Accompanying Materials for "A Diffusion Model Decomposition of the Practice Effect" D: Descriptive Results: Errors

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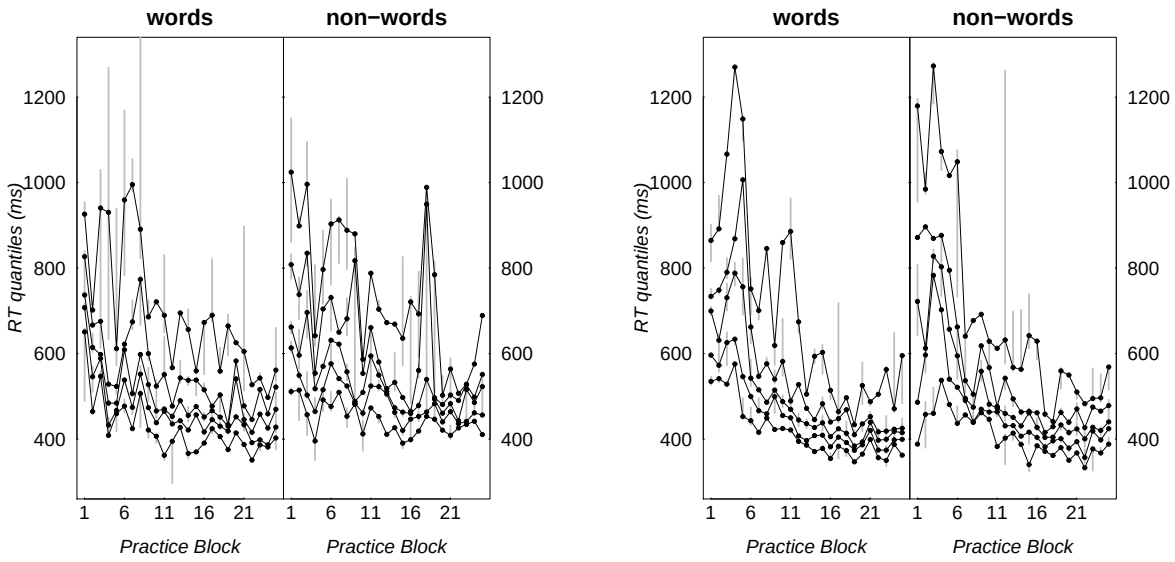
In the main article, only the RT-data of correct responses were shown. In the diffusion model, error data is not ignored as it is in regular analyses, but taken into account as valuable information about a participant's performance.

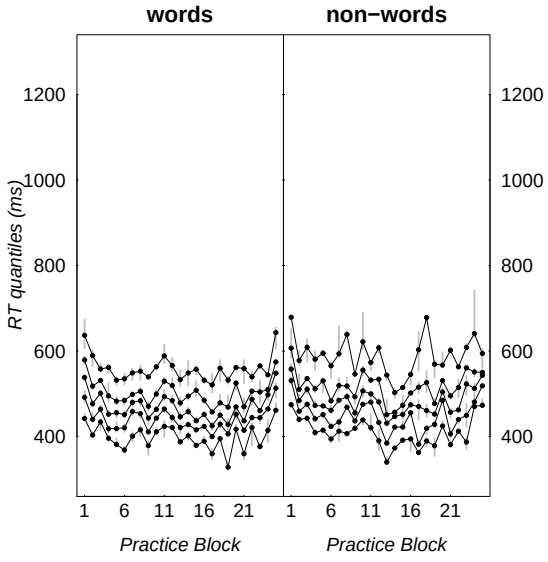
Figure 1 displays the RT distributions for incorrect responses, shown as quantiles. Figures 1(a) and 1(b), show how RT changes with practice for both accuracy stressed participants. The data looks a bit noisy due to the small amount of errors committed in this condition. The pattern of change with practice, however, is similar to the pattern found for correct RT, as shown in the main article. Both mean and spread of error RT decrease with practice.

Figures 1(c) and 1(d) show the distribution of error RT in each block for the two speed stressed participants. As in the accuracy condition, in the speed condition, the error RT pattern is similar to the correct RT pattern. Mean and spread of RT appear relatively steady for participant S1, whereas participant S2 shows a decrease of both mean and spread of RT, which is particularly pronounced in the first few blocks.

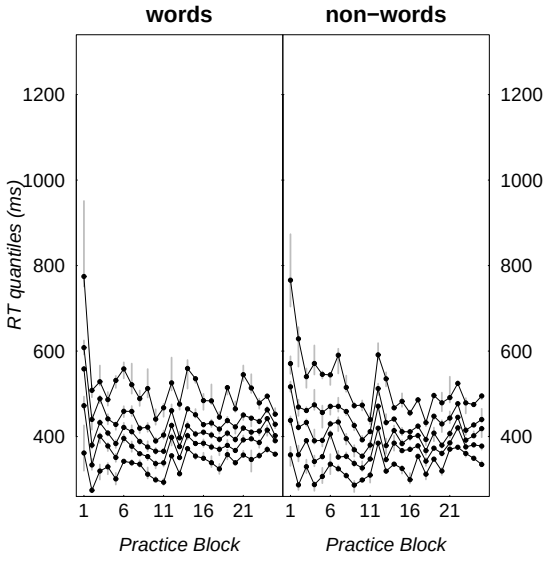


(a) Accuracy–stressed participant A1.

(b) Accuracy–stressed participant A2.



(c) Speed–stressed participant S1.



(d) Speed–stressed participant S2.

Figure 1. RT quantiles (.1, .3, .5, .7, .9) for error responses per practice block. Grey lines in show 95% bootstrap confidence intervals of the quantile estimates.