**ENGLISH**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Type** | **R1** | **R2** | **R3** | **R4** | **R5** | **R6** | **R7** | **R8** | **R9** | **R10** |
| **SS** | The horse | that | ***e*** kicked | the wolf | on Tuesday | that | ***e*** patted | the lion | just now | went home. |
| **OS** | The horse | that | the wolf | kicked ***e*** | on Tuesday | that | ***e*** patted | the lion | just now | went home. |
| **SO** | The horse | that | ***e*** kicked | the wolf | on Tuesday | that | the lion | patted ***e*** | just now | went home. |
| **OO** | The horse | that | the wolf | kicked ***e*** | on Tuesday | that | the lion | patted ***e*** | just now | went home. |

* All stats are done with lmer4.0 package in R.

Model: m\_RegionX = lmer (log\_RX ~ log\_R4\*RC1fac \* RC2fac + (1\*log\_R4\*dprimeT|Participant) + (1\*log\_R4\*dprimeT|Item), dataset)

* In RC 1, there is a robust **SRC advantage**.
* In RC 2: (notation: \*>> means significantly faster; \*<< means significantly slower)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Main Effects | | Interactions | | Rank main effects | Parallelism as a factor |
| R3 | RC1S | t = -5.155, p < .001 |  | | S \*>> O |  |
| R4 | RC1S | t = -8.253, p < .001 |  | | S \*>> O |  |
| R7 | RC1S | t = 2.228, p < .05 |  | | OS, OO \*>> SO, SS | Not sig. |
| R8 | RC2S | t = 4.831, p < .001 | RC1S:RC2S  t = -2.048, p < .05 | OO=SO?>>SS?>>OS | SO, OO \*>> OS, SS | t = -2.048, p < .05 |
| R9 | RC2S | t = -4.489, p < .001 | RC1S:RC2S  t = -2.143, p < .05 | SS=OS?>>OO?>>SO | SO, OO \*<< OS, SS | t = -2.143, p < .05 |
| R10 | RC1S | t = 2.164, p < .05 |  | | OS, OO \*>> SO, SS | Not sig. |
| R78 | RC2S | t = 2.584, p < .05 |  | | SO, OO \*>> OS, SS | Not sig. |
| R789 | Not sig. |  |  | |  |  |

* Detailed comparisons:

|  |  |  |  |
| --- | --- | --- | --- |
| Regions | Rankings | Significance | Possible explanations |
| R7 | **OS** \*>> SS | Not sig. | Processing O in RC1 was longer, which encoded the structure better, so the S after O (OS) is processed significantly faster than the S after S (SS). |
|  | OO, SO |
| R8 | OS \*<< **SS** | \* t = 4.831, S \*>> O | Parallelism. R8 is the region to show effects due to spillover for S as RC2. |
|  | OO, SO |
| R9 | OS, SS | \* t = -4.489, S \*<< O | Parallelism. R9 is the region to show effects due to spillover for O as RC2. |
|  | **OO** \*>> SO |
| R10 | OS, SS | Not sig. |  |
|  | OO, SO |
| R78 | **OO >> SO \*>> SS >> OS** |  |  |

**CHINESE**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Ty Type** | **R1** | **R2** | **R3** | **R4** | **R5** | **R6** | **R7** | **R8** | **R9** | **R10** | **R11** | **R12** |
| **SS** | Dem | on Tuesday | ***e*** kicked | the wolf | many times | de | just now | ***e*** patted | the lion | de | horse | went home. |
| **OS** | Dem | on Tuesday | the wolf | ***e*** kicked | many times | de | just now | ***e*** patted | the lion | de | horse | went home. |
| **SO** | Dem | on Tuesday | ***e*** kicked | the wolf | many times | de | just now | the lion | patted ***e*** | de | horse | went home. |
| **OO** | Dem | on Tuesday | the wolf | ***e*** kicked | many times | de | just now | the lion | patted ***e*** | de | horse | went home. |

* Same stats as the English dataset.
* In RC 1, there is a robust **ORC advantage**. This is to the opposite of English.
* In RC 2: (notation: \*>> means significantly faster; \*<< means significantly slower)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Main Effects | | Interactions | | Rank main effects | Parallelism as a factor |
| R3 | RC1S | t = -3.607, p < .001 |  | | S \*>> O |  |
| R4 | RC1S | t = 8.961, p < .001 |  | | O \*>> S |  |
| R5 | RC1S | t = 2.863, p < .01 |  | | O \*>> S |  |
| R7 | RC1S | t = -2.289, p < .05 |  | | SS, SO \*>> OS, OO | Not sig. |
| R8 | RC1S | t = -2.557, p < .05 |  | | SS, SO \*>> OS, OO | Not sig. |
|  | RC2S | t = -7.876, p < .001 |  | | SS, OS \*>> SO, OO | Not sig. |
| R9 | RC2S | t = 4.397, p < .001 | RC1S:RC2S  t = -4.103, p < .001 | OO ?>> SO = SS ?>> OS | SS, OS \*<< SO, OO | t = -4.103, p < .001 |
| R10 | RC2S | t = -3.134, p < .01 |  | | SS, OS \*>> SO, OO | Not sig. |
| R11 | Almost  RC2S | t = 1.856, p = 0.0675 | RC1S:RC2S  t = -5.121, p < .001 | SS?>>OO?>>OS?>>SO | SS, OS \*<< SO, OO | t = -5.121, p < .001 |
| R12 | RC2S | t = -2.836, p < .01 | RC1S:RC2S  t = -2.361, p < .05 | SS?>>OO=OS?>>SO | SS, OS \*>> SO, OO | t = -2.361, p < .05 |
| R89 | RC1S | t = -2.315, p < .05 | RC1S:RC2S  t = -3.815, p < .001 |  | SS, SO \*>> OS, OO | t = -3.815, p < .001 |
|  | RC2S | t = -2.327, p < .05 |  | SS, OS \*>> SO, OO |
| R8910 | RC1S | t = -2.595, p < .01 | RC1S:RC2S  t = -4.227, p < .001 |  | SS, SO \*>> OS, OO | t = -4.227, p < .001 |
|  | RC2S | t = -3.180, p < .01 |  | SS, OS \*>> SO, OO |

|  |  |  |  |
| --- | --- | --- | --- |
| Regions | Rankings | Significance | Possible explanations |
| R7 | OS, SS | Not sig. |  |
|  | OO \*<< **SO** |
| R8 | OS \*<< **SS** | t = -2.557, S \*>> O |  |
|  | OO, SO |
| R9 | OS \*<< **SS** | t = 4.397, S \*<< O |  |
|  | **OO** \*>> SO |
| R10 | OS \*<< **SS** | t = -3.134, S \*>> O |  |
|  | OO, SO |
| R11 | OS \*<< **SS** | Almost \* |  |
|  | OO, SO |
| R12 | OS \*<< **SS** | t = -2.836, S \*>> O |  |
|  | OO, SO |
| R89/R8910 | **SS \*>> SO = OS \*>> OO** |  |  |