The goals of population education are to help children understand, and act in accordance with, the impact of population characteristics on an international, national, and individual plane. It has been only within the last ten years that countries have paid systematic attention to the development of educational programs. The specific form of these programs varies from country to country, but there is a consensus among population educators that these concepts should be infused in all relevant subject areas and grade levels—not constitute a special course. Several countries, such as Korea, are well along in laying the foundations for a sound program, but Chile is the farthest advanced in actually developing a national program. They have not only developed the conceptual scheme for infusing population education into the elementary and secondary social studies curriculum, but have translated the scheme into instructional materials. The program is interdisciplinary, flexible, and stresses inquiry methods. The Chilean model is incomplete, however, in that it does not include a development in the biological sciences comparable to that in the social sciences, nor is there an institutionalized method for introducing these concepts in teacher training programs. (JLP)
In March 1970 the American Association for Supervision and Curriculum Development sponsored a World Conference on Education at Asilomar, California. The Working Party on the Social Studies, which included representatives from nine countries, developed a "Statement of Objectives and Approaches for Improvement of Social Studies" that began:

"The purpose of the social studies is to educate students toward the development of a world in which all human beings may live in dignity. The goals of learning should be the construction of a future world system which permits full realization of human dignity; that state in which all human beings enjoy material well being, the benefits of education, access to information, freedom from oppression and violence, participation in making decisions which affect their lives and a respectful, nourishing and fulfilling relationship with all forms of life and their environment." 1

The field of population education, though by definition it transcends the boundaries of the social studies, shares these goals. Population educators the world over are concerned with helping children to understand the impact of population characteristics and processes on national development, both in the short and long run, as well as their impacts on the individual and his family. On the one hand, we are concerned with developing an informed citizen, capable of understanding population characteristics and processes as they affect society, and capable of making responsible decisions with regard to public policy as it might affect, and be affected by,
these processes. On the other hand, we are concerned with the individual in his personal and family life. We hope that he will, as a result of the knowledge and understanding he has achieved through his education, make responsible decisions concerning his own reproductive behavior. The key concept for population education, as for all education, is "responsible decision making." In the words of a Philippine educator, the pupils "must be taught to act in consideration, not only of their own welfare, but the welfare of their neighbors, if not of all mankind."²

It is likely that most countries are engaging unconsciously in some form of population education through the formal school system. Textbooks, curriculum guides, traditional stories and other teaching materials most probably contain population relevant content. David Burleson of the University of North Carolina humorously charted his own education in population, and the opportunities missed throughout his 12 years of "specialized sitting," in a speech before a group of teachers this past April. "In the sixth grade," he recalled, "we learned about bars and graphs, but Miss Dardene failed totally to relate the information to people. The year would have been lost in this development of population awareness if I had not been working Saturdays as a yardman and been learning the growth rates and reproduction rates of weeds."² Despite the inadequacies of the population education he received from the late 1930's into the early 1950's, Burleson observes that it was still better than that which the 50 percent of the world now under 20 has received.³

Until very recently very few countries have paid systematic attention to the nature of the population learning that results from the traditional school program. The development of population education programs, with clearly stated objectives, is a fairly recent phenomenon, dating back no more than ten years.

There are presently approximately 20 countries around the world that have expressed some interest in the development of population education programs. These include: in Africa, Botswana, Tunisia and the United Arab Republic; in Asia, Ceylon, India, Indonesia, Iran, Malaysia, Nepal, Pakistan, the Philippines, Korea, Taiwan
and Turkey; in Europe, the United Kingdom; and in the Americas, Chile, Colombia, Mexico and the United States.\(^4\)

The form that population education programs have taken in the different countries varies widely. In Iran, for example, emphasis has been placed on adding population materials to various textbooks. Thus, the seventh and twelfth grade geography texts and the eleventh grade social studies texts include some basic demographic concepts, and data on population growth and its socio-economic impacts. Information concerning the anatomy and physiology of the reproductive system has been included in materials for the senior high school home economics programs at the ninth and tenth grade levels. For the present, however, no effort has been made to provide teacher's guides, and to provide special teacher training. Nor has there been any effort to systematically review the entire primary and secondary school curriculum to determine what population concepts and data could be infused into the different content areas in order to create a fuller program. This arises in part from the fact that the impetus for the development of the Iranian program has come from outside the educational community. Efforts are now being made to obtain the interest and the assistance of professional educators, in order to insure progressive and consistent program development.

