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Project in fundamental education through government sponsored radio broadcasting for the Philippines

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A PROJECT IN FUNDAMENTAL EDUCATION THROUGH GOVERNMENT-SPONSORED RADIO-BROADCASTING FOR THE PHILIPPINES

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FOREWORD

This project is a follow-up of a Unesco Educational Mission to the Philippines in 1949. Like the Mission, it aims to give recommendations designed to improve Philippine Education.

Unlike the Mission, however, this project is confined to a specific aspect of Philippine education with a specific method of improvement.

While the basis of improvement methodology is not entirely his own, having been formulated at Unesco conference tables and voiced by a number of Unesco publications, the author attempts to use and develop one definite pattern to the exclusion of the others.

The aspect of Philippine education is Fundamental Education; the pattern is radiobroadcasting. There is no mention of such other Unesco recommendations as the press or the film.

This exclusion must not be construed as an objection. It is merely an indication of the author's belief that radiobroadcasting should have an immediate priority over the press and the film in the particular area of education being dealt with.

In the preparation of this project, relevant documents and other materials were made available to the writer by Mrs. Daphne Lincoff of the New York Unesco secretariat, and

advices were generously received from Mr. Solomon V. Arnaldo, director of the Unesco New York office.

Invaluable suggestions as to substance and methodology were also received from Mr. Gerald Noxon of Boston University and Mr. Fred Barr of station WWRL in Long Island, New York.

For their genuine cooperation, the author expresses his debt of gratitude to these gentlemen, and especially to Mrs. Lincoff.

CHAPTER I

THE PROBLEM

It has been said very often by leading educators that the economic development of a nation is always followed by a corresponding rise in the standard of education within that nation. Perhaps this statement could be restated in reverse and still maintain a great amount of truth. For it cannot be gainsaid that a well-educated people working together in solidarity can pave wide avenues for a highly standardized national economy.

Economic and educational developments, then, could be pictured as a pair of co-existent Utopian twins, the progress of one being the sequel of the improvement of the other. In fact this inter-relation is so closely woven that the disintegration of one also follows the retrogression of the other. The result, in such a case, is a vicious circle.

Looking at the Philippines today, we find this vicious circle in an acute but curable stage.

Geographical Notes. The Philippines is an archipelago of more than 7,100 islands, extending roughly from a point just south-west of Japan to a few miles north-east of Borneo. The total land area is over 115,000 square miles, populated as of 1948 by 19,234,182 individuals.[1]

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[1] From a Special Bulletin of the Bureau of Census and Statistics, Manila, 1948.

The Filipinos are:

"... very unevenly distributed throughout the country. In most of the islands, the people reside chiefly along the sea coast rather than in the interior, where there are still some valleys particularly in Mindanao, having a relatively sparse population. The greatest population density is in the Island of Cebu and the least is in the Island of Mindanao. Certain regions in the Philippines, in addition to the Island of Cebu, are densely populated; among such regions are the areas adjacent to Manila and the Ilocano provinces in Northern Luzon.

"The Philippines now has more inhabitants than any country on the continent of North and South America except three--the United States, Brazil and Mexico. Yet the country, in terms of its land area as well as of its natural resources, has a relatively sparse population compared with that of many other countries. According to the Yearbook of Philippine Statistics for 1946, 16 countries have greater population densities than the Philippines and of these, seven have population densities more than twice as great, and four have population densities at least three times as great as that of the Philippines. In terms of the number of persons per square mile, the population density is 164 for the Philippines, whereas it is 492 for Japan, 623 for Puerto Rico, 715 for England and Wales, and 762 for Belgium." 2

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2 Report of the Mission to the Phil., Unesco, Paris, 1950, p. 13.

Literacy Status. Excluding 316,429 persons whose literacy status has not been determined, 37.8% of the population of the country ten years old and over are unable to read and write.[3]

The school system is "dominantly a primary school system. More than 80 per cent of the enrolment in the public school is found in the first four grades, of whom about half never go beyond fourth grade. Out of every 100 children that start in the first grade, 72 reach Grade II; 38 continue in Grade III; 45 reach Grade IV; 26 reach Grade V; and 18 continue in Grade VI. Only three reach the fourth year of the high school."[4]

Economic Conditions. The Filipinos are economically depressed. On wages and income among the different classes of the population, the President's Action Committee on Social Amelioration wrote:

"Wages in Manila are placed at 4 pesos a day and 2 pesos in the provinces while the average salary paid to employees is probably less than 150 pesos per month on a national average."[5]

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[3]Bulletin No. 21, s. 1951, Literacy in the Philippines by Provinces, Manila, Bureau of Public Schools, 1951.

[4]A. Isidro, "The Vernacular as a Medium of Instruction in the Primary Grades," Philippine Journal of Education, Vol. XXVI, Manila, March 1948, p. 566.

[5]PACSA, Philippine Social Trends, Manila, Bureau of Printing, 1950, p. 18.
(There are two pesos to a dollar)

The standard income of the average Filipino worker, which is far below living level, is attributed among other things to:

"(a) the primitive method of cultivation; (b) indifference of the selection of better yielding varieties of seeds; (c) ignorance of the advantage that accrues from the use of fertilizer; (d) absence of credit facilities; (e) devastation caused by plant pests and rats; (f) destruction wrought by typhoons; (g) little diversification of crops, resulting in unemployment during the off season; and (h) owing to economic necessity, the fact that the tenant shortly after harvest is often forced to sell his product at a very low price."[6]

Aside from attribute (f), which is a natural and physical one, all the above causes of low income level could be eliminated by a sound education. So that, looking more sharply into the overall problem, we are bound to witness a vicious circle: Most of the Filipinos are illiterates on account of their poverty, making them unable to go beyond the free primary public schools. They are poor because they are still employing primitive methods of production and cannot produce more crops that would yield a higher income. They use crude methods of production because of their ignorance and lack of proper information. They have no proper information because they are illiterates and cannot read. And so on, ad infinitum.

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[6] A. Isidro et Al, Compulsary Education in the Phil., Paris, Unesco, 1952, p. 55.

Within the vicious circle, as a result of their poverty and ignorance, the Filipinos are naturally disease-laden, hungry, mentally and emotionally unbalanced, and quite susceptible to the lures of communism and its promise for better living conditions.

This vicious circle must be broken. The Filipino unlettered groups must be communicated with, if not through reading, then at least through hearing. An achievement of this burden would mean the linking together of the Filipino people in a common faith and a common trust.

A country cannot give its share towards world understanding when it does not possess understanding within its own boundaries. A country cannot be expected to improve its economic lot when its inhabitants are not fundamentally educated.

And this is where radio, as an instrument in mass communication, can come in. It can, and it must be used to propagate fundamental education in the Philippines.

CHAPTER II

DEFINITION OF TERMS

A project of this nature requires an extensive definition of terms.

From the Unesco's point of view, Fundamental Education "can be as wide as the whole range of human activity or as narrow as the barest elements needed to enable the people to live healthy, active lives."[7]

Fundamental Education includes:

"Skills of thinking and communicating (reading and writing, speaking, listening and calculation), vocational skills (such as agriculture, and husbandry, building, weaving and other useful crafts and simple technical and commercial skills necessary for economic progress);

"Domestic skills (such as the preparation of food and the care of children and of the sick);

"Skills used in self-expression and the arts and crafts, education for health through personal and community hygiene;

"Knowledge and understanding of the physical environment and of natural processes (for example, simple and practical science);

"Knowledge and understanding of the human environment, economic and social organization, law and government, knowledge

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[7] Fundamental Education: Description and Programme. Unesco publication, Paris, 1949.

of other parts of the world and the people who live in them;

"The development of qualities to fit men to live in the modern world such as personal judgment and initiative, freedom from fear and superstition, sympathy and understanding for different points of view;

"Spiritual and moral development; belief in ethical ideals and the habit of acting upon them; with the duty to examine traditional standards of behaviour and to modify them to suit new conditions."[8]

Speaking of Fundamental Education, Mr. J. Grenfell Williams, head of the Colonial Service of the British Broadcasting Corporation, says:

"As a kind of 'blanket' objective which would cover many of these activities, particularly those concerned with some of the vocational skills, the skills used in self-expression in the arts and crafts, and a knowledge and understanding of the physical environment, I would add the general objective of fundamental education mentioned in the Paper issued by the Advisory Committee on Educational Broadcasting on 22 June 1949, namely, 'ability to enjoy the finest of all the arts--the art of living--through active and vicarious participation in recreational activities and avocations--music, dancing, arts and crafts, etc.' Fundamental education

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8 Ibid.

is concerned, primarily, with bringing greater happiness to people and with making them aware of the means by which they may live a fuller life. And what better way is there of achieving this than by helping people to understand and to develop their own cultures, their songs, their music, their dances, their drama, to appreciate the cultures of other peoples, to see things around them with fresh eyes, even to learn to play? Indeed, I am convinced that some of the other objectives of fundamental education will only be reached if full and intelligent use is made of the arts of the people..."[9]

The radiobroadcasting system envisioned for the propagation of fundamental education is government-sponsored, and by this we mean government-subsidized, or government-helped. The government must bind itself within the system to answer for the system's finances.[9]

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[9] Details of the system is to be found in Chapter VI.

CHAPTER III

PHILIPPINE ADULT EDUCATION

To provide a basis for the appraisal of a government-sponsored radiobroadcasting system as conceived, and of its administration and financial support, it is of help to look briefly into the status of adult education in the Philippines.

A recent survey on the subject reveals that:

"(a) Education of out-of-school youth and adults in the Philippines began early in this century. Since 1908, when an Act was passed providing civic-educational lectures in towns and barrios, Filipinos have devoted considerable efforts to raising the cultural conditions of the people, especially of the illiterate group. In 1936 an Office of Adult Education was set up to take charge of the work. At present all the activities related to this important aspect of education, laid down as obligatory in the Constitution of the Republic, are organized and carried out by the Division of Adult Education within the Bureau of Public Schools. In spite of the efforts of those who direct the Division, different factors, among which the lack of funds is the most important, have confined the program for out-of-school youth and adults to an attempt to eradicate illiteracy and to an explanation of good citizenship.

"(b) The work carried on until now under the name of adult education is exclusively fundamental education with

emphasis upon the eradication of illiteracy. Except for a limited program of agricultural extension, adult education has yet to be organized in the Philippines..." [10]

As if acting upon this Unesco report, the Bureau of Public Schools set up a series of objectives in 1950 which were to be implemented as soon as possible. These series of objectives are embodied in a special memorandum entitled "Program of the Bureau of Public Schools for the School Year 1950-1951." [11]

The memorandum promised to intensify the present adult education programme, and to emancipate the Filipino illiterates from educational chaos, and from economic, cultural, civic and health handicaps.

Going into details, the memorandum promised to step up literacy work, economic improvement, citizenship training, health and home life, and social and cultural improvement. However, it did not state how the work was to be done.

Ordinarily, the first step to be undertaken in any intensification program in education would be to increase its funds. In this case, the contrary was done. The most recent Yearbook of Philippine Statistics indicate that the appropriation for the Division of Adult Education for the fiscal year

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[10] Unesco, Report of the Mission, op. cit., p. 33.

[11] Bureau of Public Schools Memorandum No. 51, s. 1950.

1950-1951, as compared with 1949-1950, was decreased by 5,240 pesos. Here are the figures:

Year	Enrolment	Appropriation (pesos)
1949-50	203,851	₱ 163,060.00
1950-51	195,993	157,820.00
1951-52	146,820	157,820.00

As far as the above figures go, the special memorandum of the Bureau of Public Schools mentioned earlier was useless. It failed to give sense to members of the Congressional Appropriation Committee. Or it could be that Congress thought it was better to improve public gardens than increase appropriation for educational purposes.

Whatever was the case, the decrease in appropriation for adult education was not in harmony with the special memorandum's promises. In 1939, there were only 75,833 students enrolled in adult schools, but the outlay for adult education then was ₱ 184,704.00. Comparing this with the enrolment and appropriation figures for 1951-52, and considering that the value of the peso in 1939 was more than twice its value now, we come to a ridiculous result.

Centralization of adult schools is another matter. While figures on the number of adult schools have not been available, it is apparent to the casual onlooker of Philippine education that the degree of centralization of the said schools is very great.

CHAPTER IV

THE UNESCO AND FUNDAMENTAL EDUCATION

The United Nations Educational, Scientific and Cultural Organization, as its name implies, is a specialized world agency devoting most of its time in fostering international understanding and advancing knowledge in the fields of education, science and culture. It is also the strongest advocate of fundamental education in underdeveloped areas of the world.

Representing a pooling of resources of 65 countries to help the United Nations achieve its goals, the Unesco has achieved wonders which can only be surpassed by the unselfishness of the men behind the organization itself.

As early as 1948, the Unesco made a survey of the communications facilities of twelve war-devastated countries to determine the extent of losses suffered by those countries in equipment and personnel. The survey was excellently carried out and subsequently the Secretariat instructed the Commission on Technical Needs of the Press, Film and Radio to extend their study to countries where the means of communication have not yet been fully developed. By 1949, there was a total of 43 countries surveyed.

Through the efforts of the Unesco, 10 European countries have joined to set up a nuclear research center in Geneva; 40 nations have signed a universal copyright agreement to protect foreign rights of authors; nations in underdeveloped

areas have received aid in adopting compulsary education laws; American schoolteachers have pledged $53,515 in gifts to underdeveloped countries; educational aid for 850,000 Arab refugees from Palestine have been blueprinted under the direction of Dr. Robert Westwater, Canadian educator.

The Unesco has published invaluable literature, covering all the important branches of mass communication, from the professional training of workers in press, film and radio to the establishment of educational radio services. It has also distributed instructions in the equipment and operation of mobile cinemas, which are so effective in fundamental education.

As expressed in the foreword of any of the series of Unesco publications, these printed materials are made "to provide practical information and, in some cases, advice for all whose interest or whose mark lie in the field of mass communications, and thus to spread knowledge of the highest standards that are being attained and the new techniques that are being evolved."

