AAAS IN MEXICO

SCIENCE AND TECHNOLOGY IN LATIN AMERICA

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Contributors: Ana Berta Chepelinsky, Esther John, Cristian Orrego, Al Weinrub, and all our sisters and brothers who are struggling to live and practice Science for the People.

INTRODUCTION

Some time ago the American Association for the Advancement of Science (AAAS) announced plans for a June 1973 "Inter-American" meeting in Mexico City. The theme of the meeting, "Science and Man in the Americas" is suitably innocuous and gives no clue as to why at this time the AAAS is holding this meeting in Latin America. We might well ask whether this Mexico City meeting is some isolated event or whether, in fact, it is part of a larger picture, a more extensive expansion of U.S. science and technology into Latin America. There are strong indications that the latter is the case—that this AAAS meeting is but one element in a broader pattern of increased emphasis on science and technology for the economic development of Latin American, African, and Asian nations.

In speaking of these nations we are referring of course to what are generally called the underdeveloped countries, the less developed countries, or the Third World. Without using such terms let us merely say that these countries are those areas which have been ravaged by colonial exploitation and in which as a result there is now hunger, poor health, and illiteracy among the masses of the people. Almost all of Latin America falls into this category*; the great majority of Latin Americans live under conditions of deprivation.

*with the exception of Cuba

Although most of us are familiar with the plight of the Latin American people, we often feel very far removed from such problems. In most cases our day-to-day technical or scientific work appears to have no direct bearing on the conditions of Latin America. But in our own aspirations for more meaningful lives we can identify with the aspirations of our Latin American sisters and brothers for freedom from the yoke of poverty. How can we relate to their struggle for liberation? Science and technology can play an important role. We see scientific and technological skills as essential elements in Latin American development. But while they seem to be *necessary* conditions for development, they are not *sufficient*, and herein lies a fundamental point. We cannot talk meaningfully about science and technology alone, in isolation, but only within the framework of their social, economic, and political impact.

Thus the first question we must ask is what is meant by "development"? For agencies of the U.S. government, for the Rockefeller and Ford foundations, for multinational corporations, for the World Bank and for the wealthy of Latin America the term has a narrow economic significance: it means economic growth as measured by per capita gross

national product (GNP)*. But if our concern is the quality and conditions of people's lives, then such a limited definition of development becomes at best meaningless:

> *...All too often economists tend to assume that a single objective–maximizing economic growth, as measured by per capita GNP– is a sufficient basis for determining policy in an underdeveloped economy. I would like to list several independent objectives which I consider just as important to the development of a good society: (1) the reduction of inequalities both of opportunity and of income; (2) the promotion of a spirit of brotherhood and cultural unity among all groups in the society; (3) the preservation of a meaningful sense of community at the village or neighborhood level; (4) the guarantee of a measure of participation by individuals and by groups in making the decisions that affect their lives.* [1]

If we take *these* objectives as the criteria for development, then we would have to say that the function of science and technology in Latin America to date has generally been to aid in *mis*development. Although the technologies of mineral extraction, industrialization, intensive agriculture, counterinsurgency and population control, among others, have been used successfully to increase economic development as measured by per capita GNP, we shall see that this has been done only at a great social cost to the great majority of Latin American people. The rich have gotten richer and the poor have gotten poorer. With the introduction of each new technological artifact bearing the imprint of the United States, social strife and oppression mount in Latin America. If the use of science and technology is not to be a *mis*use, if we are to develop a healthy relationship with the peoples of Latin America, we must understand the conditions under which science and technology have been introduced in their societies.

In this pamphlet therefore, we will view science and technology within the context of the relations between the rich advanced technological countries and the poor peoples of Latin America. We will see that the multiplicity of technological aid programs for Latin America are not in the slightest way charity, but are rather designed to serve the interests of large corporate enterprise, and that such interests lie in the promotion of economic growth within the capitalist system of private investment. Within this system, science and technology have been used to exploit the natural and human resources of Latin America and to maintain the stability required for continued economic growth. But is growth within this system compatible with real social and political development?

> *...All the evidence suggests that foreign private investment (1) exacerbates inequalities by helping to form and to support a set of foreign and domestic privileged elites within a country; (2) inhibits the development of an indigenous sociocultural unity by absorbing a country into the world-wide capitalist system; (3) aggravates the destructive impact of modernization on community values by promoting an overwhelmingly individualistic ethic; and (4) concentrates substantial decision-making power in a few private hands, many of them foreign.* [2]

The conflict between capitalist forms of economic development and the needs of the vast majority of the people of Latin America has been the basis for the class struggles which have erupted throughout Latin America in recent decades (for example, the Cuban Revolution). If anything, these contradictions are worsening, and the struggle of the people against oppression will escalate. In the light of these political struggles science and technology can have no neutrality.

In this pamphlet we will analyze the function and impact of science and technology within the social, economic, and political context of Latin America. We will then interpret the AAAS meeting in Mexico City against this background, showing its political ramifications. Finally, we will make suggestions for an alternative relationship between scientists and technically skilled people in the U.S. and our brothers and sisters in Latin America.

*GNP is the value of all goods and services produced and sold in a year.

...and there will be work for everybody.

SCIENCE AND TECHNOLOGY IN LATIN AMERICA

HOW GREEN THE REVOLUTION?

Perhaps we can best start the discussion of science and technology in Latin America by looking at a specific example—the much talked-about Green Revolution. This is the name that has been given to the recently developed technologically intensive form of agriculture based on new high yield varieties of wheat and rice. High yield, that is, when planted in conjunction with optimum levels of irrigation water, chemical fertilizers, herbicides, and pesticides.

The Green Revolution provides an interesting case where the technological development appears to be based on humanitarian goals, upon providing food for the millions of hungry and malnourished people of Latin America. But a closer examination suggests that

> *...the Green Revolution has been paid for and staffed by some of the major elite institutions of the American ruling class. The goals of this agricultural strategy based on a new technology are to increase social stability, spread capitalist markets into rural areas, and create new sales and investment opportunities for multinational agribusiness.* [1]

The Green Revolution has been the brain-child of the Rockefeller Foundation, joined later by the Ford Foundation, and bolstered through the funding capacity of the U.S. State Department's Agency for International Development (AID). These foundations (representing the interests of large corporate enterprise), recognizing the appeal of communism to hungry people, especially in the Far East after the Chinese Revolution and in Latin America after the Cuban Revolution, decided that increasing food production was a high priority political item. Already in 1943 the Rockefellers had begun research in Mexico on high yield varieties of wheat. These proved to be successful in that country, resulting in dramatic jumps in wheat production.* The Mexican research project grew eventually into the International Center for the Improvement of Corn and Wheat, which by 1967 was receiving over two million dollars from the Rockefeller and Ford Foundations.[3] This effort was supplemented by the same foundations in the Far East with the International Rice Research Institute, established in 1962 in the Phillipines, which has developed high yield strains of rice.

The Rockefeller strategy was to establish in 1953 the Agricultural Development Council (ADC) to provide for the training of foreign agricultural experts, economists, and managers who would take over agricultural policy-formation in their home countries. Through ADC fellowships combined with AID training programs the Rockefellers managed to spearhead the agricultural strategy of the Green Revolution throughout the world. Armed with the miracle seeds, all that was needed was U.S. Government backing. This dutifully came in 1966 when President Johnson announced that under Public Law 480 (Food for Peace)[4] deliveries would be contingent upon recipient countries' willingness to promote agricultural development (and also population control). Thus, the door was opened to implementation of the Green Revolution program. By 1969/70, for the Third World as a whole (minus communist countries), about 17% of its wheat and 8% of its crop acreage had been affected by Green Revolution technology.[5]

The increase in food production has not been very great (except in a few countries), but food, in itself, has not been the main goal of this technological development, all the propaganda notwithstanding. The aspects of market control, dependency, and profits have been more important. By creating a dependency on the manufactured inputs like fertilizers and pesticides necessary for this form of agriculture, the Green Revolution brings once isolated farmers into the capitalist market system. The grower who uses the new seed must sell part of his crop for cash in order to purchase such inputs—and these market relations function as a form of control. For international agribusiness, for whom AID, UN, and World Bank financing of irrigation systems, fertilizers, and tractors, has resulted in huge profits, the Green Revolution promises yet more demands for their equipment and products.

What has been the impact of these technologically intensive agricultural techniques in the countries where they have been applied? (1)The Green Revolution has worsened

* The Mexican program was not based entirely on charity, but to lay the groundwork for new investments. The Rockefeller-controlled International Basic Economy Corporation (IBEC), established in 1947 to diversify Rockefeller family investments into areas other than oil, is a large agribusiness concern in Venezuela and Brazil. In addition, it is the largest supermarket distributor of food products in South America and controls one of the principal poultry breeding operations in the world. In 1970, 30% of IBEC assets were in Latin America and 60% of its income was derived from these assets.[2]

the inequities in productivity between various regions of a country–the rich lands and irrigated areas have expanded greatly without benefiting the poorer ones. In Mexico for example, the Northwest has been irrigated and intensively wheat-farmed while other areas remain untouched by technical know-how and machinery (and besides, the staple in Mexico is corn, not wheat). (2) In general it has been the larger, wealthier, commercial farmers who have had the resources to implement this form of agriculture and enhance it with modern farm machinery. As a result, tenants have been driven off the land, marginal farmers have been wiped out, and rural, landless laborers have been left unemployed. In other words, the social class divisions have been aggravated as agriculture becomes industrialized and mechanized. (3) The growth of unemployment in the countryside has resulted in a migration to the cities, thus swelling the urban population. (4) Since crop price supports are normally guaranteed to help pay the increased cost of the Green Revolution technology, the price of foods has increased, hurting the poor who already have trouble paying. Moreover, it has not even been possible to derive national income from these crops since the high prices make it difficult to export to the rich countries where the surplusses lower prices.

To summarize these effects, we may say that the Green Revolution simply reinforces the oppressive social conditions which already exist. It worsens the distribution of wealth geographically and by social class, causes disintegration of village life and the growth of urban squalor. At the same time it increases the wealth and power of the few. It epitomizes misdevelopment. From a historical point of view, however, this misdevelopment is not a new thing, but is rather a legacy of the past. Take the case, for example, of Mexican agrarian reform:

> *From the elimination of the latifundia system and the establishment of a system of small private property and of collective property and usufruct (ejidos), the revolutionary cycle has gone on to a new latifundia system: the accumulation of land and the formation of capitalist agricultural corporations. From a form of exploitation close to slavery (peonage), the transition has been made to capitalist forms of exploitation (wage labor combined with the historical vestiges of peonage). The small property owners and the members of the collective farms are themselves exploited through high interest rates and through speculation in agricultural products and market control.* [6]

One aspect of this intensive agriculture, however, has become more pronounced in recent years–the ecological effect. For one thing there is the use of low specificity pesticides in huge amounts as required by the new grains. These pesticides are introduced in complex tropical environments where their use may have catastrophic long-term consequences. Another problem is the danger of an oversimplified eco-system due to the extensive cultivation of too few crop varieties. The instability of such systems has been illustrated recently in the corn blight in the U.S. where there were up to 50% losses in some Gulf states.[7] While the U.S. can survive such accidents, who will guarantee the lives of the poor people in Latin America against the mistakes of the Rockefeller Breeders, for whom life in Latin America is only a profit-maximizing system?

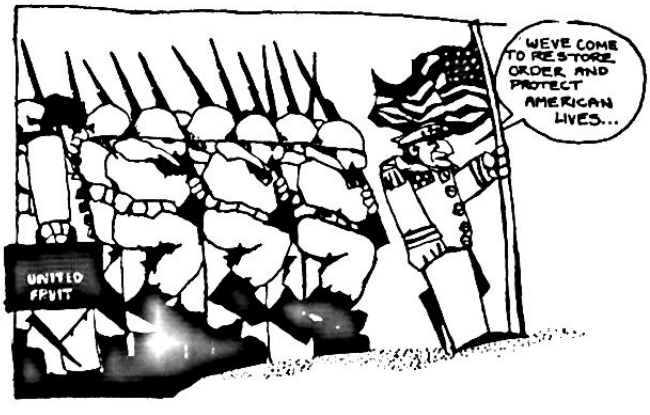
TECHNOLOGY AND MISDEVELOPMENT

As we have seen from the example of the Green Revolution, the impact of technology is highly dependent upon the network of economic and political relations under which it is introduced as well as upon the particular ends or interests it is designed to serve. Thus, if we are to broaden our understanding of the function of science and technology in Latin America we have to view them against the background of the strategy and mechanisms of the capitalist form of economic development. In the most general terms, the strategy of development in the capitalist world is to promote growth through private investment in productive enterprises. New jobs are created enableing more people to consume the products of such enterprises, thereby enabling the owners of these enterprises, i.e. the capitalists, to amass capital for further investment. Within this system long-term profit maximization is the criterion for investment decisions, and growth is the key to survival. Competition places a premium on the exploitation of cheap labor and cheap natural resources. The rationale of the system is that even the poorest sectors will benefit from the general expansion of the economy.

We see every day the tragic flaws of this system– the systematic exploitation and oppression of people, the institutionalized forms of violence, and its anti-human goals. But within its operation it has helped create a science and technology which *could* be truly liberatory. Let us see, however, what the impact of this technology has been within the capitalist system in the context of Latin America. To gain perspective, we start with a brief history of U.S. economic involvement in Latin America.[1]

U.S. Economic Involvement in Latin America

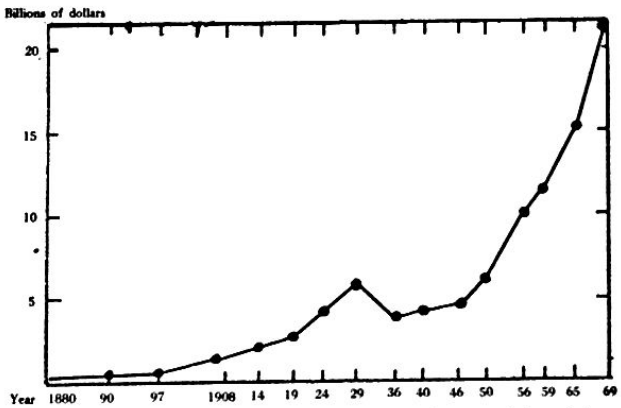
Foreign economic interests are not new to Latin America. Cortez and those who followed after him had gold in their eyes and whips in their hands. The colonial rulers plundered Latin America for what they could, destroying the social structure of the civilization, virtually enslaving the people, and establishing a class of colonial rulers. The transfer of economic dominance from European hands to those of the United States was a slow, gradual process marked first by the Monroe Doctrine of 1823, then followed by the U.S. westward expansion which included annexation of half of Mexico, the Spanish-American War of 1898, which resulted in



the acquisition of Cuba and Puerto Rico, the 1904 Roosevelt Corollary to the Monroe Doctrine which justified the exercise of international police power in "unstable" countries, and finally the growth of U.S. investments in sugar, bananas, oil, and industrial minerals which accelerated after World War I and left the U.S. in a position of unquestioned dominance by the 1930's. In years following Roosevelt's "Big Stick" policy through the years of "dollar diplomacy" following World War I, there were no fewer than 31 U.S. Latin American military police operations (undeclared war), principally in Central America, to secure U.S. business investments. Military and economic affairs have been closely coupled.

Following a period of retrenchment during the Depression and World War II, the expansion of U.S. foreign capital into Latin America continued to rise quite rapidly as competition from Europe disappeared, as the Cold War threatened foreign control, as the U.S. government adopted policies and programs favorable to investment, and as corporations adopted a multinational character. During the period 1945-1960 investments were concentrated geographically in Mexico, Argentina, and Brazil, and for the most part, new capital was directed into the primary extractive industries, especially petroleum.

U.S. TOTAL INVESTMENTS IN LATIN AMERICA, 1880-1969



Notes: Total investments (long- and short-term) include in addition to direct investments such items as foreign dollar bonds, foreign corporate stocks, and claims reported by U.S. banks.

Sources: NACLA, *Yanqui Dollar*, 1971. As taken from U.N. and U.S. Department of Commerce figures.

Then came the Cuban Revolution (1959). Everyone sat bolt upright. The savage exploitation of the mineral and human resources and the poverty it laid on the backs of the Latin American people had finally created an explosive revolutionary situation. For the capitalist ruling class in the United States and Latin America, the Cuban Revolution signaled a needed change of strategy, a change heralded by Kennedy's Alliance for Progress. With the new strategy came new rhetoric—development became the new euphemism for capitalist expansion. The substance remained the same.

The Alliance for Progress program[2] was the result of the pioneering efforts of the Rockefellers to provide a stable base for investment in Latin America coupled with the strategy of the Harvard and M.I.T. intellectuals like Bundy, Rostow, Gordon, etc., who saw communism as the principal threat to the capitalist system. Their strategy was to stave off communism through various reform measures which were designed to appeal to the middle-income sectors but which left the basic economic structure intact:

> *In the emergence of these middle sectors, the North American strategists saw a progressive, modernizing elite who might free Latin America from the dead hand of "feudal" oligarchies. This elite, it was hoped, would establish high consumption, urban economies to counter the appeals of Communist industrialization. They would see the urgency of, and their own interest in, education, the modernization of tax collection, and the more equitable distribution of tax burdens. They would sponsor land reforms which could increase food production, expand and distribute purchasing power, and free loanable funds for investment in the modern sector of the economy. Moreover, it was hoped that these progressive power groups, chiefly through the political parties of the "democratic left", could encourage the creative and pacifying participation of the Latin American masses.* [3]

But this grand strategy failed as the middle sector sided with the *status quo*. Land reform, tax reform, educational reform were doomed. They merely reinforced the existing class divisions.