One method of developing interest among educators that has proven successful in a number of countries has been the use of special seminars and conferences. India held three such conferences during the course of 1969, laying the foundation for efforts now underway in the Ministry of Education, in the Central Health Education Bureau of the Ministry of Health, and in a number of teacher training colleges and universities throughout the country. Comparable meetings have been held during 1970 in the Philippines and in Indonesia.

The first Colombian seminar on education and population was held in Paipa earlier this month. The seminar began by considering the impacts that demographic growth will have on the schools' already overstrained ability to provide education
for youth. The educators turned their attention to population education as one long-term response. Noting in the Reports and Conclusions of the Seminar, "that the educational system is not adequately preparing citizens of tomorrow...the Faculties of Education should initiate action...so that pressure is exerted on the decision-making sector, leading to the ultimate institutionalization of the population education programs."5

In view of the already crowded curriculum that characterizes school systems around the world, population educators generally agree that emphasis should be placed on the infusion of population related concepts where appropriate in all relevant subject areas, at all grade levels, rather than on the development of special and separate courses. Such an approach will also have the effect of increasing population learning, and could serve to integrate much of the learning in all subjects that occurs in the schools. Many countries have used the opportunity provided by general curriculum revision to develop their population education programs.

Korea has now embarked on a five year program in connection with the revision of textbooks scheduled to begin in 1971. Surveys are now being conducted to determine the knowledge of students and the knowledge and practice of teachers in population dynamics, the nature of the Korean family planning program, and awareness of the social and personal results of a rapid rate of population growth. These surveys are needed to discover what has already been learned from the mass media, and from the small amounts of material already in the textbooks. These data will also be useful in the later evaluation of the program's impact.

Following the completion of these surveys, seminars and workshops will be held for teachers and textbook writers in order to increase their own population awareness and to develop specific objectives for the program at the different school levels and in the different subject areas. The Korean program represents one of the most systematic attempts to date for the development of population education on a national scale.
Chilean educators deserve credit for being farthest along in actually developing a national program in population education. The Chileans have not only developed a scheme for infusion of population concepts but have also prepared much of the material for students and for teachers to implement their conceptual scheme. A brief review of their efforts may, therefore, help to make concrete that which we have been speaking of in more abstract terms.

Five years ago a major effort to revise the entire school curriculum in Chile was begun. Responsibility for this revision was lodged in the Center for Training, Experimentation and Pedagogical Research, which is affiliated with the Ministry of Education. Because the Center combines responsibility for in-service training, with curriculum reform and research they were in an ideal position to develop text materials and to bring them to the attention of teachers. The inclusion of population relevant materials in the revision was "plainly justified because of the importance of demographic phenomena encountered in the student's own life... and because it becomes more and more clear that detailed population study constitutes an indispensable key for his understanding of the interdependence of social and economic problems and events of the historic and contemporary world."6

The program is basically interdisciplinary, centering around man as problem creator and problem solver. Presentation of the material is gradual so as not to be repetitive, taking into account at the same time the intellectual and social development of the child. Emphasis is placed on inquiry, rather than on passive education and lectures. The instructors are encouraged to develop their own approaches and their own materials to suit the varied settings--both urban and rural--that are found throughout the country. The subject matter is seen as intellectually important, but also serves, it is hoped, to develop a social consciousness within the context of development in Chile.

