

Book Reviews

Toward Resolution of the Problems of Population Growth

Occasionally an event becomes a symbol of a transformation. The International Conference on Family Planning, held in Geneva, Switzerland, 23–27 August 1965, may be such an event. That man is crossing a divide in his approach to the problems of his numbers is evidenced in the differences between the two United Nations Population Conferences, the first held in Rome in 1954, the second in Belgrade in 1965. Both were scientific in concept, planned in close association with the International Union for the Scientific Study of Population. The first almost equated population problems with demography, with emphasis on the distinctions of high and low mortality and high and low fertility, and on the interrelations of demographic and other factors. A Marxian-Malthusian confrontation was a lurking hazard of the pervasive ideological interpretations. Neither birth control programs nor research on birth control were considered. Presumably the former topic was taboo, the latter irrelevant.

The Second World Population Conference was planned in the same demographic context as the first. But after the plans were completed several events occurred: The Economic and Social Council widened the definition of population matters of concern to the United Nations to include technical assistance in family planning at the request of governments; the director general of the Food and Agriculture Organization issued a moving appeal for immediate action to increase food production and reduce rates of population growth; the World Health Organization approved research and assessment in various aspects of human fertility. The World Population Conference could not be redesigned, but a session on family-planning research was added to the program. Moreover, the problems of high fertility,

the results of family-planning research, and doubts about the realism of extrapolations of population dynamics from past to future pervaded many of the other sessions. And administrators and technical people who had been at the Geneva Conference on Family Planning came from it to the Belgrade meetings, bringing with them both the sense of the urgency of action and the excitement of the knowledge that new technologies were available for dealing with the growth problem.

The speed of the transition was a response to the altered pace of history. The rate of population growth of the less-developed countries had long been increasing, but growth had been fairly slow and acceleration muted. It was believed widely, and documented in analysis, that birth and death rates, nutrition, productivity, literacy, and other components of per capita income or well-being were an inextricable complex. Hence it could be argued that the problems were economic; that with advancing industrialization and urbanization death rates would decline; that rising literacy in urbanizing populations with increasing rates of survival among infants and children would lead to declining birth rates even without overt recognition of the problems of high fertility. There was research, even prior to World War II, that suggested the depth of the problems inherent in the continuation of the evolutionary changes then occurring, but that research remained largely in the academic domain. The danger seen in Asian populations was the expansionism of an industrializing Japan, not the slow upward push of Java's largely unstudied millions or the potential growth of an awakened and modernizing China.

With World War II, the colonial and imperial systems ended swiftly, to be replaced by new nations whose peoples hoped for prompt participation in

the good life of the highly developed economies. Biomedical advances, chemical technologies, expanding health services, and effective bilateral and international assistance permitted major achievements in reducing mortality and improving health. Death rates dropped swiftly. But birth rates seemed to retain their ancient levels and associations; change, if it occurred, was scarcely measurable in the crude vital statistics available. Those groups in countries and in international organizations that planned for development soon recognized that population growth could rapidly overwhelm economic and social advances.

Thus the major stimulus to bringing birth control as well as death control within the context of governmental concerns was the reality of population growth itself. The lead countries were those of Asia where people were most numerous and problems deepest. The international breakthrough came in the Asian Population Conference held in New Delhi, in December 1963 under the auspices of the Economic Commission for Asia and the Far East. But the pioneering role outside the countries involved has been on the whole non-governmental (an exception must be noted for Sweden). This applies to the recognition of the altered dimensions of population growth; the stimulation of basic and technological research in biomedical, demographic, psychological, and related fields; and the facilitation if not the direct provision of technical assistance in family planning.

The Geneva Conference was sponsored by the Population Council (formed in 1952) and the Ford and Rockefeller Foundations. Its sense of dedication is well conveyed in the report of the proceedings, **Family Planning and Population Programs** (Bernard Berelson, Ed., Univ. of Chicago Press, Chicago, 1966. 846 pp., \$12.50). In the introduction, Berelson, who was chairman of the planning committee of the conference, cites an opening statement: "It is not given to many men to be at the right place at the right time doing the right thing. . . . We are all engaged in an historic undertaking." It is evident that there was optimism but not complacency among the participants. The rapidity of change in the past was often cited—for example, the fact that in 1960 the Milbank Memorial Fund and the Population Council had sponsored a conference in New York on Research in Family Planning, and now 5 years later a

conference was being held in Geneva concerned specifically with action programs in family planning. But elation was tempered. John D. Rockefeller III, in his opening remarks, noted that sensitivities to the subject of birth control were lessening but that government officials in positions of responsibility still evaded "bold and imaginative leadership in effective programs of population limitation."

A major task of the conference, as Berelson says in his foreword, was "to guide and expedite subsequent efforts by spreading information about family planning programs from one geographic area to another and from one specialization to another."

