

## Supplementary Material

The outputs from each of the statistical models that were run appear below, organized by research question (Appendices S1-S3), then by experimental task, then by language.

### Appendix S1. Outputs from models comparing bilinguals with each group of monolinguals

#### English Feature Typicality Ratings

| Fixed Effects                       | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>   |
|-------------------------------------|------------|-----------|----------|------------|
| Intercept                           | 62.17      | 1.40      | 44.26    | $p < .001$ |
| Group                               | -2.68      | 1.70      | -1.58    | <i>ns</i>  |
| Culture                             | -27.25     | 2.53      | -10.77   | $p < .001$ |
| Feature Type                        | 0.13       | 2.29      | 0.06     | <i>ns</i>  |
| Group x Culture Pair                | -47.10     | 2.36      | -19.92   | $p < .001$ |
| Group x Feature Type                | -5.11      | 0.99      | -5.14    | $p < .001$ |
| Culture x Feature Type              | -5.55      | 4.56      | -1.22    | <i>ns</i>  |
| Group x Culture Pair x Feature Type | -8.46      | 1.76      | -4.80    | $p < .001$ |
| Random Effects                      | Intercepts |           | Slopes   |            |
|                                     | Variance   | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects                            | 81.23      | 9.01      |          |            |
| Culture Pair                        |            |           | 145.21   | 12.05      |
| Items                               | 150.14     | 12.25     |          |            |

#### Japanese Feature Typicality Ratings

| Fixed Effects                       | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>   |
|-------------------------------------|------------|-----------|----------|------------|
| Intercept                           | 65.83      | 1.60      | 41.26    | $p < .001$ |
| Group                               | -5.82      | 1.85      | -3.15    | $p < .01$  |
| Culture                             | 20.76      | 2.84      | 7.30     | $p < .001$ |
| Feature Type                        | 2.64       | 2.63      | 1.00     | <i>ns</i>  |
| Group x Culture Pair                | 13.12      | 2.30      | 5.70     | $p < .001$ |
| Group x Feature Type                | -0.53      | 0.83      | -0.65    | <i>ns</i>  |
| Culture x Feature Type              | -5.86      | 5.27      | -1.11    | <i>ns</i>  |
| Group x Culture Pair x Feature Type | -1.81      | 1.65      | -1.10    | <i>ns</i>  |
| Random Effects                      | Intercepts |           | Slopes   |            |
|                                     | Variance   | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects                            | 93.54      | 9.67      |          |            |
| Culture Pair                        |            |           | 132.96   | 11.53      |
| Items                               | 202.94     | 14.25     |          |            |

### English Feature Verification Reaction Time

| Fixed Effects                       | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>        |
|-------------------------------------|------------|-----------|----------|-----------------|
| Intercept                           | 2.986      | 0.007     | 408.80   | <i>p</i> < .001 |
| Group                               | -0.122     | 0.013     | -9.80    | <i>p</i> < .001 |
| Culture Pair                        | 0.012      | 0.008     | 1.48     | <i>ns</i>       |
| Feature Type                        | -0.001     | 0.008     | -0.11    | <i>ns</i>       |
| Group x Culture Pair                | 0.004      | 0.005     | 0.82     | <i>ns</i>       |
| Group x Feature Type                | -0.023     | 0.005     | -4.69    | <i>p</i> < .001 |
| Culture x Feature Type              | 0.013      | 0.016     | 0.82     | <i>ns</i>       |
| Group x Culture Pair x Feature Type | -0.029     | 0.009     | -3.11    | <i>p</i> < .01  |
| Random Effects                      | Intercepts |           | Slopes   |                 |
|                                     | Variance   | <i>SD</i> | Variance | <i>SD</i>       |
| Subjects                            | 0.005      | 0.067     |          |                 |
| Culture Pair                        |            |           | 0.0001   | 0.011           |
| Items                               | 0.002      | 0.042     |          |                 |

### English Feature Verification Rates

| Fixed Effects                       | <i>b</i>   | <i>SE</i> | <i>z</i> | <i>p</i>        |
|-------------------------------------|------------|-----------|----------|-----------------|
| Intercept                           | 1.41       | 0.08      | 18.28    | <i>p</i> < .001 |
| Group                               | 0.57       | 0.10      | 5.78     | <i>p</i> < .001 |
| Culture Pair                        | -1.04      | 0.13      | -7.98    | <i>p</i> < .001 |
| Feature Type                        | -0.05      | 0.13      | -0.36    | <i>ns</i>       |
| Group x Culture Pair                | -1.55      | 0.11      | -14.50   | <i>p</i> < .001 |
| Group x Feature Type                | 0.05       | 0.10      | 0.52     | <i>ns</i>       |
| Culture x Feature Type              | -0.19      | 0.26      | -0.73    | <i>ns</i>       |
| Group x Culture Pair x Feature Type | -0.23      | 0.19      | -1.23    | <i>ns</i>       |
| Random Effects                      | Intercepts |           | Slopes   |                 |
|                                     | Variance   | <i>SD</i> | Variance | <i>SD</i>       |
| Subjects                            | 0.22       | 0.47      |          |                 |
| Culture Pair                        |            |           | 0.07     | 0.26            |
| Items                               | 0.42       | 0.65      |          |                 |