Moreover, the Agency for International Development (AID) formed to centralize the State Department's foreign "aid" dealings and coordinate programs under the Alliance for Progress, soon became quite obviously the instrument for the expansion of private enterprise. Originally envisioned by the liberal reformers as providing money for the development of Latin American infrastructure—roads, schools, utilities—it became rather the protector and guarantor of investments. For example, in 1962 Congress passed the Hickenlooper Amendment to the 1962 Foreign Aid Bill. The amendment mandated the president to terminate all financial assistance to any country which had expropriated, nationalized, or discriminatorily taxed U.S.-owned property without taking appropriate steps such as "equitable and speedy compensation for such property in convertible foreign exchange." Another club was Kennedy's expansion of the investment guarantee program, according to which AID was to negotiate bilateral agreements which would insure private investments against expropriation, inconvertibility of local currency, revolution, and in some cases even business losses!

Lest the purpose of foreign "aid" programs remain unclear, Kennedy's 1963 Foreign Aid message is unequivocal:

> *The primary new initiative in this year's program relates to our increased efforts to encourage the investment of private capital in the underdeveloped countries.* [4]

The kinds of efforts encouraged were outlined by Lincoln Gordon, a key Alliance strategist:

> *...[the] key [to development] is special incentives to attract private investment, to get over the hump of initially low returns which creates a vicious circle of stagnation. Tax concessions, market guarantees, government assistance in providing plant sites, technical assistance and credit on unusually favorable terms have all proved their usefulness.* [5]

THE FOUNDATIONS OF U.S. SOCIETY

The proliferation of the private "non-profit" foundations is the result of huge fortunes being amassed by U.S. industrialists and investors. Originally, these foundations were formed when large segments of stock were put in trust in order to prevent the loss of family-controlled business because of inheritance taxes. Profits derived from the business activities of the big corporations are reinvested, through the foundations, in the development of social and political programs designed to maintain the stability required for secure corporate planning, investment, and profit. The foundation can carry on its programs on the fringes of international politics and government bureaucracy, while being vital in the formulation of U.S. policy:

> *Foundations can experiment with projects, methods, and designs which, if successful, can then be adopted by government...they can deal with host countries on projects where U.S. government support might be embarrassing.* [1]

The two major sources of foundation funds for Latin American studies, educational projects, birth control, agricultural research, and misdevelopment (Green Revolution) in Latin America are the Ford and Rockefeller Foundations. These interests usually come from corporate investments in Latin America of the original family business (Rockefeller in oil, Guggenheim in mining). The Ford Foundation is the largest with over $3.5 billion in assets and Rockefeller follows with $1.5 billion.

The listing below illustrates how the high officialdom of the Ford and Rockefeller Foundations represent business interests in Latin America or have held key government and/or intelligence posts or are officers or trustees of organizations funded by the two foundations. Note the absence of Latin Americans.

Satellite Foundations

The big foundations have set up a large number of organizations to assist them. Each front organization includes experts in given fields to advise the Rockefeller-Ford-Business-Government Trust. For example, the Institute of International Education (IIE) funded by Ford and Rockefeller maintains computerized information on foreign students who have studied in the U.S. and U.S. students and scholars abroad. It catalogs data that might be useful to any corporation interested in employing these people. This data covers 120 countries and 150 fields of expertise. The IIE sets up special educational programs for management training needed by U.S. corporations

> *In the last decade, U.S. corporations have expanded their direct foreign investments by 60%–to $40 billion at the end of 1963. They recognize–abroad as well as at home–that education offers the best means for stimulating purchasing power, encouraging political stability, and most important of all, developing a reservoir of the trained manpower so necessary to their overseas operations.* [2]

Foundations based on the U.S. model have also emerged in Latin America (from 68 foundations in 1949 to a total of 364 today[3]). They too are a reflection of U.S. business interests. For example, in 1956 the Creole Foundation was set up by the Creole Petroleum Corporation, owned by Jersey Standard Oil which is a Rockefeller holding.

ROCKEFELLER FOUNDATION:

*C. Douglas Dillon: Secretary of the Treasury during the Kennedy administration, former vice-chairman of the Institute of International Education (recipient of Ford and Rockefeller funds), and president of U.S. and Foreign Securities Corporation (an investor in racist South Africa).

Arthur A. Houghton, Jr.: was president of the Foundation for Youth and Student Affairs (FYSA) which was the principal covert conduit for CIA funds to the National Student Association.

John D. Rockefeller III: Chairman of the Population Council, largely funded by the Rockefeller Foundation.

*John D. Rockefeller IV: fourth member of the Rockefeller family on the Board of Trustees, he has served in various capacities with the Peace Corps and the Department of State.

*Robert V. Roosa: partner in Brown Brothers, Harriman and director of the Anaconda Company, both big Latin American investors; Under Secretary of the Treasury while Dillon was Secretary.

Frank Stanton: President of CBS, director of Pan American World Airways and the RAND Corporation (which receives Rockefeller funds).

Thomas J. Watson, Jr.: Chairman of the Board of IBM and director of Bankers' Trust Company.

FORD FOUNDATION:

*David Bell: administrator of the Agency for International Development during the Kennedy administration.

*Richard Mervin Bissell: while a staff member of the Ford Foundation, he served from 1952 to 1962 as the CIA's Deputy Director for Plans (the super-secret covert foreign operations) and was the CIA man in charge of the Bay of Pigs operation.

*McGeorge Bundy: ran the National Security Council during the Kennedy and early Johnson administrations (period of both the Bay of Pigs and Dominican invasions); in his own White House offices maintained a secret "Situation Room" where communications flowed in from all over the world, and he worked with a staff of twelve recruited from the State Department and the CIA.

*Kermit Gordon: President of the Brookings Institution which gets much of its funding from Ford, and former Director, Bureau of the Budget (1962-66).

*Edwin H. Land: besides being president of Polaroid Corporation, he was a member of Kennedy's Foreign Intelligence Advisory Board, a small group that oversees the whole U.S. intelligence apparatus.

*Robert S. McNamara: former Secretary of Defense and ex-president of the Ford Motor Company, is now President of the International Bank for Reconstruction and Development.

And Dean Rusk, then Secretary of State, explained how these principles are put into practice:

> *...our influence is used whenever it can be and persistently, through our aid discussion and in direct aid negotiation, to underline the importance of private investment.* [6]

Sometimes this meant using U.S. influence to replace an uncooperative government, as in the 1964 military coup in Brazil.* In denying the well-known involvement of U.S. Agencies in the military takeover, Lincoln Gordon, then ambassador to Brazil asserted that:

> *...there was no lack of coordination, and is none, among the CIA personnel, the military attaches, the political officers of the Embassy, eht Aid mission, the USIS (United States Information Service) mission, and the Ambassador. This was and is one team.* [7]

This, then, is the Alliance team. The team of U.S. businessmen, State Department officials, and military aids–a true Alliance for Profit.

Profitable as this investment has been (in the years 1950-1965 the outflow from Latin America was $7.5 billion greater than the inflow[8]), attempts are under way to consolidate these gains and expand further. Whereas in the past investment was concentrated in the primary extractive industries, emphasis more recently has been in manufacture. This shift, coupled with the formation of multinational corporations, is a reflection of the capitalists' need to control production and distribution of goods as well as resources. The multinational firms have a world-wide base of operation which enables them to maximize return by controlling the sources and markets of goods. Moreover, they are now looking to multinational finance organizations like the World Bank to subsidize their operations through foreign loans and economic pressure (as in the current attempt to strangle Chile). The names have been changed but the game is the same. Multinationalism is just a cover under which U.S.-controlled corporations and the U.S.-controlled World Bank join with U.S.-controlled governments to exploit the peoples of the world.

*AID expenditures in Brazil dropped from $81.8 million in 1962 to $15.1 million in 1964, then shot up to $122.1 million in 1965 after the military takeover.[7]

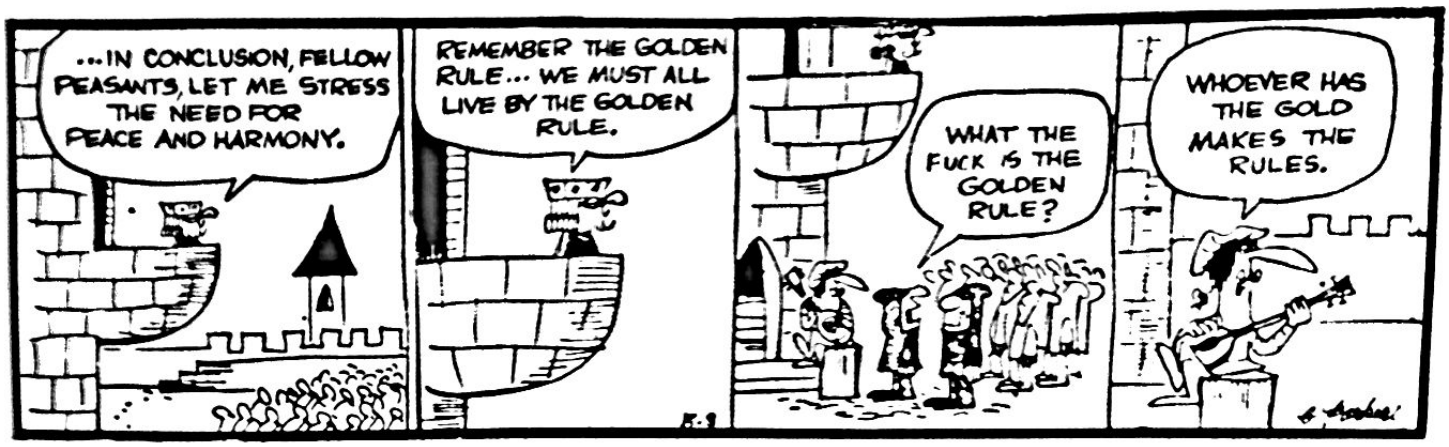
The Role of Technology

This discussion of U.S. economic involvement in Latin America, while necessarily short, should be sufficient to provide the background against which we can view the impact of U.S. science and technology in Latin America. In a very real sense there is no way to separate the consideration of technology from that of investments abroad. For one thing, most all that investment is in the form of U.S. manufacturing processes, mineral extraction and refining equipment, electrical machinery, services, agricultural technology, and other forms of U.S. equipment and know-how. When not directly tied to investment, the technology is either part of the infrastructure of transportation and communication networks (highways, railroads, telephones, televisions, etc.) needed to support economic development or part of that needed to maintain economic and political control (this last will be discussed in following sections). In all cases, technology is introduced into Latin America in ways consistent with the interest of private investment.

The technological pre-eminence of the U.S. vis-a-vis Latin America is a strong element of control, above and beyond that of brute financial power. The high cost of technological innovation usually dictates that Latin Americans turn to the U.S. where the technology already exists. Being in a monopoly position, U.S. firms (or those of the other technologically advanced countries) can set their price. This initial dependency, however, tends to be self-perpetuating in that once machinery or equipment is installed, the necessity for service and spare parts continues. The Cubans, for example, encountered great difficulty in repairing industrial machinery because of the U.S. embargo.[10]

Patents, however, provide a still more significant form of control since patent licensing agreements allows the terms of production and distribution to be fixed by a parent firm, even if it lacks a controlling share of an affiliate firm's stock. For example, licensing agreements often limit the marketing of products outside of certain geographical regions. In fact, the practice of market control through such licensing has become a major bone of contention between Mexico and the United States.[11] Patent licensing agreements have restricted Mexican sales in the international market; but in order to make its loan payments to the World Bank, Mexico needs to sell its manufactured goods abroad. In other

THE ALLIANCE FOR PROFIT



cases, the licensing agreements require a company to buy raw materials and intermediate products from the licensing firm thereby transforming a monopoly position in technology into a monopoly position in the market. Accordingly, in 1968 foreign owned pharmaceutical manufacturers in Colombia were paying to parent U.S. companies 155% over the established world market prices for their raw materials, and it is estimated that Colombia itself lost $20 million in balance of payments from such overpayments.[12] In Brazil, the biggest Latin American textile firm, Matarazzo, was forced in 1960, due to patent and technological needs, to grant control to B.F. Goodrich, Dow Chemical and others.[13] It can hardly come as a surprise that at a recent (May, 1972) conference of the Organization of American States on "The Application of Science and Technology to Latin American Development", one of the resolutions adopted was:

> *...that the Latin American countries take steps to remove the obstacles that prevent the purchaser of imported technology from using it fully.*
> *...that steps be taken to eliminate the restrictions, contractual or implicit, that generally accompany agreements for licensing and sale of patents and agreements between head offices and subsidiaries, such as the following: prohibitions against the use of materials supplied as part of a contract for manufacturing other products; prohibition against the manufacture of similar products; obligations linked to the purchase of raw materials, intermediary products and capital goods; restrictions on the export of goods manufactured under license; compulsory transfer to the licensing corporation of technological improvements and innovations developed by the licensee, etc.* [14]

It's noteworthy that the U.S. delegation refused to endorse this provision, as well as others, on the basis that government intervention would impede the transfer of technology from the U.S. to Latin America. A final note on patents: Royalties and licensing provide a source of revenue as well as market control: In 1969 earnings ($1.6 billion) on direct Latin American investments were supplemented by another $240 million in royalty and patent fees and management contracts.[15]

The technology leased, sold, or otherwise exported to Latin America is like that of the Green Revolution, consisting of the most advanced techniques for automated production, and usually involving computers, fancy machinery, electronic equipment, etc. Also illustrative of this technology is the Earth Resources Technology Satellite (ERTS) eye in the sky, which is designed to replace the whiskered, pick-carrying mineral prospector of old. Through advanced photographic techniques and data analysis it should be possible to locate all kind of mineral resources and lay the groundwork for future exploitation by foreign investors. Such sophisticated technologies viewed against the backdrop of poverty and oppressive living conditions in Latin America, are indicative in themselves of the purposes for which they are intended. They are GNP machines. They are not to help the people.

The Social Impact

What is the impact of these technologies in Latin America? First, because of their concentration in areas of production which serve the needs of capital, they reinforce the inequities which themselves are the product of a history of capitalist rule. The rule is that capital is invested where return will be high. Thus tremendous investments have been poured into the primary extraction industries, not because the Latin American people now need an especially large amount of oil, but because huge markets are available abroad and labor is cheap in Latin America. So too, in the manufacturing industries, where the goods which are produced depend upon what is generally marketable in moneyed sectors. Thus the pattern of the outflow of resources first to the urban areas from the countryside and secondly from Latin America to the overdeveloped world is one which increases the maldistribution of material resources. Thus the U.S.'s 6% of the world's population has come to consume 50–60% of the world's resources. And in a similar way, according to Robert Mac Namara, president of the World Bank, the income distribution within Latin America has come to be even more lopsided. For example, from 1960 to 1970 the poorest 40% of Brazil's population decreased its share in the national income from 10 to 8 percent, while the richest 5% increased its share from 29 to 38 percent.[16]

Second, because of the highly advanced form of technology the imported manufacturing processes, agri-

cultural processes, mineral extraction processes are capital intensive,* not labor intensive. Hence, in spite of high levels of production the number of people employed is very low. For example:

> *in Venezuela, where oil accounts for 86% of total foreign investment, 93% of the country's export earnings, and 63% of the government revenues, the oil companies employ only 1.1 percent of the labor force. In a period of 10 years the Rockefellers' Creole Petroleum Co., through introduction of automation and computerization, nearly halved its employment from 9,000 in 1957 to 5,000 in 1967–while actually increasing its production.* [17]

Such situations of course result in growing unemployment, poverty, urban squalor. They keep wages low, consumption low, and standards of health and nutrition low.†

Third, with all the highly sophisticated forms of technology, the more basic needs of the people still do not get met. Televisions abound but hospitals are rare. One aspect of the problem is that technical expertise is predominantly in areas of interest to foreign capital, say, in petrochemical technology, but areas like health care are virtually ignored. This situation is largely the result of U.S. training programs which have been established to supply the technostructure for foreign investment. AID, for example, subsidizes corporate operations through foreign aid programs to Latin American universities, vocational training institutes and "productivity centers" to turn out engineers, accountants, skilled workers. These programs run in conjunction with Ford and Rockefeller programs to restructure the educational programs of Latin America to meet the technical needs of corporate enterprise. (See discussion of cultural imperialism) In addition, many AID scholarship programs bring Latin Americans to the U.S. for training. AID explains that these programs have additional side benefits such as "the orders for purchase of equipment, materials, and services which result from participant training." [19]

The introduction of these technologies into Latin America as the tool for capitalist exploitation has given rise to an explosive social situation. The poverty of the urban slums and the rural villages stands in stark contrast to the affluence of the wealthy. The Latin American people are understanding the source of their oppression and are reacting– sometimes in the form of people's liberation movements, as the Cuban Revolution or the urban and rural guerrilla movements of Uruguay, Brazil, Mexico, Argentina, Guatemala, Columbia, and others, sometimes in voting a Socialist regime to power as in Chile. The needs of the people are in contradiction with those of the capitalist system. But the capitalists are working hard to protect their class interests by trying to stem the tide of social unrest. What are their tools? Science and technology of course.

