

where F_i 's are the roots of the equation in $F: |a_{1ij} - Fa_{2ij}| = 0$, such that the largest root has moderate optimum properties with respect to one class of alternatives, the smallest for another class and the product of the roots (which is the likelihood ratio test) for another class of alternatives—all discussed in this paper. (2) With k random samples of sizes n_r from k p -variate normal populations with means m_{ri} and a common dispersion matrix (α_{ij}) , $r = 1, 2, \dots, k$; $i, j = 1, 2, \dots, p$, an infinite number of similar region tests could be constructed for the composite hypothesis $(m_{1i}) = (m_{2i}) = \dots = (m_{ki})$, $i = 1, 2, \dots, p$, among which there is none having the strong optimum properties of the F -test in the analogous univariate problem. Among these similar region tests, however, there is a subset based on F_i , $i = 1, 2, \dots, q \leq p$, where F_i 's are the nontrivial roots of the equations in $F: |b_{1ij} - Fb_{2ij}| = 0$ (where (b_{1ij}) is the matrix of the sample means reduced to the grand means and (b_{2ij}) is the pooled dispersion matrix from the different samples), such that the largest and smallest roots have moderate optimum properties with respect to two different classes of alternatives and the sum of the roots for a third class of alternatives—all discussed in this paper. The likelihood ratio test, however, leads to the product. The wide variety of situations each problem could be made to cover is also discussed in this paper.

NEWS AND NOTICES

Readers are invited to submit to the Secretary of the Institute news items of interest.

Personal Items

Dr. K. S. Banerjee, Statistician at the Central Sugarcane Research Station, Bihar, India, received his doctorate degree from the Calcutta University in January of this year. His thesis covered his contributions to "weighing designs."

Mr. Lyle D. Calvin, formerly at the Institute of Statistics, North Carolina State College, has accepted the position of Biometrician with the Division of Biological Research, G. D. Searle & Co., Chicago, Illinois.

Dr. Robert J. Hader has accepted a position on the staff of the Institute of Statistics, North Carolina State College. He leaves Los Alamos, New Mexico, where he has been employed as statistician for the Los Alamos Scientific Laboratory for the past two years.

Mr. Bernard Hecht has joined the Victor Division of RCA, Camden, New Jersey, as Manager, Assembly Quality Control, after five years as Quality Control Manager of the International Resistance Company of Philadelphia, Pennsylvania.

Dr. Edward L. Kaplan has received his doctorate degree in mathematics from Princeton University and is now a member of the Technical Staff, Bell Telephone Laboratories, Murray Hill, New Jersey.

Dr. Eugene Lukacs has joined the staff of the Statistical Engineering Laboratory of the National Bureau of Standards. At the Bureau he will be engaged in research in mathematical statistics, particularly autoregressive series and stochastic processes.

Mr. A. W. Marshall, formerly at the Washington, D. C., office of the Rand Corporation, has now moved to its Santa Monica, California, office.