response rate than did the food pellets. Furthermore, the rate during the varied-reinforcement condition (T_3) was higher than in either of the other conditions (T_1 and T_2). These differences were found to be statistically reliable ($F=8.09$, $p<.01$). A Duncan's test (Edwards, 1960) indicated that each of the reinforcement conditions produced reliably different rates ($p<.01$).

All 12 Ss responded at a higher rate in T_2 than in T_1 . Nine Ss also responded consistently at a higher rate during T_3 than during T_2 . For two Ss the higher rate during T_3 did not evolve until approximately half way through Phase 3. The final S performed during T_3 at a rate grossly equivalent to that of T_2 .

Discussion

Previous research has tended to emphasize the similarities between varied-reinforcement and partial-reinforcement schedules (e.g., Logan, 1960; Wunderlich, 1961; cf., Steinman, 1966). To the extent that the reinforcers comprising the varied-reinforcement condition differ in reinforcing strength, a situation is developed which has partial reinforcement as its limit.

Although a partial-reinforcement analysis may be useful in explaining the greater resistance to extinction of a response acquired and maintained by varied reinforcement, it does not seem to be similarly useful in explaining the higher response rates produced by varied reinforcement in the present experiment. It is important to note that in all three reinforcement conditions, Ss received reinforcement

on a VI schedule. In the varied-reinforcement condition, the strongest of the two reinforcers (sucrose) was delivered only half as frequently as during the "sucrose-only" condition. Thus, there was what amounted to a longer average interval between equally strong reinforcers in the varied-reinforcement condition as compared with the sucrose-only condition. Variable interval schedules which have comparatively longer mean intervals, i.e., lower reinforcement densities, tend to produce lower response rates than when the reinforcement density is higher (Ferster & Skinner, 1957). The fact that the rates were higher under the varied-reinforcement condition than under the sucrose-only condition suggests that something other than the differential reinforcing strengths of the two reinforcers produced the varied-reinforcement effect.

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Notes

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Erratum

Bowen, J., & McCain, G. Occurrence of the partial reinforcement extinction effect after only one NRRN sequence of trials. *Psychon. Sci.*, 1967, 9, 15-16: On page 15, paragraph 3, the authors erroneously assumed that Surridge et al used the same extinction confinement (90 sec) in Experiment II as they had in Experiment I. The confinement time actually used was 30-35 sec.