### Japanese Feature Verification Reaction Time

| Fixed Effects                       | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>   |
|-------------------------------------|------------|-----------|----------|------------|
| Intercept                           | 2.892      | 0.009     | 327.08   | $p < .001$ |
| Group                               | -0.033     | 0.017     | -1.94    | $p < .06$  |
| Culture Pair                        | -0.012     | 0.006     | -2.05    | $p < .07$  |
| Feature Type                        | 0.003      | 0.006     | 0.51     | <i>ns</i>  |
| Group x Culture                     | -0.005     | 0.004     | -1.07    | <i>ns</i>  |
| Group x Feature Type                | 0.005      | 0.005     | 1.16     | <i>ns</i>  |
| Culture x Feature Type              | -0.011     | 0.012     | -0.94    | <i>ns</i>  |
| Group x Culture Pair x Feature Type | 0.000      | 0.009     | 0.03     | <i>ns</i>  |
| Random Effects                      | Intercepts |           | Slopes   |            |
|                                     | Variance   | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects                            | 0.008      | 0.089     |          |            |
| Culture Pair                        |            |           | 0.000004 | 0.002      |
| Items                               | 0.0009     | 0.031     |          |            |

### Japanese Feature Verification Rates

| Fixed Effects          | <i>b</i>   | <i>SE</i> | <i>z</i> | <i>p</i>   |
|------------------------|------------|-----------|----------|------------|
| Intercept              | 2.08       | 0.10      | 21.89    | $p < .001$ |
| Group                  | -0.18      | 0.10      | -1.75    | $p < .08$  |
| Culture                | 0.69       | 0.17      | 4.05     | $p < .001$ |
| Feature Type           | 0.01       | 0.17      | 0.08     | <i>ns</i>  |
| Group x Culture Pair   | 0.24       | 0.11      | 2.17     | $p < .05$  |
| Group x Feature Type   | 0.04       | 0.11      | 0.37     | <i>ns</i>  |
| Culture x Feature Type | 0.12       | 0.34      | 0.36     | <i>ns</i>  |
| Random Effects         | Intercepts |           | Slopes   |            |
|                        | Variance   | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects               | 0.215      | 0.464     |          |            |
| Culture Pair           |            |           | 0.056    | 0.236      |
| Items                  | 0.745      | 0.863     |          |            |

**English Feature Priming Reaction Time**

| Fixed Effects                                     | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>        |
|---|------------|-----------|----------|-----------------|
| Intercept   | -1.411     | 0.027     | -52.74   | <i>p</i> < .001 |
| Relation  | 0.030      | 0.005     | 6.40     | <i>p</i> < .001 |
| Group   | -0.398     | 0.005     | -9.38    | <i>p</i> < .001 |
| Culture   | 0.025      | 0.033     | 0.77     | <i>ns</i>       |
| Feature Type                                      | 0.079      | 0.033     | 2.36     | <i>p</i> < .05  |
| Relation x Group                                  | 0.009      | 0.009     | 1.00     | <i>ns</i>       |
| Relation x Culture Pair                           | -0.015     | 0.009     | -1.65    | <i>p</i> = .10  |
| Group x Culture Pair                              | 0.056      | 0.013     | 4.22     | <i>p</i> < .001 |
| Relation x Feature Type                           | -0.001     | 0.009     | -0.15    | <i>ns</i>       |
| Group x Feature Type                              | -0.069     | 0.013     | -5.20    | <i>p</i> < .001 |
| Culture Pair x Feature Type                       | 0.090      | 0.067     | -5.20    | <i>ns</i>       |
| Relation x Group x Culture Pair                   | -0.005     | 0.019     | -0.26    | <i>ns</i>       |
| Relation x Group x Feature Type                   | 0.031      | 0.019     | 1.65     | <i>ns</i>       |
| Relation x Culture Pair x Feature Type            | -0.005     | 0.019     | -0.29    | <i>ns</i>       |
| Group x Culture Pair x Feature Type               | -0.028     | 0.026     | -1.05    | <i>ns</i>       |
| Relation x Group x Culture Pair x<br>Feature Type | 0.021      | 0.037     | 0.56     | <i>ns</i>       |
| Random Effects                                    | Intercepts |           | Slopes   |                 |
|   | Variance   | <i>SD</i> | Variance | <i>SD</i>       |
| Subjects  | 0.901      | 0.949     |          |                 |
| Culture Pair                                      |            |           | 0.078    | 0.281           |
| Items   | 1.686      | 1.299     |          |                 |

