

The Brain Drain

An Anomaly of International Relations



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INTRODUCTION

"It's not worth investigating the brain drain," said a senior staff member of an international organization to me during an informal talk in the summer of 1970, "everyone knows all about it. In any case, you wouldn't dare to write about how the America of the socialist countries [i.e., the Soviet Union] drains the top level professionals from its socialist partners." Just a few statements – and they are full of malicious interpretation, insinuation and sheer misunderstanding.

The great international problem of brain drain has not been solved, neither has it been analysed in detail; moreover, it has not even been sufficiently described. The literature, amounting to several tons, has cleared up many problems, worked out concepts from different political angles and has succeeded in bringing the topic to the attention of the public, but there have been no sufficiently realistic proposals to curb or lessen the effects of the problem itself. Thus we can virtually say there are no real results.

The brain drain problem has various causes. It is made possible primarily by the backwardness of the developing countries while conversely it is the brain drain itself which contributes to curbing the development of these countries. This explains why the major capitalist countries, primarily the United States, take on the burden of a disproportionately large share of the international liabilities. It is the ground of their achievements resulting from the influence of their aid programmes, and it is, in fact, one of the sources of their tremendous scientific and technological progress. To provide a solution to the situation, the effect of brain drain has to be considered as one of the integral elements.

*

It is mainly outside the socialist world that this process occurs, but it is also directed against socialist countries. The socialist countries have no influx of foreign brain power and their quite insignificant losses – due to desertion for political or other reasons – have been considerably smaller than those of the developed West European capitalist countries.* The relationship between the socialist countries is characterized by friendly co-operation which excludes the draining of brains.

* The Hungarian Minister for Home Affairs declared in one of his communiqués (*Népszabadság*, Budapest, March 4, 1970) that since 1964 about one million Hungarian citizens had visited foreign countries each year. In the year 1969 the number of those who refused to return was about 3,000. This figure represents a total number of which only a very small percentage falls within the category of brain drain. Passport legislation ensures the freedom of travel; only 1.4 per cent out of the total number of applications was rejected in 1969.

“And what about Eugene Varga?”, a department head of the Paris Centre of the Organization for Economic Cooperation and Development asked me once in a victorious tone. Academician Eugene Varga (1879–1964), the economist, was a people’s commissar during the time of the Hungarian Republic of Councils in 1919. For this, he had every reason to expect a death sentence from the Horthy regime, so he was forced to emigrate. He subsequently became director of the Institute for World Economics and International Relations of the Academy of Sciences of the USSR (Moscow). It was only after the Second World War that the possibility for him to return home was given. The old scientist, who was by then over 66, was, understandably, unable to make the decision to settle down again in Hungary after having lived for twenty-five years as an emigrant. He visited Hungary several times and was always ready to help his native country with his knowledge in the solution of its economic problems. As the analysis in this book will show, his career can in no way be fitted into the concept of brain drain – not even in the context of the given historical period.

“And what about Bruno Pontecorvo?” is another stereotype question.* According to his own statement, Pontecorvo chose the Soviet Union instead of the United States due to political reasons. The results of his research activities made him world famous while he was still in the United States. The fact that the Soviet Union provided the conditions he required is obvious but it can by no means be classified as a case of deliberate “temptation” to win him over.

It is a fact that from time to time some top-level professionals refuse to return and they offer their knowledge to one or another of the developed capitalist countries. In these cases, however, it is generally a political attitude that is decisive. We cannot consider here those political deserters who have been given university posts in some western countries, for propaganda reasons, though their scientific achievements would not have merited the same position in their own countries.

For these reasons we shall not deal with the role, quite insignificant in any case, of the socialist countries as “pull” or recipient countries in the brain drain process.

*

There is a peculiar new approach to brain drain which calls for debate; for ten years or so this phenomenon was the topical problem for international public opinion. Since 1971, however, this has changed.

From 1960 onwards, there was a flood of monographs, studies, articles and daily news items which described its destructive effects, explained its causes, defended or attacked and justified or criticized it, but whatever their approach, they went on publishing one new fact after the other. The data relating to the period

* The Italian physicist, Bruno Pontecorvo, left the United States and settled in the Soviet Union – as it was widely publicized in the world press towards the end of the 1950s.

which ended in 1968–69 indicated a considerable increase in the number of migrating intellectuals. The peak was reached when 12,000 “brains” a year immigrated to the United States.

It was in 1970 that the first news came that the NASA (National Aeronautics and Space Administration) and Boeing programmes would be cut, leading to the dismissal of many highly qualified professionals. Consequently, not only would the brain drain process cease but a reverse flood could also be expected. This would mean that America would no longer be the unrestricted recipient.

It came into fashion to declare boldly that the problem of brain drain belonged to the past, that immigrant scientists were flooding back from the United States, that it was needless to investigate the brain drain because there was nothing to investigate. Although this biased view did not hold water, it spread with an unbelievable rapidity.

All this, however, will be discussed in the respective chapters.