Unesco's objectives in Mass Communications. The third session of Unesco's General Conference, in a formal resolution, defined a two-fold purpose of the Technical Needs Survey, thus:

"To assist in the restoration and development of the means of mass communication;

"To publish objective information on press, film and radio throughout the world with the object of: (a) enabling

Unesco to take effective measures for the removal of obstacles to the free flow of information; (b) providing press, film and radio with a work of reference, which will also be of value for the purpose of sociological studies."

Unesco's interest in the field of mass media is of primary importance. The Preamble to the Constitution of Unesco states:

"For these reasons, the States parties to this Constitution, believing in full and equal opportunities for education for all, in the unrestricted pursuit of objective truth, and in the free exchange of ideas and knowledge, are agreed and determined to develop and to increase the means of communication between their peoples and to employ these means for the purposes of mutual understanding and a truer and more perfect knowledge of each other's lives."

This Preamble, although ratified by 30 states of the world, was not sufficient to meet the demands of all member states. Mass Communications had achieved attention in extensive proportions. A Special Resolution was therefore drawn by the General Conference, Unesco's chief organ. The resolution reads:

"In view of the paramount importance of the media of mass communication such as the press, the radio and the cinema, in advancing the purpose of the United Nations to maintain international peace and security by the spread of knowledge and mutual understanding, and

"In order to define, at the earliest possible moment, the most effective ways and means in which UNESCO can cooperate with all such media of mass communication in their effort to inform the peoples of the world about each other with truth and justice and understanding, and

"In order to assist in establishing the greatest possible freedom of the instruments of international information from censorship, discriminatory economic practices, and other obstacles to the free movement of ideas by word and image among the peoples of the world, and

"In order to determine more clearly the degree and type of participation of the major agencies of mass communication, private and public, in the work of UNESCO,

"IT IS RESOLVED...."

The resolution then goes on to state that the Preparatory Commission gives priority consideration of the field of mass communication, and must prepare reports on the subject for submission to the First General Conference.

Unesco Educational Mission to the Philippines. In the early part of 1949, the Unesco sent an educational mission to the Philippines to make an appraisal of the status quo of Philippine education and to make necessary recommendations for its improvement.

The Mission was composed of the following educational experts: Paul H. Hanna, Professor of Education, Stanford University, U.S.A.; A. C. Lewis, Dean, Ontario College of

Education, University of Toronto, Canada; Floyd W. Reeves, Professor of Administration, The University of Chicago, U.S.A., (Chairman); and Viriato Camacho, former Technical Director of Public Education, Costa Rica, and at present Exchange Professor at Tulane University, U.S.A.

The Mission started working on February 14, 1949. The procedure of the work was reported thus:

"...The first three and a half months were spent gathering information, holding conferences with educators and laymen in Manila and elsewhere in the Philippines, visiting public and private schools and teacher-training institutions, and preparing a tentative draft of the report. The last two months were spent at Unesco House in Paris, where the Mission completed its report on July w8. Visits to educational institutions included observations of more than 1,000 classes in elementary, secondary and adult education in about 200 schools, and one or more classes in each of more than 60 normal schools and teacher-training divisions of colleges and universities. The travels of the Mission members took them to 27 of the 50 provinces, and to more than two-thirds of the 17 chartered cities. ...

"During the period spent in the Philippines each member of the Mission assumed responsibility for making an intensive study of one or more phases of the survey, as well as for examining all aspects of education within the scope of the survey. To facilitate these studies, the Philippine government kindly

made available to each member of the Mission the services of a Filipino educator to accompany him on his travels and to act as consultant. Under this arrangement Jose V. Aguilar, Division Superintendent of Schools for Iloilo, served with Paul Hanna in the study of elementary and secondary education; Vicente Garcia, Chief of the Division of Adult Education in the Bureau of Public Schools, with Viriato Camacho in adult education; Jesus I. Martinez, Superintendent of Normal Schools in the Bureau of Public Schools, with A. C. Lewis in teacher education; and Pedro G. Guiang, Division Superintendent of Schools for Cebu, with Floyd W. Reeves in educational administration and finance. Tito Clemente, Chief of the Measurement and Research Division in the Bureau of Public Schools, together with members of his staff, assisted the Mission in its statistical studies."[12]

In the field of adult education, which is the primary concern of this project, the Mission made the following recommendations:

"It is recommended that the present Division of Adult Education be converted into a Division of Fundamental and Adult Education;

"That the immediate objective of this Division be the eradication of illiteracy and the promotion of better ways of life for those of the population who have not yet received the benefits of an education;

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12 Foreword, Unesco Report, op. cit., p. 7.

"That the broader, long-range objective of the Division be the improvement of community life in all its aspects, through the provision of vocational, recreational, social and other educational opportunities for adults to make of themselves more efficient citizens."[13]

The Mission made a distinction between "fundamental education" and "adult education." It stated:

"(c) A definition of terms is needed to distinguish between fundamental education and adult education as these terms are used in this Report. Fundamental education is concerned primarily 'with the needs of undeveloped areas where the majority of people cannot read and write'; its purpose includes not only that of promoting functional literacy among out-of-school youth and adults, but also that of enabling them to participate effectively in the improvement of home, family and community life, and to exercise the duties and responsibilities of citizenship. Adult education is concerned with people who already possess fundamental education and who desire to improve their intellectual, social and economic status through further education. Fundamental education is designed to improve the people in order to establish a minimum level of general culture; adult education is designed to help those who aspire to excel on the basis of personal effort and

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[13] Unesco Report of the Mission, op. cit., p. 33.

talent. Both of them point to the present and the future of the Republic. Adult education is necessary for the higher cultural and economic development of the Philippines; but fundamental education is indispensable for the survival of the Philippines as an independent nation.

"(d) Fundamental education should be planned not only to reduce illiteracy but also to solve the basic problems in fields such as health and sanitation, housing, community activities, and citizenship. Its benefits should reach not only the illiterate population but also those who, in spite of literacy, still live in a rudimentary and deficient way. Thus, fundamental education will prepare people for a better way of life, in accordance with their needs and aspiration. Adult education, being related to the resources and technical development of a country, must be based on the preference of individuals for vocational and other education, in order that they may participate more effectively in social, economic, cultural, recreational, civic, and other activities."[14]

The Mission suggested that the carrying out of an adult and fundamental education programme be directed by the superintendent in each province, assisted by a full-time supervisor, and by all elementary and secondary teachers. As regards personnel, the Mission recommended that special training

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[14] Ibid.

courses be offered to supervisors and teachers engaged in fundamental and adult education, and that regular meetings, at least once a year, be held for supervisory and central staff.

Inadequacies of the Mission's Report. While the recommendations of the Mission for the improvement of Philippine education, particularly fundamental education, are in themselves sound, the author thinks they are insufficient. Or, to put it bluntly, they are too broad. Of course it maybe that the Mission was thinking of a long-range program, but even so, it should have offered a clear-cut path for immediate action. The Mission, for instance, recommended that plans be formulated so that basic problems in health and sanitation, housing and the like, could be solved, but it did not mention how they could be solved. It is not probable that the present system of adult education in the Philippines has ever, in its sixteen years of existence, forgotten the fact that such problems as mentioned should be solved. What the system needs is a knowledge of how the problems could be better solved.

CHAPTER V

WHY RADIO?

The objectives of applied fundamental education could be achieved in many number of ways. The best way, of course, would be a direct-teaching method. That is why an International Centre for training teachers in fundamental education has been set up in Patzcuaro, Mexico.

But direct-teaching method entails a huge amount of expense, not to mention a considerable length of time, even for teacher-training alone.

One of the best alternatives for carrying out a program in fundamental education is through radiobroadcasting. Tied up with the other means of communications media, radio can do a lot for the improvement of the social and economic conditions of Filipino farm and labor groups.

The health life of the masses, for instance, can be promoted through radio-education. The health program of the public schools could be supplemented effectively by educational radio, bringing directly into the home life of the families instruction on community and home sanitation, personal hygiene, waste disposal, food selection, child care and first aid treatment.

The effectiveness of radio in education cannot be overemphasized:

"(1) Its reach--its power to dispose in large measure

of the disadvantages of physical isolation. Radio has run a highway to everybody's door. All that man has ever said, or is capable of saying, is potentially available to all.

"(2) Its convenience--the easy circumstances under which listening is possible, the homeliness and intimacy of the 'fireside chat', the luxury of a full orchestra assembled in one's living room, the time saved, the sense of rich possession.

"(3) Its resources of technique--the peculiar power of its variant modes of firing our imagination and eliciting interest; the new and still-emergent lingua franca of the radio talk, the radio drama for which the listener's imagination provides the stage.

"(4) Its human resources--the experts, the public figures, the celebrities it can summon; the stimulus (particularly to those whose life is often solitary) of a new voice and the growing fascination of personality conveyed by a present voice, an absent person.

"(5) Its conquest not only of space but of time--its power to bring us a verbal picture of events and ceremonies as they occur. All these are unique and unrivaled resources, and all are most apt for education's task."[15]

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[15] Charles A. Siepmann, Radio Television and Society, New York, Oxford University Press, 1950, pp. 270-271.

In other words:

"1. Radio is timely.

2. Radio can give listeners a sense of participation.

3. Radio can be an emotional force in the creation of desirable attitudes.

4. Radio can add authority.

5. Radio can integrate the learner's experiences.

6. Radio can challenge dogmatic teaching.

7. Radio can be used to develop discrimination.

8. Radio conquers space."[16]

The role that radio has played in fundamental education can be measured by just looking at the experiences of education-hungry peoples of the world, peoples who have found in radio a blessing in tubes.

The Unesco realizes the efficacy of radio, and has made fundamental education the general theme for a substantial quantity of its radio output. The Unesco is using the help of experts in script-writing, like Mr. Leonard Cottrell, and has produced many scripts which were broadcast by Ceylon, Bahamas, Barbados, Trinidad, British Somaliland, Burma, Cyprua, India, Jamaica, Japan, Mauritius, Northern and Southern Rhodesia, South Africa and Pakistan.

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[16] William B. Levenson, Teaching Through Radio, New York, Farrar & Rinehart, Inc., 1945, pp. 6-14.

Experiment in Northern Rhodesia. The Northern Rhodesian experiment should provide a pattern for the establishment of a broadcasting system as conceived in this study. Like the Philippines, Northern Rhodesia is an undeveloped area; it makes use of several languages and is therefore tribally united.

Northern Rhodesia has a good system of radiobroadcasting now. But it had to tackle the problem of personnel-training; the problem of transport and telephone facilities; the problem of diffusing radio sets to thinly-scattered rural villages; the problem of making a people, whose traditions make them resent the slightest suggestion of change, to accept a medium hitherto unknow to them.

Geographical Notes. Northern Rhodesia is one of a trio of British protectorates in South Africa, the two others being Southern Rhodesia and Nyasaland. From 1889 to 1924, Northern Rhodesia had been under the administration of the British South African Company. Later on, the office of a governor was established and, subsequently, an executive and legislative councils.

Northern Rhodesia extends roughly north from the Zambesi river to the Belgian Congo. It has an area of 290,323 square miles (very much bigger than the Philippines), with a population of 1,866,000 people including more than 32,000 Europeans.

Southern Rhodesia differs from both Northern Rhodesia and Nyasaland in that it is self-governing.

Early Beginnings. Even before 1945, there were two radio stations in operation in this South African area. One was at Salisbury, the capital of Southern Rhodesia, and the other at Lusaka in Northern Rhodesia. The programmes of the former were mostly intended for the European population, while the latter, built from scrap equipments during the early part of the second World War, was broadcasting in the native languages predominantly. These territories had insufficient financial resources to allow the establishment of separate native and European broadcasting services for each. Nyasaland did not even have a broadcasting system at all.

In June 1945, the Central African Council was formed to co-ordinate broadcasting services for the three territories. But too much centralization presented a great problem. The Lusaka station in Northern Rhodesia was entirely dependent on the Information Department, while the station in Salisbury was directed by the Postmaster General.

The problem was studied from a technical point of view with the aid of a BBC engineer. It was agreed that bringing the various installations in one place and the construction of new buildings would involve heavy finances.

In 1947, a plan was submitted and approved, making each of the two stations separate and dependent on its local government. However, the Lusaka station was to broadcast programmes entirely for the native Africans of the three territories, while the Salisbury station was to transmit programs purely

for the Europeans. The Central African Broadcasting Corporation was to act only as a co-ordinator of programs.

Having confined its programming for the native population, the Lusaka station became an experiment. Previously, the programs in the native languages were taken for granted. There were only a handful of receivers among the native population anyway.

Before stepping-up operations, the officers of the Lusaka station were admonished by some Europeans that the Africans would not take to broadcasting. But the officers refused to believe so, and even assumed that there would be a greater appeal of broadcasting to Africans than to Europeans. They considered the fact that radio started as a novelty in America, in Eastern Russia, in all parts of the world, and peasants in India had taken to it.

The Lusakan officers assumed further that the Africans were all thirsty for knowledge, and that radiobroadcasting would play a decisive role in their sensible enlightenment. They recognized the Africans' love of traditions, and traditions meant music, argument, rhetoric. In short, the Lusakan officers believed that Africans are human beings, and what human beings could resist the novelty of the radio? What proofs are there to indicate that the radio had been taken as an intruder in the lives of human beings? Who can say that, even in a country like the United States, where radio commercials have reached a too voluminous stage to the irritation of some

allegedly fastidious intellectuals, there are some people who refuse to turn on their radios when there is a snow-storm and there is nothing else to do?

On this faith, the Lusakan officers started reconditioning their transmitters. To avoid much expense, short-wave transmitters were used in the three territories of Northern Rhodesia, Southern Rhodesia, and Nyasaland.

And then loomed the problem of making radio sets available to the entire population. But before this problem was even considered, the Lusakan officers launched a trial balloon. They set up a community listening experiment, to determine how the Africans would take to radio for the first time.