**English Feature Priming Errors**

| Fixed Effects                          | <i>b</i> | <i>SE</i> | <i>z</i> | <i>p</i>        |
|--|----------|-----------|----------|-----------------|
| Intercept                              | 3.68     | 0.17      | 22.20    | <i>p</i> < .001 |
| Relation                               | -0.36    | 0.08      | -4.46    | <i>p</i> < .001 |
| Group                                  | 1.41     | 0.22      | 6.47     | <i>p</i> < .001 |
| Culture Pair                           | -0.38    | 0.28      | -1.35    | <i>ns</i>       |
| Feature Type                           | -0.53    | 0.28      | -1.90    | .06             |
| Relation x Group                       | -0.33    | 0.16      | -2.03    | <i>p</i> < .05  |
| Relation x Culture Pair                | 0.26     | 0.16      | 1.59     | <i>ns</i>       |
| Group x Culture Pair                   | -1.42    | 0.26      | -5.55    | <i>p</i> < .001 |
| Relation x Feature Type                | 0.07     | 0.16      | 0.45     | <i>ns</i>       |
| Group x Feature Type                   | 0.46     | 0.25      | 1.84     | <i>p</i> < .07  |
| Culture Pair x Feature Type            | -0.32    | 0.54      | -0.59    | <i>ns</i>       |
| Relation x Group x Culture Pair        | 0.68     | 0.32      | 2.13     | <i>p</i> < .05  |
| Relation x Group x Feature Type        | 0.10     | 0.32      | 0.31     | <i>ns</i>       |
| Relation x Culture Pair x Feature Type | -0.11    | 0.32      | -0.36    | <i>ns</i>       |
| Group x Culture Pair x Feature Type    | 0.48     | 0.49      | 0.97     | <i>p</i> < .05  |

|   |            |           |          |           |
|---|------------|-----------|----------|-----------|
| Relation x Group x Culture Pair x<br>Feature Type | -0.59      | 0.64      | -0.92    | <i>ns</i> |
| Random Effects                                    | Intercepts |           | Slopes   |           |
|   | Variance   | <i>SD</i> | Variance | <i>SD</i> |
| Subjects  | 0.901      | 0.949     |          |           |
| Culture Pair                                      |            |           | 0.079    | 0.281     |
| Items   | 1.686      | 1.299     |          |           |

### Japanese Feature Priming Reaction Time

| Fixed Effects                                     | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>        |
|---|------------|-----------|----------|-----------------|
| Intercept   | -1.639     | 0.031     | -52.54   | <i>p</i> < .001 |
| Relation  | 0.024      | 0.005     | 4.52     | <i>p</i> < .001 |
| Group   | -0.099     | 0.057     | -1.75    | <i>ns</i>       |
| Culture Pair                                      | -0.061     | 0.027     | -2.23    | <i>p</i> < .05  |
| Feature Type                                      | 0.064      | 0.027     | 2.32     | <i>p</i> < .05  |
| Relation x Group                                  | 0.001      | 0.011     | 0.05     | <i>ns</i>       |
| Relation x Culture Pair                           | 0.025      | 0.011     | 2.32     | <i>p</i> < .05  |
| Group x Culture Pair                              | 0.013      | 0.015     | 0.87     | <i>ns</i>       |
| Relation x Feature Type                           | 0.020      | 0.011     | 1.88     | <i>p</i> = .06  |
| Group x Feature Type                              | 0.006      | 0.017     | 0.36     | <i>ns</i>       |
| Culture Pair x Feature Type                       | -0.032     | 0.054     | -0.59    | <i>ns</i>       |
| Relation x Group x Culture Pair                   | -0.005     | 0.021     | -0.21    | <i>ns</i>       |
| Relation x Group x Feature Type                   | -0.020     | 0.021     | -0.93    | <i>ns</i>       |
| Relation x Culture Pair x Feature Type            | -0.009     | 0.021     | -0.43    | <i>ns</i>       |
| Group x Culture Pair x Feature Type               | 0.007      | 0.030     | 0.22     | <i>ns</i>       |
| Relation x Group x Culture Pair x<br>Feature Type | 0.019      | 0.043     | 0.44     | <i>ns</i>       |
| Random Effects                                    | Intercepts |           | Slopes   |                 |
|   | Variance   | <i>SD</i> | Variance | <i>SD</i>       |
| Subjects  | 0.006      | 0.080     |          |                 |
| Culture Pair                                      |            |           | 0.000002 | 0.002           |
| Items   | 0.004      | 0.064     |          |                 |

### Japanese Feature Priming Errors

| Fixed Effects           | <i>b</i> | <i>SE</i> | <i>z</i> | <i>p</i>        |
|-------------------------|----------|-----------|----------|-----------------|
| Intercept               | 4.19     | 0.15      | 27.49    | <i>p</i> < .001 |
| Relation                | -0.32    | 0.10      | -3.37    | <i>p</i> < .001 |
| Group                   | 0.30     | 0.21      | 1.44     | <i>ns</i>       |
| Culture Pair            | 0.09     | 0.27      | 0.33     | <i>ns</i>       |
| Feature Type            | -0.08    | 0.27      | -0.31    | <i>ns</i>       |
| Relation x Group        | -0.49    | 0.19      | -2.54    | <i>p</i> < .05  |
| Relation x Culture Pair | 0.06     | 0.19      | 0.33     | <i>ns</i>       |

