variance (corrected for unequal N) yielded no significant effects of drug condition during training ($F=0.82$), drug condition during testing ($F=2.44$), and no significant interaction ($F=2.03$). Relative to Ss for which drug was discontinued, Ss which continued to receive pemoline during testing (the D-D group) seemed to have better retention; however, as already noted, this difference was not significant.

In general, the results of the present study are in agreement with those of other investigators (Beach & Kimble, 1967; Frey & Polidora, 1967) in that 20 mg/kg injections of magnesium pemoline facilitated avoidance conditioning in the rat but had little or no effect on subsequent retention. The tendency for an increment in performance of Ss which received drug both during training and testing suggests that facilitation may be due to the stimulant properties of the drug and/or to the drug's possible interference with freezing behavior (Frey & Polidora, 1967).

Comment on Solyom, Beaulieu and Enesco by Hugh L. Evans

Solyom et al (1966) report that RNA-treated rats do not acquire a bar-pressing response more rapidly than control animals, but do show a higher rate of responding with extended training, and a subsequent resistance to extinction.

It is felt that the above authors failed to make use of some pertinent information in the interpretation of their results. First, it is reported that the RNA-treated group did not acquire the CR sooner than the controls. In addition, there appears to be no difference between RNA and control groups in the number of trials to asymptotic VI performance. Thus RNA rats were no more proficient, in terms of reinforcements earned, than controls. Similar data have been reported for operant conditioning with food as the reward (Brown, 1966). Second, with extended training RNA rats developed a higher response rate; but on a VI schedule high response rate is not a measure of learning or adequacy of performance. Many drugs (amphetamine, caffeine) enhance the tendency to respond but have no effects on learning (e.g., Weiss & Laties, 1962). Crucial information about effects on learning could be gotten by continued testing after RNA injections have ceased.

Finally, the extinction data show that animals responding at a high baseline rate generate extinction curves differing slightly from those with a lower

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Notes

1. We thank Hollis Schoepke of Abbott Laboratories for supplying the magnesium pemoline.
2. Fifteen of the drug training Ss were used for another purpose and are not included in the testing data.

baseline rate. Because Solyom's results do not indicate a differential degree of learning during the training phase, the extinction evidence favors an RNA effect on performance, but not on learning. Evidence that RNA treatments produce no changes in open field activity has no bearing on this problem. In fact, Corson & Enesco (1966) report RNA to produce changes in instrumental performance that do not arise from the learning process. An additional group of animals trained under RNA but extinguished without RNA would establish the importance of RNA per se on rate of extinction. If learning were enhanced by an experimental treatment, subsequent behavioral indices of learning should be independent of continued treatment. In short, while the Solyom results are acceptable evidence for an RNA effect on performance, they offer no "suggestive evidence" for learning effects.

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