A letter from an African to the Lusaka station gives some interesting accounts:

"The Chief and his headman smilingly helped us to put wireless on a go. But most of the people did not know what a small sort of box was there for. They just thoughtlessly admired at its shape. Chief then sent a message to call all who were nearby. But though they came they were very much confounded. Some thought perhaps we want to preach and some thought Mr. Harrison himself wanted to say something to them. After many people arrived they were told to keep quiet and listen to a man in Lusaka talking to them. Some asked one another whether this man would come and speak to them personally. But how then, they asked? When they heard a voice, they all gazed at the battery. At the same time they had to

move their eyes to the wireless. Some who saw or heard gramophone, thought that it was such. It was until when they heard a voice talking to them in Chitonga telling them a story that moved them greatly that they came to know that it was different from a gramophone. They all looked quiet though there were some who played giddy goat. This was due to the intoxicants they were taking the whole day. In a short time Chitonga speaking man stopped and music took place. Nearly every young man and woman danced. Though they were dancing their faces betrayed that they were surprised to see such a thing which could bring voices from a distance to them. Lastly there was a speech spoken in English where none of them understood, but some due to their great pretense had to nod their heads showing that they were understanding. It was until the time when the story was construed that all women laughed to hear a young elephant getting his trunk.

"After this Mr. Harrison gave an epilogue defining all that people in the Information Office do. And how voices are carried to all parts. They were left in great joy and they asked Mr. Harrison to go again in the following week, taking his wireless with him."

Several such other community listening experiments were made, and subsequent questionnaires distributed. All results pointed to the fact that radio was among the natives to stay. There was not a single respondent who signified any dislike to radio at all.

The next problem that confronted the Lusakan officers was the search for a special radio set that would be cheap enough to meet the pocketbook of the natives. The search was launched, however, and went on for almost a period of three years in Britain and the Dominions. In 1948, the search ended. The British Broadcasting Corporation, with the cooperation of the Colonial Office, produced prototypes to the specifications drawn up by the Chief Engineer of the Lusaka station.

The radio set was named "Saucepan Special". To determine how the receiver worked under tropical conditions, and how the natives would like it, samples were distributed. Results again showed that possession of one of the "Saucepan Specials" had a pleasing effect upon the Africans. An owner of one of these sets wrote to the Lusaka station:

"Although I had never owned a wireless set before, I have no hesitation to inform my friends through the Lusaka Broadcasting Station that I have found these to be excellent. Indeed for the first time I brought my set home, my family thought that I had only wasted my time on something like a toy! I told them to wait and see what the little thing was going to bring to our house. I read the instructions and understood them, put the set up as instructed and switched on to Lusaka at 12 noon: there was nothing coming through! My little daughter began looking at me with a rather unusual eye! And I too was getting a bit vexed. Then my wife suggested I try other stations; fortunately we were cheered up with music

and my daughter's anxiety was getting down. I switched off until 5 p.m. when we got on to Lusaka. Here we got just to conclusive satisfaction! Everything went on very nicely as my children kept on jumping in our small house! We have since been enjoying our set very much since we can get news from all over the world. We can listen to the music from Lusaka, lourenco Marques, BBC, etc. The Malipenga Dance from Lusaka, the Rhumbas, Tangos and Khongas from Lourenco Marques are much enjoyed too.

"The sets are really educative in all respects more so when we come to the quiz competition. It's splendid, but unfortunately our answers cannot be heard when we try to answer a few questions. However, we have not been doing very bad after checking our answers with the corrections!

"One, but not least other interesting thing with these sets is that one can carry it to any place, and I propose to carry mine with me when I go for inspections in the Cooperative Societies so that I may give a chance to the people in the rural areas to listen to a wireless news."

The above was just one of the many letters received by the Lusaka station, all admiring the portability and efficiency of the "Saucepan Special." The Lusakan officers therefore decided that they make a mass order of the receiver, to be sold to the native Africans without profits.

But the British manufacturers were somewhat skeptical about setting up a mass production of the receiver, believing

that Northern Rhodesia would be a disastrous market. One manufacturer, however, was persuaded to make a considerable number of sample sets for experimental sale. The manufacturer was taking a calculated risk because investigations into African wage rates and incomes then revealed that Northern Rhodesians were making barely a pound a week. But the manufacturer was persuaded anyway, with great difficulty no doubt, that the average African would buy radio sets, considering that the African needed some brightness in life.

The sample sets were displayed in stores, and were sold at £5 each. They sold like hot cakes, to use an American expression.

Visits were subsequently paid to the new owners of the Saucepan Special, and what he saw amazed the manufacturer to no extent. With overwhelming enthusiasm, the sets were being used properly by their owners.

Mass production followed, and the first 2,000 receivers arrived in September 1950. They were checked and distributed for sale by the end of October, and in less than four months, all the sets were sold out.

In selling the cheap receiver to the Africans, a propaganda movement was undertaken as follows:

"A. Through the African Press. Wider publicity of the programmes. A list of the stores which stock the cheap receivers. Short articles in each issue on the installation, operation and use of the set, etc. Extracts from letters of

listeners. Photographs of broadcasting activities including the new cheap sets. Occasional editorial and critical articles on broadcasting.

"B. Vernacular Posters. One set of posters listed the stores where the cheap radio could be bought. Other posters carried slogans bringing out the educative and entertainment value of broadcasting, and others stressed alternative methods of listening, from community sets, employers' receivers, for those too poor to buy their own radio.

"C. Films. Film trailers were made, giving the price of the sets and material similar to that contained in the posters, but not the list of retailers. A filmstrip with lecture notes was produced, outlining the progress of broadcasting including the cheap receiver. These film strips are used in the mobile and static cinemas and at other centres.

"D. Broadcast. Spot announcements were made, giving all kinds of information about the receiver and encouraging listening generally. A weekly talk is given, which includes extracts from correspondence explaining the use of the set, and dealing with doubts and difficulties about lighting, electric shocks and other imaginary fears... ."[17]

The experiment has been very successful as can be judged from the present condition of broadcasting systems conducted

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[17] J. Grenfell Williams.

in the three British territories. The most salient discoveries from the Northern Rhodesian experiment are:

"(a) Many Africans have a natural gift for broadcasting, and are hardly ever shy of the microphone.

"(b) Africans like to listen where listening conditions are suitable and when programmes are interesting. This may appear obvious, but it is still not believed by some Europeans, and it still has to be proved on a larger scale.

"(c) Community receivers, although they may fill a breach, provide the worst kind of listening facilities. In practice it is only rarely that any European or trained African will take the trouble to be present every evening to work the receiver. The receiver is often not properly looked after. Speaker horns get out of alignment, sets get wheezy and so on. Listeners soon lose interest under such conditions.

"(d) Asking European employers to let their servants listen to the household set, or to fit a small extension speaker to their servants' quarters, brings some result, but not much. It is still encouraging."[18]

The Northern Rhodesian experiment has done so much in changing the life-activities of the Africans. But it has done more. It has spared countries like the Philippines from unnecessary skepticism if and when they decide to undertake a similar project.

The author believes wholeheartedly that a project of

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[18] J. Grenfell Williams.

the same proportions as the Northern Rhodesian experiment would be even more successful in the Philippines. The author would not even consider the question of whether radiobroadcasting would be accepted among the Filipino masses or not. In fact the author believes that the only reason why broadcasting has not been very successful in the Philippines in recent years is because radio sets there are so exhorbitant, and the Philippine government has done nothing to make them available to the poor man.

CHAPTER VI

ORGANIZING THE BROADCASTING SYSTEM

Brief Status of Philippine Radiobroadcasting. In nature, radiobroadcasting in the Philippines is a replica of the American Broadcasting System. It is purely commercial.

There are several high-powered standard broadcasting stations, namely:

DZFM (710 kcs.), the People's Station, owned and operated by the Republic of the Philippines;

DZRH (650 kcs.)
DZMB (760 kcs.) of the Manila Broadcasting Company;

DZBB (560 kcs.) of the Republic Broadcasting System;

DZPI (800 kcs.)
DZAB (860 kcs.) of the Philippine Broadcasting System;

DZBC (1000 " .) of the Bolinao Broadcasting Corp.;

DZAS (680 kcs.) of the Far Eastern Broadcasting Co.

There are other powerful shortwave stations affiliated with each of the entities just mentioned, and three universities have set up their own stations for educational purposes. However, all these stations are not concerned with fundamental education as explained earlier in this study. Even DZFM, which is government-owned, is entirely a commercial enterprise from which the government expects to derive some sort of profit.

Most of the transmitting stations in the Philippines have a radiated power of 10,000 watts, so that a glance at these facts would immediately indicate that the Filipinos have one of the best communication set-up in the Far East. Unfortunately, this is not the case.

The reason for this is not hard to find. Radio-broadcasting is a system of transmission and reception, and although problems in transmission have long been solved, it still remains that the Philippines has one of the least number of receiving sets in proportion to population.

From a Unesco survey made ending 1949, it will be found that the Philippines, with a population of 19 million, has 1,059 inhabitants per receiver. Egypt, which has the same number of population in round figures, has 116 inhabitants per receiver. This is so, even though both countries have no local manufacture of radio sets, and that Egypt imposes a greater per cent of ad valorem duties on radio imports.[19]

Congressional Legislation Necessary.

The problem of setting up an educational broadcasting system as planned in this study, and of diffusing radio to the greater part of the population, is one that requires government help. On the main the overall problem is a question of organization. In the case of forming community groups or

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[19] See Table I.

reception centers to stimulate the peoples' desire to buy radios, government action is necessary. The enormous task of purchasing equipment, training staff, distributing sets to remote places and areas, and advertising radio in all ways possible cannot be shouldered by private organizations, whose motivations are always commercial. And this kind of job is taxing, to say nothing of the lack of profits in sight.

Congressional legislation therefore is imperative. Congress should pass an Act in favor of the station presently contemplated and, combining all the adaptable features of the British Broadcasting Corporation and the Canadian Broadcasting Corporation, incorporate in the Act the following:

1. The system (let's call it the Philippine Educational Broadcasting Corporation for writing convenience) should be a body corporate, publicly-owned, consisting of at most a Board or Commission of eight directors.

2. The members of the Board or Commission should not be employed in the government, but should be private citizens who are experts and well-respected practitioners in the fields of education, business, radio and such other fields advisable. Exception is to be made in the case of the Director of the Bureau of Public Schools, whoushould be a member of the Board.

3. The members of the Board should be nominated by the President with Senate Approval, and appointed for a three-year term.

4. No member of the Board, with the exception of the Director of Public Schools, should be privileged with renomination at the end of his first term, but could be renominated at a later date after the end of the first intervening term.

5. The members of the Board should be given a nominal salary, i.e. enough to cover expenses, etc.

6. There should be a Chairman of the Board from among the Board members, voted by a two-thirds majority by the members.

7. The Chairman of the Board should be empowered to appoint directorate heads from among the members, with unanimous consent by the members such as:

a. Director of Programming, who should be responsible for the organization of program-production personnel;

b. Director of Technical Services, for planning and installation, equipment and engineering, design, maintenance of studios and transmitters, etc.;

c. Director of Administration, for the organization of the broadcasting system, of administration personnel, etc.;

d. Director of Finance;

e. Director of Listening Research, for establishing systematic studies of the system's audience's habits and tastes, quantity of receivers, etc.;

f. Such other Directors deemed necessary.

8. The objective of the Corporation should be to carry on a broadcasting service in furtherance of the aims of fundamental education.

9. The Corporation should be given considerable administrative and financial freedom:

a. It should have the right to administer its funds provided they are used exclusively for the purposes for which the Corporation is to be constituted;

b. It should have the right to make contracts; acquire copyrights, purchase equipment, pay personnel, install and operate synchronizing stations, buy phonograph records, tapes, and other vital broadcasting facilities.

10. The Corporation should make an annual report and financial statement, to be submitted to Congress through the Secretary of the Department of Education.

11. Funds for the Corporation should come from a separate Congressional Appropriation.

12. The Corporation should be obliged to broadcast day-to-day proceedings in Congress, and should broadcast any notice on request of a government department, but should have the right to announce that the broadcast is made on request.

13. The Corporation, although ultimately responsible to Congress, and its programs can be discussed by that body,

should have complete freedom. The government should have no powers other than those mentioned above to instruct the Corporation in the operation of its services.

14. The Corporation should not adopt any line of editorial policy in relation to current affairs, and should not be used by any party for political purposes whatsoever. However, names of candidates, and such other impartial facts, may be included in the news broadcast.

15. The Corporation should not broadcast sponsored programs, as well as advertisements other than those used for the diffusion of radio sets.

16. The Corporation should be independent of and from existing commercial stations.

17. The Corporation should recruit its staff by public advertisement, although when vacancies occur an attempt should be made to fill them by the promotion of existing staff. No general examination is necessary, but there should be various tests for different types of work.

18. The Director of Programming should determine and prescribe the hours of daily broadcasting time in conference with, and approval of, the Board members.

In addition to the above, Congress should abolish any present laws which impose registration fees and other taxes on radio sets. The idea should be to make radio as a necessity for the free flow of information.

The government should also reduce the ad valorem duties on imported radio sets. The present duties do not reflect a policy of protecting a national industry since the Philippines has no local radio industry.

Transmission. It is not within the jurisdiction of this study to make technical recommendations in regards to transmission or reception. However, reference is to be made to the recommendations of the Unesco on the subject:

"Over long distances (several hundred kilometers) the use of short waves (6, 7 and 9 Mc/s and possibly the tropical bands) with a transmitter of 20 Kw or more will make it possible to employ simplified sets of the 'under ten dollars' type. This is the solution adopted in Central Africa where the Lusaka station (power of 15 Kw) uses the 9, 7, and 4 megacycle bands for daily transmissions for a period of two hours. An experiment from the receiving side has been tried out in Northern Rhodesia, where a simplified set called 'Saucepan Special' has been placed on the market. This is a 4-valve superheterodyne receiver covering the 4 to 11 Mc/s bands, and has been sold locally for 15 dollars. The solution has been very successful."[20]

The use of shortwave broadcast channels appears to offer the greatest possibilities for clear reception, due to the

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[20] Claude Mercier, Low-Cost Radio Reception, Paris, Unesco, 1950, p. 88.

particular conditions which exist in the Philippines. It has been found that on the long-wave broadcast channels there are several points of the country which cannot be sufficiently served at certain periods because of atmospheric conditions. The transmitter radiating power does not, after certain limits have been reached, supply the answer to this problem.

Shortwave broadcasting, which can be utilized in a directive manner, is especially applicable under such conditions. Due to the much lower power needed to cover a given distance at the higher frequencies, operating other transmitters simultaneously and at a very nominal expense as compared with one high-powered transmitter on long-wave would be very possible.