Figure 1 shows the social studies program areas in the last four years of primary school on the left, and the population concepts that are being infused into the curriculum.
Course Units

2nd Unit
PROBLEMS OF THE CONTEMPORARY WORLD

8th Year

1st Unit
CIVILIZATION - MAN'S CREATION

2nd Unit
MAN ORGANIZES TO GOVERN HIMSELF

7th Year

1st Unit
MAN ORGANIZES HIMSELF TO LIVE IN SOCIETY

2nd Unit
MAN'S WAY OF LIFE IN OTHER PARTS OF THE EARTH

6th Year

1st Unit
MAN'S WAY OF LIFE IN THE REGIONS OF CHILE

2nd Unit
MAN, CITIES, INDUSTRY & TRADE

5th Year

1st Unit
MAN, LAND & SEA

Development of Demographic Concepts

Urbanization
Migration
Urban & Rural Population
Aspirations
Composition by Sex, Age, Activity
Active Population
Growth, Birth & Death Rates
Vegetative Growth
Population Distribution
Population Volume & Density
Census

Crossing of Races
Migration
Colonization

Urbanization
Directed Colonization
Ethnic Minorities
Density
Urban & Rural Population
Migration
Population Distribution

Urbanization
Rural & Urban Population
Migration
Population Distribution

Figure I: Integration of Population Concepts into the social studies programs of the second cycle of Chilean primary schools, grades 5 through 8.

Source: Center for Training, Experimentation and Pedagogical Research, Santiago, Chile.
these course areas on the right. The initial emphasis, in the fifth grade, is on human geography, in which we find discussions of urbanization, population distribution, migration, and the nature of urban and rural populations. In the sixth grade these subjects are developed further, and the children are also introduced to concepts of density, ethnicity and colonization. These concepts get further attention in the seventh year, where the focus shifts from the geographical to the social and political.

In the eighth year attention is both on history and on the contemporary world. Many of the simple concepts introduced earlier are picked up again, and new concepts, such as population composition, and growth, birth and death rates, are introduced in such a way as to summarize the primary school program. For many in Chile, the eighth year represents a terminal year.

The goals of the secondary school social studies program are to introduce the student to the sciences of man in a way that they will be useful to them, and to motivate the students to a sense of consciousness of the Chilean reality. The emphasis is not on specific solutions to problems confronting Chilean man, but rather on a presentation of the facts, and an examination of the various ideas and solutions that have been put forward by different groups and individuals. The intent is to assist the student to act responsibly as a future citizen. The infusion of population materials, building upon the primary school program, does not try to be encyclopedic. Rather the emphasis is placed on the logical development of ideas. The general objective is to inform the student of the actual demographic situation in Chile and in the world, to help him to understand how physical, cultural, social and economic factors influence population growth and distribution, and how population growth affects social and economic development. Finally, the students study the formulation of population policies, both historical and contemporary, both internationally and in the Chilean context. In their last year the students are encouraged to do independent research and prepare a paper on the general topic of
Figure 2: Integration of Population Concepts into the Chilean secondary school social studies curriculum.

Source: Center for Training, Experimentation, and Pedagogical Research, Santiago, Chile.
population policy and its relations to population growth. Figure 2 shows the secondary school program, and the population subjects that are included therein.\(^7\)

John Dewey suggested many years ago that "a working model is not something to be copied; it is to afford a demonstration of the feasibility of the principle, and of the methods which it make feasible."\(^8\)

The Chilean program, advanced though it is, does not yet provide a full model. It does not include, for example, a development in the biological sciences comparable to that in the social sciences. Nor is there as yet a formal and institutionalized program for introducing teachers to population concepts and population education methods through the regular programs of the teaching training colleges and the universities. Finally, there is need to develop a research and evaluation scheme in order to determine how effectively the Center is achieving its goals, and how it might implement them more certainly.

It should be clear from my preceding remarks that there is much that is going on in the field of population education today, and that there is so much to be done. Our goal is to develop population awareness for the benefit of the individual, his family, his community, his nation, and for all mankind. We hope to instill a sense of responsibility, of social consciousness. In the past the formal school system has not been terribly successful in achieving these goals. This makes the challenge of developing population education programs all the more exciting.
NOTES


7. Information about the Chilean program has been made available to me by: Mario Leyton, Director of the Center for Training, Experimentation and Pedagogical Research, Santiago, Chile; Sergio Sepulveda, Chief of the Center's Social Sciences Department; Olga Giagnoni, a member of the Social Sciences Department. Any errors in translating what they have said are mine alone.