**Appendix B**

**Summary of Linear Mixed Effects Models**

|  |
| --- |
| **Categorical analyses of overall effect of cognate status across the four context conditions** |
| **Model effects** | *Skipping rates*skip ~ cogstat \* local \* global + (1 | word) + (1 + cogstat + local + global | subject) | *First Fixation Duration*ffd ~ cogstat \* local \* global + (1 | word) + (1 + cogstat +  local + global | subject) |
| *Fixed effects* | *b* | *SE* | *t, z value* | *b* | *SE* | *t, z value* |
| Cognate status | -0.01919 | 0.21 | -14.69 | -1.32E-03 | 6.42E-03 | -0.21 |
| Local context (biased, neutral) | -0.36291 | 0.25 | -0.08 | 1.49E-02 | 5.62E-03 | 2.64 |
| Global context(biased, neutral) | -0.71497 | 0.20 | -1.82 | 5.52E-04 | 6.06E-03 | 0.09 |
| Cognate status X Local context | -0.07193 | 0.23 | -3.17 | 3.71E-03 | 1.12E-02 | 0.33 |
| Cognate status X Global context | -0.18827 | 0.36 | -0.20 | -5.16E-03 | 1.12E-02 | -0.46 |
| Local context X Global context | -0.29811 | 0.37 | -0.51 | -1.26E-02 | 1.12E-02 | -1.13 |
| Cognate status X Local context X Global context | 0.81406 | 0.36 | -0.82 | -2.64E-02 | 2.26E-02 | -1.16 |
| Intercept | -3.14 | 0.21 | -14.69 | 2.29E+00 | 8.67E-03 | 263.97 |
| *Random effects* |
| Subject variance | 0.9089 | 2.143e-03 |
| Item variance | 0.4683 | 1.974e-04 |
| Residual variance | NA | 1.731e-02 |

**Appendix B continued**

|  |
| --- |
| **Categorical analyses of overall effect of cognate status across the four context conditions** |
| **Model effects** | *Gaze Duration*Gaze duration ~ cogstat \* local \* global + (1 | word) + (1 + cogstat +  local + global | subject) | *Total Reading time*trt ~ cogstat \* local \* global + (1 | word) + (1 + cogstat +  local + global | subject) |
| *Fixed effects* | *b* | *SE* | *t, z value* | *b* | *SE* | *t, z value* |
| Cognate status | -3.42E-03 | 1.00E-02 | -0.342 | -1.53E-03 | 1.27E-02 | -0.12 |
| Local context (biased, neutral) | 2.67E-02 | 7.16E-03 | 3.728 | 3.49E-02 | 9.76E-03 | 3.572 |
| Global context(biased, neutral) | 8.85E-04 | 7.49E-03 | 0.118 | 1.89E-02 | 1.07E-02 | 1.758 |
| Cognate status X Local context | 2.02E-02 | 1.31E-02 | 1.543 | 2.08E-02 | 1.74E-02 | 1.199 |
| Cognate status X Global context | -3.00E-02 | 1.31E-02 | -2.288 | -8.42E-03 | 1.74E-02 | -0.484 |
| Local context X Global context | -6.33E-03 | 1.31E-02 | -0.483 | 1.86E-03 | 1.74E-02 | 0.107 |
| Cognate status X Local context X Global context | -1.95E-02 | 2.65E-02 | -0.735 | 6.00E-03 | 3.52E-02 | 0.17 |
| Intercept | 2.34E+00 | 9.96E-03 | 234.525 | 2.43E+00 | 1.50E-02 | 161.815 |
| *Random effects* |
| Subject variance | 0.002476 | 0.006152 |
| Item variance | 0.001032 | 0.001561 |
| Residual variance | 0.023502 | 0.20338 |
|  | *Spillover*lspill\_trim ~ cogstat \* local \* global + (1 | word) + (1 + cogstat +  local + global | subject) |
| *Fixed effects* | *b* | *SE* | *t, z value* |
| Cognate status | 7.40E-03 | 8.78E-03 | 0.84 |
| Local context (biased, neutral) | 4.68E-03 | 6.79E-03 | 0.69 |
| Global context(biased, neutral) | 7.37E-03 | 6.90E-03 | 1.07 |
| Cognate status X Local context | -5.80E-03 | 1.28E-02 | -0.45 |
| Cognate status X Global context | 2.47E-02 | 1.28E-02 | 1.92 |
| Local context X Global context | 6.49E-04 | 1.28E-02 | 0.05 |
| Cognate status X Local context X Global context | 3.16E-02 | 2.59E-02 | 1.22 |
| Intercept | 2.29E+00 | 9.39E-03 | 243.32 |
| *Random effects* |
| Subject variance | 2.255e-03 |
| Item variance | 7.102e-04 |
| Residual variance | 1.729e-02 |

