Predicting and preventing population problems

Various solutions are being explored by experts who believe that the 21st century will present a population crisis

by Robert J. Trotter

Dire warnings about the earth's population problem have come from experts in economics, sociology, psychology, ecology, agronomy, etc. But because these warnings have been heard so often, because they sound so ominous and because they seem to be so far into the future, the man in the street pays little attention to them.

Doom-preaching experts have created what Rufus E. Miles Jr. of the Population Reference Bureau, Inc. calls a credibility gap. This is unfortunate, continues Miles, because "the analysts who seek to interpret the meaning of the growing tidal wave of humanity start with enough known facts to make their stark predictions more than wild guesses."

The analysts know that our present annual growth rate is two percent. They know that if this continues the world population will jump from the present 3.7 billion to 7 billion or even 10 billion by the 21st century. And they know that the earth will not be able to support this abnormal growth rate for another two centuries into the future.

In an attempt to bridge this credibility gap and to put the population problem into perspective, the April POPULATION BULLETIN presents three models of possible population trends for the 21st century.

Possibility number one calls for a calamitous population crash sometime in the 21st century. Population experts and ecologists have studied animal groups whose populations expanded at a rapid rate. The animals outgrew the capacity of their environment to support them and a rapid decrease in their birth rates resulted. If the earth's population reaches 48 billion by the year 2100 (as it will at the present growth rate), the same disastrous population decline could result.

Researchers at the Massachusetts Institute of Technology have constructed a computer model of the future. Using all available data, the computer predicts that if trends are not reversed there could be a 50 to 80 percent decline in population during the 21st century. This decline would bring on "a new dark age of unprecedented bleakness," warns Miles. "The 21st century may become the darkest century of man."

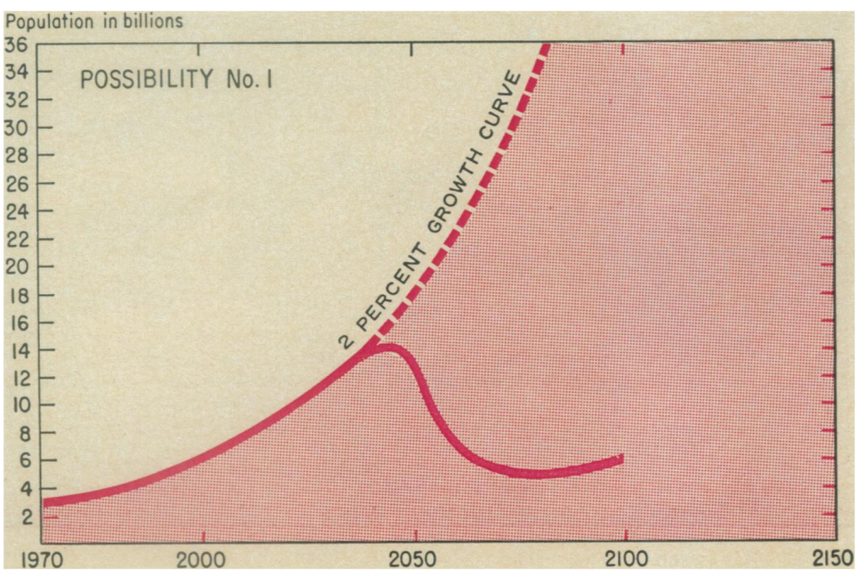
A second possibility is based on the 19th century experience of Ireland. In 1840, when the potato famine struck, the population of Ireland was more than 8 million. The famine killed one million people and two million emigrated. In 10 years time the population had dropped by 24 percent and this trend has continued. There are now only 4.6 million people in Ireland, a 42 percent drop since 1840.

The Irish people had to change from a one-crop dependency to a varied agriculture and change their basic family structure. In 1970, 70 percent of the men 25 to 34 years old were unmarried. "Judging by their action, they arrived at an unstated social consensus," says Miles.

This same downward trend could happen with the world population. A number of disasters could force people to recognize the population problem and thus determine to do something about it, as the Irish did.

Possibility number three, which would avert these disasters, calls for a gradual transition to zero population growth. It will work, assuming that

POSSIBILITY NO. 1. THE "POPULATION CRASH CURVE"



Graphs: PRB

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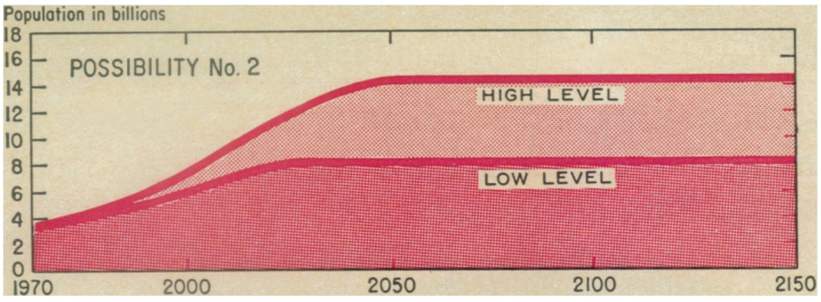
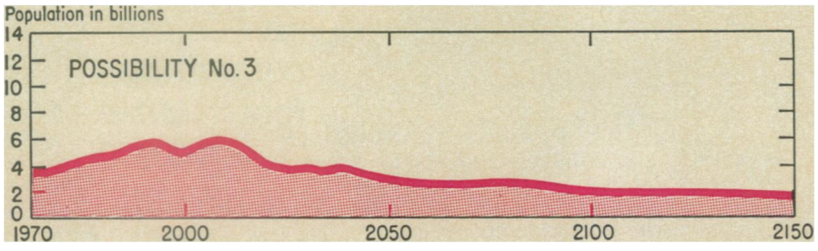
POSSIBILITY NO. 2. "GRADUAL APPROACH TO ZERO POPULATION GROWTH"



