate affairs of every society. This knowledgeability gave



The first brain drainer—Plato initiated pilferage of thinkers.

birth to transnational communities of professional men.

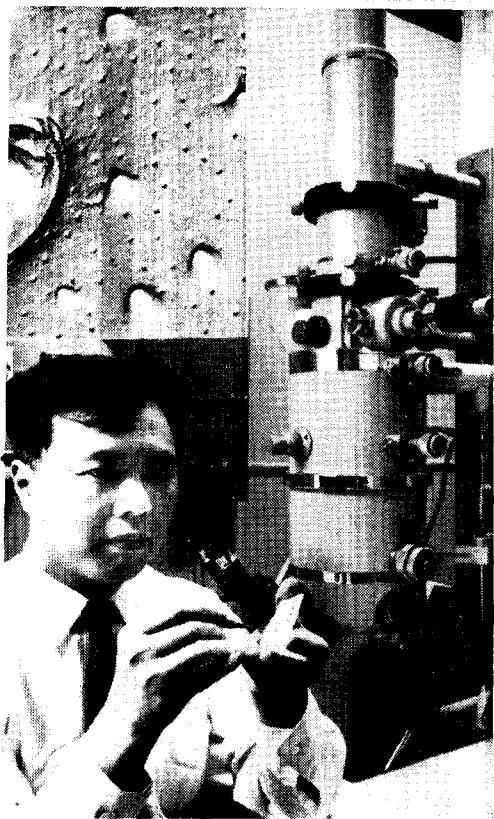
Doctors in the jungles of Africa, engineers in the heights of the Andes were pooled together with doctors and engineers in the cosmopolitan centers. These transnational pools enabled even the most isolated of the professionals to move wherever opportunity beckoned, and generated the grave flight of trained talent from its native land that gave rise to world-wide concern.

Until recently the United States had been considered the principal culprit in the drain. But further studies have revealed new evidence that indicates a universal culpability. For instance, United Nations statistics show that all of the great industrialized nations of the Western world have acted as centers of gravity for the movement. Not only the United States but Great Britain, Germany, France, Canada, and Australia have served as the principal magnets for doctors, engineers, and scientists from Asia, Africa, and Latin America.

The attraction followed a singular pattern reflecting past colonial connections, cultural and lingual affiliations, and similar economic interests. Latin Americans floated into the United States, with a small proportion preferring Spain. Sub-Africans converged on France and Belgium. Indians, Pakistanis, and Jamaicans flocked to Britain. Many Iranians preferred Germany.

The movement has not remained one-

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A Japanese biologist at Yale—"the attractions of a sophisticated milieu."

directional. The lesser-developed nations have also borrowed from each other. Many lawyers and teachers from the West Indies have moved to the new states in Africa. Kuwait and Egypt have attracted high-caliber trained talent from the poorer Arab countries. Indian scientists and engineers have found profitable employment in the developing nations of Asia and Africa.

The movement has also embraced the developed nations in a circular motion. Norway and Sweden have lost many of their brightest stars to Germany. Britain has ceded a large proportion to Canada and Australia. The United States has attracted from them all. In fact, of the 130,000 scientists that came to the United States from abroad since 1945, 77,000 have originated from Western Europe.

In this global exchange Canada and the United States have remained in the forefront, because they have attracted people from both the developed and the developing nations. Immigration has supplied the United States with 21 per cent of its annual need of physicians. In the last few years 13 per cent of the annual supply of scientists came to America from abroad. Approximately 1,500 of Canada's 24,000 physicians have been trained abroad. Canada's intake of professional immigrants from developing countries has increased from 27.6 per cent in 1963 to 36.3 per cent in 1967. Britain has obtained an increasingly large proportion of her annual need of engineers, teachers, doctors, and nurses from the developing

nations of the Commonwealth. Socialized medicine would have been impossible without the inflow of foreign-trained doctors and nurses. The foreign-born and trained constituted more than one-third of the health personnel in Britain. The weight of imported talent on France, on Germany, and on the rest of the Western European countries is not quantifiable because of the lack of precise immigration statistics. But we know indirectly that the great German expansion has attracted engineers and scientists from the Middle East. A French survey in 1965 showed that 11,000 sub-Saharan graduates had remained to work in France, against 12,000 that were studying there that year.

The contribution of the immigrant talent to the material well-being and the cultural wealth of the receiving countries remains beyond statistical computation. But their worth to the recipients in terms of the cost of their education has been estimated. A subcommittee of the U.S. House of Representatives has figured approximately \$20,000 for training a Latin American professional. UNESCO has provided similar estimates for African and Asian countries. On the basis of these computations the House Committee has figured the annual benefit to the United States from imported trained talent in the vicinity of \$45 million every year, adding up to \$1 billion since the Second World War. Obviously, the same benefits have accrued to Canada, Britain, Australia, France, and Germany. The cost of educating the same people in the developed countries would have been 20 to 30 per cent higher. In addition, the expansion of training facilities for accommodating them would have required vast outlays of capital. For instance, the training of doctors imported into the United States alone would have necessitated fifteen new medical centers.

