insist that the algebra **A** generated by $\{A_a: a \in X\}$ contain the matrices I and J.

REFERENCES

- Bailey, R. A. (1981). A unified approach to design of experiments. J. Roy. Statist. Soc. Ser. A 144 214-223.
- Bailey, R. A. and Rowley, C. A. (1987). Valid randomization. Proc. Roy. Soc. London Ser. A 410 105-124.
- BAILEY, R. A. and SPEED, T. P. (1986). Rectangular lattice designs: efficiency factors and analysis.

 Ann. Statist. 14 874-895.
- BANNAI, E. and Itô, T. (1984). Algebraic Combinatorics. I. Association Schemes. Benjamin, Menlo Park, Calif.
- Bose, R. C. and Shimamoto, T. (1952). Classification and analysis of partially balanced incomplete block designs with two associate classes. *J. Amer. Statist. Assoc.* 47 151–184.
- Duquenne, V. (1986). What can lattices do for experimental designs? *Math. Social Sci.* 11 243–281. Houtman, A. M. and Speed, T. P. (1983). Balance in designed experiments with orthogonal block structure. *Ann. Statist.* 11 1069–1085.
- NELDER, J. A. (1965). The analysis of randomised experiments with orthogonal block structure. II.

 Treatment structure and the general analysis of variance. *Proc. Roy. Soc. London Ser. A*283 163–178.
- Speed, T. P. (1985). Dispersion models for factorial experiments. *Bull. Internat. Statist. Inst.* **51** 24.1-1-24.1-16.
- SPEED, T. P and BAILEY, R. A. (1982). On a class of association schemes derived from lattices of equivalence relations. In *Algebraic Structures and Applications* (P. Schultz, C. E. Praeger and R. P. Sullivan, eds.) 55-74. Dekker, New York.
- TJUR, T. (1984). Analysis of variance models in orthogonal designs. *Internat. Statist. Rev.* 52 33-65.
 TOBIAS, R. D. (1986). The algebra of a multi-stratum design and the application of its structure to analysis. Ph.D. thesis, Univ. of North Carolina, Chapel Hill, N.C.

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By consideration of broadly ranging examples (really by an analysis of analysis of variance), Dr. Speed seeks a definition of an analysis of variance. In Section 4 he settles on a formulation that provides lots of insight. My remarks are to the effect that it would seem that his definition might be usefully broadened a bit.

There are practically occurring random process situations where it seems to me an anova exists, yet which escape Dr. Speed's definition, specifically the "equality constraints amongst (co)variances" part. Suppose one has a process $Y(\cdot)$, with stationary increments, for example, a stationary point process. Suppose, and this is usually no real restriction, Y(0) = 0. Then, following the work of Kolomogorov [see, e.g., Doob (1953), pages 551-559, Bochner (1947), Itô (1953)