## Regulating Human Fertility

**Rapid Population Growth.** Published for the National Academy of Sciences by Johns Hopkins Press, Baltimore, 1971. xiv, 696 pp., illus. $20.

Early in 1967 the directors of seven American population research centers agreed that the economic and social effects of rapid population growth were poorly understood, that assumptions about such effects were influencing the development of national policies and programs, and that research on the effects and their policy implications was lagging. This study, by an 11-man committee of population specialists chaired by Roger Revelle, was an outgrowth of that expression of concern. The committee's report constitutes a self-contained, 100-page unit within this book and has been issued separately in paperback. A collection of 17 invited papers appears only in this edition.

The report begins with the observation that "the belief is widespread that uncontrolled population growth in the earth's poor countries is leading to catastrophe. It is possible, however, to take . . . a view that social inventions will lead to a deliberate limitation of fertility by individual couples." A forthright evaluative statement follows: "high fertility and rapid population growth have seriously adverse social and economic effects. A reduction in human fertility is an important component of social and economic development. . . ."

The ensuing endorsement of family planning in less-developed countries is embodied, among other places, in a chauvinistic section of one of the committee recommendations: "By virtue of its leadership in population research and its commitment to the enhancement of the lot of the poor of the world, the United States of America is in a unique position to provide continuing support on a long-term and unequivocal basis to help other countries and international agencies carry out voluntary fertility-limiting programs."

Had the committee judged rapid growth to be beneficial, its recommendations calling for more research and for close monitoring of demographic trends, population-influencing policies, and policy-implementing programs could stand. Indeed, its endorsement of "real freedom of choice of family size" on the part of individuals could stand. Its proposal that the having of smaller families be encouraged could be justified in terms of "benefits to individual families" alone. But in framing recommendations the committee members eschew the issue of the rate of population growth as such. Their sentiment that decreases in current rates are desirable is clear, but they equivocate as to why this is so. "The weight of evidence and rational presumption concerning socioeconomic consequences strongly favors a birth rate of 25 or less over one of 35 or higher. It is unquestionably desirable for the welfare of children and mothers to reduce the number of children ever born in the average family to a much lower level than the range of six or more that now exists in many countries."

Confounding family size and the growth rate is a disservice on the part of population specialists. Does the committee recommend slower growth, which may entail reductions in average family size, or a smaller family size, which may result in slackening growth? Blurring of the distinction is scientifically unsound and may actually obscure policy alternatives.

Among the invited papers is "The economics of population control," by Paul Demeny (which also appears in the proceedings of the 1969 General Conference of the International Union for the Scientific Study of Population). In some 20 pages Demeny gives a cogent statement of the problem, a collation of economic arguments for and against lowered fertility, a critical assessment of the "economic case for an active policy aimed at *inducing* such a decline," an indication of research priorities and fruitful theoretical perspectives, and a reasoned review of policy implications. Although the paper deals only with economic considerations and reflects the views of only one population specialist, it is both more informative and more provocative than the committee report.

Demeny concludes that "if a decline [in fertility] does take place *spontaneously*, its occurrence should be welcomed on economic grounds." Were it the case that "the actions of individual families with respect to fertility do not affect others," then: "(a) Families should be permitted to act in their best interest as they see it in setting the level of their fertility, and society should extend help to render that freedom effective. (b) Society as a whole should accommodate itself to the sum total of these individual decisions as best it can." This is not the case, but "the guidance economists are at present able to give for policy makers on such matters [as the appropriate form of governmental intervention] is less than solid." In Demeny's view "the most plausible economic argument on which a first step beyond family planning, understood in a narrow sense, can be made" in today's less-developed countries is that "once a social choice for modernization has been made, fertility reduction has to come sooner or later. It seems most likely that a fertility decline brought about within a voluntary framework but making use of a carefully engineered set of pressures and inducements would turn out to be less painful than decline under a process of later 'natural' demographic adjustment, typically elicited by acute economic distress."

It is unfortunate that the committee report rather than a selection of invited papers has been issued as a separate. Although they bear less directly on the consequences and policy implications of rapid population growth than does the Demeny paper, the essays by Myron Weiner on the political consequences of population change, Abdel Omran on the role of abortion in reducing fertility, and Harvey Leibenstein on the impact of population growth on those acquired characteristics of population that are important to output and its growth are challenging.

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## Racial Views

**White Attitudes toward Black People.** ANGUS CAMPBELL. Institute for Social Research, Ann Arbor, Mich., 1971. viii, 178 pp., illus. Cloth, $8; paper, $5.

There is an acute national need for systematic, longitudinal public opinion data on such major concerns as race relations. Despite all the talk about "social indicators" and "relevant" research, we still must depend upon haphazardly timed surveys conducted with varying objectives and methods in order to estimate trends in American opinions. This little volume by the director of the University of Michigan's Institute for Social Research illustrates both the promise of survey research and the severe limitations of present arrangements.