*"Capital intensive" means a high ratio of machinery used in production to labor.

†In Puerto Rico investers obtain a 28% return on invested capital (twice as high as in the U.S.), while the average wage of a Puerto Rican industrial worker is 1/2 to 1/3 lower than the North American level. At the same time the cost of living in Puerto Rico is 25% higher.[18]

POPULATION CONTROL IS TO CONTROL PEOPLE

Let us take a look at one of the tools to counteract social unrest–population control. Based on the premise that it is population growth which has prevented social and political development in Latin America, the population control programs serve to obscure the real basis for the poverty and social unrest in Latin America–the exploitative capitalist system. For example, the economists argue that:

> *Population growth in the third world is much more rapid than in the developed countries. In the last twenty years population grew in the poor countries at about 2.5 percent annually and the rate has been increasing. In the developed countries the rate of population growth has averaged about 1 percent and is falling. This is the chief reason why there is a growing gap between the living standards of the rich and the poor nations. Unless population growth can be brought under control, the gap will increase and huge numbers of people will remain poor.* [1].

Another argument put forward in favor of controlling the population of the Third World is, according to Garrett Hardin, the guardian of white priviledge and western civilization:

Everyday we are a smaller minority. We are increasing at only 1 percent per year; the rest of the world increases twice as fast. By the year 2000 one person in 24 will be an American; in one hundred years, only one in 46. . . . If we renounce conquest and overbreeding, our survival in a competitive world depends on what kind of world it is: One World or a world of national territories. If the world is one great commons, in which all food is shared equally, then we are lost. Those who breed faster will replace the rest. . . . In a less than perfect world, the allocation of rights based on territory must be defended if a ruinous breeding race is to be avoided. It is unlikely that civilization and dignity can survive everywhere; but better in a few places than in none. Fortunate minorities must act as the trustees of a civilization that is threatened by uninformed good intentions. [2].

The words may sound new but they are actually part of an old story. Thomas Malthus, an economist of the latter 18th century and early 19th, claimed that since population was growing faster than the means of subsistence, it was preventing improvement in the standard of living of the lower classes. He claimed that:

. . . . the most permanent cause of poverty has little or no direct relation to forms of government or the unequal division of property and that, as the rich do not in reality possess the power of finding employment and maintenance of the poor, the poor cannot in the nature of things possess the right to demand them; are important truths flowing from the principles of population, which, when properly explained, would by no means be above the most ordinary comprehensions. And it is evident that every man in the lower classes of society who became acquainted with these truths, would be disposed to bear the distresses in which he might be involved with more patience; would feel less discontent and irritation at the government and the higher classes of society, on account of his property; would be on all occasions less disposed to insubordination and turbulence; and if he received assistance, either from any public institution or from the hand of private charity, he would receive it with more thankfulness and more justly appreciate its value. [3]. (emphasis in the original).

Malthus' theory found a lot of support among the eugenicists and nativists of the United States in the early 1900's. At the Sixth International Neo-Malthusian and Birth Control Conference in 1925 a speaker said about the welfare laws, that these

protective and paternalistic laws. . . [benefited] the least desirable elements of society. . . What they actually accomplish is the preservation of the misfit, the degenerate, the low, the unworthy and the more or less defective elements at the expense of the strong and exceptional. [4].

He also suggested that if practiced by the right people birth control could wipe out those evils for which welfare legislation gave at best only symptomatic relief. Fear of the loss of Anglo-Saxon political and economic hegemony were some of the bases of this racist position.

The Rockefeller Foundation has been active in population control research since the middle 1930's. In 1952, a conference on population problems was organized by John D. Rockefeller III; as a result of this conference the Population Council was founded. From the beginning the Population Council claimed that, "the relation of population to material and cultural resources of the world presents one of the most crucial and urgent problems of the day." During the 1950's, when President Eisenhower considered birth control for the Third World too delicate a subject for official United States involvement, the Population Council relied on ruling class sources for funds. In the 1952-58 period, the Ford Foundation provided $1 million and the Rockefellers $3.2 million. Total Population Council funds for the six years amounted to $4.5 million. During the next six years, Population Council funds more than quadrupled to $18.3 million, with the Fords providing $8.4 million, the Rockefellers adding $5.4 million, and the Mellons joining with $2.9 million.[5]

Also interested in the population problem was Clarence J. Gamble, who began family planning work in the United States in 1929. In the late 1940's Gamble expanded his work internationally; his growing network of field representatives and programs became incorporated into the Pathfinder Fund in 1958.[6]

Finally, all these efforts bore fruit as the U.S. Government became involved in these population programs: in 1965 AID entered the picture. As can be seen in the graph on page 13, the "great leap forward" came in 1968 when funds increased from $4.4 million to $34.8 million. What happened was that:

In the initial phase...the provision of contraceptives or machinery for their manufacture was prohibited. By 1967, the contraceptive prohibition was rescinded, population officers were being appointed, and population policy shifted from a passive to an active phase. With the legislative earmarking of population and family planning funds in 1967, with dynamic leadership in the population and family planning sector of AID, with strong Congressional and Presidential support, AID support to family planning programs rapidly increased in size and effectiveness...Much of this assistance was extended directly by AID to individual country projects, but toward the end of the decade, important sums were granted to national and international private organizations and to the United Nations and its affiliates, with the result that these organizations were encouraged and enabled to broaden their family planning support. [7]

Why did the U.S. Government get involved in these programs? The reasons given by government officials are quite revealing. For example, President Johnson said at the United Nations in June 1965, "Let us act on the fact that five dollars invested in population control is worth a hundred dollars invested in economic growth."[8] And

General Draper, who was appointed chairman of the President's Committee on Military and Economic Assistance in 1958, said that after one year of visiting developing countries, the Committee concluded that exploding population was in many cases holding back their economic development. The Committee unanimously recommended that the United States should assist any of the countries that wanted help in dealing with their population problems–in other words,"We should help them install birth control programs."[9] Draper has declared that "unless and until the population explosion now erupting in Asia, Africa, and Latin America is brought under control, our entire economic aid program is doomed to failure."[10]

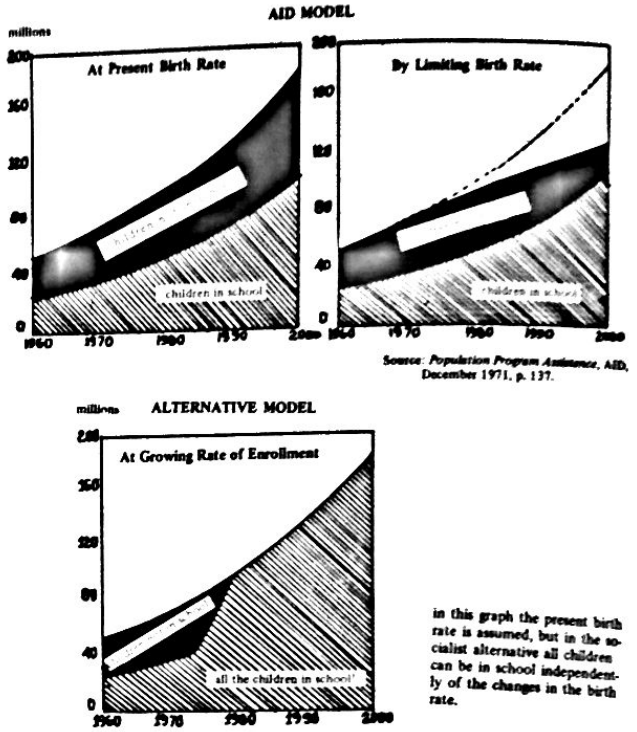
Why does the U.S. Government see population control programs as an investment? And why will the U.S. economic aid program fail if the population keeps growing at its present rate in the Third World? As has already been discussed earlier in this pamphlet, economic growth according to the capitalist model is measured by per capita GNP Rapidly growing population threatens the growth rate of per capita GNP, and thus within this model, threatens economic development. But as we have shown before, GNP only measures misdevelopment and says nothing about distribution, about living conditions in the Third World. In fact, using GNP is often tantamount to using exploitation. Rapidly growing population also threatens the growth rate of per capita food production thereby worsening malnutrition and starvation. But this situation must be seen more as a result of market economics and single crop based production which deny poor people of Latin America adequate food while cash crops are shipped to the U.S.

AID propaganda asserts that "overpopulation and underdevelopment go hand in hand"[11]. What happens in reality is that U.S. aid programs and economic misdevelopment in Latin America have failed. When population increases all the contradictions of the economic system accentuate: unemployment increases as does hunger and malnutrition, health care decreases, and education becomes hard to obtain. As the conditions of people's lives disintegrate, more people begin to fight against the injustices of the system. It is for this reason that U.S. private investors must control population– they want just the number of poor or unemployed needed for high profits, but not so many as to jeopardize social and political stability. Investors rightly fear the loss of Third World countries where they can reap high return on capital. In the event of revolution the Third World peoples will reclaim their natural resources and make their own decisions about the priorities of economic development.

U.S. investors are not thinking of the welfare and independence of Latin America. They don't want to end malnutrition, hunger, illiteracy, and poverty. For example, as can be seen from the graph of AID funds (page 13), programs in education and health decrease as population control programs increase. From the graph on this page, we can see that the scheme for reducing illiteracy is simply to keep the illiterate from reproducing. The political basis for U.S. aid is spelled out clearly by Lyndon Johson:

> *Where hunger, disease and ignorance abound, the conditions of violence breed...These are tragedies which summon our compassion. More urgently, they threaten our security. They create the conditions of despair in which the fires of violence smoulder...Our investment in foreign aid is small. In the period covered by these reports, it was only five per cent of the amount we spent for our defense. The dividends for that investment are lives saved and schools opened and hunger relieved. But they are more. The ultimate triumphs of foreign aid are victories of prevention. They are shots that did not sound, the blood that did not spill, the treasure that did not have to be spent to stamp out spreading flames of violence. These are victories not of war–but over wars that did not start.* [12]

EDUCATION IN LATIN AMERICA



This, then, is the weapon of population control. As Eduardo Galeano has said, "In Latin America it is cleaner and more efficient to kill the guerrillas in the wombs than in the mountains or the streets."[13]

Technology of Population Control

In order to control the number of poor people in the world it is necessary to control the probability that a "Third World" ovum and a "Third World" spermatozoa meet together. While Malthus advised abstinence for this purpose, the advances in science and technology nowadays have opened up new horizons in preventing this encounter. These advances have not come by chance. Research to develop new birth control methods has been an important part of the grants given by Rockefeller Foundation, Ford Foundation, Population Council, and AID. For example, AID research grants in 1969 included a total of $6 million for development of new and improved means of fertility control, including more than $1 million for improvement of IUDs and $4.5 million aimed at development of a once-a-month pill.[14] In 1970 the research funds were $6.9 million and in 1971, $6.4 million.[15]

Two highly effective birth control methods used at present to stop population growth are the pill (oral contraceptive) and the IUD (intrauterine device). The pill was tested for the first time in 1956 on women in Puerto Rico and Haiti.* In spite of many dangerous side-effects of the pill that were discovered when it was put on the market (cancer, strokes, blood clots, among others) the pill is widely used and pushed in the family planning programs in the Third World. This is clearly shown in the Population Program Assistance of AID:

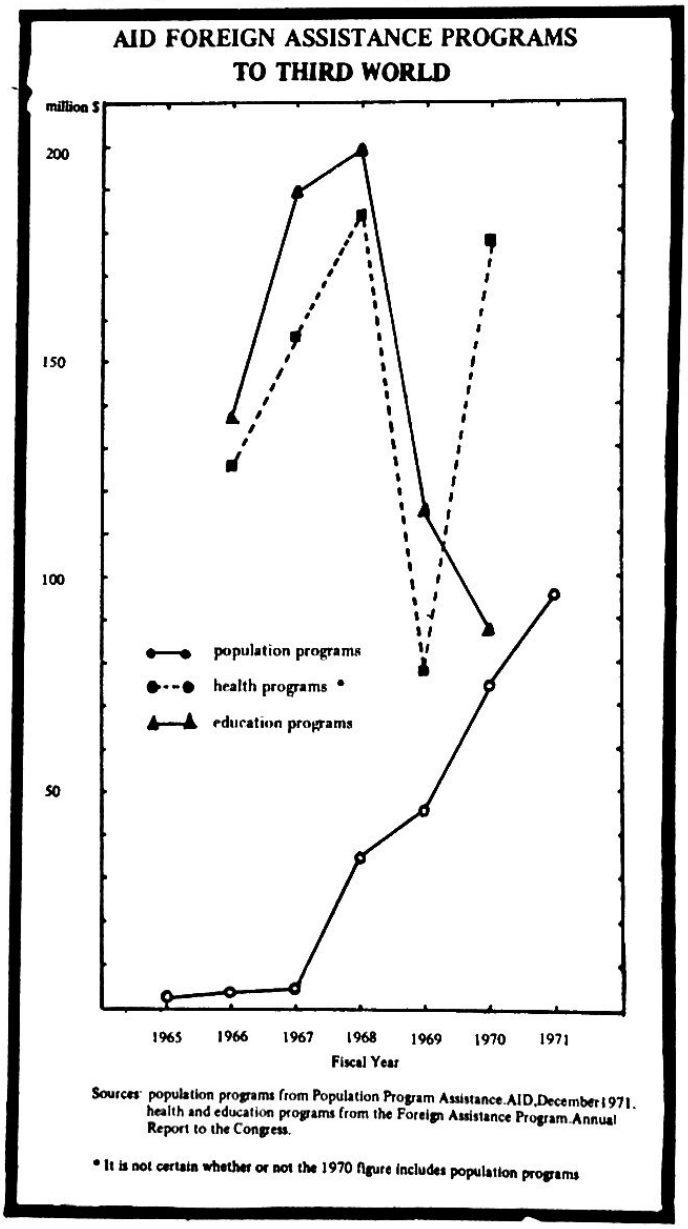
> *Particularly helpful in overcoming the fears referred to above [untoward side-effects of the pills] were studies such as that conducted by the Rockefeller Foundation concerning one million women in the 24-35 age group which showed that deaths among women taking oral contraceptives were very much less than deaths among those who used no contraceptive method at all. Thus, the risks of pregnancy are shown to be greater than the risks of using orals.* [16]

The experiments are clearly performed in such a way as to show what they are meant to show. The drug companies, who are making increasing profits with the pill, have the government as their leading customer: in 1969 AID bought $1,131,500 worth of pills from Wyeth and Syntex to pass out in birth control clinics abroad.[17] Pills of course aren't everything: in 1969 contraceptives, including pills, were provided by AID at a cost to the government of over $7 million[18], and in 1970 some $9.5 million worth of contraceptives were provided as foreign aid.[19]

New hormonal birth control methods are continuously being tested. Injectable contraceptives have been tested among extremely poor lower class women of Honduras, Brazil, and Chile, among other places. At a recent meeting of the American Association of Planned Parenthood Physicians, a study done on 907 Mexican women was reported. These were low-income women from Mexico City and from a mountainous area who had been tested with a new injectable contraceptive. The authors said that occasional severe bleeding is a major problem with injectable compounds, and this could be serious in a person already suffering from nutritional anemia.[20] Quite probably, they arrived at this conclusion because there is a high percentage of anemic women among the low income population. This drug is already in use in more than 60 countries and it is not unlikely that at some future meeting many more side effects will be reported. It was found that if rats were fed the hormonal contraceptive while on a low protein diet, they developed an "abnormal number of tumors" compared to those on normal diets.[21] We can probably expect that poor women, who have high incidence of malnutrition, will have side effects from hormonal contraceptives with greater incidence than will well-nourished women.

The other birth control method widely pushed in the Third World are IUDs. Again, as with pills, their use has a double purpose: first, to control the number of poor people and secondly, to collect data needed for perfecting these contraceptives. Latin America is the testing ground and Latin American women are the guinea pigs. New shapes, sizes, and materials for IUD's are continuously being tested. The Pathfinder Fund plays a very important part in this scheme: Since 1961, it has conducted an international IUD research program and has become a clearing house for new developments in IUD's. Using computer technology, its research department provides scientific, timely evaluation of the various IUD's in use, and of new ones. This IUD program has been carried out through a cooperative network of more than 100 medical doctors in 40 countries. At present, data collected from the experiences of 40,000 women are being analyzed.[22] Some 10 devices have been tested through the program's compilation of use-effectiveness rate. Seven volumes of "IUD Performance Patterns" have been published, as well as 140 statistical feed-back reports sent to cooperating investigators as basic material for publications.[23]

In order to convince the women to take the pill or let the IUD's be inserted in them, family planning clinics are set up, with slides and films showing healthy, well dressed, well nourished families. The women are told that if they begin to plan their families, they will be in condition to give good food, good clothing, and good education



*In the experiments in Puerto Rico three women died from blood clots. "Searle researchers told reporters at the time of their Puerto Rican tests that they didn't follow up the three deaths in their test group because of local health conditions. The doctors claimed the tested women were so unhealthy anyway that three deaths during the test weren't unusual".[17]

LATIN AMERICA: ALSO A SOURCE OF GUINEA PIGS

After reading about the birth control experiments in Mexico and Puerto Rico, we may start to wonder: why were Mexican and Puerto Rican women used? Why not mothers of large families in Chevy Chase, Maryland, or in Scarsdale, New York? And why was the Tuskeegee experiment (in which people were purposely not treated for syphilis for 30 years) carried out in a predominantly black area in the South? Why are the U.S. government and the foundations the willing promoters of such experimental programs?

