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## An Experiment in Transfer of Training

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## AN EXPERIMENT IN TRANSFER OF TRAINING

RUTH B. McDONALD

### PROBLEM

Much work has been done on the transfer of training in experiments of perception and motor skills, and some studies have been made using school subject matter. The idea of formal discipline upon which some of the work in the schools has been based, has given way to the more modern phenomenon of transfer. Many of the studies carried on demonstrated transfer effects averaging from 20 to 30 per cent.

The present study has to do with the simple sensori-motor skill of card sorting. It was assumed at the beginning of the experiment that negative transfer would be noted. The conditions and results are presented with the limitations of the type of function and the number of subjects used.

### METHOD AND PROCEDURE

Two subjects, A and B, were chosen for the experiment. They both fall within the middle age bracket and are women with college degrees, one a teacher in the public schools and the other a supervisor of a stenographic office. Subject A is very calm, deliberate and slow while subject B is quick and very keen. These two subjects were asked to sort playing cards into four piles according to suit, placed on the table face down in the following order: hearts, spades, clubs, diamonds. Fifteen practices of three trials each were given on fifteen successive days in the experimenter's room and scored as follows. The actual time for sorting the deck was noted, and for each mistake — placing of a card in the wrong pile — two seconds were added to this time. The three trials were averaged and the mean adjusted time was set down for each days work. The conditions of the experiment were controlled as nearly as possible. The time of day, the light, the place where the subject was seated, and the number of persons in the room were kept constant. However, distractions such as telephones ringing, sore fingers, weariness after a long days work were conditions which could not successfully be controlled outside of the laboratory.

When the fifteen days were completed the subjects were asked to change the order of sorting as follows. Instead of placing them

as hearts, spades, clubs, diamonds, they were asked to place them as clubs, diamonds, hearts, spades. Fourteen of these practices were given and scored the same as before. At the end of the training period the results were tabularized and graphed. (See graphs I and II.)

### SUMMARY AND CONCLUSIONS

We may tentatively conclude, from a study of the curves plotted that: first, there was no negative transfer, at least it was neutral-

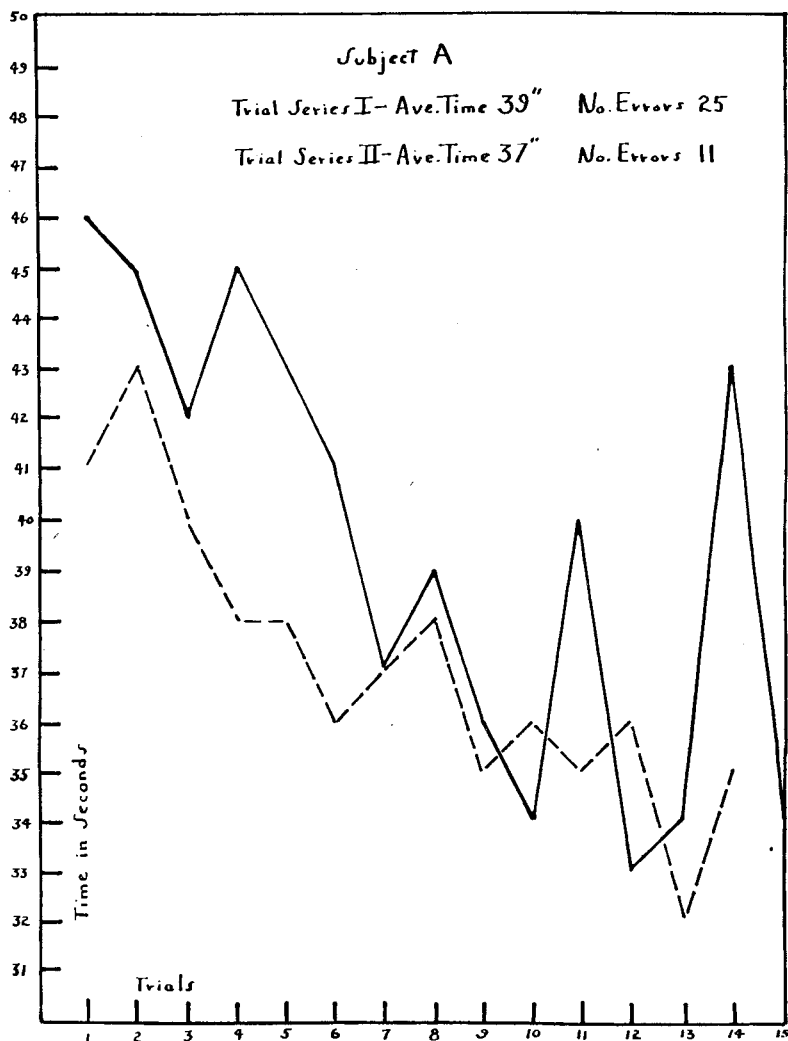


Fig. 1. Record of Subject A. Dotted line shows Series II.