All but two chapters concentrate on a single survey of 2945 whites conducted during the winter of 1968 in 15 northern cities for the National Advisory Commission on Civil Disorders. There is therefore no possibility of causal inferences and the generalization of the findings to the nation as a whole. Yet the results are consistent with national survey findings over the past two decades, though the author fails to do more than hint at the relevant literature.

The study shows that most white urbanites in the North reject notions of the innate inferiority of blacks. But they tend to believe that blacks are largely responsible for their own condition and therefore should improve themselves. A majority favor antidiscrimination laws in hiring and promotion; but they equivocate on open housing ordinances. Overwhelmingly, they reject white counterviolence.

The analyses of the social correlates of these attitudes are disappointing, for they barely go beyond those provided earlier in Campbell's article with Howard Schuman in the supplementary volume to the Advisory Commission's report. Two interesting findings are uncovered, however. First, special samples in the Cleveland and Detroit areas revealed no sharp differences in the racial attitudes of suburbanites and central-city residents. Second, a suggestive age-sex-education interaction emerges. Among both young and old women, the college-educated are consistently more favorable in their racial views. But only among those under 40 years of age is college shown to have had this effect on men. Campbell speculates that colleges since World War II have made a significant difference in moderating the racial beliefs of their students; and this stands in marked contrast to the lack of effect in these data of churches and secondary schools.

The most critical findings derive from secondary analyses of three national voting studies conducted by the author and his colleagues in 1964, 1968, and 1970. Three surveys designed for a different purpose are hardly ideal sources of data, but better ones are not available. Campbell's successive findings, like those of other studies (not mentioned in the book), show a steady though not dramatic improvement in white racial attitudes during these riot years. This improvement appears quite general across regional, educational, and age categories. Particularly noteworthy are the significant increases in the percentages of both blacks and whites who report having friends of the other race. Campbell cites reasons for expecting this trend toward favorability to persist.

*White Attitudes toward Black People* was not written for a technical audience and can be recommended to all interested readers. Despite its neglect of the relevant literature and failure to probe deeply, the volume offers a useful overview. But there still remains the national need for intensive, longitudinal data on this and related subjects gathered specifically for the purpose every three or four months. Only a major commitment from an agency such as the National Science Foundation can satisfy this need in the future.

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## Nonselectionist View

**Theoretical Aspects of Population Genetics.** MOTOO KIMURA and TOMOKO OHTA. Princeton University Press, Princeton, N.J., 1971. x, 220 pp., illus. Cloth, $12.50; paper, $5. Monographs in Population Biology, No. 4.

The application of the biochemical techniques of electrophoresis and protein sequencing has led evolutionary biology into a new and exciting period and theoretical population genetics into somewhat of a dilemma. Estimates of the frequencies of polymorphic loci and rates of gene substitution obtained from protein data are orders of magnitude greater than the frequencies and rates that can be explained by traditional genetic models of natural selection. Efforts to explain these observations have led to two major lines of justification, one involving the development of alternate, more ecologically based models of natural selection and the other involving the development of the stochastic theory which can account for these observations by the occurrence of selectively neutral or near neutral mutations. It is this latter approach that has been developed and championed by Kimura and Ohta in the recent periodical literature and that is the major theme of their book.

As the title indicates, a number of topics of population genetic theory are treated. The book includes a consideration of the fate of individual neutral and selected mutations in finite populations, a concise and lucid account of molecular evolution from a genetic viewpoint, some treatment of the theory of genetic load, linkage and selection, effective population size, breeding structure, mechanisms for the maintenance of genetic variability, and the role of sexual reproduction in evolution. Although their approach is primarily theoretical, Kimura and Ohta make extensive use of the recent empirical literature. As is the case with the other books in the Princeton series on population biology, Kimura and Ohta's book is not a textbook but rather a personal view of its subject. It has a recurrent theme, the importance of neutral mutations and finite population effects as an explanation for a major portion of the observations on protein evolution and protein polymorphism. I quote: "Protein polymorphism can thus be regarded simply as the transient phase of molecular evolution. In this view, the protein polymorphisms and the molecular evolution are not two separate phenomena, but merely two aspects of a single phenomenon caused by random frequency drift of neutral mutations in finite populations" (p. 152).

Much of the underlying mathematical treatment has been relegated to the appendix or exists in other cited sources. The verbal treatment of the subject is lively and for the most part quite lucid. The mathematics presented in the text is generally straightforward and should not present an excessive challenge to most biologists. In a number of cases numerical simulation results are presented both to check mathematical approximations and to illustrate points. However, most of the authors' arguments for neutral mutations and finite population effects as an explanation for the protein evolution and protein polymorphism data are not empirical. To accept their thesis requires acceptance of their mathematical treatment.

The arguments Kimura and Ohta present for the neutral gene hypothesis seem thorough and convincing. Their arguments against alternative, selectionist, hypotheses and opposing empirical observations seem less so. In some cases, alternative mechanisms such as truncation and regulation selection and potentially opposing empirical observations such as the similarity of gene frequencies for polymorphic proteins among subdivided populations are dealt with somewhat summarily. It seems