Shortwave broadcasting, from the monetary point of view, would mean less drain on the Government's coffers. From the point of view of listener-satisfaction, it would mean freedom from atmospheric disturbances, if the listener is located at any considerable distance from the transmitter.[21]

The use of a directional beam twin-antennae system as now found in station DZRH could also offer good possibilities, although it would mean the utilization of standard-broadcast receivers at a higher cost. The new DZRH antennae system radiates an effective power of 27,500 watts, although operating

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[21] Views expressed by Garrick Eisenberg of the old station KIZB, Manila.

a standard 10,000 watt broadcast transmitter. A special feature of the DZRH system is that, instead of making the standard circular radiation pattern which, in the case of the Philippines particularly, wastes fifty per cent of a station's power into the China Sea and the Pacific Ocean, it is now forcing its primary signal into a roughly north and south direction. Signal is therefore concentrated within the areas where potential listeners are located.

Reception. With regards to the problem of diffusing radio sets, no better solution could be found than the method recommended by the Technical Needs Commission of the Unesco.[22]

Sets could bepurchased in great quantities by the government from either Japan or the United States, and distributed for sale to all parts of the Philippines at no profits.

The Unesco has made several inquiries from radio manufacturers on the possibility of mass-producing simple sets designed for tropical conditions. Answers to the Unesco inquiries have been very encouraging.[23]

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[22] See Appendices 4 and 5.

[23] See Appendix 6.

CHAPTER VII

CONCLUSION

There is no satisfactory substitute for fundamental education. Men have not been created so that some would be enjoying the benefits of education while others would not.

Peoples who have been fortunate enough to have acquired a sound education should not turn an indifferent look towards less fortunate individuals. The Bill of Human Rights, as well as the unwritten Rights of Man, entitle them to the same privilege.

The project as propounded in the preceding pages is a challenge to the Philippine Congress to give the great mass of Filipino unlettered groups this God-given right.

The project is an economic venture of wide magnitude, but not wide enough to be forsaken and uncrossed. For it is also a noble venture.

Here is an enterprise, endorsed unofficially by the Unesco. To carry it on would save countless Filipinos from a looming educational catastrophe.

TABLE I

Extract from a Unesco Survey (1947-48-49).

COUNTRY	NUMBER OF INHABITANTS PER RECEIVER	POPULATION
Latin America		
1. Argentina	11	16,317,933
2. Bolivia	25	3,787,000
3. Brazil	20	48,900,000
4. Chile	9	5,135,800
5. Cuba	7	5,010,000
6. Dominican Rep.	70	2,089,000
7. Ecuador	111	3,340,000
8. Haiti	1,000	3,500,000
9. Honduras	61	1,220,000
10. Mexico	32	22,776,000
11. Paraguay	14	1,144,731
12. Peru	65	7,787,000
13. Uruguay	7	2,280,000
14. Venezuela	28	4,300,000
Africa		
15. Algeria	54	8,580,000
16. Morocco	92	8,617,000
17. Tunisia	60	3,230,952
18. Egypt	116	19,087,857

TABLE I (con't.)

COUNTRY	NUMBER OF INHABITANTS PER RECEIVER	POPULATION
Asia		
19. Burma	3,400	17,000,000
20. China	570	455,592,000
21. India	1,490	342,500,000
22. Malaya and		
23. Singapore	207	5,909,000
24. Pakistan	920	69,000,000
25. Philippines	1,059	19,076,000
Europe		
26. Austria	7	7,009,000
27. France	7	40,663,000
28. Finland	12	3,947,000
29. Greece	185	9,400,000
30. Hungary	20	9,292,000
31. Italy	23	45,486,000
32. Poland	41	23,920,000
33. Sweden	3.3	6,800,000
34. Switzerland	4	4,265,000
35. Czechoslovakia	7	12,913,000
36. Yugoslavia	67	14,800,000

BIBLIOGRAPHY

BIBLIOGRAPHY

A. Books

Hansen, Harry, editor, The World Almanac and Book of Facts for 1953, New York: New York World Telegram and Sun, 1953.

Isidro, A. et Al, Compulsary Education in the Philippines, Paris: Unesco, 1950.

Levenson, William B., Teaching Through Radio, New York: Farrar & Rinehart, Inc., 1945.

Mercier, Claude, Low-Cost Radio Reception, Paris: Unesco, 1950.

Siepmann, Charles A., Radio Television and Society, New York: Oxford University Press, 1950.

Williams, Grenfell J., Radio in Fundamental Education, Paris: Unesco, 1950.

B. Special Publications

Unesco, Fundamental Education: Description and Programme, Paris, 1949.

Unesco, Press Film Radio, Paris, 1950.

Unesco, Report of the Mission to the Philippines, Paris, 1950.

C. Special Bulletins

Bulletin No. 19, s. 1951, The Community School and its Records, Manila: Bureau of Public Schools, 1951.

Bulletin No. 20, s. 1951, Literacy in the Philippines by Provinces, Manila: Bureau of Public Schools, 1951.

Memorandum No. 51, s. 1950, Program of the Bureau of Public Schools for the School Year 1950-1951, Manila: Bureau of Public Schools, 1950.

PACSA, Philippine Social Trends, Manila: Bureau of Printing, 1950.

Unesco Newsletter, No. 15, Jan. 28, 1953.

Unesco Newsletter, No. 16, Feb. 11, 1953.

D. Articles

Eisenberg, Garrick, "Shortwave Broadcast Adapted to P.I. Atmospheric Conditions," Manila Bulletin, KIZB supplement, Oct. 25, 1938, front page.

A P P E N D I X

LETTER FROM THE UNESCO DIRECTOR, NEW YORK OFFICE

6 March 1953

Dear Mr. Agatep,

I am sorry that your letter of 19 February came at a time when I was away on mission to Washington. This, plus the fact that I have only recently returned from the Philippines, accounts for my late reply.

But I am glad to hear from you and delighted that you have selected as your master's thesis "A Project on Fundamental Education through Government-Sponsored Radiobroadcasting in the Philippines."

Mrs. Daphne Lincoff of our staff, who specializes in Unesco documentation, tells me that she had shown and in some instances given you, copies of all the significant material we have available in this office bearing on the subject in which you are interested. I cannot think of any more new or additional material except perhaps to point out the following:

1. Being primarily concerned with liaison work with the UN, this office receives and keeps only such Unesco documentation as is necessary in our daily work. Field materials, such as those being used in our projects in Patzcuaro, rarely come our way. Our literature here therefore is limited to our own secretariat requirements.

2. For the needs of this country (USA), Unesco has designated a dozen depository libraries where you can perhaps find a better range of subject materials. Since you are in Boston, I think the nearest depository library would be the Harvard University. The best collection of Unesco documents, of course, would be found in the Library of Congress at Washington, D.C. Here in New York, the depository is the New York Public Library.

3. If it would help you, I am attaching herewith an extract from the Report of our Director-General covering the period April 1951 to July 1952 (7C/3), which bears on the use of radio in Fundamental Education. I think you were also shown some copies of Unesco's World Review, some of which deal with Fundamental Education.

An extract from the World Review of 13 January 1951 is attached as a sample of a brief script.

4. As regards actual scripts, I have just heard of one called "Experiment in Mexico", which may be loaned to you. The New York Times has it now and will be returning it on Monday next. I shall mail it to you as soon as it is received.

I think your idea of getting Congress to initiate legislation for installing an educational broadcasting station is an excellent one. For this purpose, I suggest that you communicate, if you have not already done so, with Senator Pecson, who is also a member of Unesco's Executive Board. She is at present devoting much of her time to Fundamental Education in the Philippines. Perhaps you have heard of UPEF (Unesco-Philippine Education Foundation). She is the head of that group, which helped put out last year the Bureau of Public Schools pamphlet "The Community School of the Philippines".

Next time you are in town, please call on us and perhaps we can get together.

With all good wishes.

Sincerely yours,

(Sgd.) Solomon V. Arnaldo,
Director, New York Office.

Mr. Carlos A. Agatep,
23 Kenwood Street
Brookline, Mass.

MCR/518

"EXPERIMENT IN MEXICO"

PART I

A dramatised feature
on the Unesco Centre
for Fundamental
Education at
Patzcuaro, Mexico.

Duration: 30 minutes

Written and produced
by
Leonard Cottrell
(Radio Division)

RECORD No. 1647

LANGUAGE: English

RADIO...UNESCO...RADIO

"EXPERIMENT IN MEXICO"

PART I

CONTROL: MUSIC COMMENCES AND THEN FADES BEHIND

ANNOUNCER: Unesco Radio presents Part I of "EXPERIMENT IN MEXICO" - a dramatic impression of the first international centre in the world for training teachers in the technique of Fundamental Education. All the material on which this programme is based, including the dramatized scenes, is based on the personal experience of Leonard Cottrell during his recent visit to the Unesco Centre at Patzcuaro in Mexico. The programme was produced by Leonard Cottrell in the studios of Unesco Radio in Paris.

NARRATOR: (Quietly) Before I tell you who I am, let me begin by asking you a question. You sir; you are an American. Tell me, what do you fear most?

AMERICAN: Say, I can't give you a snap answer to that one. There are so many things.

NARRATOR: All right, tell me some of them.

AMERICAN: Well, I guess my greatest fear is of a world war. I fought in the last one, and I don't want any more of that.

But a third world war...well...

NARRATOR: I see. Now you, Sir, as an Englishman, what do you fear most?

ENGLISHMAN: At rock-bottom, the same as my friend here- a Third World War. But I try not to think about it too much; there are so many other more immediate problems; how to get enough to eat is one; then there's this continuing austerity. We've gone on tightening our belts for twelve years. When's it going to end?

NARRATOR: Thank you. And, finally, you, Sir. You're a European. What do you fear most?

FRENCHMAN: Another war. Another occupation. I don't want my country to become a battleground for warring nations. Yes, that's what I fear most.

NARRATOR: Then allow me to say that you're all wrong. The thing you have to fear most is <u>me</u>.

ALL: Who are you?

NARRATOR: My nationality isn't important. I could be an Indian, a Pakistani or an African. There are many millions of me in South East Asia. There are more millions of me in Latin America. You'll find me in places all over the world. But whatever our nationality, we've

this in common. We're poor, we're hungry, we're sick. Altogether there are twelve hundred millions of us; more than half the population of the world. You, sir, the Englishman. How many people of your country died of starvation last year?

ENGLISHMAN: (Hurriedly) Good heavens, old chap, it's not as bad as that. I mean we get enough to live on.

NARRATOR: And if you or your wife or children are ill, what happens?

ENGLISHMAN: Well, we go to our local doctor, or if necessary into hospital.

NARRATOR: And who pays for your treatment?

ENGLISHMAN: The State. Though of course we pay for it ultimately in taxation.

NARRATOR: But do any of your people die because they can't get treatment or can't pay for it if they could get it?

ENGLISHMAN: No one, I should say.

NARRATOR: And you, Sir, as an American, do the same conditions apply in your country?

AMERICAN: Well, we haven't a State medical service, of course, but I would say most of us can get medical attention when we need it. And we try to feed our population adequately.

NARRATOR: And in your country, Sir?

FRENCHMAN: In my country, France, there is no serious food problem; as for medical help, we have not a National Health Scheme like Britain, but there are various insurance schemes. But as for other European countries, conditions vary very much. In parts of South Eastern Europe I'd say there are quite a few people with not enough to eat.

NARRATOR: Thank you. Now I'd like you to hear my story. In South East Asia alone, several million people died last year of starvation or malnutrition. Take one country- Ceylon. In Ceylon the average expectancy of life is 23 years. In Africa too there are millions who are undernourished, and suffer permanently from disease brought on by insufficient food, bad housing conditions, or by pests which could be controlled. But there are two main facts which you should bear in mind. Over fifty percent of the world's population do not have enough food to maintain health. And seventy-five percent of the world's population are illiterate.

AMERICAN: These are impressive figures, but, to put it brutally, what can we do about it? We're in the minority, I can see, and we enjoy a

higher standard of life than the rest of the world. But I don't see why or even how we should be expected to feed three quarters of the people on this planet.

ENGLISHMAN: I agree. It's a terrifying problem, but surely in the long run it's one which the individual countries should solve themselves---I mean those which are independent and self-governing. It's a different matter for countries with colonies. They do have a responsibility to the native population- at least until those peoples have learned to govern themselves.

AMERICAN: And after all we <u>are</u> doing something to help. What about Point Four of the Truman doctrine?

FRENCHMAN: What about the United Nations?

ENGLISHMAN: Yes, what about those Specialized Agencies? The Food and Agriculture Organisation, the World Health Organization and so on? Surely we've made a start there?

NARRATOR: Yes, you've made a start.

AMERICAN: Well, this may make me unpopular but I'm going to say it. I think there's too much spoon-feeding already in the modern world. I come from a country which believes in

individual initiative and enterprise. After all that's how America became a nation. Those figures are horrifying and no man with any conscience at all can stand aloof and say they don't concern him.

NARRATOR: Am I my brother's keeper?

AMERICAN: Yes, I know what you mean. <u>But why can't these people do something to help themselves?</u>

NARRATOR: (Gravely) Because first they must be shown how to.

AMERICAN: (Puzzled) I don't get that.

ENGLISHMAN: Neither do I.

UNESCO OFFICIAL: I think I can explain that.

NARRATOR: Yes, he knows.

UNESCO OFFICIAL: Please forgive me for interrupting. It's just that we are tackling just that particular problem--helping people to help themselves.

FRENCHMAN: Who are "we?"

UNESCO OFFICIAL: Unesco.

AMERICAN: Come again.

UNESCO OFFICIAL: The United Nations Educational, Scientific and Cultural Organization.

ENGLISHMAN: I'm sorry, but when I hear the name Unesco I'm afraid I usually think of something rather high-flown and academic. It's that word "culture" I suppose.

FRENCHMAN: A word always suspect to the Anglo-Saxon mind.

AMERICAN: (Good humouredly) I guess you've got something there.

UNESCO OFFICIAL: Well, let's leave Culture on one side for the moment, shall we, and concentrate on Science and Education, especially Education. Look, you'll understand much better if you'll let me take you to a place where we're tackling this problem in a practical way. It's one of the most fascinating experiments taking place in the world today.

AMERICAN: Where?