The answers lie in the fact that within the present social and economic system, poor and oppressed people are regarded as objects, as bodies without identities, not as highly valuable human beings. For capitalists, in fact, the only value these people have is in terms of their labor power or buying power. When the poor and oppressed make it impossible for their humanity to be ignored, when their consciousness of their collective power becomes strong and poses a threat to the social order, then in the capitalist strategy they are to be misled, demoralized, killed, just so long as they are kept from upsetting the class and economic power structure. Thus we witness propaganda campaigns, social programs, and the outright abuse of a large world-wide class of people.

Add racism to this factor, and we find the reason why black and brown people of the world are subjected to experimentation by a white ruling elite.

With these things in mind, we will now look at an experiment concerning malnutrition and mental development done on dirt-poor people in four small villages in Guatemala.

The Experiment

In Guatemala, 75% of the children under the age of 5 are malnourished. 50% of all deaths are children under 5 who suffered from malnutrition coupled with infection. People there could farm to provide themselves with food, but their land has been denied them. United Fruit Company and Delmonte own most of the good land there, and they pay their farm workers little enough so that bananas can be sold here for 19 cents per pound and still turn a large profit.

Against this background a team of researchers, predominantly from the U.S., descended on rural Guatemala. Channelled through the World Health Organization (WHO) and funded by the U.S. National Institute of Health and Child Development to the tune of $½ million per year, the experimenters set out to determine whether malnutrition affects mental development.

After collecting extensive data on the people and the environment, they supplimented the regular diet in two villages with Incaparina, a high-protein drink. In the other two villages the regular diet was supplemented with a high-calorie mixture (that is, something along the lines of Kool-Aid). The children who drank the Incaparina were "nourished" and the children who drank the "Kool-Aid" were "undernourished".

A battery of tests was used on the children to determine whether mental development differed as did nutrition between the villages. These intelligence tests were based on village cultural norms in order to guard against cultural bias in testing.

As part of the experiment medical care centers were set up in the villages. There, people could receive their food supplements and could get medical care.

What's Going On Here?

What was the purpose of all these tests? To reduce malnutrition? NO: scientists were simply taking advantage of the poverty of these Guatemalans for experimental purposes. There would be no question about the effects of malnutrition on intelligence were there no malnutrition to begin with. So, then, why the tests?

The question of nutrition and performance on tests and in school is presently a hot issue in the United States. All sorts of so-called scientists are coming up with this and that theory as to why poor people do badly on intelligence tests. It is believed that if this can be determined then the reason why poor people are poor will uncover itself. Well, that reason is plain to see right now for anyone who's poor. Only the rich require fancy theories to justify an oppressive social system. But tests cannot be carried out on upper-class whites—they'd never permit it; and in some black communities in the U.S. there has been resistance to using black people as guinea pigs. The experimenters would rather find a place where malnutrition abounds and where resistance to these experiments has not yet materialized. But the most offensive aspect of this research is the emphasis: it is on gathering information which can only be used to maintain peoples' poverty, *not* on helping the people out.

Within the present system it would actually be very difficult, if not downright *impossible*, to help people out of malnutrition. Take the Incaparina. It was developed by the Instituto de Nutricion de Centro America y Panama (INCAP) as part of a WHO project. It was funded by a U.S. grant. It became too expensive for INCAP to produce, so they sold their rights to Quaker Oats. Quaker Oats sells the stuff at cost—that's 3 cents per glass. For five children who drink a glass a day, the cost is 15 cents per day. The average family income is 30 cents per day, so that a food *supplement* for a family with five children would take half the family earnings, still much too expensive. The irony of this is that the Food for Peace program remunerates Quaker Oats for the cost of producing Incaparina anyway, and now Quaker Oats has, potentially, a good cheap public relations gimmick.

In this experimental project the big researchers come from the U.S. and so does the money. What happens to the villages once the experiment is finished? No more medical care? No more food?

In case you're curious, the result of malnutrition is actually hyperactivity. Is Ritalin or some new, untested drug next on the agenda for the poor of Latin America?

to their children. Afterwards, they are given a choice between the pill or an IUD. The poor woman, living in the slum, without any possibility of improving her economic and social situation will try anything to get out of hell. The Medical Association of the State of Guanabara, Brazil denounced the Association for the Welfare of the Family (financed by International Planned Parenthood Federation) for inserting IUD's and then cutting the string in order to make it more effective.[24] To insert an IUD without any medical check up leaves the woman subject to many side effects (including bleeding and severe cramps). Moreover, cutting the string is a way to sterilize women. Once the string is cut, as was pointed out in a Brazilian newspaper, an operation is necessary to remove the IUD. Where is a poor woman going to get the money for the expensive operation needed to remove the IUD?

Sterilization is also performed in Latin America; the place where it is probably most widely used is Puerto Rico, where it is reported that in 1965, 34% of mothers aged 20-49 were sterilized.[25] New developments in technology made possible the development of new, more sophisticated, and simpler methods of sterilization involving very small abdominal incisions. Culdoscopy is one of those new developments. The physicians' training program for this method was carried out at the Women's Hospital in Mexico City under a grant from the Ford Foundation. The results obtained, which looked very promising, were presented at the 1971 meeting of the American Association of Planned Parenthood Physicians. Thus we see that the purposes of sterilization projects are manifold: not only can Latin American women be permanently kept from reproducing, but they can also be experimented upon while the scientists walk off with the professional laurels.

Convincing the Unconvinced

Population control programs, as important as they may be to the maintenance of social and political stability, cannot simply be forced on Latin Americans. As an official of International Planned Parenthood Federation (IPPF) pointed out in 1962 at the 4th Conference of IPPF in Puerto Rico, it is necessary to set up family planning seminars in Latin America because

> *...neither the Organization of American States nor the United Nations and its specialized agencies can establish and implement any policy in population and fertility control without full support of their government members.* [26]

To this end attempts have been made by IPPF and others to involve Third World scientists and professional health workers in family planning programs. This has been difficult, but the goal has finally been accomplished through conferences, meetings, training courses, and discussions made attractive by propaganca and by offering grants and fellowships in family planning. The first two IPPF seminars in Latin America in the early '60's attracted 100 specialists in medicine, public health, sociology, economics, demography, nursing, and social work*:

> *Perhaps one of the most important accomplishments of the seminars has been the change of attitudes on the part of many delegates from a negative or doubtful attitude toward family planning and population problems to a positive, dynamic outlook. This change has occurred not by persuasion or pressure, but by the acquisition of* scientific information *about the different aspects of family planning and its inter-relation to the demographic and socio-economic development of their countries.* [28] (Emphasis ours)

"Science" is substituted for simple persuasion; the experts return to their countries convinced of the necessity to establish population control programs.

Against the background of such efforts, the U.S. government aid policy becomes more understandable:

> *AID has three primary criteria for family planning assistance: the developing nation must request U.S. help; its family planning program must be consistent with the cultural, social, religious, and political belief of its people; participation must be voluntary.* [29]

All of the conferences, seminars, and so forth are simply the necessary precursors for successful birth control programs.

Latin American countries are encouraged in other ways to institute population control programs—economic pressure, for example. The World Bank, when giving a loan, prefers to lend to countries having birth control plans or programs existing. The rationale for this policy is that the loan would otherwise be dissipated by the increased necessities of an increasing population instead of being used for the "development" of the country. It is very interesting to note that the World Bank has become increasingly active in population program assistance. Its first population program loan ($2 million) was made to the Government of Jamaica in 1970 to help develop a postpartum family planning program:

> *The Bank looks on its support to population programs as a logical extension of its activities in the field of economic development. It is aware that during the last decade, less developed nations have achieved some of the highest economic growth rates in history but too often the benefits to individuals and to the nations have been lowered or even wiped out by excessively rapid population expansion. Allocating Bank resources to population programs has the intended effect of helping developing programs to yield their intended benefit.* [30]

While we have been critical of existing population control programs, we are not against birth control *per se*. Our opposition is based upon the fact that all the liberatory potential of birth control is used *against* the women of Latin America. They are not only guinea pigs for the birth control experiments, but the targets of the unhealthy technology which results. In the present context, no birth control program can liberate Latin American women or men from the oppressive conditions of their lives: they need the health care, education, nutrition, and other things necessary to take an active role in society. Only in a society free of exploitation with free choice can birth control be a liberatory technology.

*Of the 100 specialists 53 were from the U.S., 47 from Latin America.[27]

SCIENCE AND TECHNOLOGY FOR COUNTERINSURGENCY

Military and Police Technology

While population and control programs have been pushed by Rockefeller, Ford, and AID, as a way of disguising the real programs which exist in Latin America–the problems of foreign domination and exploitation, of maldistribution of wealth, of economic, social, and political misdevelopment–they have been no less vigilant in protecting their interests by more direct means. For even if population were to be stabilized, the conditions which gave rise to the Cuban Revolution would continue to exist. As indicated before, the Cuban Revolution caught the capitalists sleeping–a position they were determined not to be in again. Consequently, the Alliance for Profit was much more than the simple economic program described earlier in this pamphlet. It was, in addition, a full scale military effort to squash people's liberation struggles, for these struggles posed the greatest threat to the roughly $9 billion invested at that time in Latin America (the Cuban Revolution alone expropriated $2.7 billion worth of foreign holdings.*) Quoting Rockefeller:

> *Rising frustrations throughout the Western Hemisphere over poverty and political instability have led increasing numbers of people to pick the United States as a scapegoat and to seek out Marxist solutions to their socio-economic problems. At the moment there is only one Castro among the 26 nations of the hemisphere; there could well be more in the future. And a Castro on the mainland, supported militarily and economically by the Communist world, would present the gravest kind of threat to the security of the Western Hemisphere and pose an extremely difficult problem for the United States.* [1]

The Cold War strategy of hemispheric defense against an outside enemy quickly became a strategy of hemispheric defense against an internal enemy – the insurgent movements of Latin America. But the strategy was to keep a low profile. Rather than station U.S. troops in Latin America,† the plan was to provide assistance in the form of equipment and training to help the local forces overcome guerrilla movements. Thus the $1 billion spent between 1960-1970 was mainly spent on modernization programs in counterinsurgency warfare. The major instrument of this military aid has been the Military Assistance Program (MAP). Of the $45.5 million requested for MAP grant aid in 1968, the Pentagon proposed to spend $34.7 million or 76% on hardware and services related to counterinsurgency.[2] The emphasis, rather than being on large artillery, tanks, fighter aircraft or combat ships was on helicopters, small vehicles, and communications equipment. This is the technology designed and perfected for use in Vietnam against the Vietnamese people.

In the original Alliance plan, the bolstered military establishments would work closely with the civilian programs like road building, schools, etc. funded by AID. These "civic action" programs (sometimes coordinated with the Peace Corps) would stabilize the political climate by constructing close links between soldiers and peasants. So much for idealistic plans. What happened was that the military forces strengthened by U.S. aid have been used rather in a long series of coups throughout Latin America (Peru 1962, Guatemala 1963, Ecuador 1963, Dominican Republic 1963, Honduras 1963, Brazil 1964, Argentina 1966, Bolivia 1971) establishing regimes sympathetic to U.S. private investment. This result, however, is not incompatible, in the eyes of the U.S. military, with the objectives of the MAP:

> *to help Latin American nations maintain military and paramilitary forces capable of providing, with police forces, internal security essential to orderly political, social and economic development.* [3]

Internal security for orderly development is their way of saying a repressive regime which promotes economic misdevelopment.

As indicated in this statement, military programs are not expected to carry the burden alone, but need to be reinforced by local police forces. Vast military training programs for Latin America have therefore been supplemented by extensive police training programs and police technical aid. These police programs are funded by AID's ill-named Office of Public Safety (OPS). The OPS assistance is in three forms (with proposed budgets indica-

* According to claims on file at the U.S. Foreign Claims Settlement Commission (though these are probably inflated).

† Though the U.S. engineered the abortive Bay of Pigs invasion of 1962, and invaded the Dominican Republic in 1965.

ted[4]): training senior police officers at the International Police Academy in Washington ($654,000), stationing local "public safety advisors" in Latin America to provide training to rank and file police ($1,551,000), and making direct grants of specialized equipment including riot gases, guns, communications systems, helicopters, vechicles, and computers ($489,000). As with the military programs, the assistance is aimed at counterinsurgency – at developing police command headquarters, databanks, identification systems, and communications.

These modernized police and military forces have been instrumental in maintaining an atmosphere of terror in Latin America and in bolstering dictatorial regimes. Brazil, for example, the greatest recipient of OPS and MAP funds in Latin America,*has won world-wide recognition (has been cited even in the U.S. Congress) for its repressive regime. After the 1964 coup, for example, 40,000 "subversives" were jailed and all 13 existing parties were outlawed. The military regime suspended political rights for 10 years for 387 persons.[6] Then in 1968 a militant wave of strikes and student demonstrations swept the country and the regime instituted a hard line. The universities have been purged (see section on cultural imperialism), jails filled to bursting, and thousands of political prisoners have suffered brutal tortures (electrode shocks, scalping, castration). A democratic regime? According to Rockefeller, ". . . The question is less one of democracy or lack of it, than it is simply of orderly ways of getting along."[7] U.S. private investors have indeed gotten along fine with the military governments.

Brazil is an investors paradise. It provides the political stability and all the needed economic incentives that were quoted earlier from Lincoln Gordon, U.S. ambassador who engineered the military takeover in 1964. As Brazil emerges as the model of capitalist development in Latin America, it is well to remember that in the Northeast region of the country two million peasants live below the starvation line (100 calories a day) and in Rio's squalid *favelas*, almost 70% of the black population is afflicted with tuberculosis.[8] †

*OPS aid to Brazil through 1970 totalled roughly &7,900,000 and assisted in the training of 100,000 federal and state police personnel with approximately 600 persons having received training in the U.S. Major project accomplishments include construction, equipping, and staffing of National Police Academy, National Telecommunications Center, and National Institutes of Criminalistics and Identification. Has also supported substantial increase in police telecommunications with mobile facilities and equipment.[5]

U.S. MILITARY AND POLICE OPERATIONS IN LATIN AMERICA

MAP Expenditures 1950-70
$1,294,200,000

Latin American Military Personnel Trained under MAP 1950-70
54,270

OPS Expenditures in Latin America 1961-71
$51,262,000

Latin American Police Trained in the U.S. under OPS 1961-71
3,833

OPS Public Safety Advisors Stationed in Latin America as of June 1968
90

Source: NACLA, *The U.S. Military Apparatus*

Science for Counterinsurgency

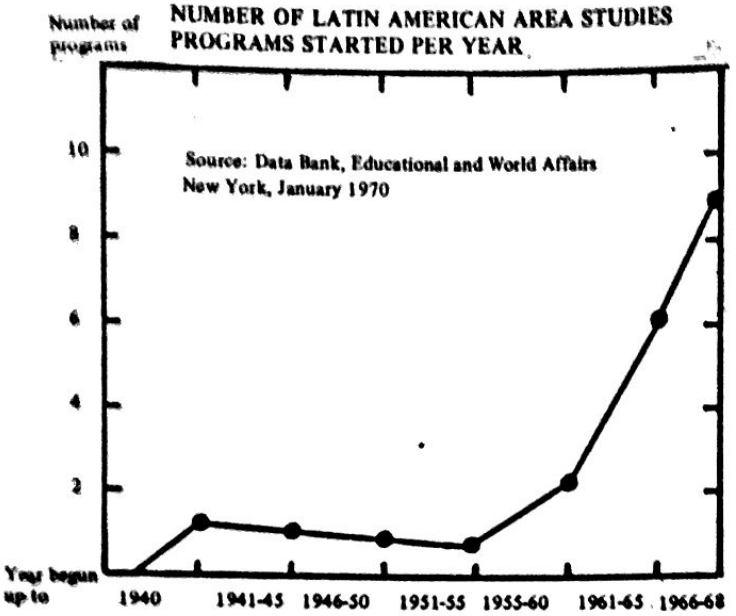
The latest police and military technology, however sophisticated and feared by the people, is not in itself adequate to maintain political stability. A successful counterinsurgency strategy requires knowledge in intimate detail of a society's culture, history, and social infrastructure. As a National Academy of Science (NAS) panel puts it:

> *Despite the difficulties attendant upon research in foreign areas, it must be explicitly recognized that the missions of the DoD (Department of Defense) cannot be successfully performed in the absence of information on (a) socio-cultural patterns in various areas including beliefs, values, motivations, etc.; (b) the social organization of troops including political, religious and economic; (c) the effect of change and innovation upon socio-cultural patterns and socio-cultural organization of groups; (d) study and evaluation of action programs initiated by U.S. or foreign agencies in underdeveloped countries...This goal should be pursued by (a) multidisciplinary research teams; (b) series of field studies in relevant countries; (c) strong representation of quantitative and analytic skills; (d) a broad empirical data base.* [9]

This is where Latin American studies programs and social science research enter the picture.

As we might imagine, the science of counterinsurgency, as with most of the other programs we've described, blossomed in the early 1960's. Best known is the infamous Project Camelot [10], which caused an international stir in 1965. The project, conceived by the Army, and run by its Special Operations Research Organization (SORO) at American University, enlisted large numbers of social scientists in studies designed to make "it possible to predict and influence politically significant aspects of social change in the developing nations of the world." When leftists in Chile caught wind of this project, they created such a stink that the whole project was quickly cancelled. This is what the NAS panel meant by "the difficulties attendant upon research in foreign areas."

