ABSTRACTS OF PAPERS

(Abstracts of papers to be presented at the Central Regional Meeting, Lafayette, Indiana, March 23–25, 1966. Additional abstracts will appear in the April 1966 issue.)

1. Some asymptotically efficient sequential procedures for ranking and slippage problems. M. S. SRIVASTAVA, Princeton University.

In this paper Chow and Robbins' [*Ann. Math. Statist.* **35** (1964) 457–462] sequential theory has been applied to slippage and ranking problems: (1) A class $\mathcal{C}$ of sequential procedures is given for selecting the population with the largest mean from k populations having fixed distribution functions F_i with unknown but finite variance $\sigma^2 > 0$, so that in each case the probability of making the correct decision exceeds a specified value (say, $1 - \alpha$) when the greatest mean exceeds all the other means by at least a specified amount $2d$ and when $d \to 0$. The members of the class $\mathcal{C}$ of sequential procedures are asymptotically 'efficient' (in the sense of Chow and Robbins). Other ranking problems can be considered similarly. (2) Slippage problem. In the above problem, the possibility that all parameters (means) of the various populations are equal was ruled out. In this paper, we consider this possibility also and a class $\mathcal{C}$ of efficient sequential procedures is given. (3) A Multivariate Slippage problem. The problem 2 has been extended to multivariate case also.

2. On the asymptotic theory of sequential confidence intervals. M. S. SRIVASTAVA, Princeton University. (By title)

Chow and Robbins [*Ann. Math. Statist.* **35** (1964), 457–462] have considered the problem of finding a confidence interval of prescribed width $2d$ and prescribed coverage probability α for the unknown μ of a univariate population Ω having fixed distribution function F with unknown, but finite, variance $\sigma^2 > 0$. Since no fixed sample procedure can possibly work, they consider a certain class of sequential procedures and show that the members of this class are asymptotically consistent and efficient. It is the object of this paper to investigate the extent to which these results may be extended to find the confidence intervals for the following: (1) Mean of a multivariate population. (2) All normalized linear functions of the p components of the mean vector. (3) Linear regression parameters. (4) Means of K independent univariate populations. (6) All differences between means of k independent populations. (7) For the difference between the means of two univariate populations with unequal unknown variances, Fisher-Behren's problem. (8) All normalized liner functions of means of k independent univariate populations.

(Abstract of a paper to be presented at the Eastern Regional Meeting, Upton, Long Island, New York, April 27–29, 1966. Additional abstracts will appear in the April 1966 issue.)

1. Minimal two-level main-effect-clear plans (preliminary report). CUTHBERT DANIEL, Private Consultant, New York.

Intermediate in resolving power between main-effect plans (which alias main-effect estimates with two-factor interactions) and two-factor-interaction-clear plans (which alias each main-effect and two-factor interaction only with higher order interactions) are main-effect-clear plans (which alias main-effects only with three-factor interactions and two-factor interactions with each other). An estimate of the main-effect of factor A, unbiased by any two-factor interactions with factors $B, C, D, \cdots, Q$, can be obtained from the re-