UNESCO OFFICIAL: In Mexico.

ENGLISHMAN: Mexico? Sorry, old chap, I'd love to, but I haven't the time....

UNESCO OFFICIAL: Don't worry. It won't take a minute. By air it would take you a day and a half. But by radio...just close your eyes for a moment.

EFFECT: LOW OSCILLATING NOTE WHICH GRADUALLY RISES, THEN IS SUSTAINED AT A HIGH, LEVEL PITCH. KEEP BEHIND SPEAKER.

UNESCO OFFICIAL: Now open your eyes. What do you see?

ENGLISHMAN: Mountains. Hundreds upon hundreds of mountains spread out below. They look like volcanoes. And sunshine...and there is a blue lake. Where are we?

UNESCO OFFICIAL: We're over Mexico. Now we'll go lower.

EFFECT: OSCILLATING NOTE DESCENDS THE SCALE, THEN IS HELD AT A LEVEL PITCH.

UNESCO OFFICIAL: Now what do you see?

AMERICAN: The lake is much clearer now. It is a very big lake, and there are islands on it.

UNESCO OFFICIAL: Closer still.

EFFECT: OSCILLATING NOTE DESCENDS A FURTHER OCTAVE AND IS HELD AT A CONSTANT PITCH.

UNESCO OFFICIAL: And now?

FRENCHMAN: There's a little town beside the lake.

UNESCO OFFICIAL: That is Patzcuaro. The lake is called Lake Patzcuaro.

EFFECT: NOTE DESCENDS STILL FURTHER BEHIND THE NEXT SPEECH.

UNESCO OFFICIAL: Still closer. Now what do you see?

ENGLISHMAN: A house. A big house near the lake. It stands high, and there are gardens around it. Flowers, trees, lawns. There's a ter-

race with people walking and talking.

UNESCO OFFICIAL: Right. Now we're going right inside to a big room on the ground floor overlooking the lake...

EFFECT: AT THE END OF THE LAST SPEECH THE OSCILLATING NOTE IS CROSS-FADED INTO THE VOICE OF THE NEXT SPEAKER.

LECTURER: (Slight echo; he is addressing a large audience) ....And as a resumé, we can write as much as we like on a theoretical basis but that will always be of little or no value--the way in which we react towards the new scheme and it is on the basis of this experience that the world will judge the solidity of the fundamental education system

UNESCO OFFICIAL: (While the lecturer continues behind) This is the main lecture-room of "Erêndira" the first international centre in the world for the teaching techniques of what we call Fundamental Education. Visitors to the Centre listen very attentively to all we have to say about the methods employed in it, but they all invariably demand to visit the communities in order to realize for them-

AMERICAN: And who are these young people?

UNESCO OFFICIAL: Students from nine Latin American countries.

ENGLISHMAN: And the speaker?

UNESCO OFFICIAL: He's the Director of the School. Listen.... selves on the field how the method works.

Self assurance of the kind that pushes a man into action or creation is not acquired by following a series of theories, but on the contrary by vivid personal experience. When you are back in your own countries you will have to convince not only your own governments, but the people themselves, and this you will never do by lecturing more or less cleverly in an academic style, but giving them, from your own personal experience, the facts which are the only means to convince the world of the worth of our cause.

EFFECT: SOUND OF CHAIRS BEING MOVED, AND STUDENTS MOVING OUT OF THE LECTURE ROOM AS THE LECTURE ENDS. A HUM OF VOICES RISES, THEN FADES AS UNESCO OFFICIAL SPEAKS.

UNESCO OFFICIAL: Now the lecture is over and the students are going off to their work in the villages.

ENGLISHMAN: But tell me, who are these people?

AMERICAN: Yes, what's going on here?

UNESCO OFFICIAL: I told you. This is the first international centre in the world for training teachers

in Fundamental Education.

AMERICAN: Well, can we have it a bit more precisely? What is this thing you call Fundamental Education?

UNESCO OFFICIAL: Let's go back a bit. You, Sir, if I remember rightly, said "Why can't these people do something to help themselves?"

AMERICAN: Yes.

UNESCO OFFICIAL: And your answer, Sir, was...

NARRATOR: Because we haven't been shown how to.

UNESCO OFFICIAL: Right. There is, as you've pointed out, an enormous world problem; twelve hundred million human beings who won't get enough to eat, who are ignorant, poor, diseased, unhappy. Now in most of the countries where these conditions occur there are national agencies who are trying to tackle the problem. Sometimes they're called centres for Basic Education. But there's one great fundamental problem which applies to all these countries. You, Sir, know what that is.

NARRATOR: There aren't enough teachers. There are thousands, but we need hundreds of thousands.

UNESCO OFFICIAL: Now we must be careful about the word "teacher." You see, traditional schoolroom

methods are no use at all. Usually a school-teacher is concerned mainly with instilling academic knowledge into the minds of children. But these problems affect all parts of the population--children and adults, women as well as men. It is useless to teach people to read and write unless they have an incentive to learn and use this knowledge.

FRENCHMAN: Yes, I see that.

ENGLISHMAN: That's fair enough.

UNESCO OFFICIAL: Equally, it's useless to concentrate on, say, improving health if the soil on which the people depend is so eroded, and the farming methods are so inefficient that they don't grow enough food for a healthy life.

AMERICAN: Agreed.

UNESCO OFFICIAL: Right. Then the only realistic way to tackle the problem is from all angles--health, home economics, agriculture, and so on. When you've shown the people how to improve their living conditions, how to avoid disease, how to grow better crops or raise better cattle, in short, when you've given them hope and the will to improve themselves, then, and only then, can you start

teaching them to read and write. All this boils down to one essential fact. We need a new kind of teacher--thousands, no, hundreds of thousands. And we've started to train them here.

AMERICAN: Just a minute. Two points occur to me. Isn't this just what I said a little while ago--spoon-feeding the people? Depriving them of initiative-

UNESCO OFFICIAL: No, no, no. The whole idea is to show people how to help themselves. One of your countrymen summed it up very neatly. He called it "subsidised self-help."

AMERICAN: The other point is "why Mexico in particular?"

FRENCHMAN: Yes, why not Africa, or the Far East, or southern Europe for that matter.

UNESCO OFFICIAL: Well, there will be other international centres. Later this year one will be opened in Egypt to serve the Arab countries of the Middle East. In addition, a number of other countries--India, Turkey, the Philippines--want to set up centres which may take their students either from their own people or from neighbouring countries as well. But they will be staffed by international teams

of professors, some from Unesco and some from other Agencies of the United Nations. The Centre in Mexico is the first to be opened. It serves 16 Latin American countries.

ENGLISHMAN: But why Unesco? I thought you said that each country had its own "cultural missions."

UNESCO OFFICIAL: Yes, but they welcome our help, because we aim to set up an international network of centres so that knowledge can be pooled. In a national centre knowledge will be pooled through an international staff. In an international centre students from various nations with similar problems can work together and get the benefit of each other's experience. Not only can they study together, but they have the opportunity of doing field work together.

FRENCHMAN: What do you mean by field work?

UNESCO OFFICIAL: You'll see in a minute. We're going to eavesdrop on the students and professors at work--here at the Centre and also in the village communities round about. You see, Patzcuaro was chosen as the first training-centre because it is surrounded by country in which all these interrelated problems

occur--malnutrition, poor soil, disease, illiteracy and so on.

AMERICAN: So you see the local countryside as a kind of laboratory or workshop?

UNESCO OFFICIAL: You could put it that way. At the Centre, the students hear lectures by experts and have discussions. There are also workshops, a printing shop, and an artists' studio for making the various teaching aids which they need in the work. There's even a unit which makes what they call "audio-visual" aids--films and film-strips. But outside the Centre, in the villages around the lake, the pupils have the opportunity of getting their teaching experience in a practical way.

ENGLISHMAN: Individually or in groups?

UNESCO OFFICIAL: In groups. Groups of students are attached to each village and learn for themselves the best ways of showing the villagers how to deal with their particular problems.

UNESCO OFFICIAL: You heard how the Director emphasized the importance of a practical approach. Then, at the end of their 18-months course they can apply the lessons they have learned to their own countries. That's what I mean by field-work.

NARRATOR: Gentlemen, you've talked a lot. Show me what you are doing.

UNESCO OFFICIAL: Nothing easier. I shall have to use a little magic again, take you to several places in a short while, even take you backwards and forwards in time. Well, are you ready?

ALL: O.K.

EFFECT: THE OSCILLATING NOTE BEGINS AGAIN, LOW THIS TIME AND MAINTAINED AT A LEVEL PITCH. IT RISES TO A CRESCENDO, THEN GRADUALLY DIES AWAY.

UNESCO OFFICIAL: Now what do you see?

ENGLISHMAN: A room in a small house. It's night and a number of people are sitting around a table after dinner.

UNESCO OFFICIAL: They're some of the professors from the Centre, and they're entertaining a guest, a journalist who is visiting the Centre. The man at the top of the table is the expert on agriculture. He's telling the visitor about some of his experiences. Let's listen.

AGRICULTURAL PROFESSOR: (FADED IN) You see, in most of the communities the staple crop for hundreds of years has been maize. They only have the one-crop system. Year in, year out, it's always maize. They make tortillas from it.

VISITOR: What are they?

AGRICULTURAL PROFESSOR: They're flat cakes made from flour. The people practically live on them. But the one-crop system has just worn out the land.

HEALTH PROF: Not only that, the monotonous diet is insufficient to maintain health.

AGRICULTURAL PROFESSOR: Well, that's your department, Jose. You're the health expert. But they can live on it.

HEALTH PROF: Well they can keep alive.

AGRICULTURAL PROFESSOR: And that was our trouble in trying to get them to vary their crop in order to get more variety into their diet.

VISITOR: Have you gone any way towards solving the problem?

AGRICULTURAL PROFESSOR: Yes, we've persuaded some of the communities to grow fruit trees. Last year we distributed a great many trees given us by the State Forestry Department of Morelia. This Spring we have started planting fruit trees and we've distributed four hundred trees which were also given to us by the State Forestry Department. And we've planted a tree nursery here at Crefal with some two thousand or more little trees. In time they, too, will be distributed.

VISITOR: But all that takes time. Isn't there a quicker method?

AGRICULTURAL PROFESSOR: Yes, there is, as an interim measure; we've shown them a short cut. I'll tell you what happens. One of my students goes to the village of Casas Blancas--that's up in the mountains--with a bunch of pear twigs. He's already gained the friendship of one of the smallholders--we'll call him Pedro. This is what happens. (FADE)

STUDENT: (FADED IN) Pedro, you know that old apple tree at the end of your plot?

PEDRO: It's no good, Senor. It is only a Tejocote. It only gives small apples, crab-apples; they're only worth giving to the pigs.

STUDENT: I know. But I want you to let me show you something. You see these?

PEDRO: Twigs. What good are they, Senor?

STUDENT: You'll see. They're twigs from a very fine pear tree. As a matter of fact I got them out of the garden at "Erendira." Now I want a mallet and a wedge.

PEDRO: Yes, Senor (Pause) Here they are.

STUDENT: Thank you. Now watch me carefully (SOUND OF TAPPING) I cut into the tree here, you see. Then I shape the end of the twig. I stick

it firmly into the crevice... (FADE)

VISITOR: I see. Tree-grafting. But there's nothing new in that.

AGRICULTURAL PROFESSOR: Oh, it is to these people. They've never heard of grafting. Why should they?

HEALTH PROF: That's the point you've got to remember all the time. The things we take for granted are quite unknown to people who have never had the chance of learning about them. Take latrines for example. I shall never forget the day I went with my students to a place called Cucuchuco.

AGRICULTURAL PROFESSOR: All right, Jose, we'll hear about your latrines later. Let me finish my story. A few weeks later the student goes back to see Pedro (FADE)

PEDRO: Senor! Senor! Look!

STUDENT: Yes, it's taken very well. You'll get plenty of blossom.

PEDRO: It's a miracle, Senor! And shall I get pears from that old apple-tree?

STUDENT: Of course. Now look, here are some more twigs. I want you to graft them on to that other tree while I watch you. (FADE)

AGRICULTURAL PROFESSOR: So the idea quickly caught on. Pedro learned how to do the grafting himself. Then the

other villagers heard about it and they wanted to learn, too. In time the people of Casas Blancas will have a good crop of pears, perhaps with a surplus at Patzcuaro market. Now that doesn't solve the problem of course, but it is a step. We've also introduced a hardier kind of wheat which will withstand the upland climate. Then there were those pigs--

THIRD PROF: (Laughing) Those pigs! That wasn't quite so easy, was it, Arturo?

AGRICULTURAL PROFESSOR: Well, we have to make our mistakes. The boys were a bit hasty at first, I admit, but they learned.

VISITOR: What happened?

AGRICULTURAL PROFESSOR: Well, it was at a village in the same area- a place called San Gregorio. Two of my students who were attached to the village noticed that many of the cattle were sick and dying, especially the hogs. They taled to the head man about it.

HEADMAN: Always it happens, Senor. Every year it happens and this year it is worse. My neighbor, Sanchez, had ten hogs. Nine have died. My neighbor, Jimenez, lost all his stock last year.

1st STUDENT: Have you tried to find out the cause?

HEADMAN: These things happen, Senor. There are good years and bad years. It is the will of God.. (FADE)

1st STUDENT: (Quietly to 2nd Student) (FADED IN) I'll tell you what I think it is.

2nd STUDENT: Don't tell me. Hog cholera?

1st STUDENT: No doubt about it. Did you see that sow? It's unmistakable. Look, we'll get some serum and hypodermics and we'll clear this place up in no time at all. We'll do a blitz on them. What do you say? Next Monday?

2nd STUDENT: O.K. Suits me. (FADE)

AGRICULTURAL PROFESSOR: They were young men, you see, full of enthusiasm, proud of their technical knowledge. I let them have their way. But when they went back to San Gregorio armed with their serums and syringes and what not they got what they hadn't bargained for (FADE)

EFFECT: FADE IN SQUEALING OF PIG AND HOLD IN BACKGROUND

HEADMAN: (FADED IN) Senor, Senor! What's that you've got in your hand?

1st STUDENT: It's ahypodermic syringe. There's no harm in it.

