of literature has built up over the years; little could W.R. Thompson[1] have realized the industry he was creating in his 1933 paper.

The book gives a comprehensive account of bandit problems, and includes an excellent annotated bibliography, with comments (sometimes rather acerbic) on about 200 books and papers. The main approach is Bayesian, in which case the optimal solution may be obtained by dynamic programming (Bellman [2] is an early reference). Minimax solutions are also discussed. The authors are mainly interested in discrete-time bandits, with one chapter devoted to continuous-time versions. It is assumed that rewards are discounted, giving rise to a discount sequence α_i, $i = 1,2, \ldots$, which is the discount rate for the ith trial, two important sequences being the uniform $\alpha_i = 1$, $i \leqslant n$, $\alpha_i = 0$, $i > n$ giving a finite horizon, and the geometric $\alpha_i = \alpha^{i-1}$, $0 < \alpha < 1$. Random discount sequences are also discussed. A chapter is included on the k-armed bandit with geometric discounting, and the Gittins-Jones[3] dynamic allocation index.

The mathematics can be rather heavy in places - Chapter 2 requires measure theory, for example - but it is worthwhile persisting. The writing is generally very clear. It is recommended to those readers who have an interest in sequential decision problems and in characterizing their optimal solution, and those planning graduate courses in sequential optimization.

P.W. JONES

References

1. W.R. THOMPSON (1933) On the likelihood that one unknown probability exceeds another in view of the evidence of two samples. Biometrika **25**, 275-294.
2. R. BELLMAN (1956) A problem in the sequential design of experiments. Sankhya A **16**, 221-229.
3. J.C. GITTINS and D.M. JONES (1974) A dynamic allocation index for the sequential design of experiments. In "Progress in Statistics" (J. GANS et al., Eds), pp. 241-266. North-Holland, Amsterdam.

Books Received

Team Theory. K.H. KIM and F.W. ROUSH. Ellis Horwood Ltd, Chichester, 1987. 293 pp. £30.00. ISBN 0 745 80154 4

Mathematics with Applications. M.L. LIAL and C.D. MILLER. Scott, Foresman & Co., Glenview, Illinois, 1987. 740 pp. ISBN 0 673 18464 1

Judgmental Forecasting. G. WRIGHT and P. AYTON (Eds). John Wiley & Sons Ltd, Chichester, 1987. 293 pp. £29.95. ISBN 0 471 91327 8

Effective Assignment Skills and Strategies. A. RUSTON and R. RAM. HMSO Books, London, 1987. 94 pp. £5.80. ISBN 0 11 430015 1

Critical Issues in Information Systems Research. R.J. BOLAND and R.A. HIRSCHHEIM (Eds). John Wiley & Sons Ltd, Chichester, 1987. 394 pp. £27.95. ISBN 0 471 91281 6

Operational Research Society is collaborating with JSTOR to digitize, preserve, and extend access to *Journal of the Operational Research Society.* www.jstor.org