|   |            |           |          |           |
|---|------------|-----------|----------|-----------|
| Group x Culture Pair                              | -0.08      | 0.30      | -0.27    | <i>ns</i> |
| Relation x Feature Type                           | -0.10      | 0.19      | -0.52    | <i>ns</i> |
| Group x Feature Type                              | 0.39       | 0.30      | 1.31     | <i>ns</i> |
| Culture Pair x Feature Type                       | 0.00       | 0.52      | 0.00     | <i>ns</i> |
| Relation x Group x Culture Pair                   | 0.38       | 0.38      | 0.99     | <i>ns</i> |
| Relation x Group x Feature Type                   | -0.19      | 0.38      | -0.50    | <i>ns</i> |
| Relation x Culture Pair x Feature Type            | -0.34      | 0.38      | -0.90    | <i>ns</i> |
| Group x Culture Pair x Feature Type               | -0.43      | 0.58      | -0.74    | <i>ns</i> |
| Relation x Group x Culture Pair x<br>Feature Type | 0.00       | 0.76      | 0.00     | <i>ns</i> |
| Random Effects                                    | Intercepts |           | Slopes   |           |
|   | Variance   | <i>SD</i> | Variance | <i>SD</i> |
| Subjects  | 0.55       | 0.74      |          |           |
| Culture Pair                                      |            |           | 0.04     | 0.20      |
| Items   | 1.21       | 1.10      |          |           |

**Appendix S2. Outputs from models comparing bilinguals in each language**

**Typicality Ratings**

| Fixed Effects                          | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>   |
|--|------------|-----------|----------|------------|
| Intercept                              | 66.16      | 1.49      | 44.26    | $p < .001$ |
| Language                               | 5.16       | 0.84      | 6.16     | $p < .001$ |
| Culture                                | 5.24       | 2.69      | 1.95     | $p = .05$  |
| Feature Type                           | 2.85       | 2.34      | 1.22     | <i>ns</i>  |
| Language x Culture Pair                | 17.55      | 0.69      | 25.32    | $p < .001$ |
| Language x Feature Type                | 0.34       | 0.69      | 0.50     | <i>ns</i>  |
| Culture x Feature Type                 | -3.16      | 4.64      | -0.68    | <i>ns</i>  |
| Language x Culture Pair x Feature Type | -3.47      | 1.39      | -2.50    | $p < .05$  |
| Random Effects                         | Intercepts |           | Slopes   |            |
|  | Variance   | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects                               | 83.54      | 7.39      |          |            |
| Language                               |            |           | 54.65    | 7.39       |
| Culture Pair                           |            |           | 172.99   | 13.15      |
| Feature Type                           |            |           | 7.47     | 2.73       |
| Items                                  | 157.83     | 12.56     |          |            |

**Feature Verification Reaction Time**

| Fixed Effects                          | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>   |
|--|------------|-----------|----------|------------|
| Intercept                              | -1.133     | 0.023     | -50.05   | $p < .001$ |
| Language                               | -0.352     | 0.022     | -16.25   | $p < .001$ |
| Culture Pair                           | -0.002     | 0.017     | -0.12    | <i>ns</i>  |
| Feature Type                           | 0.016      | 0.017     | 0.95     | <i>ns</i>  |
| Language x Culture Pair                | -0.061     | 0.012     | -5.13    | $p < .001$ |
| Language x Feature Type                | -0.037     | 0.012     | -3.09    | $p < .01$  |
| Culture x Feature Type                 | -0.001     | 0.033     | -0.04    | <i>ns</i>  |
| Language x Culture Pair x Feature Type | -0.099     | 0.024     | -4.13    | $p < .001$ |
| Random Effects                         | Intercepts |           | Slopes   |            |
|  | Variance   | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects                               | 0.0418     | 0.20      |          |            |
| Language                               |            |           | 0.0407   | 0.20       |
| Culture Pair                           |            |           | 0.0003   | 0.02       |
| Feature Type                           |            |           | 0.0003   | 0.02       |
| Items                                  | 0.0070     | 0.08      |          |            |

**Feature Verification Rates**

| Fixed-effects                          | <i>b</i>   | <i>SE</i> | <i>z</i> | <i>p</i>        |
|--|------------|-----------|----------|-----------------|
| Intercept                              | 1.61       | 0.08      | 20.52    | <i>p</i> < .001 |
| Language                               | 0.95       | 0.07      | 13.27    | <i>p</i> < .001 |
| Culture Pair                           | 0.14       | 0.13      | 1.09     | <i>ns</i>       |
| Feature Type                           | -0.04      | 0.13      | -0.27    | <i>ns</i>       |
| Language x Culture Pair                | 0.79       | 0.08      | 10.49    | <i>p</i> < .001 |
| Language x Feature Type                | 0.07       | 0.08      | 0.97     | <i>ns</i>       |
| Culture Pair x Feature Type            | -0.07      | 0.26      | -0.29    | <i>ns</i>       |
| Language x Culture Pair x Feature Type | 0.01       | 0.15      | 0.10     | <i>ns</i>       |
| Random Effects                         | Intercepts |           | Slopes   |                 |
|  | Variance   | <i>SD</i> | Variance | <i>SD</i>       |
| Subjects                               | 0.8        | 0.43      |          |                 |
| Language                               |            |           | 0.34     | 0.58            |
| Culture Pair                           |            |           | 0.03     | 0.17            |
| Feature Type                           |            |           | 0.02     | 0.14            |
| Items                                  | 0.45       | 0.67      |          |                 |

