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### 1.1 A: Predictor collinearity

Table A1. Predictor Collinearity - odd numbers

| Measure | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1. Decade magnitude | - | -.09 | .22 | -.06 | -.10 | $-.37^{*}$ | .03 | -.18 |
| 2. Unit magnitude |  | - | -.04 | -.00 | .01 | -.07 | .02 | .09 |
| 3. Parity congruity |  |  | - | .05 | -.27 | $-.34^{*}$ | -.02 | -.22 |
| 4. Prime number |  |  |  | - | -.29 | $-.51^{* *}$ | $-.46^{* *}$ | $-.45^{* *}$ |
| 5. Square |  |  |  | - | $.56^{* * *}$ | .11 | .20 |  |
| 6. Multiplication table |  |  |  |  |  | - | .24 | $.39^{*}$ |
| 7. Divisibility by 5 |  |  |  |  |  |  | - | $.51^{* *}$ |
| 8. Frequency log10 |  |  |  |  |  |  |  | - |

Note. * p < .05, ** p < .01, *** p < . 001

Table A2. Predictor collinearity - even numbers

| Measure | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1. Decade magnitude | - | -.14 | -.22 | -.13 | -.33 | -.13 | -.06 | $-.40^{*}$ |
| 2. Unit magnitude |  | - | .00 | .00 | -.35 | -.25 | -.06 | -.09 |
| 3. Parity congruity |  |  | - | .04 | -.07 | .04 | .00 | .12 |
| 4. Being a square |  |  |  | - | $.44^{*}$ | $.46^{*}$ | .28 | .20 |
| 5. Multiplication table |  |  |  | - | $.44^{*}$ | .32 | $.41^{*}$ |  |
| 6. Power of 2 |  |  |  |  | - | .28 | .20 |  |
| 7. Divisibility by 4 |  |  |  |  |  |  | - | .36 |
| 8. Frequency log10 |  |  |  |  |  |  |  | - |

Note. * p < . 05

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### 1.2 B: averaged bivariate correlations within participants

Table B1: Averaged bivariate correlations within participants. Positive values show that increasing / possessing given property correlated with longer response times, while negative values that it was associated with shorter response times.

| Odd numbers | overall | English | German | Polish |
| :--- | :---: | :---: | :---: | :---: |
| Decade magnitude | 0,10 | 0,13 | $-0,01$ | 0,18 |
| Unit magnitude | 0,06 | 0,02 | 0,09 | 0,08 |
| Parity congruity | $-0,02$ | $-0,03$ | $-0,02$ | 0,00 |
| Prime number | 0,02 | 0,01 | 0,01 | 0,05 |
| Square | $-0,01$ | $-0,03$ | 0,00 | 0,01 |
| Multiplication table | $-0,04$ | $-0,05$ | $-0,02$ | $-0,04$ |
| Divisibility by 5 | 0,05 | 0,10 | 0,00 | 0,05 |
| Frequency | 0,01 | 0,06 | 0,02 | $-0,05$ |
|  |  |  |  |  |
| Even numbers | overall | English | German | Polish |
| Decade magnitude | 0,10 | 0,06 | 0,01 | 0,22 |
| Unit magnitude | $-0,01$ | 0,01 | 0,04 | $-0,08$ |
| Parity congruity | $-0,01$ | 0,00 | 0,00 | $-0,04$ |
| Square | $-0,02$ | $-0,02$ | $-0,02$ | $-0,02$ |
| Multiplication table | $-0,02$ | 0,01 | 0,00 | $-0,06$ |
| Power of 2 | $-0,01$ | $-0,03$ | 0,01 | $-0,03$ |
| Divisibility by 4 | $-0,02$ | $-0,05$ | $-0,01$ | $-0,01$ |
| Frequency | $-0,04$ | 0,03 | $-0,06$ | $-0,09$ |

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### 1.3 C: SNARC effects

The SNARC effect (Dehaene et al., 1993) was calculated using a method proposed by Fias, Brysbaert, Geypens, and d`Yedewalle (1996). It calculates one single numerical value for each participant, which can be used for further analysis and represents the magnitude of the SNARC effect. First, the difference in reaction times between the both hands ( $\mathrm{d}_{R T}=\mathrm{RT}_{\text {right hand }}-\mathrm{RT}_{\text {left hand }}$ ) is calculated for each number for each participant. A left-hand advantage is represented by a positive $\mathrm{d}_{R T}$, a right-hand advantage is represented by a negative $\mathrm{d}_{R T}$. Then the calculated $\mathrm{d}_{R T S}$ are regressed on number magnitude. The obtained non-standardized regression slopes can be taken as a measure of the SNARC effect. More negative slopes relate to stronger SNARC effects. To calculate the unit-SNARC effect, the reaction times for each unit number ( $1,2,3,4,6,7,8,9$ ) were averaged across decades for each participant separately. In a second step, the same method was used as for the calculation of the overall SNARC effect. To examine the significance of the SNARC effect on sample level, the obtained slopes are tested against zero with a one-sample $t$-test. Following these methods, testing regression slopes for the overall SNARC against 0 did not reveal a significant SNARC effect, $t(106)=-0.21, p=.836$. However, testing regression slopes for the unit-SNARC against 0 revealed a significant unit-SNARC effect, $t(106)=-$ $6.15, p<.001$.