† As President Medici himself said after a visit to the Northeast, "*A economia vai bem, o povo e que vai mal*" (the economy is fine, it's the people who are not).



Camelot may have died, but the research goes on. The DoD's Advanced Research Project Agency (ARPA) now funds counterinsurgency research under its Project Agile. Typical research projects are intitled "Remote Area Conflict," "Urban Insurgency Studies", and "Isolating the Guerrilla". Going a step further, ARPA has pushed into the fields of data storage, retrieval and analysis. Project Cambridge[11], is an ARPA-funded joint MIT-Harvard effort to develop new data analysis and predictive techniques using the most sophisticated computer networks and hardware.

ARPA is but one of many conduits for social science research programs on Latin America. In 1964 the Foreign Area Research Coordinating Group (FARCG) was formed by the U.S. government to coordinate the foreign area and cross-cultural social science research programs of 25 different agencies. Among these, in addition to the DoD, are AID, CIA, U.S. Information Agency (USIA), Department of Health, Education and Welfare (HEW), and National Science Foundation (NSF). In 1969 $33.3 million was spent by government agencies in social and behavioral research on foreign areas and international affairs. 158 projects were directed toward Latin America alone.[12] We must remember, however, that the government is only part of the story. The foundations, especially Ford, have contributed heavily to Latin American studies programs. For example, in 1969 the Ford Foundation sponsored 199 such programs, some in the U.S. and some in Latin America. In addition the Ford Foundation was the main source of support for 56% of the 191 university foreign affairs research centers in the United States.[13]

The recipients of foundation and government funds are a variety of research centers and contractors. These include Federal Contract Research Centers like the Center for Research in Social Systems (CRESS), Rand Corporation, and Research Analysis Corporation (RAC), which are almost entirely funded by the DoD; non-profit research centers like the Brookings Institution, Stanford Research Institute (SRI), and Atlantic Research Corporation, which are independent think tanks; and university foreign affairs research centers like the Institute of International Studies-Center for Latin American Studies* (Berkeley), Latin American Program (Stanford), and the Center for International Affairs (Harvard) which are tied into the U.S. State Department (or DoD), foundations, and U.S. business interests.

These various research institutions, taken together, perform the tasks necessary to the development of an effective counterinsurgency network:

> *1) investigate social factors which may precipitate or preclude insurgency; 2) develop operational models (usually through historical analog), which identify those aspects of an actual state of insurgency most susceptible to military control; 3) investigate values, social relations and communications institutions which lend themselves to external manipulation in the interests of U.S. military policies; 4) produce anthropological and sociological information (particularly elite and minority group studies) which can be used by the United States to intervene in the political and social processes of the host country; and 5) develop political-military strategies for the maintenance of U.S. power.* [15]

Innocent as these research programs may sometimes appear, they are all supported as part of a program to provide the intellectual resources and information infrastructure for the penetration and expansion of U.S. capital in Latin America and other parts of the world. Their research personnel and students move between the department of state, the foundations, corporate enterprise, and multinational agencies (like the U.N. and World Bank) to perform the capitalist system's social, economic and political engineering. Their research results likewise pass through this same network to become the basis for economic and military policy for Latin America.

Inescapably, the scientist or scholar who is genuinely interested in contributing to the independence of the people of Latin America, will realize that research as designed, formulated, nurtured, or supported by the foundation-government-corporate-military trust has the effect of exacerbating the painful conditions of the destitutes of this world. There is no such thing as independent scholarship or neutral research. The dominant institutions of this society never give something for nothing. The liberation of the people of the Third World will not yield them a profit. Scholarship is supported by wealth and power to yield more wealth and power.

Those who feel solidarity with the oppressed of this world will have to compare the stated rhetoric of any research program on Latin America with its real social and political consequences. An unrelenting research and its diffusion to the general public is needed concerning who uses and who benefits from Latin American studies and social science research programs.

*An annual report states: "...the ideological content of Latin American studies [is being] gradually...replaced by a more objective and practical approach to the study of economic problems. Debates of an earlier era about U.S. imperialism and Latin American graft seem strangely out of place in a discussion of cost/effectiveness, marginal capital output ratios, and education as a form of social overhead capital investment." Which is to say they've chosen which side they're on.

SCIENCE AS CULTURAL IMPERIALISM

The exploitation of Latin America, its natural resources and the labor of its people, to the tune of a multi-billion dollars investment backed up by billion dollar expenditures in counterinsurgency and population control technology is what is called imperialism. The particular form it takes in Latin America is neo-colonialism–control not through direct military rule, but through a local regime totally dominated by the weight of U.S. economic, military, and technological power. In addition to the many activities which we have discussed which are directly related to U.S. economic gains, there is a vast network of supporting activities which limit the options of the Latin American peoples for alternatives to foreign domination. These affect education, mass media, organized labor, community relations, etc., and, though more subtle, still constitute imperialism–cultural imperialism. The ultimate effect is to give the U.S. supreme voice in the internal and cultural affairs of these countries.

Cultural imperialism has two separate but related elements. One is the spread of an ideology and the other is the emulation of foreign cultural forms and their substitution for the native culture. Science plays an important role in both aspects. First, in the ideology which defines scientific and technological growth as progress, and the ultimate solution to the problems of social and political oppression, as the benefactor of all mankind regardless of class. Closely related is the myth of the political neutrality of science and the conception of science as the domain of a certain elite. Second, in the transfer of science to Latin America in a form which directly replicates that of U.S. science, a form as we shall see is totally inappropriate to the conditions of the people of Latin America. We are not opposed to scientific and technological development in Latin America–we find it essential–but we must be critical of the function and impact of the present educational and scientific aid programs.

The level of understanding of many U.S. scientists about conditions in the Third World is illustrated by a member of the Committee on International Education in Physics who says:

> *The lack of adequate trained manpower and a scientific isolation from the rest of the world are the two* main *problems facing (the) less developed countries.* (Emphasis ours)[1]

Fortunately, there has been a response:

> *...We, as scientists, continue to help propagate the myth that science is a solution to everything. As if when scientific research goes on in a country, the country will develop and its people will be free. This has been proven wrong and a United Nations study on the Second Development Decade* puts it very simply: "The argument that all research ultimately benefits everyone is now known to be false." Engaging on such a path only guarantees the existence of class structures by reinforcing the position of privileged ones over unprivileged ones. Science per se, without participating in the total challenge of the existing system of class exploitation can lead only to the reinforcement of that very system.* [2]

Unfortunately the U.S. scientific aid programs appear to take the former perspective, and in so doing serve the interests of further capitalist expansion into the Third World. These aid programs are in the form of scientific exchange, curriculum development, and university reform. One of the foremost manifestations of their effect is the Latin American brain drain.

Scientific and Educational Programs

The participation of U.S. scientists in educational programs in the Third World has given us an indication of what results. For example, *Physics Today* has published several reports about teaching in India or Pakistan in which the main conclusion is that those participating in teaching there accomplished very little. They were overwhelmed by the poverty they saw, the lack of connection between their work and the human suffering around them, and the fantastic amount of elitism and personality cult among their privileged students and colleagues who utterly disregarded the needs of their people. But what our colleagues in those positions often did not realize was that their very presence as foreign experts, as revered sage men of nuclear science, tacitly justified the whole pattern of class domination. Far from combating the basic scheme of social inequity, they used its existence as a justification for their own work.

One quite large Latin American program is the Plan Chile-California[4], a plan of cooperation between the University of California and the University of Chile in Santiago The budget is $1 million per year (financed by the Ford Foundation) and has the stated purpose of promoting mo-

Ideología en la ciencia

*Central to the U.N. Second Development Decade is the World Plan of Action for the Application of Science and Technology to Development. This plan proposes that the developed countries contribute more to Third World Research and Development. Noting that 2/3 of the world's population lives in the Third World and that the developed countries spend $45 billion per year on research and development as compared to $2 billion by the rest, the Plan proposes $8.5 billion per year be spent in the Third World, $1.25 billion in the form of aid from the developed countries.[3]

dern scholarly research in Chile. To do this it has attempted to transform the Chilean university into a modern U.S. institution. Under this program a cyclotron discarded by the University of California at Davis was sent to Chile, where the government now supports its operation. In order to furnish it with electricity, a power line was put through slums which do not have electrical power. The facility supports a few Ph.D.'s studying nuclear particles. As of 1971 it had produced one graduate student who was brain drained away to Berkeley. In fact most of the money spent in the Chile-California program is for bringing graduate students to the U.S. A California physicist has been quoted as saying that this program is "one of our best ways to get the best graduate students possible from Latin America." It is worth noting that the Plan Chile-California contains no provisions for a program of mining engineering even though copper represents 80% of Chilean exports.

Another U.S.-sponsored educational program, Latin American Program for American Universities (LASPAU), run with AID money, brings Latin American students to study in the USA with the agreement that the student will go back to his or her university of origin. This program has been designed to allow foreign students to obtain a Masters degree and, in exceptional cases, the PhD degree.[5] LASPAU states that the purpose in obtaining the Masters Degree is to rapidly increase the teaching skills and personnel of the university faculty in Latin America. The PhD degree is viewed under this program as an excessive preparation and specialization for the Latin American student who has to go back and alleviate the shortage of university teachers.[6]

This view has been challenged by some LASPAU students[7], who during their studies in a science program at a U.S. university have realized that the Masters Degree in their particular field does not prepare them enough to go back as accomplished teachers. These students believe that teaching is only textbook repetition if they are unable to generate new ideas through research. Therefore, they have requested LASPAU, with the total support of their Latin American universities, to allow them to continue to the PhD. This request was based on the necessity of obtaining sufficient training in laboratory techniques and practice to enable them to generate research related to the needs of the people of their countries.

This request, which conflicted with LASPAU's conception of the purpose of the program, was denied by LASPAU although exceptions have been made to other Latin American students known to be very sympathetic, or at best indifferent, toward the educational policies of LASPAU.

LASPAU's denial was followed by the withdrawal of the Latin American students from the program, taking advantage of the offer of their U.S. university, to finance their studies toward the PhD. This, again, with the authorization of the Latin American university. At that point, in one known case, LASPAU threatened to withdraw all its fellowships to the particular Latin American university. Thus it is clear that educational assistance policies are determined by U.S. agencies to serve their interests and not by the Latin Americans themselves.

All educational aid is not at the graduate student level. Many programs funded mainly by Ford are actively developing curricula to be used at all grade levels. Let us look at the content of one typical program.

In the early sixties, as soon as the Physical Sciences Study Curriculum (PSSC)* was put together, it was exported to people who live in countries where eighty percent of the population is barefoot in villages with no electricity. One brings to teachers who are part of the local well-off bourgeoisie the PSSC course in which examples instead of being taken from collisions of billiard balls are drawn from collisions of nuclear particles. In this manner one turns one's audience away from its nontechnical culture and surroundings towards some remote, ultimate nuclear truths which they cannot touch and which they can only admire through the descriptions offered by the traveling scientists from the U.S. And this guarantees the state of powerlessness of those to whom one is teaching—their powerlessness in front of our technological and technocratic civilization. Students could not reproduce experiments with atoms. They could only admire the fact that we can do it. And they could only imagine us as living in a better world because we could do such experiments. While no one would want to deny these students an understanding of atomic physics, the result of the way in which the inaccessible glitter of modern science is introduced is that the best elements in the universities of underdeveloped countries emigrate; they get drained into our pure research programs, into our elite way of life; they succumb to our intellectual propaganda, even when we propagate it unconsciously. Those who have been brain-drained can only meet frustration if they ever go back to their country of origin. They have nothing to connect to there. They need contacts and the level of development which they met in the United States, and they end up in that state of total dependence in which they have to beg for money to buy American equipment.

*This post-Sputnik curriculum was designed for advanced high school students in the U.S.

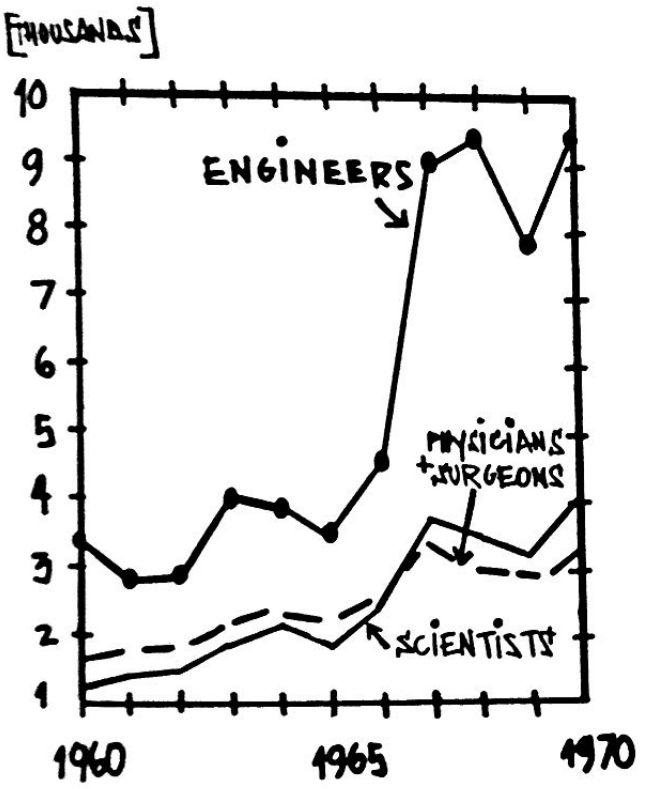
Through this elite type of education into which we have misled them, we have guaranteed their state of uselessness to their own country.

Thus programs like those we have discussed have the following effects on the Latin American university:

1. They introduce the concept of the American University Professor. This involves a whole set of attitudes based on individualistic competition, measurement of achievement through the number of papers published, foreign referee system and "accepted" journals.
2. They assure adoption of research projects of little importance to the country involved.
3. They create a drain on the intellectual resources of the country.

The above effects make it almost impossible for Latin American governments to carry out a *planned* scientific effort with the participation of their own universities. Planning is the only way that paying for their own scientific research is justifiable for these countries.[8] Without planning, the university system becomes a knowledge factory containing scientific skills and an ideology which serves nobody's interests but her/his own individual ones, along with personal ambitions, and which may help to fulfill the requirements of American expansion:

IMMIGRATION OF SCIENTISTS, ENGINEERS, AND PHYSICIANS TO THE U.S., FISCAL YEARS 1960-1970



Source: National Science Foundation from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Government sponsored research has come to dominate universities. Since the needs of the big corporations have carried them increasingly abroad, where the bulk of their profits are to be made, the university, as their partner, has moved abroad too. [9]

The Brain Drain

Many of the educational programs on Latin America appear to be aimed at creating an indigenous scientific elite. The reality is that local trained personnel is being seriously depleted by emigration. On a world-wide basis, the brain drain is suggested by the fact that the yearly contribution of the developing countries to U.S. medical manpower is equivalent in numbers to the entire output of the 15 U.S. medical schools graduating the largest number of Md's. In 1968, 30% of hospital resident physicians were foreigners.[10] That Latin American countries are literally bled of their trained people can be seen from the following facts: in the Dominican Republic, out of 200 newly graduated physicians in 1962, 78 left for the U.S.—one half of the children born in the Dominican Republic die before reaching the age of five[11]; in Mexico, between 1966 and 1968, about 20% of graduates in engineering left the country[12]; Latin American brain drain totals for the period 1969-70 include 958 engineers, 410 natural scientists, 151 social scientists, and 683 physicians and surgeons accepted as permanent immigrants to the U.S.[13] The sad trend of immigration of talent is also increasing on a world-wide scale. From 1960-1970 immigration of research scientists from all over the world to the U.S. increased five-fold, of engineers three-fold, and of physicians and surgeons also three-fold (see graph).

An analysis of the relationship between foreign aid and the depletion of local talent has been made in the Report to Congress of the Committee on Government Operations:

Thus, in 1967 the U.S. spent roughly $75 million toward providing some 5400 trained persons for the very countries engaged in 'exporting' nearly 5200 of their [own] scientific professionals. The statistical near balance between AID-financed manpower and brain drain outflow is made possible only by including U.S. technicians sent to this group of countries. If AID efforts to increase local manpower (3900 AID trainees) is compared to the outflow of local manpower (5200), AID comes out the loser by 1300 professionals. [14]

This analysis should be read keeping in mind the statement made in 1965 by former Secretary of State, Dean Rusk, at the time of a change in the Immigration Laws to facilitate immigration of specially qualified people,

Our country has the rare chance to be able to attract immigrants of great intelligence and capacity. Immigration well administered, can be one of our great national resources. [15]

It is important to realize that of those who do emigrate to the U.S., as has been the case with Chilean professionals, 66% have already done post-graduate studies in the U.S. These people emigrate not so much in quest of better remuneration but, to a large extent (58% of those who were consulted) because of professional progress considerations. [16] It is evident that these emigrating professionals have adopted the norms of the university institutions that exist in the U.S. He or she does not find these conditions at home. Since the education recieved by these foreigners does not prepare them to work in their own country, the U.S. is the only place in which they *can* work.