**Feature Priming Reaction Time**

| Fixed-effects                                     | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>        |
|---|------------|-----------|----------|-----------------|
| Intercept   | -1.387     | 0.029     | -47.07   | <i>p</i> < .001 |
| Relation  | 0.024      | 0.004     | 5.91     | <i>p</i> < .001 |
| Language  | -0.377     | 0.027     | -14.06   | <i>p</i> < .001 |
| Culture Pair                                      | -0.031     | 0.029     | -1.09    | <i>ns</i>       |
| Feature Type                                      | 0.091      | 0.029     | 3.16     | <i>p</i> < .01  |
| Relation x Language                               | -0.002     | 0.008     | -0.19    | <i>ns</i>       |
| Relation x Culture Pair                           | 0.004      | 0.008     | 0.45     | <i>ns</i>       |
| Language x Culture Pair                           | -0.040     | 0.008     | -4.94    | <i>p</i> < .001 |
| Relation x Feature Type                           | 0.006      | 0.008     | -0.79    | <i>ns</i>       |
| Language x Feature Type                           | -0.030     | 0.008     | -3.72    | <i>p</i> < .001 |
| Culture Pair x Feature Type                       | 0.022      | 0.057     | 0.39     | <i>ns</i>       |
| Relation x Language x Culture Pair                | 0.039      | 0.016     | 2.38     | <i>p</i> < .05  |
| Relation x Language x Feature Type                | 0.047      | 0.016     | 2.89     | <i>p</i> < .01  |
| Relation x Culture Pair x Feature Type            | -0.014     | 0.016     | -0.89    | <i>ns</i>       |
| Language x Culture Pair x Feature Type            | -0.137     | 0.016     | -8.42    | <i>p</i> < .001 |
| Relation x Language x Culture Pair x Feature Type | -0.004     | 0.032     | -0.12    | <i>ns</i>       |
| Random Effects                                    | Intercepts |           | Slopes   |                 |
|   | Variance   | <i>SD</i> | Variance | <i>SD</i>       |
| Subjects  | 0.06225    | 0.249     |          |                 |
| Relation  |            |           | 0.00004  | 0.006           |
| Language  |            |           | 0.06604  | 0.257           |



|              |         |         |       |
|--------------|---------|---------|-------|
| Culture Pair |         | 0.00003 | 0.005 |
| Feature Type |         | 0.00057 | 0.024 |
| Items        | 0.02421 | 0.156   |       |

### Feature Priming Errors

| Fixed-effects                                | <i>b</i>   | <i>SE</i> | <i>z</i> | <i>p</i>   |
|--|------------|-----------|----------|------------|
| Intercept                                    | -3.41      | 0.14      | -24.94   | $p < .001$ |
| Relation                                     | 0.14       | 0.06      | 2.12     | $p < .05$  |
| Language                                     | -1.23      | 0.13      | -9.40    | $p < .001$ |
| Culture Pair                                 | -0.21      | 0.24      | -0.87    | <i>ns</i>  |
| Feature Type                                 | 0.45       | 0.24      | 1.87     | .06        |
| Relation x Language                          | -0.18      | 0.13      | -1.40    | <i>ns</i>  |
| Relation x Culture Pair                      | 0.09       | 0.12      | 0.74     | <i>ns</i>  |
| Language x Culture Pair                      | 0.16       | 0.13      | 1.24     | <i>ns</i>  |
| Relation x Feature Type                      | -0.02      | 0.12      | -0.18    | <i>ns</i>  |
| Language x Feature Type                      | -0.69      | 0.13      | -5.29    | $p < .001$ |
| Culture Pair x Feature Type                  | 0.23       | 0.48      | 0.49     | <i>ns</i>  |
| Relation x Language x Culture Pair           | 0.06       | 0.24      | 0.24     | <i>ns</i>  |
| Relation x Language x Feature Type           | 0.05       | 0.24      | 0.22     | <i>ns</i>  |
| Relation x Culture Pair x Feature Type       | 0.10       | 0.24      | 0.22     | <i>ns</i>  |
| Language x Culture x Feature Type            | -0.61      | 0.24      | -2.51    | $p < .05$  |
| Relation x Language x Culture x Feature Type | 0.43       | 0.48      | -2.51    | <i>ns</i>  |
| Random Effects                               | Intercepts |           | Slopes   |            |
|  | Variance   | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects                                     | 0.375      | 0.61      |          |            |
| Relation                                     |            |           | 0.006    | 0.08       |
| Language                                     |            |           | 1.182    | 1.09       |
| Culture Pair                                 |            |           | 0.017    | 0.13       |
| Items  | 1.534      | 1.24      |          |            |