**Appendix B continued**

|  |
| --- |
| **Analyses of non-identical cognates as a function of orthographic overlap across the four context conditions** |
| **Model effects** | *Skipping rates*skip ~ graph \* local \* global + (1 | word) + (1 + ortho + local +  global | subject) | *First Fixation Duration*ffd\_trim ~ 1 + local + global + local:global + ortho + local:ortho + global:ortho + local:global:ortho + (1 | subject) |
| *Fixed effects* | *b* | *SE* | *t, z value* | *b* | *SE* | *t, z value* |
| orthographic overlap | -1.58 | 2.20 | 0.47 | 0.02 | 0.04 | 0.64 |
| Local context (biased, neutral) | -2.56 | 2.28 | 0.26 | -0.11 | 0.05 | -2.03 |
| Global context(biased, neutral) | -0.07 | 2.32 | 0.98 | 0.13 | 0.05 | 2.35 |
| orthographic overlap X Local context | 4.13 | 3.24 | 0.20 | 0.15 | 0.08 | 1.91 |
| orthographic overlap X Global context | -0.20 | 3.38 | 0.95 | -0.19 | 0.08 | -2.47 |
| Local context X Global context | -0.79 | 3.76 | 0.83 | 0.16 | 0.11 | 1.49 |
| orthographic overlap X Local context X Global context | -0.01 | 5.31 | 1.00 | -0.24 | 0.15 | -1.52 |
| Intercept | -1.90 | 1.50 | 0.21 | 2.27 | 0.03 | 80.67 |
| *Random effects* |
| Subject variance | 0.32014  | 0.002236 |
| Item variance | NA | NA |
| Residual variance | NA | 0.018807 |

|  |  |  |
| --- | --- | --- |
| **Model effects** | *Gaze duration*gd ~ 1 + local + global + local:global + ortho + local:ortho + global:ortho + local:global:ortho + (1 + global | subject) +(1 | word) | *Total reading time*trt ~ 1 + local + global + local:global + ortho + local:ortho + global:ortho + local:global:ortho + (1 | subject) + (1 | word) |
| *Fixed effects* | *b* | *SE* | *t, z value* | *b* | *SE* | *t, z value* |
| orthographic overlap | 0.11 | 0.06 | 1.90 | 0.07 | 0.09 | 0.79 |
| Local context (biased, neutral) | -0.06 | 0.06 | -0.96 | -0.09 | 0.08 | -1.08 |
| Global context(biased, neutral) | 0.14 | 0.06 | 2.20 | 0.21 | 0.08 | 2.65 |
| orthographic overlap X Local context | 0.06 | 0.09 | 0.66 | 0.10 | 0.12 | 0.88 |
| orthographic overlap X Global context | -0.22 | 0.09 | -2.47 | -0.35 | 0.12 | -3.07 |
| Local context X Global context | 0.12 | 0.12 | 0.95 | 0.03 | 0.16 | 0.21 |
| orthographic overlap X Local context X Global context | -0.17 | 0.18 | -0.96 | -0.03 | 0.23 | -0.15 |
| Intercept | 2.26 | 0.04 | 53.93 | 2.38 | 0.07 | 36.23 |
| *Random effects* |
| Subject variance | 0.0036979 | 0.008292 |
| Item variance | 0.0006126 | 0.00215 |
| Residual variance | 0.0242561 | 0.20412 |

**Appendix B continued**

|  |
| --- |
| **Analyses of non-identical cognates as a function of orthographic overlap across the four context conditions** |
|  | *Spillover*Spill ~ 1 + local + global + local:global + ortho + local:ortho + global:ortho + local:global:ortho + (1 + local | subject) + (1 | word) |
| *Fixed effects* | *b* | *SE* | *t, z value* |
| orthographic overlap | -0.01 | 0.06 | -0.10 |
| Local context (biased, neutral) | 0.11 | 0.07 | 1.54 |
| Global context(biased, neutral) | -0.01 | 0.07 | -0.09 |
| orthographic overlap X Local context | -0.15 | 0.10 | -1.56 |
| orthographic overlap X Global context | 0.00 | 0.10 | 0.03 |
| Local context X Global context | -0.10 | 0.14 | -0.77 |
| orthographic overlap X Local context X Global context | 0.09 | 0.19 | 0.45 |
| Intercept |  |  |  |
| *Random effects* |
| Subject variance | 0.002189 |
| Item variance | 0.000524 |
| Residual variance | 0.13497 |