These obvious benefits to the recipients have spurred the developing countries to intensify the controversy around the brain drain. They have accused the recipients of deliberately encouraging the influx of trained talent. Indeed, in the practices of the last twenty years they found cogent arguments. The Immigration and Nationality Act of the United States shifted the balance in favor of skilled and trained immigrants, aiming at deliberate courtship of foreign brains. In 1958 and 1966, the Australian government issued new regulations that promoted the influx of immigrants with "high attainment in the arts, sciences, and other fields of professional attainments."

Since the Fifties, the Canadian gov-

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ernment has initiated varied legislative and administrative measures to serve the same purpose. Similarly, Britain, beginning with the Commonwealth Act of 1962 and proceeding with the Act of 1965, restricted immigration to professionally qualified individuals.

No doubt, such courtship of trained talent by the industrially advanced countries encourages the brain drain from the lesser-developed nations, but it does not generate it. The reasons for the exodus are inherent in the economic, social, and cultural contrasts between the developed and the developing nations. First, the industrialized nations offer much higher salaries. In Western Europe, engineers and doctors from Asia and Africa get four to five times the amount they would receive in their native lands. In America, the differential is still higher. The National Science Foundation computed the annual median salary in the United States of scientists such as chemists, mathematicians, physicists, econometricians, and medical personnel to be in the range of \$12,000 to \$18,000. In many of the Asian and African countries, the annual median for such professionals hardly exceeds \$3,000. Allowing for substantial differences in purchasing power, the American scale would still provide an incomparably higher standard of living. In many instances, the immigrant professional rises far above the median. My own doctor, a Greek from Salonica established in New York with an office in the East 70s, has told me that he averages \$40,000. In his home town he expected an average of \$10,000. According to the local standards this would have placed him in the top bracket. "But," he has said, "money is not the main inducement. Here I also work in the Cornell Medical Center. This provides me with advances in my profession. I also have the satisfaction of associating with advanced people in my profession."

A young nuclear scientist, from another Mediterranean country, who was offered a leading scientific post in his country's major university with a compensating salary remained in the United States. "Here I have every possibility for my research. All the logistical support I need is at hand. But a more important consideration keeps me here. Even if I were assured of all these facilities, I would still be wary to return. I would be afraid of being

isolated from the scientific world. Here, I am at the hub of things. There, I would be confined to an ivory tower."

A Latin American working as a chemist for Squibb voiced another factor that entices professionals away from their homelands. "I took up chemistry in order to take over my father's pharmacy—the largest in our town. But now that I have won my degree and traveled around, I do not want to go back. As a pharmacist I would be nobody. In my town the prefect, the police director, government functionaries, petty bureaucrats with lesser education and worldly knowledge will command more attention and respect than I would. Here, as chemist for a well-known corporation my social status is assured." Indeed, the traditional tendency in the old cultures to look up to political authority and to look down upon the professions also operates as a reason for keeping foreign-educated professionals from returning to their native lands.

Such reluctance naturally applies mainly to students abroad who develop a sense of comparative social values. Currently, there are an estimated quarter-million of them studying in the United States and Western Europe.

Britain harbors 75,000, Germany has roughly 30,000, France roughly another 30,000, and the United States 100,000. Of those in America, one-fifth tend to remain. Many who come for training in basic sciences to return as science teachers continue in advanced studies in physics, in electronics, and in the nuclear sciences for which there are no job opportunities in their own countries. Overtraining among the doctors also prohibits repatriation. They specialize in cancer research, in heart transplants for which there are no laboratory facilities or proper hospital equipment.

Of the 390 Koreans who earned doctorate degrees in the United States, only sixty-four have returned. Many of them remained because there was no outlet for the employment of their advanced training at home.

Better pay and opportunity, the attractions of a sophisticated milieu, are not the only reasons inhibiting repatriation. Not all countries with heavy commitments on training abroad have plans that relate the training to their needs. Many of the students receive government scholarships. On their return, they face dull prospects in a rigidly structured bureaucracy in which their special training attracts envy and discrimination. They are frequently assigned to posts that are beneath their capacity and which are often unrelated to their training. The same deficiency in planning applies at home and

prompts much of the drain from the underdeveloped nations to the Western world. In many of the countries of Asia, Africa, and Latin America, the educational system is still patterned on nineteenth-century lines. As characterized in a United Nations report, it is geared to raise gentlemen scribes rather than scientists; engineers, lawyers, and public administrators abound where agronomists, chemists, and pure scientists are desperately required, paralleling the situation in the United States before the establishment of the land-grant colleges when the engineers and the chemists required for industrialization were imported from Europe.