POSSIBILITY NO. 3. THE "MODIFIED IRISH CURVE"



man has not already passed the population level that the earth can sustain, that man can slow down his birth rate and that he will have adequate resources and political management to sustain a steady-state population. If man can do this by 1985, the world population will level off at 7 billion by the year 2055. But because 40 to 45 percent of the world's population is under the age of 15 in most of the underdeveloped world, there is likely to be another doubling of population before the steady state can be reached. This would mean that the earth would have to support 14 billion people—highly unlikely with the present state of technology.

If it is accomplished in time, this leveling off of population is probably the most rational approach to the problem. But, Miles concludes, "This would require the application of a degree of human intelligence, foresight, mutual concern, cooperation and forbearance which has not been in evidence in any previous period of human history."

How then, short of disaster, is man to be induced to lower his birth rate?

Dr. Dewey Lipe of the American Institute for Research in Palo Alto, Calif., believes that the answer can come from psychologists and behavioral scientists. Their job, he states in the July AMERICAN PSYCHOLOGIST, is "to identify the full range of contingencies in the environment of a given population that influence family size and then to alter those contingencies in order to increase birth limitation behavior and decrease family size." In other words, by using various psychological, social and economic incentives, he feels that people can be taught that it is in their self-interest to change their behavior patterns with regard to childbearing.

Problems, however, will confront the psychologists who attempt this behavior modification. First is popular sensitivity about efforts to regulate family size. The emotional reactions against external control and the loss of individual freedom must be countered. Dr. Lipe suggests that massive educational efforts be generated (such as the one by the Population Reference Bureau, Inc.) to help desensitize the public to this topic. This, he says, must be done with caution and good sense, but not with timidity.

There is also an ethical problem involved. The American Psychological Association's code of ethical standards for psychologists says "The psychologist in the practice of his profession [must] show sensible regard for the social codes and moral expectations of the community in which he works. . . ." Dr. Lipe agrees, but feels nevertheless that the time is right for stronger action now than has yet been attempted. "Responsible local personnel must become intimately involved in planning and carrying out this research."

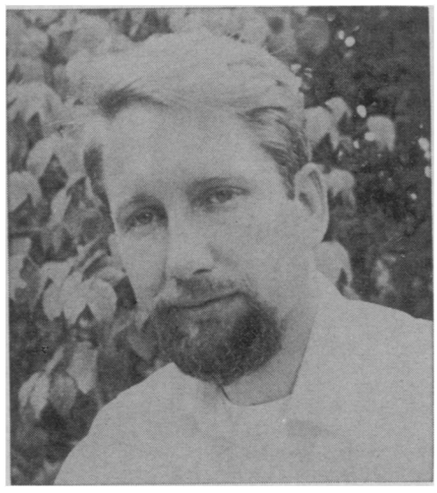
Some of Dr. Lipe's suggestions for behavior control are material incentives (giving prizes to the parents of two-child families) and vicarious incentives (rewarding persons in the presence of others). But these and other incentives must be modified by and directed toward specific populations. Research must identify these populations by age, religion, area of residence, socioeconomic states, race, etc. Some groups might be influenced by social and theological control mechanisms of their church, whereas others might be influenced more by more informal social cliques.

Once the groups and the proper incentives are chosen, modes of delivery and timing must be selected. "Suppose, for example," says Dr. Lipe, "that every time someone purchased a contraceptive device he received a token that could be inserted into a machine. The machine would then offer a chance prize such as a movie ticket or perhaps something very simple such as fortune cookies."

Research recommendations from a newly issued National Academy of Sciences' report, Rapid Population Growth: Consequences and Policy Implications, are less specific. They note the individual's right to determine family size but go on to call for research into Government policies to influence fertility control. They even say that "legal and social barriers to fertility control should be promptly removed and broad social acceptance and support of fertility control should be fostered, including, where health services permit, medically safe abortions and sterilization."

Whether or not the predictions of the Population Reference Bureau, Inc., are correct and whether or not Dr. Lipe's solution is workable are still questions. But answers may be forthcoming from India, one of the world's most overpopulated countries. July 1 marked the start of a month-long family-planning festival in Ernakula, India. The district family planners used the incentive method to get married men with more than one child to have vasectomies.

In a carnival atmosphere (music, crepe streamers, balloons and dolls) the men lined up for the 10-minute operation. After the operation each patient received round-trip bus fare and gifts worth 110 rupees (about $15) including 25 rupees in cash. Spectators gathered across the road to watch a large electric scoreboard flash out the total number of operations like election results: 25,500 . . . 26,000. "We hope to sterilize 50,000 by the end of the month," an Ernakula family-planning official predicted. □



Lipe: Better behavior is the answer.