Cultural Imperialism and the Class Structure

It is generally recognized that the university selects for the young people of high economic status and that these are the ones who have a greater chance of doing post-graduate studies abroad. The practice of taking the U.S. scientific and professional standards as the norm seems to vary according to the socioeconomic level of the Latin Americans. In a study it was found that the proportion of those who wish to study in the U.S. rises from 8% among students of low socioeconomic status to 17% among students of medium socioeconomic status to 21% among those of high socioeconomic status. [17] The desire to study in other Latin American countrys has no systematic relation to status. In this case, students were classified in the socioeconomic levels according to the degree of formal education of their parents or guardians.

We see that in Latin America, the ruling classes have been responsible in facilitating the penetration of U.S. corporations by yielding the human and natural resources of their country to foreign interests. In addition, they and those of the middle class are the ones who preferentially go to the university, do post-graduate studies abroad, migrate, and in any case, contribute through their identification with the *American way of life*, to the extension of American imperialism. The values of U.S. science and technology are important aspects of U.S. culture, and their acceptance and practice by Latin American scientists and technical people can only be to the cruel detriment of their people.

Dependence and the Development of Science and Technology in Latin America

A cooperative program between the U.S. National Academy of Sciences and Brazil's National Research Council has been described by *Chemical and Engineering News* in the following words:

> *(In Brazil) Chemical expertise and advanced manpower are needed in programs dealing with agriculture, mineral resources, and pharmaceutical, petrochemical, and industrial development. For example, the ultimate goal is the establishment of research centers of excellence in Brazil that are independent of U.S. guidance.* [18]

As stated, this is wishful thinking. The reality is that the talents of those who stay in Latin America do not flourish due to the simple fact that a great majority of the industrial processes in Latin America are tied to foreign enterprises. Marcel Roche, a Venezuelan scientist, tells us of his visits to a number of technological research institutes in Latin America. [19] He was impressed by their lack of local clientele. The Instituto Nacional de Tecnologia Industrial in Argentina was in existence nine years before finally receiving four research contracts. Out of the principal Brazilian industries (those with 100 employees or with capital of more than $100,000) less than 1/4 carry out research and more than half of those who said they do research had no more than one to three investigators with professional training. In Venezuela, the Instituto Venezolano de Investigaciones Industriales, a private institution and the only one dedicated to industrial research has failed to develop. After 12 years of existence it still has only 5 professional researchers. Universities in Latin America carry none or limited applied research. Whenever industrialists need research they usually contract with foreign firms. Thus, little or no research is being done on oil in Venezuela, on wool in Uruguay, on tin in Bolivia, and until recently, on copper in Chile, all exports essential to each country.

The program between the U.S. NAS and the Brazilian Research Council can be viewed as a new stage in the misdevelopment of Latin American education and its dependence on the U.S. The basic contradiction in American sponsored scientific education will continue since expertise needed by the foreign controlled industries in Latin America has, up to the moment, come from the mother country. This contradiction might only take a new face the day U.S. firms realize that it is cheaper to do research in the foreign subsidiaries. At this point "the research centers of excellence" in Brazil may well become "independent of U.S. guidance" but absolutely dependent on the American corporation.

The unwillingness of the U.S. to share knowledge and technology with Latin America on a non-money making basis was again evident during the previously mentioned conference of the Organization of American States on the Application of Science and Technology to Latin American Development. One of the other resolutions that the U.S. delegation, headed by Philip H. Abelson (Editor of *Science* and AAAS heavy), refused to endorse reads:

> *To recommend to the Latin American countries that they adopt such measures as they deem appropiate so that foreign concerns will devote funds to conducting or contracting for research to be carried out locally, guaranteeing at the same time that the results of that research will be suited to national development objectives and that, in accordance with its interests, each country will be owner and beneficiary of those results.* [20]

Incidentally, no mention of this impasse between the countries of Latin America and the U.S. was made in either of the two misleading editorials on the state of Latin American science that Mr. Abelson wrote after his return from Brazil. [21]

Latin American opposition against U.S. imperialism has come to a large extent from the Latin American university. Students there realize that the use of technology will not benefit the society until the political system is changed and that this change has to be initiated and controlled by the Latin Americans independent of the economic and social schemes of the U.S. The effectiveness of the university insurgency is facilitated by the university's relative autonomy from the government and other political forces and the student's power and participation in university decisions. In some countries, universities have become the center of urban guerrilla activity and recruitment. U.S. interest in Latin America's higher education responds to the necessity of de-politicizing the Latin American university in order to achieve the political stability agreable to U.S. expansion.

The university situation in Brazil since the military takeover in 1964, exemplifies the important role of the U.S. in shaping Latin American universities to a particular mold. In that country, according to a report published in *Science* by H.M. Nussenzveig:

> *An avalanche of political persecutions was unleashed in many universities and institutes, where military 'committees of inquiry' were installed, often subjecting professors to degrading treatment. Scientists, most of whom were alien to politics, were interrogated and arrested. Several were dismissed from their jobs. 'Colleagues' who had always been bothered by the presence of research-minded people in their midst hastened to denounce them as 'subversive'. In several institutes, the climate of terror and suspicion rendered all research activity impossible. As a result, many scientists left the country.* [22]

In 1969, just after the Brazilian government had decreed the dismissal of about one hundred university professors [23] a conglomerate consisting of the U.S. National Academy of Sciences (with AID money), the U.S. National Science Foundation and the Anderson Atlantic Richfield Foundation on the one side, and the National Research Council of Brazil on the other, started a program in which U.S. PhD. chemists are sent to develop graduate programs in Brazil (Universities in Rio and Sao Paulo)[24] This bilateral agreement and the U.S. AID-Ministry of Education of Brazil project for the reform of brazilian universities served to help solidify the new order established and to almost obliterate the student movement in Brazil. As a visiting mathematician points out in describing the "silence of peace" at the University of Sao Paulo:

> *...The students have of course some reason to use restraint. Decree 477, issued in 1969, suspends for three years any student involved in 'subversive activity,' and this is loosely defined. To pin the wrong clipping on a bulletin board might qualify. Veja cites more than thirty cases where the 477 has been applied. But this figure does not seem to reflect what is actually going on. There is other legislation, in particular Act. no. 5, which eliminates the constitutional habeas corpus guarantees in the case of political crimes. Many students simply seem to disappear for a while, without any publicity. During these two months several students in the social sciences and in physics were arrested, or so I was told. No public information was available, and there was no open discussion of these cases. Among the people I met at least two had been in jail and under torture, both women. In August the director of the political science department was arrested because his wife was suspected of 'subversive activity' and again there was no public information or comment.* [25]

The Brazilian pattern of government intervention in the university has been followed in many other Latin American countries, notably Argentina in 1966 and Mexico in 1968.

In summary, the U.S. through its power to manipulate and control the educational system and institutions in Latin America prevents these countries from finding the socialist alternative to foreign domination, class divisions, and inhuman exploitation of their people.

LOS NUEVOS CONQUISTADORES

Background of the AAAS Mexico Meeting

By bringing out the function and impact of science and technology on Latin America, and by studying their relationship to the main political and economic forces in those countries, we have laid the groundwork for understanding how the coming AAAS Mexico meeting will inevitably serve the interests of U.S. investment in Latin America. We have tried to show clearly how such interests are incompatible with the needs of the Latin American people. The AAAS Mexico meeting will be yet another instrument of capitalist expansion and cultural imperialism in Latin America. But more on that later.

For the moment we would like to ask why the AAAS meeting is occurring now, at this point in history. In the last few years, in the councils of government, around the conference tables of the multinational organizations (UN, World Bank, etc.), in the ivy-covered halls of academia, and in the offices of the multi-national corporations an increased emphasis is being placed on the importance of science and technology in (mis)development. The catchphrase often heard is "technology transfer".

Technology transfer in this context means the exportation of U.S. technology to the Third World. While it is an understatement to say this is not a new phenomenon, there is apparently a different emphasis emerging. In the past, private investments were made in Third World countries with little regard for anything but capital return. As a result, great effort was required to contain the inevitable social reaction to exploitation. It was necessary to recruit social scientists to study foreign cultures and social systems as part of counterinsurgency planning.

Now the effort appears to be on investing capital in ways which still generate high returns, but which are designed to minimize their disruptive social impact. Consequently we find social scientists setting up study programs on the social impact of technology and on various other aspects of technology transfer. Take for example a recent $900,000 grant from AID to the Massachusetts Institute of Technology (MIT) under the title "Adaptation of Industrial and Public Works Technology to the Condition of the Developing Countries". In the introductory paragraph of the contract we are informed that:

> *The* only process *that can bring about that secularly continuing significant rate of increase in real income per capita which we term 'economic development' is progressive and continuing technical advance. Thus, economic development is virtually by definition a process of technical change. Our understanding of this process is, however, inadequate in ways that are relevant to those inside and outside the developing countries who seek to promote orderly and effective economic growth.* (Emphasis ours)[1]

It is thus clear in whose interests and for what purposes this study is being funded. The ideology of capitalist development is all-pervasive.

Another new grant to MIT, this one from the Ford Foundation to MIT's Center for International Studies (part of the Harvard-MIT counterinsurgency think tank), is for $400,000 and will be spent, in large part, on the development of programs concerning the "International Impact of Technology", "Population and Migration", and "Technology and Development"—all aimed at the Third World.[2] Similar kinds of studies are being developed at Berkeley and Harvard and in Latin American studies centers across the U.S.

Also, in the last couple of years a strong emphasis on science and technology has been reflected in the concerns of the multinational organizations. Large numbers of studies on technology transfer and indiginous technological development appear in the recent publications of the Inter-American Development Bank (IADB or IDB), Economic Commission for Latin America (ECLA), U.N. Food and Agricultural Organization (UNFAO), International Labor Organization (ILO), Organization of American States

(OAS), the U.N. Educational, Scientific, and Cultural Organization (UNESCO), and others. In addition the U.N. has recently formulated a World Plan of Action for the Application of Science and Technology to Development, and even more recently (May, 1972) the OAS has held the previously noted conference on the Application of Science and Technology to Latin American Development. What is the significance of all this activity? We must keep in mind that U.S. capital overwhelmingly dominates all of these organizations as well as the individual countries themselves (although nationalistic expressions are often tolerated). Within this context, as we have seen, development means misdevelopment, and technology is synonymous with capital investment. During the years of the Alliance for Profit, through military and economic pressures, through educational and exchange programs, through foreign "aid", the U.S. has driven most of the governments of Latin America to accept the capitalist model of growth. While technology transfer is in actuality a prescription for increased resource and market control in the hands of multinational finance groups, it is advertized as the cure-all for the poverty of the Third World. Like all drug advertising, the propaganda is clever and deceptive.

Enter the AAAS

Viewed against this background, the AAAS Mexico meeting is merely one element in the recent surge of activity directed toward science, technology, and misdevelopment–but it is an important element. The importance of the AAAS in this regard comes in terms of its uniqueness in the U.S. among all the scientific and professional organizations, as the main purveyor of the ideology of U.S. science under capitalism. The main components of this ideology are: (1) that science is politically neutral, and (2) that in science and technology lie the solutions to the social and political problems of the people of the world. The fallacy of these ideas has been brought out strongly in the first part of this pamphlet.

This ideology not only serves the system very well, but also serves the stated purpose of the AAAS, which is the promotion and advancement of U.S. science. In this respect, the AAAS is the main outlet for propaganda about how science and technology serve the needs of the people, how scientists are concerned with social problems, and doing ing the research to resolve them. The contradictions in the AAAS annual meeting, its main forum, must be made clear.

While the rhetoric is one of human welfare, the sessions and symposia are devoted to rationalizing and justifying the existing system by consciously working to formulate new instruments of social control, by presenting government, industry, and foundation officials, and other apologists for the oppressive institutions of U.S. society, and by failing to analyze and understand the fundamental reasons for the oppression of people. Thus the AAAS does more than simply whitewash science–it actually reinforces and perpetuates the existing political system.

In 1952 the AAAS added to its stated purposes efforts "to improve the effectiveness of science in the promotion of human welfare." Finally, in 1958 a Committee on Science in the Promotion of Human Welfare (CSPHW) was set up. This committee has done nothing in its 14 years of existence but sponsor a few irrelevant symposia. In 1970, of a total expenditure of $5 million, the AAAS reported an expenditure of zero dollars (0.00%) for Promotion of Human Welfare (or anything resembling that). Again in 1969 the AAAS announced bold "new" plans for the coming decade, including:

> *a major increase in the scale and effectiveness of its work on the chief contemporary problems concerning the mutual relations of science, technology, and social change, including the uses of science and technology in the promotion of human welfare.* [3]

This rhetoric can only be seen as pure propaganda, designed to give the impression of an organization concerned about human needs when in reality its every action has been to reinforce a system which categorically denies the fulfillment of these needs.

Enter the Mexico City Meeting

In September 1971 the AAAS announced plans to hold its 1973 annual meeting in Mexico City. As we have seen, these plans fit well into recent trends emphasizing the importance of science and technology for misdevelopment. The AAAS, as the main tool of propaganda and ideology of U.S. science and technology, has an important role to play in equating misdevelopment to human welfare. Science and technology for misdevelopment will be portrayed as science and technology for human welfare. Thus as announced in an editorial in *Science,* the journal of the AAAS, the objectives of the Mexico meeting

> *will be to present to a professional and a lay audience aspects of science that profoundly influence the development and well-being of all people in the Americas...The board of directors of the AAAS feels strongly that the Mexican meeting, emphasizing those activities which further the public understanding of science throughout the hemisphere, is consonant with the fundamental aims of the Association. It is to be hoped that the knowledge exchanged, when applied to human affairs, can play an important part in the future of the whole American continent.* [4]

We will see how well this meeting furthers the public understanding of science, or anything else, for that matter. The "fundamental aims of the Association" and its practice to date of obscuring rather than clarifying the relations of science to society make us skeptical of the AAAS's role.

Before delving directly into the contents of the program for the Mexico City meeting, let us indicate more clearly the political position of the AAAS with respect to Latin America. The following editorial in *Science* leaves little doubt:

> *The most dynamic country in South America today is Brazil. During the past several years, its gross national product has been growing at the rate of about 9 percent; in 1971, it grew 11 percent, and talk of the "miracle of Brazil" has be-*

Mexico City Meeting

AAAS EXECUTIVE PLANNING COMMITTEE

Walter Berl
- meeting editor, AAAS

William Bevan
- executive director, AAAS

Harrison Brown
- foreign secretary, National Academy of Sciences
- member, bd. of directors, Resources for the Future (see box below)
- organizer of industrial conferences on Resource Development (see book *The Next 100 Years*)

Henry Dreyfuss
- corporate consultant and industrial designer
- member, bd. of directors, Ford Foundation Educational Facilities Laboratories (see box on foundations, p. 7)
- trustee, California Institute of Technology

William T. Golden
- chairman of the board, Federated Development Co.
- dir. Block Drug Co, Verde Exploration (with operations in Latin America), American Investors Co., etc.
- member, Department of State Advisory Committee on Private Enterprise in Foreign Aid, 1964-65
- trustee, Mitre Corp. (weapons developer), Riverside Research Institute and Hudson Institute (military think tanks)
- member, Council on Foreign Relations (see box below)
- member, Executive Committee, AAAS

Caryl Haskins
- former member President's Scientific Advisory Committee
- director, E.I. duPont de Nemours & Co.
- trustee of Rand Corp. (military think tank)
- member, bd. of directors, Population Council (see discussion of population control)
- member, bd. of directors, Council on Foreign Relations (see box below)
- member, bd. of directors, AAAS
- promoter of cultural and scientific imperialism (see book *The Scientific Revolution and World Politics*), and of ruling class ideology (see book *Of Societies and Men*)

Howard O. McMahon
- president, A.D. Little, Inc. (see box on right)

Glenn T. Seaborg
- former chairman, Atomic Energy Commission
- former member, President's Scientific Advisory Committee
- member, Council on Foreign Relations (see box below)
- president, AAAS

Athelstan Spilhaus
- former president, AAAS
- Scientists for Nixon

RESOURCES FOR THE FUTURE

Established in 1952 as a non-profit corporation and funded completely by the Ford Foundation until 1970 when the Rockefeller Foundation joined in. RFF has been engaged in the business of resource misdevelopment, management, and use. It funds research aimed at supporting investment into various areas of resource development, from land use to minerals. RFF has a special Latin American Program which has produced a detailed study of Natural resources in Latin America, studies of agricultural productivity, and has supported other research programs in Mexico and Argentina. In 1970 RFF worked jointly with the Rand Corporation on Middle East Studies and the World Bank on misdeveloping the Lower Mekong River. RFF's program focusses much of its research on issues relating to international trade and investment and technological advance. No wonder Ford and Rockefeller fund it.

Arthur D. Little, Inc.

ACORN PARK
CAMBRIDGE, MASSACHUSETTS 02140
Area Code 617 864-5770

At recent seminars held by Arthur D. Little, Inc., in New York City, Chicago, and Los Angeles, members of our Mexico City staff discussed the political and economic climate for investment opportunities in Mexico. This report is based on their comments.

ADL has been concerned with developments in Mexico for over 50 years. For example, investigations of energy resources in the Western Hemisphere, begun by Dr. Little in 1916, led to a study of Mexican Petroleum resources. Since then we have performed many studies for agencies of the Mexican Government and for private interests in Mexico, the United States and various foreign countries. ADL has conducted many studies of investment opportunities in Mexico for U.S. investors and has assisted in implementing investment programs. We have recently completed a study "Current Mexican Attitudes Toward Foreign Investment."

