

IMPOSSIBLE DEVELOPMENTS III

20

Note II on this subject was intended merely to investigate the powers of machine-sorting. It suggests that by this technique we are in a position to deal with almost anything that could be made to run. This note is concerned with the possibilities of using very short beginners (or endings) (say 13 - 14 letters on an average) and reasonable menus (i.e. about 40 - 200 stecker stops per w.o.) It is based on using not two cribs with the turnover risks looked after, but a whole series of beginners in which turnovers are not taken into account.

Suppose we have menus $M_1 - M_k$ made up on k different beginners ignoring the turnover risks. Suppose that on any given w.o. the expected no. of pairs of consistent stories on M_r, M_s is n_{rs} . Then between all the possible menus we expect to get $\sum n_{rs}$ consistent stories between pairs of menus. If we run enough menus we are eventually pretty sure to find at least two beginners which are both right and without turnover. And owing to the small probability on most reasonable menus of getting consistent stories we should have very little testing to do after the cards are sorted. For instance with 10 menus, if the average probable no. of expected stories between two of the menus is $< 1/45$ * we shall expect less than one story to test per w.o.

If we have only a very few w.o. to run (as we have now on Red or L.B. after the beginning of the month) ** this would appear to be a fair proposition. It would be particularly helpful in the Naval when there is only one w.o. to do on half the days

* And it is reasonably clear from Note II that $1/45$ is actually rather a large no. for reasonable menus

** This was written when the Clarke w.o. rule was working well.

(D.B.S. Nov. 1941)

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