Part 1, "National programs: Achievements and problems," begins with areas whose populations and cultures are Chinese or Chinese-related. These include Japan, where modernization has been in process for a century and birth rates are very low; South Korea, where there is a highly organized and intensive government program; Mainland China, where politics and policy statements are known but the extent of activities in the health services is only conjectural; Taiwan, where research and programs are alike pioneering and birth rates are declining; Hong Kong and Malaysia and Singapore, where modern contraceptives are acceptable to Chinese populations and birth rates are declining. The next series of reports concerns Middle South Asia: Thailand, Ceylon, India, and Pakistan. Then there are the Middle East and North African countries: Turkey, United Arab Republic, and Tunisia. There are regional reports on Africa, Western Europe, the Socialist countries of Europe, and Latin America. There are also reports for Puerto Rico and Chile. This first section is concluded with a summarization of "Family planning around the world." Most of the authors were involved in the programs they reported; 17 of the 25 authors were M.D.'s.

Part 2, "Organization and administration of programs," presents experience and assessment in starting a program, planning the program, organizational structure, personnel problems, informational and educational programs, family planning and the school curriculum, and budget and timetable.

Part 3, "Contraceptive methods: Use, safety, and effectiveness," is a portrayal of evolving methods, principles of use, effectiveness, problems, and possibilities as assessed in mid-1965. It is the

materials of this section that document the close association between acceptable and effective means of limitation, program development, and popular response. It is also the reports of this section that yield the disturbing realization that major reductions in birth rates may involve deeper forces than new means, government decisions, and appropriate administration. The topical reports extend from introductory statements on "Contraceptive methods: Use, safety, and effectiveness" and "Current laboratory studies on fertility regulations: Evaluation of their possibilities" to studies of specific means or even the procedures for using specific means. Again chapter titles suggest scope: the rhythm method; the mass use of IUD's in Korea; a family planning program related to modernization; postpartum insertion of a standard Lippes loop; the training of the nurse-midwife for a national program in Barbados combining the IUD and cervical cytology; the U.S. medical profession and family planning; abortion programs; a commercial system for introducing family planning in Comilla, Pakistan; distribution of contraceptive supplies through commercial channels; the problems of IUD manufacture.

Part 4, "Research and evaluation," includes summaries of several of the field studies designed to educate governments and people as to their population problems, to provide base-line information, and to measure changes in attitudes, acceptances, and birth rates. Titles suggest the diversity in fields of research or evaluation, the multiplicity in approaches, the new research demands and the enduring problems of experimental design, field survey techniques for vital statistics, and so on. As the following list indicates, the field studies were made in many countries, and the methodological research was diffuse in nationality of author and locus of study: a family life study in East Java; family growth and family planning in a rural district of Thailand; recent trends in family-planning research in India; factors affecting Moslem natality; a survey in Tunisia; family formation and limitation in economically superior urban areas of Ghana; a program of comparative fertility surveys in Latin America; estimating rates of population growth; KAP studies on fertility; records and record-keeping in family-planning programs; evaluation procedures for a family-planning program; lessons learned from family-planning studies in Taiwan and

Korea; a review of recent designs of demonstrations, experiments, and pilot projects; costs of family-planning programs.

The fifth and final section is a summary, generally optimistic but also suggestive of the initial state in which knowledge, administration, experience, and evaluation now stand; the probabilities of continuing accelerations in scientific and technical advances and in country programs and the achievement of those programs; the searching questions of timely achievements in great countries where health services are limited, development sluggish, and the survival of children still unsure.

The International Conference on Family Planning was a working one; participants were involved persons—foundation staff members who labor on studies or advise and assist in programs; the comparable individuals from governments; central staff and regional representatives of the International Planned Parenthood Federation; people who assess, plan, study, and act in the family-planning activities of their own countries; the specialists on means of limitation; the survey statisticians. And although the Peoples Democracies of Asia and the USSR were not represented, the roster of nations participating documents the increasing extent of the concern.

It is tempting to a demographer who was also a participant to comment on status and development; to emphasize the integral association in demographic and other aspects of modernization and to evaluate the possibilities that birth control, like death postponement, can be partially separated from those levels and conditions of living that have been its historic accompaniments; to speculate on the dynamics of populations in future decades as birth rates decline and the population problems become the less immediately acute but the more intricate ones of transition to modernization. But the academic appraisal, the theoretical formulations, the research not related directly to action, have limited immediate relevance to the swiftly moving planning and action programs. The years of crisis are truly such; the hazards of accelerating population growth and lagging food production are not remote contingencies but present facts. The intensity and the extension of the concern over population growth, the movement to action programs, the added pressures to programs already existing—these have been the develop-

ments in the 10 months since the International Conference on Family Planning was held. The Conference Proceedings are the closest approximation to the current status of the great transformation that is now in process, but they are already historic and will be antiquated soon except as base-line documents. The magnitude of man's numbers in future decades is now uncertain, not alone because of the declining death rates and the delicately balanced relations between economic and political developments and population growth but because—on the one hand—the birth rates in the world's high fertility areas can no longer be assumed as inviolate, tied to the traditional verities of ancient cultures and beliefs, and—on the other—the availability of means does not insure automatic solutions to problems of population growth.

