

Note that the factor in brackets is the same as the last term on the right side of (1) with  $n$  replaced by  $n - 1$  and  $x + 1$  replaced by  $x$ . Hence for large  $x$  and  $N$ ,

$$w(n, 1, N, x) \approx \frac{n}{N+n} \left(1 - \frac{x}{N}\right)^{n-1} \cdot \left\{ \frac{\left(1 + \frac{n}{N-x}\right)^{N-x+n}}{\left(1 + \frac{n-1}{N}\right)^{N+n-1}} \right\} \sqrt{1 - \frac{n-1}{N+n-1}} \sqrt{1 + \frac{n-1}{N-x}}.$$

By the same limiting procedure as before,

$$(5) \quad \lim_{x=kN \rightarrow \infty} w(n, 1, N, kN) = \frac{n}{N} (1 - k)^{n-1}.$$

In any small interval  $dk$ , there are  $Ndk$  possible values that  $x$  can assume; hence the probability that  $k$  lies in the interval  $dk$  is

$$(6) \quad p(k) dk = \frac{n}{N} (1 - k)^{n-1} (N dk).$$

Therefore,  $p(k) = n(1 - k)^{n-1}$ . This is exactly the result given by equation (4), but obtained in a somewhat different way.

From the symmetry of the problem,  $\lim_{N \rightarrow \infty} W(n, 1, N, kN)$  is also the probability that in a large future sample at most a fraction  $k$  of the observations will be less than the *smallest* observation in the original trial sample of  $n$  units. Hence, a life-test of  $n$  units may be discontinued as soon as any unit fails and equation (3) will give the probability that in the future at most 100% of the units will fail in a time shorter than the length of the test. The graphs show  $W$  as a function of  $k$  for various values of  $n$ .

#### REFERENCE

- [1] E. J. GUMBEL AND H. VON SCHELLING, "The distribution of the number of exceedances," *Annals of Math. Stat.*, Vol. 21 (1950), pp. 247-262.

### CORRECTION TO "THE SAMPLING DISTRIBUTION OF THE RATIO OF TWO RANGES FROM INDEPENDENT SAMPLES"

BY RICHARD F. LINK

*Princeton University*

In the note mentioned in the title (*Annals of Math. Stat.*, Vol. 21 (1950), pp. 112-116) the distribution given for the above mentioned ratio when the sample values are drawn from a rectangular distribution is correct only when  $R \leq 1$ . This is pointed out in an article by P. R. Rider ("The distribution of the