Mexico continues to present interesting opportunities for investment. The Gross National Product of Mexico is expected to grow from $21 billion in 1966 to $27 billion in 1970, for an average annual increase of 6.5%; it has political stability; it has hard currency; it has no restraints on the outflow of profit. Further, the Mexican Government, while intent on protecting what it considers its legitimate national interests, is prepared to negotiate to encourage foreign investors that contribute to national economic development. The Mexican Government is especially interested in attracting foreign investment in areas which demand a high degree of technology or involve a certain amount of risk.

We hope you will find this report of interest.

Sincerely,

Vice President
Management Services Division

COUNCIL ON FOREIGN RELATIONS (CFR)

The CFR is the group of 1450 men (women are barred from membership according to its by-laws) who formulate "U.S. government" foreign policy. Established in 1919 by the Dulles brothers, J.P. Morgan, Averell Harriman, and John D. Rockefeller I, it is to this day comprised mostly of corporate and finance magnates. Other members include figures like university presidents (Harvard, Yale, etc.), academics, senators, and foundation representatives, who are not directly involved in corporate of finance affairs, but who avail their services to CFR (i.e. ruling class) interests. Funds come from the Rockefeller and Carnegie foundations along with dues of member corporations which each pay from $1,000 to $10,000 yearly. The group conducts about 100 meetings per year, in addition to sponsoring long-term study and discussion groups, for the purpose of planning and executing policies which maintain and extend the power of U.S. private investment interests around the world.

In its 50-odd years of existence the CFR has often been represented in Government in extremely influential positions. Eisenhower and Kennedy were CFR members while serving as President. Nixon is also a member. Dean Rusk, the Bundy brothers, Henry Kissinger, Ellsworth Bunker, John D. Rockefeller III, and Henry Cabot Lodge are all members. Present CFR posts in government include Assistant to the President for National Security, Secretary of the Army, Director of Public Broadcasting, Chairman of the Federal Reserve System, Ambassador to South Vietnam, Chairman of the National Commission on Population Growth and the American Future, Chairman of the President's Foreign Intelligence Advisory Board, Ambassador to the U.N., and Chairman of the Atomic Energy Commission.

There are now at least 110 CFR members who are holding or have held key policy-making posts in the Nixon Administration.

gun. On the average, Brazil is not nearly as advanced or as literate as Argentina. In the torrid, dry, northeast region of the country, some 30 million people live in poverty; about half of them have a yearly cash income of less than $50. It is in the southern, more temperate region that industry is booming. Production of steel is increasing rapidly and is projected to reach 8 million tons in 1975. Brazil has begun to export motor vehicles. Last year, several million dollars' worth of precision parts for aircraft were exported to the United States.

One of the largest Brazilian efforts has been in education. Resources devoted to education have doubled during the last 5 years. During the past 8 to 10 years, the number of students receiving higher education has increased by 500 percent. The tradition of education for the few has been abandoned.

Brazilians have a flair. The great wholesale food distribution center in Sao Paulo is unsurpassed in convenience, size, and cleanliness. It makes comparable centers in the United States look anachronistic and grubby. Similarly, their huge international exhibit hall outclasses most of ours. The big shocker is the new capital, Brasilia. Its construction in the midst of nowhere has opened up a vast region. Its architecture and the city plan are highly imaginative and striking.

By reason of Brazil's geography, the present dynamism of the country could have profound consequences on the rest of South America. Brazil borders every country of the continent except Chile and Ecuador, and its neighbors are highly sensitive to the changes that are occurring. To varying degrees, they are apprehensive and envious of the Portuguese-speaking giant. But they are more likely to look to Brazil as an example than to the United States. [5]

Is this the same Brazil denounced world-wide for its political persecutions and savage torture of political prisoners, the same Brazil which wages a campaign of genocide against the impoverished Indians of the Northeast, the same Brazil which hosts the disease-ridden and impoverished slums of Rio de Janeiro and Sao Paulo second to none in the world, the same Brazil in which power and wealth is being grabbed by a small ruling elite, the same Brazil which has cleaned its universities of political freedom and imposed on them a reign of terror? What arrogance can regard as "flair" the enslavement of the Brazilian people to produce the aristocratic opulence of Brazilia? This editorial places the AAAS in the same political camp as Louis XIV of France. It is a flagrant assault on the aspirations of the Latin American people, a statement which can only be representative of those for whom oppression of the people means the guarantee of class privilege.

The alliance of the AAAS with reactionary forces is not always so blatant. Often it is simply a matter of repeating the capitalist line. For example, in the following editorial it is argued that for Latin Americans to fulfill their aspirations they must be careful not to place restrictions on foreign private capital:

If the Latin American countries are to make substantial progress toward fulfillment of their aspirations, they must succeed in bringing to bear on the task much larger intellectual and other resources than have heretofore been employed.

One method is to utilize outside resources: for example, the transfer of technology through foreign investment. The CACTAL (Conference on the Application of Science and Technology to Latin American Development) report seems to restrict that avenue, for it recommends restrictions on the operations of foreign firms that those firms would be reluctant to accept.

The Latin American countries might try to utilize some of the bounteous resources of scientists and engineers in developed countries. This would require an unprecedented degree of cooperation on the part of the Latin Americans and a willingness to provide conditions that would permit effective tackling of problems. [6]

The political position of the AAAS is clarified even further by the affiliations of the people it has selected for the Executive Planning Committee of the Mexico meeting. Except for a few Association functionaries, the committee is composed almost entirely of individuals affiliated with ruling class institutions, the government, and corporate enterprise (see page 26). In some cases they even have direct interests in investment in Latin America.

The Meeting

We have now set the stage for discussing the AAAS Mexico meeting. Seen in the context of the role played by science and technology in Latin America, this meeting is not simply an innocent gathering of scientists. It is meant rather to be—and our understanding of the political function of the AAAS leaves no doubt—an important instrument for the extension of U.S. science and technology into Latin America, in the service of U.S. imperial interests. The Executive Planning Committee, itself representing such interests, has prepared a program (see box) well geared to meeting the needs of U.S. capital investment, while ignoring the often-expressed needs of the Latin American people.

Involved also in the planning of this meeting has been Mexico's National Council of Science and Technology (CONACYT), a recently formed committee in the Mexican Government which has broad coordinating responsibilities in scientific and technological affairs. It would be a mistake to suppose that this committee, or the Mexican government for that matter, represents the needs of the Mexican people. It is merely part of the Latin American oligarchy tied to U.S. economic power which has adopted capitalist forms of misdevelopment for its country. Since 1940, for example, the Mexican government has opened the doors to U.S. investment, and has used its police and military power to maintain social stability, most notably in the case of the 1968 massacre in which several hundred political demonstrators were slaughtered just prior to the 1968 Olympic games.

THEMES OF MEXICO CITY MEETING

The Sea and Its Resources: Arthur E. Maxwell (Associate Director of Research, Woods Hole Oceanographic Institute) and Agustin Ayala Castanares (Director, Institute of Biology, National University of Mexico).

Ecology and Development*: S. Fred Singer (Brooks Museum, University of Virginia) and Alfredo Barrera (Director, Museum of Natural History, Mexico City).

Deserts and Arid Lands: Harold E. Dregne (Chairman, Department of Agronomy, Texas Technical College) and Fernando Medellin Leal (Director, Institute of Arid Zones, San Luis Potosi, S.L.P.).

Nutrition and New Food Technology: Ted C. Byerly (Office of Science and Education, U.S. Department of Agriculture) and Ing. Rafael Rojas (National Laboratories of Industrial Development, Mexico).

Earthquakes and Earthquake Engineering: (U.S. arranger to be announced) and Emilio Rosenblueth (University of Mexico).

Science Technology and Social Change: Harrison Brown (Office of the Foreign Secretary, National Academy of Sciences) and Victor Urquidi (Director, Colegio de Mexico).

The Problems of Population: Roger Revelle (Director, Population Studies, Harvard University) and Gustavo Cabrera (Director, Center for Economic and Demographic Studies, Colegio de Mexico).

Opportunities in Education: Albert V. Baez (Open University, Bletchley, Bucks, England) and (Mexican arranger to be announced).

Non-Nuclear Energy for Development: (U.S. arranger to be announced) and Edmundo de Alba (Technical Coordinator, Consejo Nacional de Ciencia y Tecnologia, Mexico D.F.).

*This theme has been replaced by two others: Pollution and Deterioration of the Environment and Non-Renewable Resources

The Mexico meeting has ten central themes, roughly divided into two categories: those directly concerned with science and technology for misdevelopment, and those concerned with the infrastructure of social and ideological control required for popular acceptance of exploitation. What can we expect the focus for each of these themes to be?

The themes in the first category all have an underlying misdevelopment scheme: "The Sea and Its Resources"—to promote Latin American cooperation with U.S. plans to extract the internationally-owned wealth of the sea; "Deserts and Arid Lands"—to explore irrigation and other schemes for making these regions produce for U.S. capital (as with wheat and cotton in Mexico); "Nutrition and New Food Technology"—to further develop agribusiness in Latin America, especially through Green Revolution technology (never mind food for the hungry); "Non-Nuclear Energy for Development"—to explore new ideas in the development of oil resources and off-shore drilling for private interests; and "Non-Renewable Resources"—to emphasize the need for long-range U.S. planning of its consumption of Latin American resources.

The other category, oriented toward social control, is more subtle in nature, more ideological in content. For example, "Science, Technology, and Social Change" is to attempt to assess the impacts of U.S. investment on Latin American society in order to rationalize further investment —rather than to question the basic nature of the capitalist development scheme. "The Problems of Population" is to obscure the nature of the social and political system and the oppression it engenders by focusing on population growth as the key problem of Latin America. "Opportunities in Education" is to help develop a technical support structure needed for U.S. misdevelopment schemes. "Pollution and the Deterioration of the Environment" is to cloud the political issues by focussing on the nature of air and garbage in the urban centers in Latin America without discussing either the conscious exportation of pollution from the U.S. or the reasons for the poverty and privation of those who live in the squalor of urban slums. In all these cases the existing political and economic relations are not challenged. Science and technology are portrayed as politically neutral instruments of growth and "development". Acceptance of the U.S.'s anti-human forms of development, and perpetuating them under the guise of scientific neutrality, is the destructive use of science as cultural imperialism.

These comments on the Mexico meeting are not merely conjecture. The past history of the AAAS, the affiliations of the Executive Planning Committee, the past performance of meeting coordinators like Roger Revelle, Fred Singer, and Harrison Brown all ensure that there will be no meaningful approach to the every-day problems that plague the Latin American people. For these "scientists", the only answer to the social and political strife of Latin America is more of the same kind of "development" which caused this strife in the first place—only now, with the added sophistication of science.

In the past new conquerers invoking new gods and bearing trinkets landed on Latin American soil to plunder these lands. Now we have a new breed with a new god, this time bearing pills and seeds and lightning in their grasp.

TOWARDS LIBERATION

In this pamphlet, we have discussed the AAAS Mexico meeting–its contents, its purposes, and the interests it serves. The political significance of this meeting will not escape the Latin Americans who daily struggle against the use of U.S. science and technology in their countries. Nor should it escape those of us who do scientific and technical work in the U.S. We cannot allow the rhetoric of "Science and Man in the Americas" to disguise the fact that in serving to extend the power of U.S. ruling class interests in Latin America, the Mexico meeting is a flagrant denial of the aspirations of the Latin American people.

But those of us who do identify with these aspirations have to learn how to relate to the Latin American struggle in a forceful and constructive way. We cannot simply attempt to do more "relevant" science, teach in Latin American universities, or attend foreign scientific meetings. Latin Americans need no more Peace Corps, no more cultural and educational charity, no more AAAS meetings.

So what is to be done? We must first free ourselves of our own cultural indoctrination, to see through the rhetorical justifications given for the system of exploitation

which exists in Latin America. We must understand the process by which this system implants itself and finally comes to dominate the social, economic, and cultural life of the Third World. We must recognize the destructive nature of the ideology which the system propagates in order to sustain itself. And we must realize how in its operation it strives to destroy human relations, not only among the poor, but among everyone.

In many cases we may ourselves become unknowing purveyors of the ideology of the present system. For example, though we may understand that government foreign aid programs are not aid at all (but rather control), we may yet tend to think that we are in a position to determine what aid the peoples of the Third World need. Instead of "helping" or "giving aid" to Latin Americans in their struggle for liberation, our perspective must rather be one of joining with them. The system that enslaves people of Latin America is the same system that is the source of our own alienation and frustration, our own powerlessness to control our lives and the way our labor is used.

We and our sisters and brothers in Latin America are faced with the same struggle to create a new society, and that struggle must be waged where we live and where we work. For scientists and other technical workers what this means is a full challenge to the ideology which dominates scientific work, the ideology perpetuated by groups like the AAAS. We must fight the conception of science as an individualistic, elitist trip, and make it a tool of revolutionary struggle. This means a change in our day-to-day practice. We no longer experiment on poor and oppressed people. We no longer stand passively before arbitrary authority. We no longer emulate the self-proclaimed scientific elite. We no longer prostitute ourselves to the MAN.

Instead, we struggle together. We struggle to form the bonds and relationships of the future society. We struggle to control our work. We struggle to control our lives. We struggle to be human.

> ... The corporate rulers of this society would not be spending as much money as they do for knowledge, if knowledge did not confer power. So far, sociologists have been schlepping this knowledge that confers power along a one-way chain, taking knowledge from the people, giving knowledge to the rulers.
>
> What if that machinery were reversed? What if the habits, problems, secrets and unconscious motivations of the wealthy and powerful were daily scrutinized by a thousand systematic researchers, were hourly pried-into, analysed and cross-referenced, tabulated and published in a hundred inexpensive mass-circulation journals and written so that even the fifteen-year old high school dropout could understand it and predict the actions of his landlord, manipulate and control *him*?
>
> Would the war in Vietnam have been possible if the structure, function and motion of the U. S. imperial establishment had been a matter of detailed public knowledge ten years ago?
>
> Martin Nicolaus speaking to the 1968 convention of the American Sociological Association (ASA).

... and the new human being is born.

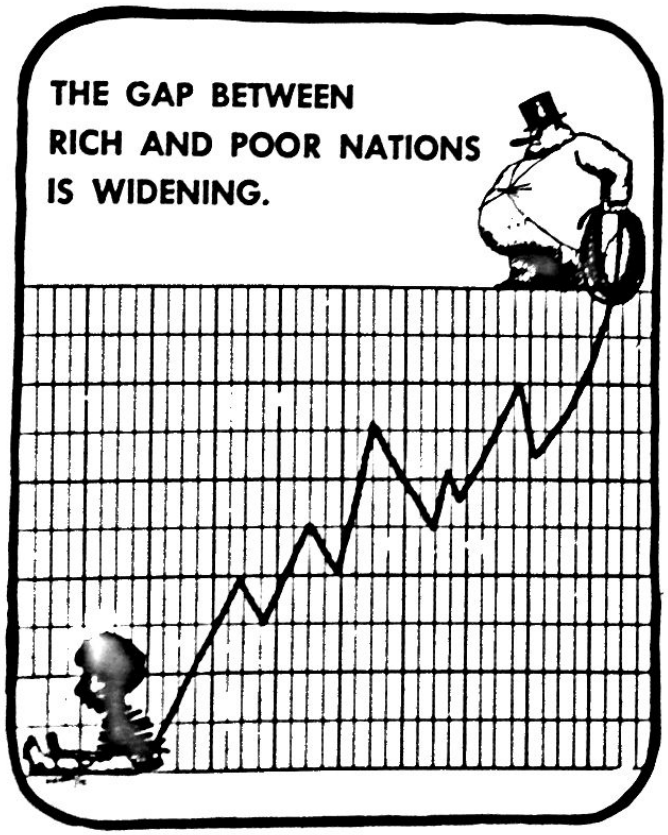
SUPPLEMENT

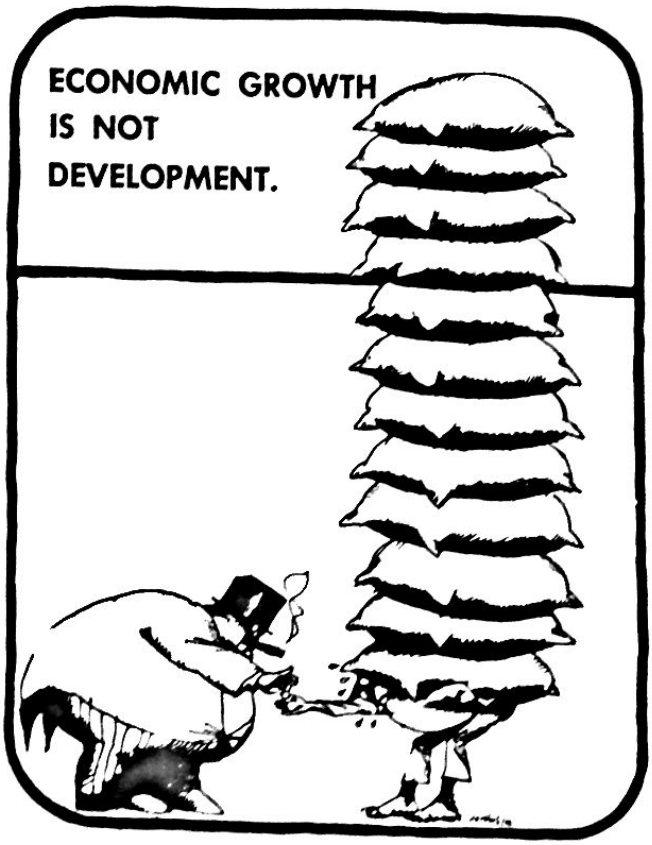
TO ¿POR QUE?