Many countries have engaged in corrective measures. Turkey, India, Pakistan, and some in Latin America have sought to relate supply to demand. But educational planning is still wallowing in its infancy; at the same time, its rapid break off into new ground is subject to traditional attitudes and to the founding of new institutions. For



Foreign students—"Britain harbors 75,000 . . . the United States 100,000."

instance, India, desperately in need of agricultural experts, of chemists, of natural scientists, produced an excess of engineers. Some 20 per cent of them were employed outside their profession, and the government actually encouraged their emigration. Korea has found herself with half of her pharmacists unemployed.

The failure of the traditional institutions to train students for work in the rural areas has compounded this imbalance between supply and demand. Education in these institutions has meant unsoiled hands, unsoiled feet. Doctors, engineers, pharmacists—extremely scarce in the rural regions—refused to move from the urban centers. They saturated the market and looked for employment abroad.

Whatever the reason, an itch for

greener pastures across the horizons has infected trained brains all over the world. This is not an altogether novel phenomenon. Indeed, in its very essence history is but a record of this urge to move. The brain drain, per se, is not new, even though Lord Hailsham was the first contemporary personality to bring it into international prominence some years ago in a statement before the House of Lords in which he complained of the drain of British brains to the United States. But the term as such was first used by an ancient Greek writer, Atheneus, when he wrote of "the drain of Greek brains to Alexandria." Plato must be acknowledged as the first brain drainer. His Academy initiated the pilferage of leading thinkers from other lands. The Ptolemies of Egypt launched the first concerted effort. In the third century B.C. they founded Alexandria with the specific purpose of eclipsing Athens. They built the museum and the library. Spending enormous sums, they imported brains, turning the small somnolent fishing village on the Mediterranean into the intellectual center of the world for more than five hundred years.

In the eighth century A.D. the Caliph al-Mansur achieved the same in Baghdad. Mathematicians from Tashkent in Central Asia, astronomers from the Ganges valley in India; philosophers, architects, and physicians from Rome, Athens, and Alexandria were lured with high honors and high salaries to work in the new city. Later, Cambridge gained its first luster from the "Great Dispersion" in the University of Paris in 1299. Henry III, learning of the troubles of French scholars, issued an open invitation: "We want your university to know that if you desire to transfer yourselves to our Kingdom of England and to abide there for the sake of study, we will assign to you whatever boroughs and villages you choose, and we will provide for your liberty and tranquillity in every convenient way."

Of the Italian city-states, Bologna, graced with one of the foremost universities in the Middle Ages, manifested an early anxiety for preserving its own. It passed severe penalties against university thieves. "The penalty of death awaited any person who entered into conspiracy for transferring scholars out of the city. Any citizen doctor over the age of fifty who left Bologna without permission became liable to capital punishment." In modern times, Ataturk, the founder of Turkey, invited the German-Jewish scholars ousted by Hitler to the Turkish universities. They were received

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THE EYE OF EISENSTAEDT

by MARGARET R. WEISS



—All photographs by Alfred Eisenstaedt.

Silhouette in the sun, Davos.

Lacking a specific vocabulary for photo-criticism and still groping for an esthetic theory distinctive to the camera arts alone, reviewers and critics have already made clichés of such phrases as “the photographer’s eye” and “the art of seeing photographically.” Understandable though this may be, it has undoubtedly anesthetized the reader or viewer more often than it has aided him in esthetic apperception and appreciation.

In the case of *The Eye of Eisenstaedt* (Viking), however, the photographer himself has managed with the simplest of commentary to pin a few small butterflies as he briefly exposes the creative attitude and approach underlying his eminently successful camerawork. What interests him, what he attempts to capture, how closely result measures up to intention, brief notes on the when and where of assignments—these

make up this unpretentious postscript to Alfred Eisenstaedt’s earlier volume, *Witness To Our Time*, which documented his thirty-year tenure as a *Life* staff photographer.

Albeit a postscript and an “as-told-to” book (with Arthur Goldsmith competently serving as recording angel), there is never any doubt as to who is doing the telling. The photographer’s own idiom comes through as consistently in the text as in the pictures; so does the rather shy, reticent man whom the camera world calls “Eisie.”

Sketching in the details surrounding some 150 of his prints, he reveals the early trauma of being “the short one” in the family; coming of age in a post-World War I Berlin that could offer him no more than a button-and-belt salesman’s job; the influence of museum visits in directing him toward a pictorialist approach; the progress

from a vintage Kodak No. 3 folding camera to a Zeiss, an Ermanox (the “candid camera” made famous by Erich Salomon), and finally a Leica. Less than two years after selling a vacation shot to the *Berliner Tageblatt* for \$3, his 50-50 arrangement with the Pacific and Atlantic Picture Agency produced enough income to encourage him to make photography a full-time career.

Eisie’s initial professional assignment took him to Stockholm to cover Thomas Mann’s acceptance of the Nobel Prize. Compact Ermanox in hand, the photographer reveled in the relative ease of shooting by existing light, enjoying most the opportunity to try for a more pictorial kind of picture than the usual straight record shot of a celebrity or a public event. Learning to “see fast and respond quickly,” he soon found that the Leica’s