**Supplementary Material**

**Comprehensive results of the mixed effects model analysis in Experiment 1:**

Table 5

*Estimates of fixed effects of the skin conductance (SCR)* ***frequency*** *data for the estimated best model in Experiment 1. A more in depth look at the model including all three predictors revealed a 94% probability of showing a positive SCR response in the first trial during the congruent condition. Probability of a positive response in the first trial did not differ significantly neither for the visual only, nor for the vestibular only condition. Interestingly, sequence had no significant effect in the congruent condition, which means that SCR response did not decrease significantly with increasing number of trials. The interaction estimates describe the difference in the slope for both control conditions compared to the congruent condition. The interaction between sequence and the visual only condition was highly significant. This means that the influence of sequence on SCR probability was stronger in the visual only condition than in the congruent condition, showing a SCR decrease with increasing number of trials. The interaction between sequence and the vestibular only condition did not turn out significant.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Estimate | SE | z | p |
| Intercept (condition=congruent,sequence = 1) | 2.82 | 0.94 | 2.99 | <0.003 |
| Sequence | -0.18 | 0.16 | -1.11 | 0.27 |
| Condition (=visual only) | 0.84 | 1.1 | 0.76 | 0.44 |
| Condition (=vestibular only) | -0.07 | 1.21 | -0.06 | 0.95 |
| Interaction sequence \* visual only | -0.7 | 0.25 | -2.83 | 0.005 |
| Interaction sequence \* vestibular only | -0.15 | 0.24 | -0.63 | 0.53 |

Table 6

*Estimates of fixed effects of the skin conductance (SCR)* ***amplitude*** *data for the best model in Experiment 1. The model predicted a SCR response of 0.51 in the first trial during the congruent condition and a significant decrease with increasing trial number.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Parameter* | *Estimate* | *SE* | *t* | *p* |
| Intercept (condition=synchronous,Sequence = 1) | 1.97 | 0.37 | 5.37 | <0.001 |
| Sequence | 0.35 | 0.08 | 4.74 | <0.001 |

**Comprehensive results of the mixed effects model analysis in Experiment 2:**

Table 7

*Estimates of fixed effects of the skin conductance (SCR)* ***frequency*** *data for the best model in Experiment 2. Investigating the parameters of the best model revealed a 99% probability of showing a positive SCR response in the first trial during the congruent condition. Probability of a positive response in the first trial of the noise condition was 94% and differed significantly from the congruent condition. Furthermore, sequence significantly predicted SCR response in the synchronous condition, showing a decrease of SCR response with increasing number of trials.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Estimate | SE | z | p |
| Intercept (condition=synchronous,Sequence = 1) | 5.28 | 1.5 | 3.51 | <0.001 |
| Sequence | -0.84 | 0.23 | -3.64 | <0.001 |
| Condition (=noise) | -2.65 | 0.98 | -2.7 | 0.007 |

Table 7.

*Estimates of the fixed effects of the skin conductance (SCR)* ***amplitude*** *data for the best model in Experiment 2.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Estimate | SE | t | p |
| Intercept (condition=synchronous,Sequence = 1) | 1.68 | 0.58 | 2.89 | 0.004 |
| Sequence | 0.44 | 0.11 | 3.96 | <0.001 |
| Condition (=noise) | 1.46 | 0.51 | 2.87 | 0.004 |

**Comprehensive results of the mixed effects model analysis in Experiment 3:**

Table 8

*Estimates of fixed effects of the skin conductance (SCR)* ***frequency*** *data for the best model in Experiment 3: Investigating the parameters of the best model revealed a 94% probability of showing a positive SCR response in the first trial during the congruent condition. A positive response was less likely with 52% in the first trial of the incongruent condition and differed significantly from the congruent condition. Furthermore, sequence significantly predicted SCR response in the congruent condition, showing a decrease of SCR response with increasing number of trials. The interaction turned out to be significant showing that the influence of sequence on SCR was weaker in the incongruent condition than in the congruent condition.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Estimate | SE | z | p |
| Intercept (condition=congruent,Sequence = 1) | 2.68 | 0.69 | 3.9 | <0.001 |
| Sequence | -0.86 | 0.19 | -4.61 | <0.001 |
| Condition (=incongruent) | -2.61 | 0.89 | -2.94 | 0.003 |
| Interaction sequence \* incongruent | 0.63 | 0.24 | 2.62 | 0.009 |

Table 9.

*Estimates of the fixed effects of the skin conductance (SCR)* ***amplitude*** *data for the best model in Experiment 3.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Estimate | SE | t | p |
| Intercept (condition=congruent,Sequence = 1) | 1.61 | 0.35 | 4.68 | <0.001 |
| Sequence | 1.35 | 0.31 | 4.43 | <0.001 |