

A Study of Population & Population Growth

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Abstract: - A population is a summation of all the organisms of the same group or species, which live in a particular geographical area, and have the capability of interbreeding. In ecology, the population of a certain species in a certain area is estimated using the Lincoln Index. The area that is used to define a sexual population is defined as the area where inter-breeding is potentially possible between any pair within the area. The probability of interbreeding is greater than the probability of cross-breeding with individuals from other areas. Under normal conditions, breeding is substantially more common.

Keywords: - Population, India.

I. INTRODUCTION

Both men and women should realize the dangers of over-population. If we make a random survey we shall find that still there are women as well as men who are not able to grasp why they should have less children. The television instructs through advertisements and tableaux about the merit of a small, manageable family. But still there are families that suffer from die-hard superstition. They consider adoption as an unholy activity. Again the backward tradition of professional ancestry is also firmly rooted in a large cross-section of our Indian society. A blacksmith, a carpenter, a mason or a tailor promptly trains his children to pick up the trade of their father. Naturally, they have a psychological make-up that the more sons they have the more they can employ. Thus a laborer produces more as that mean more income. People, themselves must realize the merits of a small family. They should be encouraged to adopt preventive checks – checks that control the birth rate.

Another factor that encourages the growth-rate is religion. Some communities consider any mandate or statutory method of prohibition to be sacrilegious. India being a secular state, she cannot exercise any check or restraint on religious grounds.

Another great factor that contributes to the population growth is the cursed voting system. It is based on number. On the other hand the voting pattern, especially in northern India, is based on caste. Naturally, the caste that outstrips the other castes in sheer number of votes enjoys a comparatively higher leverage in the domain of powers.

Early marriages not only leads to high-population and thwart the progress of our young population, they entail an enormous amount of trouble to young mothers. These young girls, in most cases, are not healthy enough to bear the burden of childbearing.

The importance of a higher standard of living should be inculcated in the mind of the mass of the people. The desire for better living conditions automatically works as a deterrent to heavy increases in population. It restricts the population explosion and thus tends to keep high the efficiency of our existing population.

Education at the grass root, more equitable distribution of the natural wealth, restrictions on religious fanatics that would damage the country's economy by unnecessary births, and lastly, weight age to voting not by number but by some other method – these alone can bring about a kind of effective control over the population problem.

This seldom occurs in nature: localisation of gamete exchange – through dispersal limitations, or preferential mating, or cataclysm, or other cause – may lead to small actual gamodemes which exchange gametes reasonably uniformly within themselves, but are virtually separated from their neighbouring gamodemes. However, there may be low frequencies of exchange with these neighbours. This may be viewed as the breaking up of a large sexual population (panmictic) into smaller overlapping sexual populations. This failure of panmixia leads to two important changes in overall population structure: (1) the component gamodemes vary (through gamete sampling) in their allele frequencies when compared with each other and with the theoretical panmictic original (this is known as dispersion, and its details can be estimated using expansion of an appropriate binomial equation); and (2) the level of homozygosity rises in the entire collection of gamodemes. The overall rise in homozygosity is quantified by the inbreeding coefficient (f or ϕ). Note that all homozygotes are increased in frequency – both the deleterious and the desirable. The mean phenotype of the gamodemes collection is lower than that of the panmictic "original" – which is known as inbreeding depression. It is most important to note, however, that some dispersion lines will be superior to the panmictic original, while some will be about the same, and some will be inferior. The probabilities of each can be estimated from those binomial equations. In plant and animal breeding, procedures have been developed which deliberately utilise the effects of dispersion (such as line breeding, pure-line breeding, back-crossing). It can be shown that dispersion-assisted selection leads to the greatest genetic advance ($\Delta G =$ change in the phenotypic mean), and is much more powerful than selection acting without attendant dispersion. This is so for both allogamous (random fertilization) and autogamous (self-fertilization) gamodemes.

II. POPULATION GROWTH

Population growth increased significantly as the Industrial Revolution gathered pace from 1700 onwards. The last 50 years have seen a yet more rapid increase in the rate of population growth due to medical advances and substantial increases in agricultural productivity, particularly beginning in the 1960s, made by the Green Revolution. In 2007 the United Nations Population Division projected that the world's population will likely surpass 10 billion in 2055.

In the future, the world's population is expected to peak, after which it will decline due to economic reasons, health concerns, land exhaustion and environmental hazards. According to one report, it is very likely that the world's population will stop growing before the end of the 21st century. Further, there is some likelihood that population will actually decline before 2100. Population has already declined in the last decade or two in Eastern Europe, the Baltics and in the Commonwealth of Independent States.

The population pattern of less-developed regions of the world in recent years has been marked by gradually declining birth rates. These followed an earlier sharp reduction in death rates. This transition from high birth and death rates to low birth and death rates is often referred to as the demographic transition

III. HUMAN POPULATION CONTROL

Human population control is the practice of altering the rate of growth of a human population. Historically, human population control has been implemented with the goal of increasing the rate of population growth. In the period from the 1950s to the 1980s, concerns about global population growth and its effects on poverty, environmental degradation and political stability led to efforts to reduce population growth rates. While population control can involve measures that improve people's lives by giving them greater control of their reproduction, a few programmes, most notably the Chinese government's one-child per family policy, have resorted to coercive measures.

In the 1970s, tension grew between population control advocates and women's health activists who advanced women's reproductive rights as part of a human rights-based approach. Growing opposition to the narrow population control focus led to a significant change in population control policies in the early 1980s.

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