**Appendix S3.** Output from baseline and final models investigating the impact of individual differences in English (L2) proficiency and cultural exposure on task performance

**English Typicality Ratings**

| Fixed Effects                   | Baseline                      |           |          |            | Final (Model 3) |           |          |            |
|---------------------------------|-------------------------------|-----------|----------|------------|-----------------|-----------|----------|------------|
|                                 | <i>b</i>                      | <i>SE</i> | <i>t</i> | <i>p</i>   | <i>b</i>        | <i>SE</i> | <i>t</i> | <i>p</i>   |
| Intercept                       | 63.31                         | 1.62      | 39.01    | $p < .001$ | 63.31           | 1.61      | 39.37    | $p < .001$ |
| Culture Pair                    | -8.61                         | 2.70      | -3.19    | $p < .01$  | -3.87           | 2.70      | -1.43    | <i>ns</i>  |
| L2 Proficiency                  | -0.16                         | 1.13      | -0.14    | <i>ns</i>  | -0.16           | 1.13      | -0.14    | <i>ns</i>  |
| Culture Exposure                | 2.71                          | 1.24      | 2.19     | $p < .05$  | 2.39            | 1.22      | 1.96     | $p = .05$  |
| Feature Type                    | 2.32                          | 2.27      | 1.02     | <i>ns</i>  | 2.32            | 2.27      | 1.02     | <i>ns</i>  |
| Culture Pair x Culture Exposure | -                             | -         | -        | -          | -9.59           | 1.44      | -6.66    | $p < .001$ |
| Random Effects                  | Intercepts                    |           | Slopes   |            | Intercepts      |           | Slopes   |            |
|                                 | Variance                      | <i>SD</i> | Variance | <i>SD</i>  | Variance        | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects                        | 96.09                         | 9.80      |          |            | 95.94           | 9.80      |          |            |
| Culture Pair                    |                               |           | 134.16   | 11.58      |                 |           | 98.03    | 9.90       |
| Items                           | 188.53                        | 13.73     |          |            | 182.92          | 13.53     |          |            |
| L2 Exposure                     |                               |           | 29.37    | 5.42       |                 |           | 24.26    | 4.93       |
| Model Comparisons               |                               |           |          |            | Model           | Model Fit |          |            |
| 2 vs 1                          | $\chi^2(1) = 5.78, p < .05$   |           |          |            | 1               | 51883     |          |            |
| 3 vs 1                          | $\chi^2(1) = 39.40, p < .001$ |           |          |            | 2               | 51866     |          |            |
| 4 vs 2                          | $\chi^2(1) = 33.78, p < .001$ |           |          |            | 3               | 52167     |          |            |
| 4 vs 3                          | $\chi^2(1) = .16, p = .69$    |           |          |            | 4               | 51866     |          |            |

**Japanese Typicality Ratings**

| Fixed Effects                   | Baseline   |           |          |            | Final (Model 3) |           |          |            |
|---------------------------------|------------|-----------|----------|------------|-----------------|-----------|----------|------------|
|                                 | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>   | <i>b</i>        | <i>SE</i> | <i>t</i> | <i>p</i>   |
| Intercept                       | 68.74      | 1.61      | 42.76    | $p < .001$ | 68.74           | 1.59      | 43.35    | $p < .001$ |
| Culture Pair                    | 10.37      | 2.75      | 3.78     | $p < .001$ | 14.21           | 2.70      | 5.28     | $p < .001$ |
| L2 Proficiency                  | -0.63      | 1.02      | -0.62    | <i>ns</i>  | -0.63           | 1.02      | -0.62    | <i>ns</i>  |
| Culture Exposure                | 0.53       | 1.11      | 0.47     | <i>ns</i>  | 2.43            | 1.12      | 2.17     | $p < .05$  |
| Feature Type                    | 3.39       | 2.41      | 1.4      | <i>ns</i>  | 3.40            | 2.41      | 1.41     | <i>ns</i>  |
| Culture Pair x Culture Exposure | -          | -         | -        | -          | -9.83           | 1.23      | -7.97    | $p < .001$ |
| Random Effects                  | Intercepts |           | Slopes   |            | Slopes          |           |          |            |
|                                 | Variance   | <i>SD</i> | Variance | <i>SD</i>  | Variance        | <i>SD</i> |          |            |
| Subjects                        | 90.72      | 9.53      |          |            | 87.09           | 9.33      |          |            |
| Culture Pair                    |            |           | 122.89   | 11.09      |                 |           | 76.95    | 8.77       |

|             |                               |       |       |      |        |            |
|-------------|-------------------------------|-------|-------|------|--------|------------|
| Items       | 192.02                        | 13.86 |       |      | 188.24 | 13.72      |
| L2 Exposure |                               |       | 20.00 | 4.47 |        | 16.01 4.00 |
|             | Model Comparisons             |       |       |      | Model  | Model Fit  |
| 2 vs 1      | $\chi^2(1) = 3.54, p = .06$   |       |       |      | 1      | 53357      |
| 3 vs 1      | $\chi^2(1) = 53.58, p < .001$ |       |       |      | 2      | 53357      |
| 4 vs 2      | $\chi^2(1) = 50.36, p < .001$ |       |       |      | 3      | 53332      |
| 4 vs 3      | $\chi^2(1) = .32, p = .57$    |       |       |      | 4      | 53332      |

