# Supplementary Material

## Participant-level Model Fits to Experiment 1

In Experiment 1, the response error models were fit to data from each of the 36 participants individually. In the main text, we compared the models’ summed AIC across participants. Table 1 shows the AIC values on an individual level, as well as the transformed AIC weights. As with the summed AICs, this analysis reveals a quantitative preference for the Intrusion + Guess model, which is preferred for 16 of the 36 participants, however there is a substantial degree of individual variability both in terms of which model is preferred and the margin by which it is preferred.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Table 1  *Individual-level Response Error Model Comparison* | | | | | |
| Participant | Model AIC (Weight) | | | | |
| 1  Pure Guess | 2  Pure Intrusion | 3  Intrusion + Guessing | 4  Temporal | 5  Spatiotemporal |
| 1 | -135 (0.13) | -71 (0) | -**139 (0.86)** | -128 (0) | -124 (0) |
| 2 | **1291 (0.56)** | 1295 (0.1) | 1293 (0.27) | 1296 (0.05) | 1298 (0.01) |
| 3 | **1129 (0.56)** | 1192 (0) | 1130 (0.3) | 1132 (0.13) | 1136 (0.02) |
| 4 | 1110 (0.09) | 1125 (0) | **1105 (0.85)** | 1112 (0.04) | 1113 (0.02) |
| 5 | 1088 (0) | 1103 (0) | **1075 (0.96)** | 1082 (0.03) | 1085 (0.01) |
| 6 | 332 (0.01) | 395 (0) | 335 (0) | 323 (0.32) | **322 (0.67)** |
| 7 | 1197 (0.01) | 1209 (0) | **1188 (0.84)** | 1192 (0.13) | 1196 (0.02) |
| 8 | 876 (0) | 902 (0) | 865 (0.26) | 867 (0.09) | **863 (0.64)** |
| 9 | 999 (0.03) | 1037 (0) | **994 (0.44)** | 995 (0.32) | 996 (0.2) |
| 10 | 1193 (0) | 1186 (0) | **1167 (0.95)** | 1174 (0.02) | 1174 (0.03) |
| 11 | 945 (0.01) | 966 (0) | **937 (0.71)** | 940 (0.16) | 940 (0.12) |
| 12 | **1243 (0.5)** | 1261 (0) | 1244 (0.28) | 1244 (0.2) | 1249 (0.02) |
| 13 | **1241 (0.71)** | 1256 (0) | 1243 (0.22) | 1246 (0.06) | 1250 (0.01) |
| 14 | 1309 (0) | 1297 (0.01) | **1288 (0.99)** | 1310 (0) | 1300 (0) |
| 15 | 1258 (0.34) | 1271 (0) | 1260 (0.14) | **1258 (0.46)** | 1262 (0.06) |
| 16 | 1003 (0.01) | 1025 (0) | 998 (0.11) | **994 (0.73)** | 997 (0.15) |
| 17 | 1057 (0.05) | 1072 (0) | **1052 (0.75)** | 1055 (0.17) | 1058 (0.03) |
| 18 | **332 (0.79)** | 344 (0) | 335 (0.2) | 342 (0.01) | 344 (0) |
| 19 | 1039 (0) | 1054 (0) | 1011 (0.47) | 1017 (0.02) | **1011 (0.51)** |
| 20 | 1045 (0) | 1105 (0) | 1024 (0.09) | 1020 (0.46) | **1020 (0.45)** |
| 21 | 1274 (0) | 1267 (0) | **1253 (0.68)** | 1255 (0.29) | 1259 (0.03) |
| 22 | 1144 (0) | 1154 (0) | 1127 (0.42) | **1127 (0.45)** | 1129 (0.12) |
| 23 | 1212 (0) | 1216 (0) | **1193 (0.68)** | 1195 (0.29) | 1199 (0.03) |
| 24 | 1183 (0) | 1162 (0) | **1147 (0.65)** | 1148 (0.32) | 1153 (0.04) |
| 25 | 1137 (0.16) | 1208 (0) | 1136 (0.21) | **1134 (0.55)** | 1138 (0.08) |
| 26 | 735 (0.02) | 747 (0) | **728 (0.87)** | 733 (0.09) | 736 (0.01) |
| 27 | **1078 (0.72)** | 1134 (0) | 1080 (0.27) | 1087 (0.01) | 1090 (0) |
| 28 | 1240 (0.01) | 1267 (0) | **1231 (0.94)** | 1237 (0.03) | 1239 (0.01) |
| 29 | **1290 (0.48)** | 1299 (0.01) | 1290 (0.42) | 1294 (0.08) | 1298 (0.01) |
| 30 | 1294 (0) | 1291 (0.01) | **1281 (0.98)** | 1292 (0) | 1290 (0.01) |
| 31 | 605 (0) | 631 (0) | 599 (0.03) | 593 (0.45) | **593 (0.52)** |
| 32 | 1209 (0.07) | 1237 (0) | **1205 (0.68)** | 1207 (0.16) | 1209 (0.09) |
| 33 | **1141 (0.62)** | 1181 (0) | 1143 (0.2) | 1145 (0.11) | 1146 (0.06) |
| 34 | **952 (0.63)** | 1000 (0) | 953 (0.33) | 957 (0.04) | 962 (0.01) |
| 35 | 1173 (0.47) | 1188 (0) | **1173 (0.47)** | 1178 (0.03) | 1179 (0.02) |
| 36 | **1119 (0.59)** | 1172 (0) | 1120 (0.34) | 1124 (0.06) | 1128 (0.01) |

*Note*. The AIC weight, displayed in parentheses, can be interpreted as the relatively likelihood of a given model for each participant. Best fitting model for each participant is displayed in boldface.

## Parameter Estimates of Models across Presentation Conditions

## Recentered Plots