CORRECTION NOTE

CORRECTION TO STOPPING TIME OF A RANK-ORDER SEQUENTIAL PROBABILITY RATIO TEST BASED ON LEHMANN ALTERNATIVES

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Professor R. A. Wijsman located a gap in the above paper (Ann. Math. Statist. 37 (1966) 1154–1160). The absolute value on the left-hand side of inequality (16) was not justified and consequently the absolute value in inequality (18) was not justified.

Professor Robert Berk has elegantly filled the gap in the following manner. Below, assume $A \ge 1$. (When A < 1 the computation is similar.) Then

$$\begin{split} -T_n^{(2)} &\leq n^{-1} \sum_{i=1}^{2^n} \ln \left\{ 1 + \Omega \left(n \right) / [F_n(Z_i) + AG_n(Z_i)] \right\} \\ &\leq n^{-1} \sum_{i=1}^{n} \left\{ \ln \left(1 + \Omega \left(n \right) / F_n(X_i) \right) + \ln \left(1 + \Omega \left(n \right) / AG_n(Y_i) \right) \right\} \\ &\leq 2n^{-1} \sum_{i=1}^{n} \left\{ \ln \left(1 + n\Omega \left(n \right) / i \right) \\ &< 2n^{-1} \int_{0}^{n} \ln \left(1 + n\Omega \left(n \right) / x \right) dx \\ &= 2 \left(1 + \Omega \left(n \right) \right) \ln \left(1 + \Omega \left(n \right) \right) - \left(2\Omega n \right) \ln \Omega \left(n \right). \end{split}$$

Hence

$$P(T_n^{(2)} < -\epsilon) \le P(2(1 + \Omega(n)) \ln(1 + \Omega(n)) - 2\Omega(n) \ln\Omega(n) > \epsilon)$$
$$= P(\Omega(n) > \epsilon') < \rho^n$$

where ϵ' depends only on ϵ and $\rho < 1$. Hence, we have obtained (18).

We sincerely appreciate the efforts of Professors Wijsman and Berk in this matter.

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