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AN INVESTIGATION INTO CHOICE BETWEEN FIXED-INTERVAL
AND
MIXED-INTERVAL SCHEDULES OF REINFORCEMENT

A thesis submitted to the University of Auckland in
partial fulfilment of the requirements for the
degree of Master of Science

by

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ABSTRACT

Pigeons were trained under concurrent chain schedules in which the initial links were equal aperiodic schedules. One of the two terminal links was always a fixed-interval schedule of 10 sec duration. The other terminal link was either a two-valued mixed-interval schedule or a fixed-interval schedule. The shorter of the two intervals comprising the mixed-interval schedules was always 5 sec, the longer was either 10 sec, 20 sec, 40 sec, or 60 sec. The number of times each of the two intervals occurred in these mixed-interval schedules was varied. The data were compared with predictions from various models of concurrent chain performance and the adequacy of these models was discussed. No one model was a good predictor of all the data. Davison and Temple's (submitted for publication) model fitted the FI vs FI data well and fitted the FI vs MI data better than any other model. It was suggested that a "carry over" from one condition to the next had affected the present data. It was also suggested that the way in which Davison and Temple's predictions differed from the obtained preference ratios was the result of a weighting of the intervals in the MI schedules that changed according to the particular choice arranged.