HEADMAN: Let me look. Senor, come here! (QUIETLY) Let me see this thing.

2nd STUDENT: It's quite harmless, Senor. Look, you see this bottle? Inside it there's a medicine. You know when your wife was ill the doctor gave her medicine out of a bottle.

HEADMAN: But that medicine was red. This has no color.

1st STUDENT: Yes, but that doesn't matter, Senor. This instrument is made to give medicine to your sow. Only instead of making her drink it we inject it into her blook, like this.

HEADMAN: Stop!

2nd STUDENT: I tell you it is <u>good</u> medicine, Senor! Your hogs are all dying. This will save them. In a few days, perhaps hours, you will see how she'll get better.

HEADMAN: Stop, I tell you!

EFFECT: <u>CROSS FADE SQUEALING PIG TO MURMUR OF ANGRY VOICES</u>

1st STUDENT: But, Senor, we mean no harm. We want to help you. Let me show you--

HEADMAN: No! Stand away! If you don't I'll throw you out!

<u>MURMUR RISES TO ANGRY CRIES, WHICH DIE AWAY AS HEADMAN SPEAKS</u>

Senors, you are strangers here. We don't know you but we don't like you. We don't need foreigners to show us our business. Now get out! (MURMURS OF ANGRY AGREEMENT)

2nd STUDENT: But, Senor, we want to help you! My friends and I have come a long way. We've brought medicine to cure all the hogs in your village.

HEADMAN: You heard what I said. Get out!

ANGRY MURMUR WHICH IS FADED OUT

(P A U S E)

AGRICULTURAL PROFESSOR: That was a lesson to all of us. It is no good trying to move too quickly. First you must get the confidence of the people, get to know and like them, get to the stage when they trust you -- which they will, after a time. That's what I told my students.

VISITOR: Did they win over the village in the end?

AGRICULTURAL PROFESSOR: Yes. Eventually the villages were sufficiently convinced to allow the students to inject their hogs. The result was that whereas they used to lose eight out of ten they now lose only one out of ten. The result has been that nowadays the people of San Gregorio and the surrounding villages buy their own anti-cholora serum. They do their own innoculations now. But what is just as important is that the students themselves have learned a valuable lesson in dealing with simple people: hasten slowly!

EFFECT: FADE, INTRODUCE STEADY OSCILLATING NOTE PEAK AND FADE

UNESCO OFFICIAL: You see? There are two examples of the kind of work we're doing. Two minor victories- nothing much in themselves- but at least a beginning. And I could quote you a hundred similar cases.

AMERICAN: Yes, it's interesting. But tell me something. The Professor talked about sending the students to the villages in groups. How are the groups selected?

UNESCO OFFICIAL: Well when the students come to Erendira from Peru, or Ecuador, or El Salvador, or wherever it is, they usually want to specialise in some subject or another--health, agriculture, home economics, and so on. We try to arrange that each team includes at least one specialist in each of these branches of education. Because, as I explained to you, all these problems are inter-related.

ENGLISHMAN: I see. But what are they like, these Mexican villagers? How do they live? I'd like to see one of their villages.

UNESCO OFFICIAL: You can see several. Wait a moment.

EFFECT: OSCILLATING NOTE WHICH RISES SLIGHTLY AND IS HELD AT A LEVEL PITCH.

UNESCO OFFICIAL: Now what do you see?

ENGLISHMAN: A road, a dusty road full of pot holes, beside the lake. There's a car lurching and bumping along it.

UNESCO OFFICIAL: That's one of the Crefal Cars.

ENGLISHMAN: Crefal, what is that?

UNESCO OFFICIAL: It's the name we give to the Unesco Centre- made up from the initials Centro Regional de Educacion Fundamental Para La America Latina. But the villagers call it Crefal for short. Now that car's taking a group of students to their various adopted villages. They do the same trip practically every day. The only difference ttoday is that they're taking a visitor with them--the journalist you saw at the Professor's house. Now we'll go a bit closer.

EFFECT: OSCILLATING NOTE DESCENDS IN PITCH AND CROSS-FADES TO SOUND OF CAR

AMERICAN: The're entering a village. Mud-brick houses, a long narrow street, rutted and pot-holed. Bright sunshine and deep shadow. Pigs and fowls wandering in the road. Men in big sombreros, some squatting in the shade of their doorways. Some are working in the main square. The car's stopping. People are getting out--two young men, a vivacious dark-hard girl,

and the journalist.

UNESCO OFFICIAL: That's the village of Nocutzepo. Now listen.

CONTROL: EFFECT: SOUND OF CAR STOPPING. DOOR OPENS. BRING UP MURMUR OF VOICES.

3rd STUDENT: Hullo, Carlos, Hullo Alfredo, Buenos Dias.

VOICES: Buenos Dias, Senor, Buenos Dias.

4th STUDENT: I see you're getting on with the basket ball pitch.

2nd VILLAGER: Si, Senor. Come and look at it.

4th STUDENT: You've no idea what this place was like when we came here--you can see the state of the roads--but the're improving them. They've got all the problems here--bad sanitation, a tainted water supply, which of course means typhoid-- everything. But the main job we had to tackle was their apathy and indifference. There's literally nothing to do here-- nothing for the youngsters to do in what spare time they have. So we suggested they build a basket-ball pitch.

VISITOR: Why basket ball?

4th STUDENT: Yes, I suppose it does sound a bit juvenile to you. But the fact is the Tarascans love basket-ball. They're all Tarascan Indians round here, you know. So they set to work to make a pitch in the plaza. They're laying the

foundations now. Fernando's responsible for that. He's our recreation specialist. I look after health.

3rd STUDENT: (COMING IN FROM A DISTANCE) Yes, that's fine, but you'll need a level here.

VILLAGER: A what, Senor?

3rd STUDENT: A spirit level. I'll get you one. (TO VISITOR) All these men are giving their time and labor free to build this pitch. It probably seems rather naive to you but these chaps get a great kick out of this. The whole spirit of the place has changed since we first came here.

VISITOR: They feel they've got something to work for?

4th STUDENT: Exactly. Once they were convinced that we weren't 'politicos' as they call them-- or tax collectors in disguise-- they couldn't have been more co-operative.

GIRL: Fernando, I think I'll go and see that girl at the end house. Her mother's sick and she asked me to see her.

4th STUDENT: O.K. But while you're there I'd like to show Mr. Cottrell the new well. Would you come with me, please? (FADE)

ENGLISHMAN: Now the little group has split up. While the girl student goes off to a house at the end

of the village the rest of the party enter a narrow alley. At the end of the alley there's a well. Two young girls are pulling up earthenware jars full of water.

UNESCO OFFICIAL: And full of typhoid and dysentery, I'm afraid. But what else can you see?

ENGLISHMAN: Some men building a stone tank.

UNESCO OFFICIAL: That's - well, let us listen to the student explaining- he's the health expert by the way- a Mexican doctor.

4th STUDENT: It's so difficult to explain the relation between disease and the causes of disease. Any British or American child knows that diseases are spread by germs. That's not because you're more intelligent than these chaps. Don't run away with that idea. You're taught it at school. You read books and newspapers - you see films. But how can you expect an illiterate peasant, who's never been outside his village, to realize that the thing which kills his wife or his child is in the water he drinks?

VISITOR: I understand you.

4th STUDENT: Now this represents a little triumph for us. We've proved to the people of this village that if they drink pure water they're not

likely to get typhoid or dysentery. So they've given their time and their labor to build this cistern. They're going to buy an electric pump - with their own money, mind you- to pump the water into the cistern. Then we'll install a filter, and for the first time Nocutzepo will have pure water.

GIRL: Mr. Gonzales, Mr. Gonzales!

4th STUDENT: Yes, what is it?

GIRL: Maria's mother - she's very ill. She has a fever. It looks like-

4th STUDENT: Typhoid?

GIRL: I'm afraid so.

(P A U S E)

4th STUDENT: (To visitor) You see what I mean?

VISITOR: Yes, I see.

4th STUDENT: (To Girl) All right, Pilar. I'm coming. See you later, Mr. Cottrell.

ANNOUNCER: That is the end of the first Part of "EXPERIMENT IN MEXICO"- a dramatic impression by Leonard Cottrell of the first international centre in the world for training teachers in Fundamental Education.

It was based on material gathered by Leonard Cottrell during his recent visit to the Unesco Centre in Patzcuaro in Mexico, and was produced by him in the studios of Unesco

Radio in Paris. In a subsequent programme you can hear what happened when the visitors went to Jaracuaro and other Mexican Villages and watched the Unesco students at work.

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"EXPERIMENT IN MEXICO"

PART II

A dramatised feature
on the Unesco Centre
for Fundamental
Education at
Patzcuaro, Mexico.

Duration: 30 minutes

Written and produced
by
Leonard Cottrell
(Radio Civision)

RECORD No. 1648

LANGUAGE: English

RADIO...UNESCO...RADIO

"EXPERIMENT IN MEXICO"

PART II

ANNOUNCER: Unesco Radio presents Part II of "EXPERIMENT IN MEXICO" a dramatized impression of the first international centre in the world for training teachers in the technique of Fundamental Education. All the material on which this programme is based, including the dramatized scenes, is based on the personal experience of Leonard Cottrell, writer of the programme, during his visit to Patzcuaro in Mexico. The programme was produced by Leonard Cottrell in the studios of Unesco Radio in Paris.

Listeners who heard the first programme in the series will remember that at the village of Nocutzepo, the Unesco Doctor was talking about disease brought on by bad water.

NARRATOR: And that scene, gentlemen, is taking place all over the world. In Africa, in Egypt, in India and Pakistan, in the villages of Asia..

UNESCO OFFICIAL: Does that answer your question, Sir? You remember you asked "Why can't these people help themselves?"

AMERICAN: I get you. But the car's going off now.

ENGLISHMAN: Where's it going?

UNESCO OFFICIAL: Oh, to another village, a place called Jaracuaro. But we shall have to get back. Time's running short and I'm sure you gentlemen are very busy...

FRENCHMAN: No, there's still plenty of time.

AMERICAN: Give us a break. You've taken us this far.

ENGLISHMAN: Seriously, I really would like to see what happens at the next village. What's it called?

UNESCO OFFICIAL: Jaracuaro. All right. Just a quick glimpse.

EFFECT: OSCILLATING NOTE RECOMMENCES IT RISES IN PITCH THEN DESCENDS

ENGLISHMAN: Closer! Closer! I can't see properly.

UNESCO OFFICIAL: Is that better?

ENGLISHMAN: Yes, I can see now.

EFFECT: NOTE DESCENDS, RESTS AT LEVEL PITCH THEN IS CROSS-FADED TO PLASH OF PADDLES AS CANOE CROSSES LAKE

ENGLISHMAN: (quietly) They've left the car now. They're in a kind of canoe; a big flat-bottomed affair- rather like one of those dug-out canoes which you see in pictures of prehistoric man. The lake's very calm: it's late afternoon, the sun is low on the water. The mountains are a ruddy gold in the sun. They look calm, almost beneficient, cradling the lake in their arms. It's a lovely scene...

EFFECT: BRING UP MUSIC AND PLASH OF PADDLES
TAKE OUT MUSIC AND LEAVE PLASH OF PADDLES BEHIND NEXT SCENE

3rd STUDENT: Every day it gets more difficult to get across this narrow strip of water.

VISITOR: Why?

4th STUDENT: Because the level of the water is dropping all the time.

3rd STUDENT: Look at the mud.

VISITOR: Why is it dropping?

4th STUDENT: Nobody knows. The villagers say it is all due to Paracutin.

VISITOR: The new volcano?

4th STUDENT: Yes. The one which spouted out of a corn-field in 1944.

VISITOR: But Paracutin's fifty miles away, or more.

3rd STUDENT: True, but you can hear it quite clearly, sometimes, and see the smoke. Wait a minute. Listen.

EFFECT: DISTANT RUMBLE, LIKE A ROLL OF DRUMS

3rd STUDENT: There you are. That's Paracutin- the cause of all their trouble so the people say. Per-haps they're right. I wouldn't know.

VISITOR: But that's ridiculous- what proof is there that there's any connection between this lake and a volcano fifty miles away?

3rd STUDENT: Agreed. But if you'd lived here all your life-

if you were an Indian with all the folk-memories of the Indians in a land of volcanoes, wouldn't you think the same?

VISITOR: Possibly- I don't know.

4th STUDENT: None of us knows. But you can see the fact for yourself. Look at that quay over there - fifty feet above water-level. A few years ago, the canoes used to load there. Now it is useless.

VISITOR: What is this place called?

3rd STUDENT: Jaracuaro. It's a village on an island, as you can see, and they don't grow things here. They've no land so they make things. And do you know what they make? Sombreros- straw hats.

EFFECT: SLOWLY FADE FLASH OF PADDLES

UNESCO OFFICIAL: Jaracuaro's one of our most interesting communities. You see, the village lives almost entirely by making things, not growing things. They make straw hats. In practically every one of those little houses you'll hear sewing machines at work.

That room is a living room, bedroom and workshop all combined. The journalist is asking a few questions. Listen...

EFFECT: BRING UP SOUND OF SEWING MACHINE

VISITOR: How many sombreros can you make in a day, Senor?

2nd Villager: On a good day, perhaps three.

3rd STUDENT: And your whole family helps you?

2nd VILLAGER: Si, Senor.

VISITOR: What do you get in the market for three sombreros?

2nd VILLAGER: It depends. Perhaps four pesos.

3rd STUDENT: That's roughly three and sixpence, or half a dollar.

VISITOR: Half a dollar a day! But that's nothing.

2nd VILLAGER: But, Senor, soon we shall have electricity! That we can have motors to drive our machines. We can have electric irons to iron the straw. Then perhaps my family will make six hats a day, perhaps eight. And we shall have light in our houses at night. The senors from Crefal have done this for us. They have been very good friends of Jaracuaro.

VISITOR: Is that true - that you're giving them electric power?

3rd STUDENT: No, it's <u>not</u> true. Come outside and I'll tell you all about it.

EFFECT: <u>FADE SOUND OF SEWING MACHINES</u>

3rd STUDENT: The simple facts are these. We discovered that there are two main problems at Jara-

cuaro. First they don't get enough for their work. They pay high prices for their raw material - the palm fronds from which they make their sombreros. And their production methods are uneconomic. Hand labor and all that. The second problem is transport. You saw that narrow strip of lake we crossed?