*

The aim of our investigation has been to reveal the phenomenon objectively and to draw conclusions in a similar manner. We are quite aware that our study will not solve the problem of the shortage of professionals in the developing countries as we cannot return the doctors or engineers to Africa, for example, from their American, English or French posts. We hope, however, that we can contribute to forming a clearer picture of this whole phenomenon by pointing out some aspects which the western literature has recognized or published very reluctantly, if at all. Perhaps our view will challenge the experts in the field, resulting in a discussion which may then lead to a more objective approach by the interested bodies.

PART ONE

SOME GENERAL PROBLEMS

THE CONCEPT OF BRAIN DRAIN

The term “brain drain” has become common and unambiguous in literature and in journalism as well as in living speech. It expresses a characteristic international movement of our times, the migration of usually highly qualified professionals.

We think the way this term has become accepted in the various languages virtually speaks for itself.

Official documents in English use the term “brain drain”, although in the English documents of some international organizations the precise term of “outflow of highly trained personnel” is preferred. However, even the ‘official’ term “outflow” has been unable to do away with the unpleasant political connotation of the term “brain drain”. It is understandable therefore that despite its frequent use it is not preferred in the Anglo-Saxon terminology. Brinley Thomas, one of the most well-known experts in the field, definitely disapproves of the use of the term “brain drain”; as he writes: “Brain drain is a loaded journalistic term, and it is unfortunate that it was ever used in scientific discussion.”¹

Other languages either simply adopt the original English term “brain drain” – quite often declining it according to their own grammatical rules, which is a definite sign of adoption – or they try to translate it. For example, in French the expression “le drainage des spécialistes” (the draining of specialists), in Russian „высасывание умов/мозгов/талантов/кадров” (the draining of mind, brains, talents, cadres) or in German the phrase “Gehirnentzug” (brain drain) is used in the literature.

When the term is not translated but expressed by a phrase of the language in question, it usually indicates some judgement, quite often increasing the original pejorative meaning of brain drain. It is worth having a look at some of these expressions. In French: “Fuite/exode des capacités/compétence/cerveaux/de la matière grise” (escape/exodus of talents/competence/ brains/grey matter), or an even stronger expression “hémorragie de la matière grise” (hemorrhage of grey matter). The expressions used in Russian are varied and quite strong: „охота за мозгами”, „утечка/истечка/перекачка/перекачивание умов/мозгов и.т.д.”, „интеллектуальное обескровливание”, „скупка/похищение умов”, „бегство умов”, „хищение умов” and „торговля умами”: they indicate a “hunting for brains”, the “stealing of talents”, the “trade” in grey matter, or the “outflow” of trained cadres.

In German, in addition to "Gehirnentzug" which has already been mentioned, there is a stronger ["Abwerbung" (acquiring by way of recruitment)] and a weaker ["Abwanderung" (migration)] expression.

There is no uniform terminology in Hungarian. Sometimes "az agyak vándorlása" (migration of brains) is used, at other times "agy-lecsapolás" or "agy-elzívás" (brain-drainage or draining of brains) can be found.

Brain drain, of course, is not primarily a linguistic but an economic and political phenomenon. Its linguistic aspects, however, seem to be indicative of the following points: 1. the world-wide nature of the problem; 2. the expression, to some extent, of the judgement of the language concerning this phenomenon.

All the expressions and phrases given above indicate a loss of human capital in excess of the normal contractual process of migration. That is the heart of the matter.

There have been several efforts to define the concept of brain drain, mainly by international organizations. For example, we can read the following in a 1968 UNESCO report: "... the 'brain drain' could be defined as an abnormal form of scientific exchange between countries, characterized by a one-way migratory flow in favour of the most highly developed countries. The root cause of this process lies in the fact that countries at different stages of scientific and technological development have correspondingly different scientific and technical manpower requirements. Its more immediate cause is the receiving countries' wish to acquire productive intellectual capital as quickly and as cheaply as possible. This leads them to encourage selective immigration in various ways (immigration policy, recruiting of foreign specialists, advertising, etc...)." ²

The most comprehensive report of the UN so far, also from 1968, ³ prepared by UNITAR, summarizes the main characteristics of brain drain as follows: "... recent immigration statistics from certain developed countries indicate that: (a) there are numerous flows of skilled and trained persons from developing to developed countries; (b) these are characterized by large flows from a comparatively small number of developed countries and by smaller flows from a larger number of developing countries; (c) in these flows engineers, medical personnel and scientists usually tend to predominate; (d) the above flows have grown with increasing rapidity in recent years; (e) the higher the level of skill or training, the greater the susceptibility to migration tends to be; (f) the flows respond increasingly to the changed economic complexity of world societies and to legislation which reflects the demands of a new economic era; (g) these migratory trends are stimulated both by the character of national educational systems and by a lack of adequate planning for the training of students from developing countries in developed States as well as the proper utilization of their skills in their home country; and (h) except possibly for South America, there are no signs that this migration of talent is decreasing and there are fairly definite signs that its increase will, under present conditions, continue to accelerate."

