

This Week's Citation Classic

Cavalli-Sforza L L & Bodmer W F. *The genetics of human populations*. San Francisco: W.H. Freeman, 1971. 965 p. [Stanford University, Stanford, CA and Oxford University, Oxford, England]

Population genetics as applied to humans. Contents: Mendelian populations; mutation, and the elimination of deleterious mutants; coexistence of many forms of a gene (genetic polymorphisms); genetic variants detected by immunological techniques; demography and natural selection; inbreeding; consanguinity; effects of chance in evolution; continuous variation, environment versus genotype; sex chromosomes, sex ratio; human evolution, genetics, and society. [The SCI® indicates that this book has been cited over 565 times since 1971.]

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"I was asked once by Josh Lederberg to give a course in genetics at Stanford in the summer of 1960 and chose a title similar to that of this book. This was the subject of the research in which he was engaged. Asked to repeat the course in 1962, my acceptance was made possible by sharing the task with Walter Bodmer. We had met in Cambridge, England, in the department of genetics, then directed by Sir Ronald Fisher, and although we had been there at different times this certainly generated a common background. The course was the foundation for the idea of writing the book that was actually published nine years after the cooperation in lecturing. During that period I was in Italy, at the University of Pavia,

and Bodmer was in Stanford. At the time the book was published, we had crossed over the Atlantic Ocean. I joined Stanford and Bodmer became a professor at Oxford. At the end of a second nine-year cycle of scientific activity there, he has become director of the Imperial Cancer Research Fund Laboratories. The book was written during times in which one of us came to Stanford, or the other to Italy, in Pavia, but more often, at a small village called San Michele di Pagana, not far from Portofino and Santa Margherita in the province of Genova.

"It is perhaps the fortunate choice of pleasant places during the time the book was written that has been responsible for its success in becoming a *Citation Classic*. Another reason is that the book was the first on a subject of importance to human geneticists, even more than to geneticists working on other organisms. The fact that practically no experimental genetics is possible on human individuals makes it necessary to resort to matings which occur in real populations. This requires a knowledge of population structure and of probabilistic treatments. Unfortunately, the mathematics necessary for a complete understanding of the subject is often above the limits of tolerance of most research workers in biology and medicine. With this problem in mind, at some later stage of preparation the book was rewritten, shifting all proofs and mathematical detail to the end of each chapter (under the prudent title of 'Worked Examples'). Did this contribute to the acceptance that the book received? The latest edition of this book appeared in 1978."¹

1. Cavalli-Sforza L L & Bodmer W F. *The genetics of human populations*. San Francisco: W.H. Freeman, 1978. 965 p.