If we let $f_n(x) = h_n(x) + p_0(x)$, and $f(x) = p_0(x)$, then $\lim f_n(x) = f(x)$, but $c_n = \frac{1}{2}$ and $c = 1$, hence $\lim c_n \neq c$. Employing the assumption that $p_n(x)$ and $p(x)$ are densities we see

$$1/c_n = \int_R f_n(x)\,dx, \qquad 1/c = \int_R f(x)\,dx,$$

and hence $\lim c_n = c$ if and only if

$$\lim \int_R f_n(x)\,dx = \int_R \lim f_n(x)\,dx. \tag{13}$$

It follows that in such cases if we wish to establish a limiting distribution in the sense (1), we may either prove $\lim c_n = c$, or we may justify (13), say by producing a suitable dominating function, but we need not do both. No doubt the first alternative would be preferable at all but the most advanced levels of teaching or exposition.

REFERENCES

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AN EXPLICIT REPRESENTATION OF A STATIONARY GAUSSIAN PROCESS

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1. In a paper which will soon appear in the *Journal of Applied Physics* [1] the authors have introduced methods of calculating certain probability distributions which are of importance in the theory of random noise in radio receivers.

The complexity of the physical problem and occasional uses of heuristic reasonings may have obscured some of the mathematical points. For this reason the authors felt that it may be worth while to illustrate one of the basic ideas on a simple but important example.

2. A stationary Gaussian process is a one parameter family $x(t)$ of random variables such that:

(a). $x(t)$ is normally distributed; the mean and the variance being independent of t

(b). the joint probability distribution of $x(t_1), x(t_2), \cdots, x(t_r)$ is multivariate Gaussian whose parameters depend only on the differences $t_j - t_k$.

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