The Annals of Statistics
1987, Vol. 15, No. 2, 883

CORRECTION

ESTIMATING A DISTRIBUTION FUNCTION WITH TRUNCATED DATA

BY M. WOODROOFE

The Annals of Statistics (1985) **13** 163–177

The proof of Theorem 5 is incomplete, although the theorem is correct as stated.

On page 175, line 22, it is necessary to show that $\sup_{c<a}|W_n(c)| \to 0$ in probability as $n \to \infty$ and then $a \to 0$. In fact, it suffices to show that $\sup_{c<a}|II_n(c)| \to 0$, where II_n is defined on page 175. To see this, let

$$M_n(t) = [1 - F_n^*(t)]/[1 - F_*(t)] - 1,$$

for $0 \le t < b_F$. Then $M_n(t)$ is a martingale in t for each fixed n, $X_n(t) = -\sqrt{n}[1 - F_*(t)]M_n(t)$, for $0 < t < b_F$ and $n \ge 1$, and

$$\begin{aligned} II_n(c) &= \sqrt{n}\int_0^c [M_n(t)/C(t)]\, dF_*(t) \\ &\quad - \sqrt{n}\int_0^c [1/C(t)][1 - F_*(t)]\, dM_n(t) \\ &= II_{1,n}(c) - II_{2,n}(c), \end{aligned}$$

say, for all $0 < c < b_F$ and $n > 1$. Now, if a is so small that $F_*(a) < \frac{1}{2}$, then $E|M_n(t)| < 1/\sqrt{n}$ for $0 < t < c$ and (by Fubini)

$$E\Big\{\sup_{c<a}|II_{1,n}(c)|\Big\} \le \int_0^a [1/C(t)]\, dF_*(t), \tag{$+$}$$

which is independent of n and tends to zero as $a \to 0$. Next, since $II_{2,n}(c)$ is a martingale in c,

$$P\Big\{\sup_{c<a}|II_{2,n}(c)| \ge \varepsilon\Big\} \le (1/\varepsilon)E\big[|II_{2,n}(a)|\big],$$

which approaches 0 as $n \to \infty$ and $a \to 0$ for all $\varepsilon > 0$, by $(+)$ and

$$E\big[II_n(a)^2\big] \to 0 \quad \text{(shown in the paper)}.$$

I wish to thank Professor Richard Gill for bringing the incompleteness of the proof to my attention.

DEPARTMENT OF STATISTICS
UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48109

Received November 1986.