### English Feature Verification Reaction Time

| Fixed Effects                   | Baseline                    |           |          |                    | Final (Model 3) |           |          |                    |
|---------------------------------|-----------------------------|-----------|----------|--------------------|-----------------|-----------|----------|--------------------|
|                                 | <i>b</i>                    | <i>SE</i> | <i>t</i> | <i>p</i>           | <i>b</i>        | <i>SE</i> | <i>t</i> | <i>p</i>           |
| Intercept                       | -0.952                      | 0.02      | -44.77   | <i>p</i><br>< .001 | -0.952          | 0.02      | -44.81   | <i>p</i><br>< .001 |
| Culture Pair                    | 0.039                       | 0.02      | 1.86     | <i>p</i><br>= .07  | 0.023           | 0.02      | 1.05     | <i>ns</i>          |
| L2 Proficiency                  | -0.032                      | 0.02      | -1.58    | <i>ns</i>          | -0.032          | 0.02      | -1.58    | <i>ns</i>          |
| Culture Exposure                | 0.014                       | 0.02      | 0.68     | <i>ns</i>          | 0.007           | 0.02      | 0.36     | <i>ns</i>          |
| Feature Type                    | 0.023                       | 0.02      | 1.14     | <i>ns</i>          | 0.023           | 0.02      | 0.25     | <i>ns</i>          |
| Culture Pair x Culture Exposure | -                           | -         | -        | -                  | 0.019           | 0.00      | 2.11     | <i>p</i><br>< .05  |
| Random Effects                  | Intercepts                  |           | Slopes   |                    | Intercepts      |           | Slopes   |                    |
|                                 | Variance                    | <i>SD</i> | Variance | <i>SD</i>          | Variance        | <i>SD</i> | Variance | <i>SD</i>          |
| Subjects                        | 0.0298                      | 0.17      |          |                    | 0.0298          | 0.17      |          |                    |
| Culture Pair                    |                             |           | 0.0008   | 0.03               |                 |           | 0.0006   | 0.03               |
| Items                           | 0.0123                      | 0.11      |          |                    | 0.0122          | 0.11      |          |                    |
| L2 Exposure                     |                             |           | 0.0005   | 0.02               |                 |           | 0.0005   | 0.02               |
|                                 | Model Comparisons           |           |          |                    | Model           | Model Fit |          |                    |
| 2 vs 1                          | $\chi^2(1) = 0.70, p = .40$ |           |          |                    | 1               | 1085.2    |          |                    |
| 3 vs 1                          | $\chi^2(1) = 6.21, p < .05$ |           |          |                    | 2               | 1085.8    |          |                    |
|                                 |                             |           |          |                    | 3               | 1083.0    |          |                    |

**English Feature Verification Rates**

| Fixed Effects                   | Baseline                      |           |          |            | Final (Model 4) |           |          |            |
|---------------------------------|-------------------------------|-----------|----------|------------|-----------------|-----------|----------|------------|
|                                 | <i>b</i>                      | <i>SE</i> | <i>z</i> | <i>p</i>   | <i>b</i>        | <i>SE</i> | <i>z</i> | <i>p</i>   |
| Intercept                       | 1.14                          | 0.08      | 13.49    | $p < .001$ | 1.15            | 0.08      | 13.53    | $p < .001$ |
| Culture Pair                    | -0.37                         | 0.14      | -2.61    | $p < .01$  | -0.26           | 0.14      | -1.90    | $p = .06$  |
| L2 Proficiency                  | 0.12                          | 0.06      | 2.00     | $p < .05$  | 0.13            | 0.06      | 2.16     | $p < .05$  |
| Culture Exposure                | 0.18                          | 0.07      | 2.76     | $p < .05$  | 0.19            | 0.06      | 2.99     | $p < .05$  |
| Feature Type                    | -0.08                         | 0.13      | -0.60    | <i>ns</i>  | -0.08           | 0.13      | -0.60    | <i>ns</i>  |
| Culture Pair x L2 Proficiency   | -                             | -         | -        | -          | -0.10           | 0.05      | -1.99    | $p < .05$  |
| Culture Pair x Culture Exposure | -                             | -         | -        | -          | -0.19           | 0.06      | -3.03    | $p < .05$  |
| Random Effects                  | Intercepts                    |           | Slopes   |            | Intercepts      |           | Slopes   |            |
|                                 | Variance                      | <i>SD</i> | Variance | <i>SD</i>  | Variance        | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects                        | 0.24                          | 0.49      |          |            | 0.2393          | 0.49      |          |            |
| Culture Pair                    |                               |           | 0.01     | 0.12       |                 |           | 0.0003   | 0.01       |
| Items                           | 0.49                          | 0.70      |          |            | 0.4868          | 0.70      |          |            |
| L2 Exposure                     |                               |           | 0.05     | 0.23       |                 |           | 0.0407   | 0.20       |
| Model Comparisons               |                               |           |          |            | Model           | Model Fit |          |            |
| 2 vs 1                          | $\chi^2(1) = 8.50, p < .01$   |           |          |            | 1               | 5910.0    |          |            |
| 3 vs 1                          | $\chi^2(1) = 13.32, p < .001$ |           |          |            | 2               | 5906.2    |          |            |
| 4 vs 2                          | $\chi^2(1) = 16.52, p < .001$ |           |          |            | 3               | 5803.7    |          |            |
| 4 vs 3                          | $\chi^2(1) = 8.76, p < .01$   |           |          |            | 4               | 5901.8    |          |            |