The two formulations quoted are of different types: that of UNESCO has the character of a definition while that of UNITAR rather attempts to enumerate the

relevant characteristics. Though the precise formulation, the content and the unambiguous political outspokenness of the UNESCO definition are exceptional in the literature, yet due to the complex nature of the problem, it is worth pointing out its essential features, even at some length. It is quite conspicuous that the voluminous literature on the problem either makes no attempt to deal with the precise definition of the concept, considering what is known about brain drain, or it blurs the difference between brain drain and the other movements in society (e.g., migration, emigration, long study tours, etc.). Needless to say, it is very important to clarify the concept in order to be able to draw the possible conclusions. A phenomenon cannot be analysed if all its essential characteristics as well as its distinguishing traits are not clarified. Hence, though granting their value and the importance of their content, we do not consider either the UNESCO or the UNITAR definition to be comprehensive enough to serve as a basis for our examinations.

Having read the voluminous literature on this problem, we still have to attempt to define the concept precisely. There are obviously several factors responsible for the lack of a thorough and acceptable definition. The decisive factor among them must be that it is not in the interests of the authors of the various national publications to define the phenomenon, for in this way the attitude of the countries profiting from the process could be disputed, or else, if it is to be correct, this definition could not ignore that their gains had been obtained at no cost. This latter would of course be undesirable from their political points of view. The formulations given by international organizations have usually been arrived at through compromises (these follow from the structure of these organizations) and have always been the point where the various interests are confronted. As shown by the two formulations mentioned above, it is not impossible to produce quite realistic definitions. However, international organizations are supposed to take active steps rather than to provide codifications. As experience has shown, such debates have tended to devote more energy to elaborating practical proposals than to defining the phenomenon. Finally, the lack of a comprehensive Marxist analysis is another reason why the problem is only incompletely clarified. In its absence, non-Marxist experts of the brain drain are not challenged to take part in a discussion on this topic.

Before making our own attempt to define precisely the content and significance of brain drain, we must mention two types of ideological manoeuvring widely employed by western literature to which we are strongly opposed.

Those studies and official statements published both in Western Europe and in the USA generally incorporate the problems of brain drain in the concept of "migration".⁴ Regarding the concept of "migration", let us quote G. Beijer, the Dutch demographer, who has given a precise and succinct definition: "Migration = generally movement of a person or persons involving a permanent change of residence. Migrant = generally a person who moves his residence, either during emigration, immigration, or international migration."⁵ It is clear from this definition that, on the one hand, brain drain can only be a very special case of migration,

and on the other, migration is only one of the elements of brain drain, even from the most formal point of view.

We can also agree with the report of the British Parliamentary Committee on Manpower Resources for Science and Technology⁶ which clearly states that temporary migration is definitely desirable, for in this case the person concerned returns home with additional knowledge gained abroad, while in the case of emigration the home country loses him.

Despite all, – and we should like to re-emphasize this – it is a general practice to equate the concept of brain drain with migration (in better cases they are only confused). The purpose behind it is quite clear. Although migration may well have some undesirable side effects, in general it is a positive phenomenon. Brain drain, however, is on the whole a negative process – despite the great number of its defenders. Its artificial “dissolution” in the concept of migration helps those forces which benefit from it.

In order to be objective, we also have to oppose another view which is based on a legend and is quite consistently spread in the western literature. According to this, brain drain has always existed and the recent process is only the continuation, in the modern world, of a well-known ancient phenomenon.

Stefan Dedijer, the Yugoslav politologist living in Sweden, for example, points out the “eternal” phenomenon of the migration of scientists from ancient times, starting from the example of Ptolemy, through a very interesting series in his study “Early Migration”.⁷ The following study in the same volume “Modern Migration”⁸ by Brinley Thomas is organically linked to the former. The official American standpoint is directly connected to this, as it turns out from an analysis of brain drain: “Scientists have always settled in places where they found the most propitious atmosphere for the development of their gifts and the achievement of their work.”⁹ True, there are several examples for this in history.

It is tempting to begin explaining brain drain with the example of Tycho Brahe or Leonhard Euler and end it with that of, say, the Italian Enrico Fermi.*

It would be easy to collect a vast amount of edifying historical data and enjoyable anecdotes, but it is felt that the analysis of brain drain does not fall within this sphere. The essence of brain drain lies in its being a new social phenomenon which qualitatively differs from the migrations continually occurring in history. While the old type of migration of scientists was isolated, individual and was varied in its orientation, today’s brain drain is a mass phenomenon with a definite orientation; it is accelerating and is becoming increasingly strong. It developed these traits mainly in the sixties. There is also a difference between brain drain and the old type of migration in that the former derives from the scientific and technological

* Tycho Brahe (1546–1601), Danish astronomer, and the court astronomer of Rudolph II in Prague from 1599. – Leonhard Euler (1707–1783), Swiss mathematician, active in Russia at the Academy of St Petersburg. – Enrico Fermi (1901–1954), Italian physicist, on escaping from fascism emigrated to the USA and played a major part in the construction of the first uranium atomic reactor in New York in 1938.