THEOREM 3. *If* $E(X_i) = 0$, $E(W) > 0$, *then* $E(Z) = -\infty$, *where*

$$Z = \min_{k \le n} (X_1 + \cdots + X_k).$$

PROOF: It follows from the proof of the lemma that

$$\int_{V_N} (X_1 + \cdots + X_N)\, dP \to -E(W).$$

Now on V_N, $Z \le (X_1 + \cdots + X_N)$. Hence

$$\lim_{N \to \infty} \int_{V_N} Z\, dP \le -E(W).$$

Thus $E(Z)$ cannot exist if $E(W) > 0$, since $P(V_N) \to 0$. Since $Z \le X_1$, $\int_{Z \ge 0} Z\, dP$ exists; consequently $E(Z) = -\infty$.

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CORRECTION TO THE PAPER "ON A PROBLEM OF ESTIMATION OCCURING IN PUBLIC OPINION POLLS"

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In the paper "On a problem of estimation occurring in public opinion polls" (*Annals of Math. Stat.*, Vol. 16 (1945), pp. 85–90) the author made the assertion that, in the notation of the paper, $E[(\epsilon_i - r_i)^2]$ is always smaller than $E[(\epsilon_i - e_i)^2]$. This statement is incorrect and its supposed proof contains a numerical error in the fourth line from above on p. 90.

We have

$$E(r_i^2) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{+\infty} \int_{1/2}^{\infty} \int_{1/2}^{\infty} \frac{1}{2\pi\sigma_i^3} \exp\left[-\frac{1}{2\sigma_i^2} Q(x, y, p_i)\right] dx\, dy\, dp_i$$

$$= \frac{1}{2\pi} \frac{2}{\sqrt{3}} \int_{c/\sqrt{2}}^{\infty} \int_{c/\sqrt{2}}^{\infty} \exp\left[-\frac{1}{2}\frac{4}{3}(x^2 + y^2 - xy)\right] dx\, dy$$

$$c = \frac{\frac{1}{2} - \pi_i}{\sigma_i}.$$

The last integral is tabulated in Karl Pearson's *Tables for Statisticians and Biometricians*, Vol. 2, p. 93. Comparing this table with a table of the normal probability integral it may be seen that there exists a value $\bar{c}$ such that

$$\begin{aligned} E(e_i^2) &\geq E(r_i^2) \text{ for } c \leq \bar{c}, \\ E(e_i^2) &< E(r_i^2) \text{ for } c > \bar{c}. \end{aligned}$$

The quantity $\bar{c}$ lies in the neighborhood of 2.

I am indebted to Professor J. W. Tukey for bringing the error to my attention.