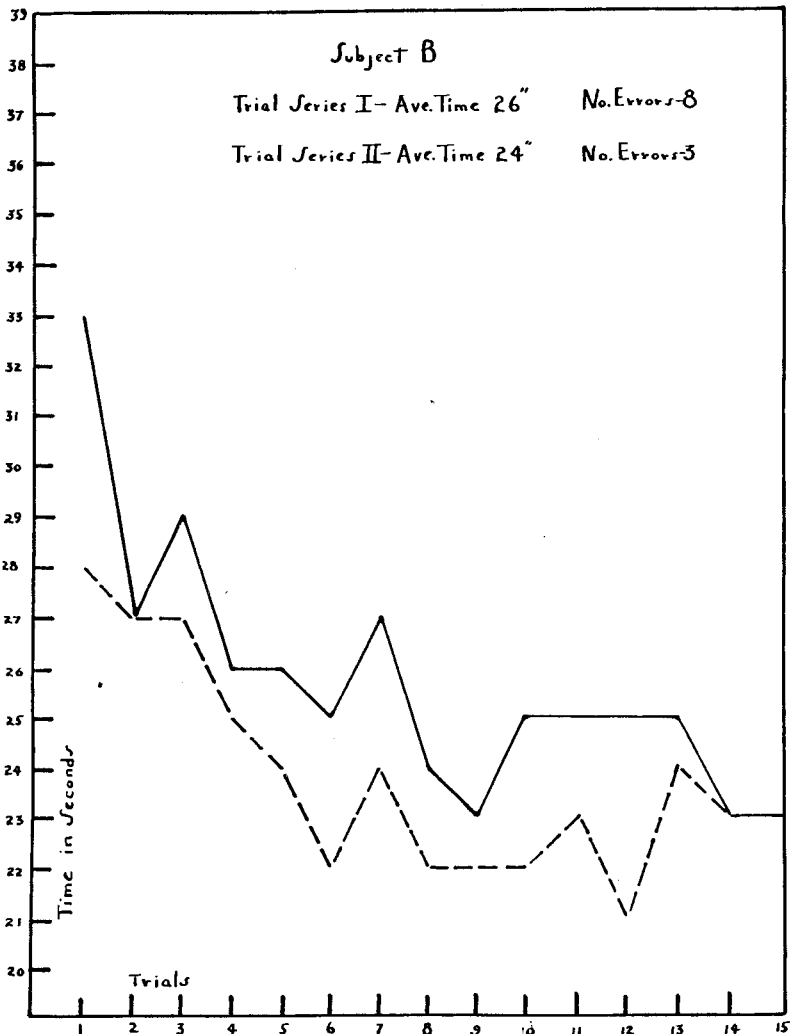


Fig. 2. Record of Subject B. Dotted line shows Series II.

ized by other factors which transferred positively; second, a slight positive transfer of about 5 per cent to 8 per cent was noted as the mean time of the complete series of trials was two seconds less in both cases on the second trial. There was a slight loss of time at the beginning of the new trial but we see that both curves on the second trial have less fluctuation. Third, the low scores were gained more readily after the first few trials of the second series, showing that even though a habit pattern may slow one down when a reversal of procedure is introduced, the new pattern

is learned much more quickly and is much more steady than the first.

In conclusion it may be said that the experiment could be improved in many ways. It would be interesting to note the results if children were used as subjects, employing a more complex pattern and giving more trials over a shorter period of time in order to form a stronger habit through concentrated effort. A series of such experiments is needed before any definite conclusions should be formed. It is the author's opinion that some very different ideas of transfer effects might be obtained from those which now exist, if experiments were sufficiently varied and continued over a much longer period of time.

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