**Japanese Feature Verification Reaction Time**

| Fixed Effects    | Baseline   |           |          |            |
|------------------|------------|-----------|----------|------------|
|                  | <i>b</i>   | <i>SE</i> | <i>t</i> | <i>p</i>   |
| Intercept        | -1.3130    | 0.027     | -48.24   | $p < .001$ |
| Culture Pair     | -0.0290    | 0.019     | -1.55    | <i>ns</i>  |
| L2 Proficiency   | -0.0196    | 0.028     | -0.67    | <i>ns</i>  |
| Culture Exposure | 0.1043     | 0.028     | 3.70     | $p < .001$ |
| Feature Type     | 0.0004     | 0.019     | 0.02     | <i>ns</i>  |
| Random Effects   | Intercepts |           | Slopes   |            |
|                  | Variance   | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects         | 0.063300   | 0.25      |          |            |
| Culture Pair     |            |           | 0.000018 | 0.004      |
| Items            | 0.008497   | 0.09      |          |            |

| L2 Exposure |                             | 0.000003 | 0.002     |
|-------------|-----------------------------|----------|-----------|
|             | Model Comparisons           | Model    | Model Fit |
| 2 vs 1      | $\chi^2(1) = 0.12, p = .72$ | 1        | 5498.8    |
| 3 vs 1      | $\chi^2(1) = 0.15, p = .70$ | 2        | 5497.9    |
|             |                             | 3        | 5498.7    |

### Japanese Feature Verification Rates

| Fixed Effects                   | Baseline                      |           |          |            | Final (Model 4) |           |          |            |
|---------------------------------|-------------------------------|-----------|----------|------------|-----------------|-----------|----------|------------|
|                                 | <i>b</i>                      | <i>SE</i> | <i>z</i> | <i>p</i>   | <i>b</i>        | <i>SE</i> | <i>z</i> | <i>p</i>   |
| Intercept                       | 2.17                          | 0.01      | 21.95    | $p < .001$ | 2.17            | 0.10      | 21.95    | $p < .001$ |
| Culture Pair                    | 0.48                          | 0.18      | 2.76     | $p < .01$  | 0.56            | 0.17      | 3.29     | $p < .01$  |
| L2 Proficiency                  | -0.01                         | 0.06      | -0.12    | <i>ns</i>  | -0.02           | 0.06      | -0.29    | <i>ns</i>  |
| Culture Exposure                | 0.08                          | 0.07      | 1.15     | <i>ns</i>  | 0.07            | 0.07      | 1.10     | <i>ns</i>  |
| Feature Type                    | 0.06                          | 0.17      | 0.69     | <i>ns</i>  | 0.07            | 0.17      | 0.40     | <i>ns</i>  |
| Culture Pair x L2 Proficiency   | -                             | -         | -        | -          | -0.14           | 0.07      | -2.15    | $p < .05$  |
| Culture Pair x Culture Exposure | -                             | -         | -        | -          | -0.14           | 0.07      | -1.94    | $p = .05$  |
| Random Effects                  | Intercepts                    |           | Slopes   |            | Intercepts      |           | Slopes   |            |
|                                 | Variance                      | <i>SD</i> | Variance | <i>SD</i>  | Variance        | <i>SD</i> | Variance | <i>SD</i>  |
| Subjects                        | 0.24                          | 0.49      |          |            | 0.24            | 0.49      |          |            |
| Culture Pair                    |                               |           | 0.05     | 0.22       |                 |           | 0.01     | 0.12       |
| Items                           | 0.72                          | 0.85      |          |            | 0.72            | 0.85      |          |            |
| L2 Exposure                     |                               |           | 0.02     | 0.13       |                 |           | 0.009    | 0.10       |
| Model Comparisons               |                               |           |          |            | Model           | Model Fit |          |            |
| 2 vs 1                          | $\chi^2(1) = 8.96, p < .01$   |           |          |            | 1               | 4224.4    |          |            |
| 3 vs 1                          | $\chi^2(1) = 8.16, p < .01$   |           |          |            | 2               | 4219.9    |          |            |
| 4 vs 2                          | $\chi^2(1) = 12.57, p < .001$ |           |          |            | 3               | 4220.3    |          |            |
| 4 vs 3                          | $\chi^2(1) = 3.62, p < .06$   |           |          |            | 4               | 4218.1    |          |            |