VISITOR: Yes.

3rd STUDENT: Everything has to be carried across that strip of water in canoes - all the raw material, their food, everything. So the students attached to Jaracuaro studied the problem and said to the villagers: "What you need is, first, electric power for your machines and second, why not build a stone causeway across the shallow water and so cut out this slow, cumbersome canoe transport?"

VISITOR: I see.

3rd STUDENT: And they're doing it! Once we'd explained how they would overcome their difficulties the people of Jaracuaro themselves set about the job.

VISITOR: How?

3rd STUDENT: First they organized groups of men to bring posts from the mainland to carry the power lines. They did it all themselves, bought the

poles, ferried them across, and put them in position. Crefal negotiated with the Mexican Government and they've agreed to supply the power.

4th STUDENT: Then there was the problem of the raw material. They paid too much for it. The trouble was that they hadn't learned to organize themselves. Each little manufacturer bought his own palm fronds for the best price he could get. So we told them that if they all get together and bought their stuff collectively, they might get a cheaper rate. Oh, it was difficult at first because these people are naturally suspicious. They are individualists to a man. But eventually we won them over. The leaders of the village got together and organized what we call a buying co-operative, and it has worked very well.

VISITOR: And the causeway across the lake?

3rd STUDENT: It's almost finished. The Government supplied a tipping truck, and the men of Jaracuaro supplied the labor, free, to quarry the stone and carry it to the lake. <u>But they've done it all themselves</u>. All we did was to show them what to do and how to do it. (FADE)

EFFECT: LOW OSCILLATING NOTE WHICH RISES TO A PEAK, THEN FADES

UNESCO OFFICIAL: Well, there you are. That's what we mean by Fundamental Education. You've heard about agriculture, health economics. Is there anything else?

AMERICAN: No, I guess you've explained everything pretty well.

ENGLISHMAN: You certainly have. But I think you've made it sound a bit too easy. Surely you must have had a pretty tough time to start with?

UNESCO OFFICIAL: That's true. Techniques, know-how, call it what you will, they just aren't enough. You saw that in the story of the pigs. You've got to love the people before you can help them. You've got to be prepared to put up with humiliation and rebuffs. You must have infinite patience. That's the core of the problem. Would you like to have a couple more witnesses before I take you back home?

ALL: O.K. Sure, we'd like to, etc. etc.

UNESCO OFFICIAL: Right. Then let's go back to that little dinner party at the Professor's house. There are two guests who haven't spoken yet - the Professor in charge of Health Education and a woman student, Miss Martinez. Let's go over to them.

HEALTH PROF: (Faded in) I think the most difficult community our students had to deal with was Cucuchucu. I shall never forget the first time we saw it. The streets, or rather what were called "streets" were simple and most dirty passages through which pigs, donkeys and other animals used to walk. Through the frail hedges of the patios we could see extremely dirty women walking barefooted in excrement. Children relieving themselves at the doors of their houses, and pigs waiting to gorge themselves. The houses were windowless and in as bad a sanitary condition you could imagine.

At first the people were openly hostile. "We don't want foreigners here", they'd say to us. They refused any offer of help from us. In some cases they actually showed violence to the students. But they went on patiently trying to get their confidence.

Later on, when we were able to approach the houses we found that in most cases they had only one room which was used for all purposes. Everybody slept there, including the children; crops, grain, tools were all kept there. The room was a dining-room and kitchen

as well, and there slept hens, ducks, dogs and so on. The young boys and girls had nothing to occupy their spare time. There was no healthy occupation, no sport. Their eyes were very sad and one could feel a general unhappiness deeply rooted in them.

Well, as days went by the teacher-pupils worked harder and harder, trying to make themselves accepted and useful. The thing which finally won the villagers over was the scourge of typhoid fever. There were many cases of typhoid in Cucuchucu. The people remembered with terror the past epidemics. Everyone had lost someone - a husband, a wife, a father. When we were able to prove to them by practical demonstration that the cause was the bad water supply they were pathetically grateful. From then on we knew we had won their hearts. They even dug a new well and installed a filter at their own expense. They told us "We'll have a new well- whatever the sacrifice. We must have clean, pure water." They even approached the governor of the State of Michoacan. He received their delegation cordially and the government gave them the pump and some of the

accessories. The people of the village gave the rest of the material and labor. So now Cucuchucu has a pure water supply.

MISS MARTINEZ: And that was only the beginning. They built a basket-ball field in the centre of the village. The women learned to make clothes to sell. But the amazing thing was the change in the spirit of the people. Instead of being listless, apathetic, fatalistic, they became hopeful. They welcome us now. They are kind to us now.

AGRICULTURAL PROFESSOR: They weren't very kind to you at first, I remember.

MISS MARTINEZ: What else could you expect? We were strangers.

VISITOR: Miss Martinez, how did you manage to get their friendship?

MISS MARTINEZ: By being friendly.

VISITOR: I'm sure it wasn't as simple as that.

HEALTH OFFICER: It isn't. You mustn't think that the people of the communities welcomes us with open arms; there are all kinds of resistance to break down. First we are foreigners; admittedly, the students all come from Latin American countries and they all speak Spanish, but they are still foreigners. When you have

lived in a small village all your life and been denied the advantage of even elementary education, your horizon is bound to be limited. Even the people from another state of Mexico are foreigners, so you can imagine what the students have to contend with. Then there are other reasons for their suspicion- political perhaps or religious. Unless you approach the problem quite humbly, and are prepared for snubs, you have not a hope, and that calls for a very special type of personality-- a combination of the practical man and the idealist -- almost the saint. Not everyone can measure up to such standards - it is not easy.

It is difficult at first when you come to a place full of enthusiasm and ideals, to put up with the sustained hostility, but it is a healthy experience for the students. The incapable ones soon fall by the wayside, the others just keep on trying and eventually they succeed. Maria, I think, we should tell the visitors about your experience. You could not have a better example - it's what I call Fundamental Education in a nutshell. Tell him, Maria.

MISS MARTINEZ: All right. Well, when we arrived they didn't let us as much as get into their houses; they avoided meeting our glances. They closed their doors. Now the women chat with me - I go to their houses, they invite me to eat a piece of tortilla because, and that's worth mentioning, they only eat twice a day - around ten o'clock in the morning the first time, and around five p.m. the second. But in spite of their economic situation, which is very bad, they are sweet with me now, they like me now, now there is affection. I think that in this work of fundamental education, affection is fundamental.

VISITOR: But how did you manage to get the friendship of these people?

MISS MARTINEZ: That's rather a long story. We, here, of the team, we went about walking because we didn't manage to gather the villagers together, or to get them to talk to us. They speak Tarascan and Spanish perfectly well, but when they noticed us in the neighborhood, they would stick to Tarascan which we don't understand. Well now, as a woman, I had to dress in a very simple way with a shawl. I'd say "hullo" to a child in the street and try to get into

their houses under the slightest pretext... For instance, to tell them their child was sick - if I saw that one of them had a cold or something like that. The women would only answer me in monosyllables - no more. After that, because I took an interest in the child, I would bring some medicine. I would tell the woman to give him a little tea. I brought her some aromatic herbs and then they began to realize that I was quite selfless in this. They had to, didn't they? Then, if they were grinding their grain, I would say "Look, lady, let's make a tortilla soup. Shall we? I'll tell you how." And the first time I had to cook there, in the rural surrounding, I had to bring my own things, which I gave away without as much as mentioning that I cared at all for those things. Later on, after five or six such occasions, I told them "Listen, now we're going to cook with what you bring from your houses - what have you got?" "Well, Miss" they'd say, "We have chilacayotes and calabash". "All right then, next time that's what we will cook". "Who is to bring the sugar?" Then another girl would volunteer. And we cooked these dishes

collectively and we would share them. That is how I managed to make my way with them. You know that the woman's influence is decisive with the men, and later on, even the men would be pleased to see me, and greet me, and my colleagues of the team as well, and now they accept us perfectly well - all of us, and they like us very much.

VISITOR: But what are you teaching to them?

MISS MARTINEZ: As I told you, I started by teaching women how to prepare food that they could afford that would be substantial, well presented and somewhat varied. This is as far as diet is concerned. As for hygiene, that was a problem. First of all I want to get the affection of these women well earned, and then I will walk into their houses firmly to improve them. We are already at it, improving the kitchens, their fires so that they don't cook on the ground, so that they will work more comfortably. But I'm telling you it's a very delicate problem which we're dealing with gradually. For the time being I'm still at the convincing stage - at the stage of mere affection for these people, getting their confidence so that I can go ahead.

HEALTH PROF: You see what I mean. You have simply got to start on the ground floor, forget your background or pride and fight at all costs in self-conscious sense of mission. The moment you show patronage, you are lost. But it is no good just sitting back and hoping for the best; besides patience, you must have faith and quite a strong will. Tell him about the Petates, Maria.

MISS MARTINEZ: Well, most of the women work like their husbands in agriculture and home industry, making petates which are straw mats. They use a material called "tule" that cannot be found here. They have to bring it themselves on their backs from neighboring villages. I studied the budget of this mat-making, and I calculated that making a mat takes from five to six labor hours, two pesos worth of raw material, so they make fifty centavos for five hours work - that is to say, ten centavos an hour - it's practically nothing, no benefit to speak of for them. So I'm telling the women that they've got to sew and embroider, that they can make very pretty blouses and table-cloths, little girl dresses - that they can sell them for much money, more pro-

fit. They're becoming interested in this. First they would tell me and I would hear them with sadness: "My hands are hard - I can't bear my fingers to sew, because that's what mat-making does to them deforming them, making them stiff, very stiff". Then they would give me another reason - "This is my fate. This is how we're born and this is how we'll die. We are not to work in anything else. My mother made mats, my father made mats, my grandmother made mats, my uncle makes them. All of us - that's how we have lived, and that's how we will die."

This idea is soo deeply rooted in them that we of the team have seen with great pleasure that they come twenty or twenty-five women of the community around me in the afternoon, women and young girls, to embroider, to cook, to prepare some recipes that they can use to prepare their food. Very simple little things but in which they put a lot of interest, and this phrase "This is my destiny" they do not tell me so often any more, because I wont accept it.

You see, this work of fundamental education is one of complete selflessness, of

much affection. I don't mean for the colleagues of the work here at Crefal but for the men and women of the community. It's amazing how just a greeting, a smile can make a person of a rural region happy. But only if they can prove by our work that we are always doing it out of affection and genuine liking and not out of personal interest. That's how one gets the confidence of the people. (FADE)

EFFECT: LOW OSCILLATING NOTE, WHICH PEAKS AND FADES

UNESCO OFFICIAL: Well, that's all we have time for, I'm afraid. I've only showed you a few typical examples of the work of Crefal. For instance, I haven't shown you anything of the literacy training. But that comes later, and in any case our time is up. We must get back.

ENGLISHMAN: Wait a minute. Wait a minute. How many of these Centres did you say Unesco was setting up?

UNESCO OFFICIAL: It all depends on the money available. Crefal is the first centre. There'll soon be one in Egypt, as I said. Then there are going to be various purely national centres, financed principally by the countries concerned, and drawing students from those

countries. But Unesco and other United Nations Agencies will help by supplying experts who will come from various nations. And, of course, if there is enough money available other purely international centres will be set up - on the lines of Crefal.

ENGLISHMAN: And how many experts do you expect to train?

UNESCO OFFICIAL: It's difficult to say, as a preliminary target, say, ten thousand.

NARRATOR: Ten thousand! Ten <u>thousand</u> you say. Gentlemen, there are twelve hundred <u>million</u> people like me in the world. Do you really think you are doing enough? You all want peace, you say, security for your homes, your wives and your children. Do you think you can ever get a permanently peaceful world when that world contains twelve hundred million miserable and hungry people?

ENGLISHMAN: He's right, you know.

AMERICAN: We're only scratching the surface of the problem.

FRENCHMAN: It's a drop in a bucket.

AMERICAN: And yet these guys we've seen are doing a wonderful job. A real practical job of work and no starry-eyed stuff. Why can't there be more centres like this?

UNESCO OFFICIAL: Just a minute, gentlemen. I think you've missed the point. When these teachers return to their own countries the plan is that they should train other teachers in the techniques they have learned. Then they'll teach other teachers, and so on. So in time the body of knowledge will grow-

FRENCHMAN: Like a snowball.

UNESCO OFFICIAL: Exactly. As for your question, why can't Unesco do more, let me ask you a question. Do you know what is the total annual budget of Unesco at the moment - subscribed by sixty-five Member States?

ENGLISHMAN: No idea.

UNESCO OFFICIAL: Eight million seven hundred thousand dollars, or roughly two and a half million pounds. It's much less than the amount a great city like New York spends each year in cleaning its streets. Do you know what Unesco costs you, Sir, as an individual Englishman? Two-pence a year. Two pennies a year. And to you, Sir, as a citizen of the United States of America, Unesco costs .025 cents a year. And that's the <u>total</u> budget, mind you. Out of that eight million seven hundred thousand dollars Unesco has to finance all its acti-

vities - not just Fundamental Education.

FRENCHMAN: Does Crefal get any help from the other United Nations Agencies?

UNESCO OFFICIAL: Yes, from the World Health Organization and the Food and Agriculture Organization. And some of the professors are lent to us by those Agencies. And, again, we couldn't have started Crefal without the help of the Organization of American States. Also the Mexican Government have provided us with the Headquarters House and helped in lots of other ways. Other national governments will also help in founding new Centres. But, by and large, the jam has to spread very thin....

ENGLISHMAN: Twopence a year. I can't get over that. Especially when I think of the criticism in some British newspapers.

AMERICAN: And in my country, too.

UNESCO OFFICIAL: Well, it's not a bad thing to have criticism - when it's fair and reasonable criticism. We aren't perfect. We make mistakes like any other organization. But, well, you've seen for yourself what we're trying to do. Can you honestly say that this work isn't worth doing, and doing well?

PAUSE

ANNOUNCER: You have just heard the second and final part of the programme "EXPERIMENT IN MEXICO", a feature programme on the first Unesco centre for Fundamental Education at Patzcuaro in Mexico. The programme was written by Leonard Cottrell from material which he gathered at Patzcuaro and produced by him in the studios of Unesco Radio in Paris.