Since the publication of *Por Que* more information about the joint AAAS-CONACYT meeting in Mexico City has come to our attention, both from AAAS publications and from conversations with AAAS officials. This brief supplement has been prepared to help bring our understanding of the nature of the meeting up to date.

The evidence we've seen indicates that the AAAS and CONACYT have engineered the program so as to insure that those who represent the scientific elite, government agencies, industry, and private foundations will dominate the meeting. As usual, the AAAS issued no call for papers or proposals for this meeting, but rather selected various groups and individuals to participate. The program makes pretty clear who was on the AAAS' list—representatives from the Ford Foundation, the U.S. Department of Agriculture, A.D. Little Co., Harvard Business School, the World Bank, and even Coca Cola. In Mexico, as well, the scientific, educational, and governmental elite were chosen as organizers for the various symposia. They in turn, have organized symposia meant to further their own positions and established interests—the unrestricted growth of the present forms of science and technology.

By restricting the meeting in this way to only the established elite, the AAAS and CONACYT have insured that younger American scientists, especially those who are critical, will have almost no opportunity to participate. Those who have expressed opposition to the present forms of scientific and economic development have been essentially excluded from the meeting. A noteworthy example is the group of Third World scientists who participated





CONFERENCE ON ENVIRONMENTAL SCIENCES AND INTERNATIONAL DEVELOPMENT

AAAS Annual Meeting, Philadelphia, December 1971

STATEMENT OF THE LATIN AMERICAN PARTICIPANTS

The young citizens of Latin America belonging to the Latin American Youth Federation for Studies on the Human Environment (FEJLA) who have attended the 138th Annual Meeting of the American Association for the Advancement of Science:

Considering:

That, in order to study the environment in Latin American countries as in the rest of the world, *not only* the physical and biological factors should be considered, but also those interactions which occur among men: Hence the political, economic, cultural, and social aspects have major relevance;

That the current environmental problems of Latin America derive from a political, social, and economic structure which is inadequate and, furthermore, is fundamentally affected by the processes of colonization and dependency to which the region has been subjected by dominant nations;

That in most Latin American nations the prevailing socio-political structure has led to an uneven distribution of resources, wealth and power;

That the current human environment in Latin America is characterized by misery, hunger, and illiteracy;

That the criteria of choices among technological processes have led, in many cases, to undesirable environmental modifications;

We, therefore, declare:

That socio-political structures prevailing throughout Latin America need to be changed in order to improve our present environmental conditions taking into account the specific conditions of every Latin American country.

That strong efforts should be made to implement these changes within the context of the sovereign right of self-determination.

That information obtained through research reach the masses of the people so that they can more effectively participate in the implementation of these changes.

That we must organize into multi-disciplinary groups dealing with research on the nature and causes of our environmental problems, development of the manpower resources required to improve our environment, and the search for an application of the knowledge and technology which are compatible with our cultural growth.

That appropriate measures should be taken to end the brain drain which curtails the potential of our human resources.

That it is utopian to pretend to solve the environmental problems with present systems of the world without prior development of a *universal social system.*

We condemn the irresponsible behavior of most technological nations which pursuing economic and selfish interests have caused (and continue to cause) destruction to the environment of many nations, particularly those of Latin America, Africa, and Asia.

in the December 1971 Philadelphia AAAS meeting and who as a result issued a strong anti-imperialist statement (see box). Those in that group, including about 20 Latin American scientists, have not been invited back to the Mexico meeting. Furthermore, while it is claimed that half the participants will be from Latin America, to date there are no Cubans involved. The Mexico meeting is meant to be a gathering of those who have benefitted from the present system and who seek to perpetuate it.

The political motive and impact of the meeting can be seen more clearly by considering the two most sensitive areas of the program: the parts on technological development and population control. In both cases the U.S. program arrangers are drawn from the foreign office of the U.S. National Academy of Sciences (NAS). Harrison Brown, co-arranger of the theme on Science, Development and Human Values, is the foreign sectetary of the NAS; and Roger Revelle, co-arranger of the theme on Population Control, is the past chairman of the NAS Board on Science and Technology for International Development. Funded almost entirely by U.S. AID, the foreign office of the NAS and this Board in particular carry out studies and programs connected with AID's goals (as explained in *Por Que*) of promoting U.S. economic interests in the Third World.

The nature of the foreign office of the NAS is revealed by the four individuals who dominate it—Brown, Revelle, Carl Djerassi, and Bruce Old. Brown has been the NAS foreign sectetary for over ten years and has been an advocate of population control and industrial resource development planning for U.S. capital (see *Por Que*, p. 26). Revelle, currently chairman of the Ad Hoc Advisory Committee on the Role of Science and Technology in International Development in the 1970's, is also head of the Harvard Center for Population Studies, funded by the Ford Foundation, and has recently chaired an extensive AID-funded NAS study on Third World population control. Djerassi, presently chairman of the Board on Science and Technology for International Development, is well known for his involvement in birth control experiments on Mexi-

can-American women, his active membership on the board of directors of Syntex Corporation (manufacturer of pharmaceuticals and birth control pills in Latin America), and his chairmanship of the NAS-Brazil bilateral chemistry project (instituted on behalf of the right wing Brazilian government). Old is interested in technology transfer activities; he is foreign sectetary of the National Academy of Engineering (NAE) and currently senior vice president of A.D. Little Co., which has extensive interest in Third World capitalist development schemes (see *Por Que*, p. 26). These are the individuals who oversee the activities of the NAS foreign office and who cooperate with AID to aid in the exploitation of the Third World.

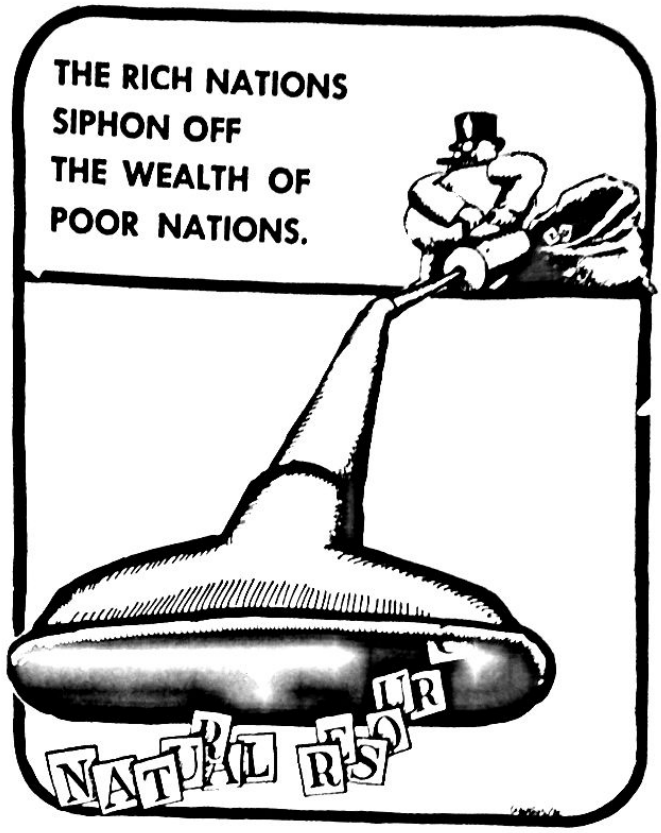
Their political perspective is strongly reflected in the Mexico meeting. The population control theme (arranged by Revelle) is a good case in point. According to Walter Berl, U.S. meeting editor, the Mexican planners were originally opposed to making population control a major theme of the Mexico meeting. But the U.S. put on the pressure, and CONACYT finally capitulated (Revelle is president-elect of the AAAS). Revelle, it should be remembered, recently chaired the NAS study, *Rapid Population Growth: Consequences and Policy Implications.* The report, naturally enough stresses the importance of population control in Latin America and emphasizes the need for capitalist development programs.* That the U.S. should consider the population control theme an essential part of the Mexico meeting is not surprising, in view of the large scale AID and Rockefeller Foundation birth control programs in Latin America (the latter is providing financial support for the Mexico meeting). Included also in the Mexico meeting will be a three and one half day symposium on family planning being arranged by a representative of the Federacion Internacional de Planificacion Familiar (International Planned Parenthood) and which is described in a AAAS working document as follows:

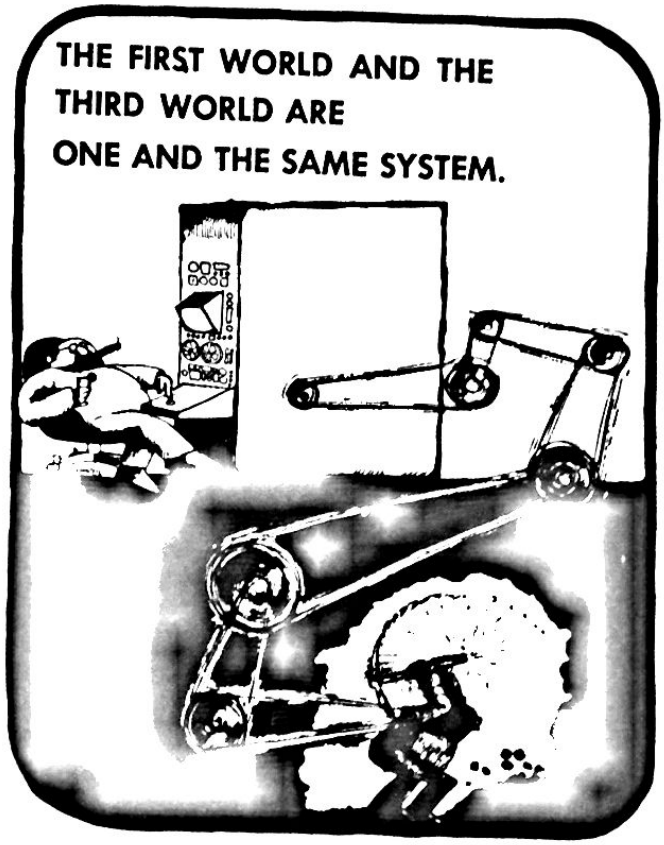
> *The purpose of this symposium is to promote family planning in Mexico and Latin America. The anticipated problems that will arise from this relatively new socio-medical concept will be examined and discussed. There will be an exhibit and panel discussions of interest to the general public. The greater portion of the program will be of a high technical level, and will be particularly directed towards doctors, social scientists, biologists, and students of these disciplines.*

As we described in *Por Que*, these are the types of conferences used to sell to Latin American people the idea that their growing numbers is their main problem—not the maldistribution of resources, wealth, and power.

To analyze in detail every symposium in the Mexico meeting would be a very large undertaking—there are ten central themes and some 29 or so other sessions. But in view of the heavy control exercised in planning the meeting, it would be surprising if the other symposia took po-

* The report is being translated into Spanish by the NAS!





by claudius ceccon

litical positions far different from those quite obvious in the case of population control. In addition, we are struck by the conspicuous absence of sessions of obvious importance. For example, where are the sessions on military and and counterinsurgency technology, on the problems of brain-drain and underutilization of talent in Latin America, on the domination of U.S. science in all the laboratories and classrooms of Latin America, on the diverse forms of cultural imperialism perpetuated by U.S. science and technology, on the question of housing and urban slums and the quality of life engendered by these environmental conditions, on finding a form of cooperation between scientists in the U.S. and Latin America which is non-exploitative and free of U.S. domination? Such sessions are nowhere to be found.

The Mexico meeting will not deal meaningfully with the difficult problems facing the people of Latin America with respect to the proper use of science and technology. Rather this meeting will be a continuation of the existing scientific and technological relationships between the advanced capitalist countries, notably the U.S., and the Third World. All the evidence we've seen suggests that the meeting will be an opportunity for the scientific jet-set of both the U.S. and Latin America to perpetuate the uncritical and mechanical way in which they serve the cause of U.S. economic and cultural expansion into Latin America.

That the imperialistic nature of the Mexico meeting will not be missed by people in Latin America is understood by CONACYT and the AAAS. Will dissent be stifled in Mexico as it was recently in Washington when the AAAS arrested eight people for distibuting literature critical of established science and the system it serves? While students and others will be allowed into the Mexico meeting ($2charge for students, $25 for everyone else), it is the "opinion" of Walter Berl (U.S. meeting editor and chairman) that literature will have to remain outside. This would mean that critiques or other written expressions of opposition will be stifled. If the AAAS and CONACYT were serious about the desire to deal with important issues rather than simply propagandise, how could they justify such a repressive posture? Hopefully some of their propaganda can be counteracted and a far-reaching alliance of scientists can be formed to aid in the struggle for liberation of the people of the Americas.

SCIENCE FOR THE PEOPLE

March 1973

Science For The People
9 Walden Street
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Mexico City Meeting
June 20-July 4, 1973

	June 20 Wed	June 21 Thurs	June 22 Fri	June 23 Sat	June 25 Mon	June 26 Tues	June 27 Wed	June 28 Thurs	June 29 Fri	June 30 Sat	July 2 Mon	July 3 Tues	July 4 Wed
OPENING CEREMONY – Address by President Echeverria													
	NON-NUCLEAR ENERGY FOR DEVELOPMENT				THE SEA AND ITS RESOURCES				Tropical Ecosystems		EARTH SCIENCES FOR DEVELOPMENT		Astronomy
	Technology Transfer				OPPORTUNITIES IN EDUCATION						Health Services		Land Connections
	EARTHQUAKES AND EARTHQUAKE ENGINEERING		Hurricane Prediction		DESERTS AND ARID LANDS				Family Planning		Aqua-culture	Development of Arid Lands	
	Geodynamics				Research in Natural Products		Language Planning and Sociolinguistics		Anthro. Applied to Health Problems		Aerobiology of Diseases, Pests, etc.		Aggression and Violence
	NUTRITION AND NEW FOOD TECHNOLOGY				Wildlife and its Envir.	PROBLEMS OF POPULATION			Birth, Death and Cultural Context		SCIENCE, DEVELOPMENT AND HUMAN VALUES		
	Pre-Colom. Archaeo-Astron.	Aerial Inventory of National Resources			Effects of Malnutrition on Development		ECOLOGY AND DETERIORATION OF THE ENVIRONMENT			Range Science			Environmental Health in the Americas
	Symmetry	Volcanos in Mexico and Central America			Information Needs	Neurohumoral Coding of Brain Function			Psychodysleptic Drugs and Addiction	Math Questions in Biology		Settlements of Tomorrow	

Main Themes of the Meeting are indicated by capital letters.

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PEOPLE'S PRINTING
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This conference reflects the recognition by our countries of two fundamental deficiencies [in Latin America]. These are the poor development of scientific and technological research and its failure to relate to the realities and problems of our countries.

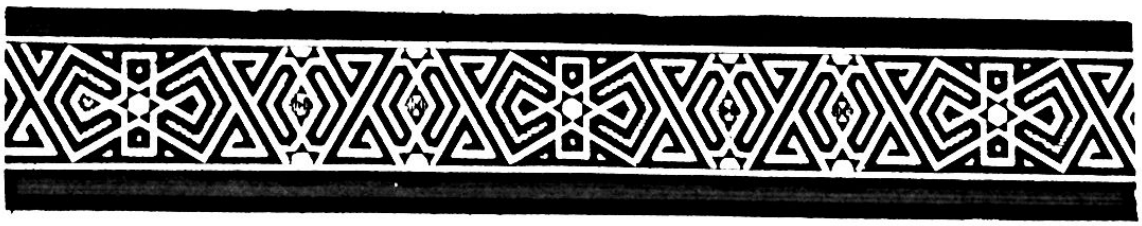
...We could say that the insufficient development of [our] science and technology is a simple consequence of our poverty, or blame our scientists of insensitivity to the realities of our countries. In both cases this would be a gross simplification, which would fail to admit that the problem of science, as any problem in our societies, is linked to our development as exploited and dependent countries, politically, economically, and culturally. It would also fail to admit that the fundamental centers of decision are outside our national frontiers and are antagonistic to the common interest of our people in obtaining a development within a context of justice and liberty.

The only dynamic factor in the field of technological innovation in Latin America has been that of foreign investments carried out directly or through national monopolistic capital always willing to serve foreign interests in exchange for a part of the profit that results from these arrangements...The purpose [of foreign investments] is simply to maximize profits, and we should not expect from them the solution to our problems.

Therefore, it is not a question of simply saying that we should invest more in science and technology. The affirmation that the amount of resources dedicated to scientific and technological research is a measure of the capability of countries to solve their problems, is attractive but false. Witness the case of the richest countries in the world in which their enormous scientific and technological development has not contributed to make their people happier.

We have seen how, under the pretext of a publicized but not practiced scientific freedom, the best scientists of the world contribute to the creation of mechanisms of destruction, death, and political domination. We see today how, far away from our Latin America, the world's most powerful country unleashes on an underdeveloped country all the violence that its scientific and technological potential is capable of producing while within its frontiers exist, yet unresolved, problems of poverty, pollution, and social discontent. These, far from diminishing, are increasing.

—from the speech delivered by Jose Miguel Insulza, president of the Chilean delegation to the Organization of American States Conference on the Application of Science and Technology to Latin American Development, Brasilia, May 1972. (Translated from a quote in *Ciencia Nueva*, no. 17, 1972, p. 5.)



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