

## ARTICLES, PAPERS AND PUBLICATIONS OF ACTUARIAL INTEREST

### POPULATION

November–December 1987

BROUARD, N. *Sida: durée d'incubation, taux de croissance, taux de reproduction nette*. (AIDS: Incubation Period, Growth Rate, Net Reproduction Ratio.) Lotka's theory can be applied to the sub-population of HIV-positive individuals.

Three parameters are involved in the theory: the virus's incubation period, its rate of growth and the average number of cases infected by a seropositive carrier. The first two can be calculated, and the third can be deduced from them. Under certain assumptions relating to stability, particularly as regards the current growth rate, a HIV-positive carrier will infect 7 healthy individuals per year.

The model suggested also focuses on new HIV-positive carriers who are approximately 2<sup>n</sup> times more numerous than the number of individuals infected  $n$  years earlier and who, generally unaware of the fact that they are carriers, continue to transmit the virus unknowingly.

BLUM A. *Pressat: Une nouvelle table de mortalité pour URSS (1984–85)* (A New Life Table for the U.S.S.R. (1984–1985)) The publication of a new life table by sex and single years of age for the U.S.S.R. has provided accurate information on some of the peculiarities of mortality rates in that country. Some problems remain in the interpretation of infant mortality rates, in spite of the publication of an almost complete series. What is more surprising is the mortality during the second year of life, which turns out to be much higher than would have been expected. There have been recent falls in mortality from infancy to young adult ages and deterioration of mortality at older ages (particularly from the age of 45 upwards) and an unusually high excess mortality rate among men, which extends over a longer period of life than is commonly found elsewhere.

### POPULATION INDEX

Winter 1987 (53, No. 4)

Contains a special bibliography of Governmental and International Serial Publications containing vital statistics. A cumulative index to the Index was published simultaneously.

### POPULATION STUDIES

42, 1 (March 1988)

KREAGER, P. *New light on Graunt. The Natural and Political Observations* (1662) follow the method of observation prescribed by Sir Francis Bacon's method of natural history, applying book-keeping arithmetic within contemporary religious and mercantile models (including the wider principle behind double-entry methods).

### U.S. DECENNIAL LIFE TABLES 1979–81

Vol 1, 4

Trends and comparisons are given for the period 1900–81, in terms of average after-lifetime by race and sex from birth and from age 65 for each state and for the whole of the U.S.A.