CONTROL: MUSIC TO CONCLUSION.

WS/082.92

Extract from the report of the Technical Needs Commission, UNESCO, 1949.

LOW COST RADIO RECEIVERS

During its study of the reports on many countries, the Radio Commission noted a very low ratio of sets per population, more particularly because of the high price of receiving sets; apparently the average price of a set is U.S. $100 and the cheapest are sold at $50.

The Commission congratulates the Secretariat on the results it has already obtained, following the recommendations of the Technical Needs Commission in 1948, by interesting some of the principal radio industries of the world in the question of the large-scale manufacture of cheap wireless sets.

The Secretariat has now received estimates for the 10 types of sets, the specifications of which were prepared by the Commission in 1948. These estimates justify high hopes.

It is already evident that the industry can supply large numbers of simple sets at prices corresponding to the Commission's hopes and the technical features of which are often even superior to those indicated by the Commission.

The Commission notes that the interest of the world industry has been aroused and that the mass production of low cost sets may now be expected. This would remove the chief obstacle to the popularization of broadcasting.

The Commission asks Unesco to complete its survey speedily and to bring its results to the notice of the

governments concerned. It recommends Unesco to add to the information already gathered the following particulars:

(1) (a) The price of a complete set of space valves (tubes).

(b) The annual consumption of electric current by the set, assuming a use of three hours a day.

(c) The cost of the annual amortisation of all the valves (tubes) in the set.

(2) The lifetime guaranteed by the maker and the qualitative specifications of equipment used.

The Commission draws the Secretariat's attention to the following points:

(1) The sets and all the equipment used must be able to resist the climatic conditions of the countries for which they are intended (tropicalization).

(2) The sets must present every guarantee of safe usage (including protection against fire hazard); they must also conform to the regulations of the countries for which they are intended (label).

(3) Repairs must be within the capacity of a non-specialist electrician, without the need for complicated measuring instruments (oscillators, etc.).

(4) Handling of the set must be as simple as possible, both as regards switching on and selection of stations.

(5) In case of regenerative type circuits, all care must be taken to avoid "howling".

The Radio Commission suggests that the Secretariat draw the attention of the research departments of the radio electric industries concerned to the exceptional importance of the production proposed, which should justify the use of new technical devices with a view to still further lowering the price of sets.

These devices could include the following:

(a) The use of printed circuits.

(b) The replacement of valves (tubes) by semi-conducting elements such as the transistor; this element would be particularly important for the equipment of battery sets.

(c) The introduction of sub-miniaturization and automatic methods of industrial manufacture for spare parts.

The Commission particularly stresses the importance of drawing the attention of Governments and national organizations wishing to procure large quantities of low cost wireless sets, to the following points:

It will be necessary for official services to take in hand the problems concerning the distribution of these sets, which, as has already been done inccertain countries, should be on a non-commercial basis, so as to cut out the many customary middlemen. Manufacturers could not well be asked to make a serious attempt to reduce the price of these sets to the lowest possible figure, only to find prices considerably increased by the profits of such middlemen.

In addition, these sets, many of which will be intended for schools and other communities, should be exempt from customs duties and all sales taxes or charges.

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(In reference to paragraph No. (3), on repairs: The new method of repairing by a non-qualified person is as follows: the set is designed in such a way that the components are grouped in several easily removable blocks. For repairing, these blocks must be replaced successively in a given order. The block which is found to be faulty is then finally replaced while the others are returned to their original positions. This method requires neither measuring apparatus nor specialized skill. Moreover, it is an extremely rapid process).

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RECOMMENDATIONS

Extract from the report of the Technical Needs Commission, UNESCO, 1948.

MEANS OF RECEPTION

Unesco's studies in expanding the cultural and educational influence by radio to the great masses of people in the world who are those least favored economically have been based on a review of all the technical methods that have been developed and used thus far by many countries. These include:

(1) The use of radio receivers by private individuals purchased through established commercial agencies.

(2) The use of permanent community receiving facilities of the type where a central radio receiver, in combination with loudspeaker equipment, is used to provide programmes for rather large numbers of assembled people.

(3) The use of mobile community reception similar to the preceding method but where the equipment is itinerant and provides only temporary service in any one community.

Note. Facilities for cinema presentations and the origination of local programmes by recorded material or by means of the local microphone are sometimes combined with radio reception to increase the scope of methods (2) and (3).

A. The radio sub-commission urges Unesco to recommend to all Member Governments:

That, in all countries where needs of vast masses of people in receivers are great, the proper official authorities should be responsible for purchasing and distributing, on a non-profit basis, free from all taxes and duties of every kind, to schools and to communities, the receivers they need to meet basic requirements, so as to avoid additional costs involved in usual commercial transactions.

B. Private home receivers. There are three ways in which this important element of mass communications can be expanded:

(a) As has been previously stated the reduction of taxes, duties and fees and other restrictive influences on individual receivers in regions where the propagation of education and culture is most needed;

(b) the encouragement of industry to produce receivers of lower cost than those presently available. A separate recommentation was prepared in furtherance of this point;

(c) the encouragement of governments and philanthropic organizations to make free grants of radio receivers to schools, civic groups and individuals in regions of greatest need.

As regards point (b), the sub-commission on Radio held a special meeting attended by the following (including three

technical experts of the sub-commission):

Mr. E. A. Laport,
Chief Engineer, International Division, R.C.A.

Mr. S. E. Allchurch,
Secretary, the British Radio Equipment Manufacturer's Association.

Mr. George Havelka,
Director of Research and Development, Tesia.

Mr. G. Van Dissel, United Nations' observer.

Three experts invited for this meeting:

Mr. D. Clouet of "Le Matériel Téléphonique",

Mr. M. Jean of "Thomson Houston",

Mr. H. Piraux of "Philips".

This to study the possibility and feasibility of establishing types of receivers for operation on mains or batteries.

The purpose of their meeting was to determine the types of receivers necessary to meet the needs of vast masses of people in under-developed countries where illiteracy is high and purchasing power is at its lowest.

Following this meeting, the Radio sub-commission now recommends that Unesco should, in collaboration with major radio industries in the world, investigate the possibility of producing different types of low-cost receivers to meet varying needs in different parts of the world. It is suggested that the following five basic types of receivers should be considered:

(1) A fixed frequency medium-wave receiver suitable for receiving one station only.

(2) A fixed frequency receiver suitable for receiving one station only on tropical or short-wave bands.

(3) A tunable receiver for medium-wave bands.

(4) A tunable receiver for tropical or short-wave bands.

(5) A tunable receiver for medium-wave, tropical and short-wave bands with minimum specification.

The sub-commission realizes that this presents no new problem and that it has already received consideration by industry. However, it is considered that it presents a fundamental problem which must be overcome, and, for this purpose, it may be that special research will have to be undertaken, for example in the development of lower-cost valves and components which will be calculated to give satisfactory performance under tropical conditions. The sub-commission is cognizant of the fact that the level of purchasing power existing in certain densely populated parts of the world is so low as to preclude the possibility of private ownership of a radio receiver obtainable through normal commercial channels. It has in mind that the selling price level of the five recommended types of receivers should be of the order of $4 to $10. These prices would not allow for normal distribution margins and would represent manufacturers' selling prices to some non-profit distributing authorities. No firm estimate can be made of the quantity of sets involved, but it is considered that there is a market for several millions of receivers which should make such a project practical.

The sub-commission strongly recommends that serious consideration be given to the possibility of producing such units as a means of improving the standard of education and culture in the world and eliminating the level of illiteracy which now exists.

General specifications have been drawn up by three experts of the sub-commission as a guide of the type of units which are envisaged (see table on following page).

General Specification for Low-Cost Home Radio-Receivers

Type	Source of Power	Frequency Range	Sensitivity in micro-volts	Tuning	Selectivity	Audio input to speaker	Res. to tro-pic-al Cons.	Wire aer-ial	Circuitry chassis and cabinet
1 A	Battery	530-1,600 kc/s	150-250	Fixed	30 db at 50 kc/s	0.1 w	Yes	50 ft.	Design optional
1 B	AC/DC	530-1,600 kc/s	150-250	Fixed	30 db at 50 kc/s	0.3 w	Yes	50 '	"
2 A	Battery	3-18 mc/s	80-120	Fixed	30 db at 25 kc/s	0.1 w	Yes	50 '	"
2 B	AC/DC	3-18 mc/s	80-120	Fixed	30 db at 25 kc/s	0.3 w	Yes	50 '	"
3 A	Battery	530-1,600 kc/s	150-250	Direct Var.	30 db at 50 kc/s	0.1 w	Yes	50 '	"
3 B	AC/DC	530-1,600 kc/s	150-250	Direct Var.	30 db at 50 kc/s	0.3 w	Yes	50 '	"
4 A	Battery	3-18 mc/s	80-120	Direct Var.	30 db at 25 kc/s	0.1 w	Yes	50 '	"
4 B	AC/DC	3-18 mc/s	80-120	Direct Var.	30 db at 25 kc/s	0.3 w	Yes	50 '	"
5 A	Battery	530-1,600 kc/s 3-18 mc/s	50-75 80-120	Direct Var.	30 db at 25 kc/s	0.2 w	Yes	50 '	"
5 B	AC/DC	530-1,600 kc/s 3-18 mc/s	50-75 80-120	Direct Var.	30 db at 25 kc/s	0.5 w	Yes	50 '	"

Notes: Battery sets to include battery cable. AC/DC sets to include 6 ft. power cord. AC/DC for 110/220 v. +/- 10%. Fixed fre. adjustment for frequency of local station.

Extract from ANALYSIS OF MANUFACTURER'S REPLIES TO UNESCO ENQUIRY.

CZECHOSLOVAKIA.

Kovo.

1A, $7.96; 2A, $10.60; 3A, $12.40; 4A, $12.60; 5A, $15.20; 1B, $9.38; 2B, $13.72; 3B, $15.60; 4B, $15.80; 5B, $18.32.
Standard materials without tropical proofing. Quantity of 100,000 sets.

FRANCE.

The request was passed by the Syndicat des constructeurs de matériel radioélectrique to its members. (Basis: 350 frs.--$1.)

(a) Ariane.
3B; Metal case $12.55, inclusive of simple packing.

Without tropical finish.

(b) Compagnie francaise Thomson-Houston.
1B and 2B; $9.15 for 100,000 sets. $8.70 for 200,000 sets.

3B: and 4B: $9.40 for 100,000 sets. $8.95 for 200,000 sets.

Excluding production tax. Tuning by induction coil and core. Sheet metal case.

(c) Etablissements Gailard.

2-valve receiver, dry batteries, type 3A and 4A but with less sensitivity and selectivity. Materials suitable for tropical use (accumulators separate and tropical-proofed, impregnated insulators, trolitril valve-holders, insect proof) about $10. High-quality receiver with a 25 watt amplifier for collective reception, the whole equipment being carefully proofed for use in the tropics. Cost of a complete set $189.

(d) La Radio de France.
Type 1B; $12.80. Type 2B: $13.10. Type 3B, 4B: $13.95.

Type 5B: $18.50. The A types are designed for working off vibrator and the price is increased by $5.70 (power supply from 6-volt battery). Prices without packing. Metal case, carefully tropical proofed. Simplified receiver with dry batteries: about $10. Receiver followed by amplification stage to 12 watts for collective listening. $125 complete including 6 volt 120 amp. hr. battery and all accessories.

GERMANY.

The German radio industry was asked by the Unesco Office in Germany to study this question. Three of the five manufacturers approached replied to the questions.

(a) Blaupunkt (Darmstadt).

Uniform price of $13 for all types 1A, 1B, 2A, 2B, 3A, 3B, 4A, 4B. Price of $14 for 5A and 5B. All models are superheterodyne sets in bakelite case. Price based on a minimum of 250,000 sets. Packing and valves included in the price.

JAPAN.

Joint proposals were submitted by 19 manufacturers. Assuming a quantity of 500,000 receivers, and prices not including valves and batteries, the following approximate figures are obtained, after an addition representing the cost of the valves; 1A, $5.10; 2A, $7.85; 3A, $5.90; 4A, $8.50; 5A, $11.55; 1B, $6.30; 2B, $8.40; 3B, $6.55; 4B, $9.50; 5B, $12.65.

The equipment does not appear to be tropicalized, but the general designs are particularly well-adapted to the pro-

blem in question. Figures quoted are cost prices ex-works without profit margin.

UNITED STATES.

Contact was established with the Radio Manufacturers' Association of America, and letters were sent to 60 manufacturers of receiving sets listed in the yearbook of radio and electrical equipment manufacturers. Out of 12 replies received, five fulfilled the proposed conditions.

(a) General Electric.

Two proposals for type 3B receivers. The most suitable is a superheterodyne receiver (3 valves plus rectifier). $9.50 for 10,000 sets. Case of moulded material. Commercial model in normal mass production without tropical finish.

(b) Packard Bell Company.

A price less than $10 for types 3B, 4B and 5B would probably be possible.

(c) R.C.A.

1A: $5.71 for a minimum of 100,000 sets; $5.44 for one million. Price ex-works, without export packing or accumulators. 5B: $14.25 for 100,000 sets. $13.67 for 1 million. Prices for other types all fall within these limits. Extra charge for tropical finish.

(d) Westinghouse.

This firm advises investigation of the possibilities of a simpler set than those concerned in the enquiry. Price

of a crystal set estimated at $1.50.

(e) Zenith Radio Corporation.

3B: $7.30. 4B: $11.45. 4A: $11.65 (without battery). 5A: $16.15 (without battery). 5B: $15.90. Bakelite case. Quantity of 100,000. Reduction of 5 per cent above 500,000. Price ex-works. Material designed to withstand heat and humidity.

Note. Japanese manufacturers quote the lowest prices obtained. There would probably be an extra charge, however, for tropical finish. Hence, if tropical-finished equipment is assumed, the following prices would result: about $7 for a fixed-frequency battery receiver, $9 with variable frequency but one waveband only, $14 for superheterodyne.

The above figures represent the lowest costs which can be expected in the present state of the enquiries which have been made.

Manufacturers in other countries were approached, but the proposals given above were the only ones received.