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Cetology

Whales, Dolphins, and Porpoises (University of California Press, Berkeley, 1966. 805 pp., \$15), edited by Kenneth S. Norris, contains 33 papers that were presented at the First International Symposium on Cetacean Research held in Washington, D.C., in August 1963. These papers, each of which relates to a different facet of cetology, reflect the increased interest in research on marine mammals in the last decade or two.

Cetaceans present a combination of many barriers to study that are not encountered in most other kinds of organisms. The size of some, their habitat, and their general availability, as well as the relative rarity of certain species, are just a few of these. Despite the numerous factors unfavorable to research, amazing advances have been made in our knowledge of whales, porpoises, and dolphins in recent years. This is especially true with respect to their physiology, means of communication, behavior, distribution, and migration. Some of this is accounted for by the economic value of the animals themselves. The blubber and flesh of the larger species are still sought and are of considerable commercial value. The fact that cetaceans have an advanced type of mammalian brain and can be rapidly trained to perform

remarkable and amusing feats has led to their use as performers in captivity. This in itself has largely been responsible for much of our most recent information on cetacean underwater communication. Likewise, most information regarding the physiology, behavior, and learning ability of cetaceans has been the result of studies on captive individuals.

The symposium, whose participants have their papers included in this volume, was presided over by L. Harrison Matthews, the scientific director of the Zoological Society of London. The published results are very logically divided into seven parts: (i) Systematics, distribution, and natural history; (ii) Anatomy, physiology, and sea animal propulsion; (iii) Underwater observation and recording; (iv) Communication; (v) Echolocation and recognition; (vi) Practical problems; (vii) Behavior. Part 6 pertains to a round-table discussion on the capture and care of cetaceans, in which five persons, including the editor (formerly curator of Marine-land of the Pacific), participated. The significance of this phase of the symposium is obvious because most studies, other than those that pertain to anatomy or taxonomy, are dependent upon healthy captive animals.

Nine countries were represented at the symposium, which was the first of its type. It was sponsored by the United States Office of Naval Research and conducted by the American Institute of Biological Sciences.

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Marine Biology

This third volume of **Advances in Marine Biology** (Academic Press, New York, 1965. 412 pp., \$13.50), edited by Sir Frederick Russell, contains four papers: "Learning by marine invertebrates" by M. J. Wells; "Effects of heated effluents upon marine and estuarine organisms" by E. Naylor; "Aspects of the biology of the seaweeds of economic importance" by A. D. Boney; and "Marine toxins and venomous and poisonous marine animals" by Findlay E. Russell. Two articles are applied in orientation; Boney's treatment of seaweeds is probably of more general biological interest, while Naylor's discussion of heated effluents is the shortest and least satisfactory of the four. How-

ever, it must be noted that the study of effects of warm effluent water has hardly begun and that in a field where the interest of industry is at stake it is not always easy to accumulate objective information. The contribution on learning by invertebrates is a well organized, analytical article, while that on toxins and venoms is primarily a catalog. All of these articles are useful summaries, but each is intended for a different group of readers, and I wonder if the potential usefulness to interested individuals justifies publication in this expensive manner.

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Introductory Business Statistics

Statistical Methods (Panstwowe Wydawnictwo Ekonomiczne, Warsaw; Pergamon Press, New York, 1965. 666 pp., \$17.50.), by Stefan Szulc, covers roughly the ground of an introductory text in economic or business statistics, with a few additional topics thrown in. The substantial size of the book is due neither to these extra topics nor to an advanced treatment of any of the subjects covered, but to an approach that develops every topic from the ground up, as it were. No previous knowledge or training on the part of the reader is assumed. Discussion, once started, is continued at length until the topic is brought to, but never beyond, an elementary level.

Among the conventional subjects covered by the author are frequency distributions, graphical representations, measures of location and dispersion, analysis of time series, index numbers, correlation, and sampling. Curvilinear correlation and life tables are given a little more attention than is usual. Statistical inference is virtually ignored, except for a few pages inserted in the section on sampling.

The level of presentation can be illustrated by the treatment of index numbers. This is restricted very nearly to simple aggregative (Laspeyres and Paasche), quantity-weighted price indexes and price-weighted quantity indexes. There is, of course, no suggestion of possible anomalies resulting from the use of administratively set prices as weights for quantities, nor that anything other than prices could be used as weights. A footnote that promises new developments ("Since this