**Appendices**

**Appendix A. Psycholinguistic Characteristics of Stimuli (SDs)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|   | Related | Unrelated  | TL-within  | SL-within  | TL-across  | SL-across  |
| Bigram Frequency (Token) | **274** (42) | **258** (45) | **254** (52) | **242** (49) | **227** (73) | **216** (50) |
| OLD20 | **2.99** (0.3) | **3.09** (0.4) | 3.24 (0.5) | **3.28** (0.4) | **3.44** (0.4) | **3.75** (0.4) |
| Positional Specific Bigram Freq. | **28,152** (7,501) | **28,874** (6,008) | **26,529** (8,159) | **24,620** (7,414) | **26,624** (7,136) | **25,319** (6,872) |
| Prime-Target Form Overlap Ratio | **0.96** (0.1) | **0.08** (0.1) | **0.60** (0.1) | **0.59** (0.1) | **0.77** (0.1) | **0.77** (0.1) |
| Word Length | **9.24** (0.4) | **9.37** (0.5) |  |
| Orthographic Neighbourhood | **0.15** (0.4) | **0.17** (0.4**)** |  |
| Stem Bigram Frequency | **1,141** (861) | **1,266** (1,119) |  |
| Stem Frequency | **4.34** (0.7) | **4.39** (0.8) |  |
| Word Frequency | **2.08** (0.7) | **2.07** (0.6) |  |
| Stem Length | **5.39** (0.6) | **5.52** (0.7) |  |
| Stem Ort.Neighbourhood | **2.33** (1.9) | **2.33** (2.3) |  |

*Note.* Word frequency counts were obtained from the SUBTLEX-UK database using the Zipf values (log10 occurrences per billion).

a Positional specific bigram frequency and OLD20 were computed using the ‘vwr’ package in R (Keuleers, 2015).

**Appendix B. Stimuli**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **TARGET** | **Morphological****Prime** | **TL-within****Prime** | **TL-across****Prime** | **SL-within****Prime** | **SL-across****Prime** | **Unrelated****Prime** |
| 1 | dispute | disputable | disptuable | dispuatble | dispkaable | dispuokble | absorbable |
| 2 | allow | allowable | allwoable | alloawble | allveable | alloimble | believable |
| 3 | amend | amendable | amednable | amenadble | amekcable | amenekble | obtainable |
| 4 | execute | executable | exectuable | execuatble | execheable | execuefble | touchable |
| 5 | afford | affordable | affodrable | afforadble | affokvable | afforulble | chargeable |
| 6 | break | breakable | brekaable | breaakble | brefuable | breaihble | verifiable |
| 7 | lament | lamentable | lametnable | lamenatble | lamedrable | lamenelble | bridgeable |
| 8 | imagine | imaginable | imagniable | imagianble | imagzeable | imagierble | driveable |
| 9 | admire | admirable | admriable | admiarble | admvoable | admiosble | electable |
| 10 | oppose | opposable | oppsoable | oppoasble | oppxaable | oppoecble | learnable |
| 11 | assign | assignable | assingable | assiganble | assicqable | assigemble | pardonable |
| 12 | attain | attainable | attaniable | attaianble | attaseable | attaierble | guessable |
| 13 | search | searchable | searhcable | searcahble | searkrable | searcetble | manageable |
| 14 | paint | paintable | paitnable | painatble | paifrable | painefble | attachable |
| 15 | catch | catchable | cathcable | catcahble | catkrable | catcetble | irritable |
| 16 | stack | stackable | stakcable | stacakble | stalwable | stacutble | breathable |
| 17 | teach | teachable | teahcable | teacahble | teabnable | teacidble | thinkable |
| 18 | spend | spendable | spednable | spenadble | spetmable | spenolble | assessable |
| 19 | trust | trustable | trutsable | trusatble | trufcable | trusidble | drinkable |
| 20 | palate | palatable | paltaable | palaatble | palhoable | palaidble | clickable |
| 21 | adopt | adoptable | adotpable | adopatble | adolyable | adopelble | noticeable |
| 22 | watch | watchable | wathcable | watcahble | watlzable | watcutble | adaptable |
| 23 | laugh | laughable | laughable | laugahble | lauytable | laugidble | refutable |
| 24 | spread | spreadable | spredaable | spreaadble | sprekiable | spreaifble | licensable |
| 25 | advise | advisable | advsiable | adviasble | advxoable | advionble | realisable |
| 26 | mould | mouldable | moudlable | mouladble | mouhkable | mouletble | enjoyable |
| 27 | achieve | achievable | achiveable | achieavble | achisoable | achieizble | changeable |
| 28 | coarse | coarseness | coaresness | coarsneess | coararness | coarsvaess | crossness |
| 29 | sharp | sharpness | shaprness | sharnpess | shagcness | sharcqess | brashness |
| 30 | brave | braveness | braevness | bravneess | braocness | bravruess | directness |
| 31 | eager | *eagerness* | *eagreness* | eagreness | eagnaness | eagemzess | crispness |
| 32 | slack | *slackness* | *slakcness* | slacnkess | slakvness | slacmhess | bluntness |
| 33 | black | *blackness* | *blakcness* | blacnkess | blahrness | blacrtess | frankness |
| 34 | exact | *exactness* | *exatcness* | exacntess | exakrness | exacwhess | faintness |
| 35 | fleet | *fleetness* | *fleteness* | fleentess | flelaness | fleesmess | uniqueness |
| 36 | acute | *acuteness* | *acuteness* | acutneess | acuhoness | acutsiess | grossness |
| 37 | fresh | *freshness* | *frehsness* | fresnhess | frednness | fresmtess | briskness |
| 38 | remote | *remoteness* | *remoetness* | remotneess | remoidness | remotziess | moistness |
| 39 | sweet | *sweetness* | *sweteness* | sweentess | swediness | sweerkess | steepness |
| 40 | close | *closeness* | *cloesness* | closneess | cloavness | closcuess | vagueness |
| 41 | short | *shortness* | *shotrness* | shorntess | sholmness | shorvkess | cleverness |
| 42 | false | *falseness* | *falesness* | falsneess | falirness | falszaess | politeness |
| 43 | loose | *looseness* | *looesness* | loosneess | looarness | loosmiess | harshness |
| 44 | grand | *grandness* | *gradnness* | granndess | gralrness | granstess | otherness |
| 45 | crude | *crudeness* | *cruedness* | crudneess | cruabness | crudraess | stillness |
| 46 | alert | *alertness* | *aletrness* | alerntess | alelzness | alermkess | subtleness |
| 47 | prompt | *promptness* | *promtpness* | prompntess | promlgness | prompstess | stiffness |
| 48 | cheap | cheapness | chepaness | cheanpess | chejeness | cheamgess | toughness |
| 49 | alive | *aliveness* | *alievness* | alivneess | aliocness | alivmiess | wholeness |
| 50 | alone | *aloneness* | *aloenness* | alonneess | aloorness | alonzuess | roughness |
| 51 | clear | clearness | cleraness | cleanress | cleneness | cleasmess | smartness |
| 52 | noble | nobleness | nobelness | noblneess | nobidness | noblriess | bleakness |
| 53 | broad | *broadness* | *brodaness* | broandess | brotuness | broartess | whiteness |
| 54 | wrong | wrongness | wrognness | wronngess | wroprness | wronmyess | vividness |

**Appendix C.**

*Post-hoc Comparisons for L1 English*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| contrast | estimate | SE | z.ratio | p.value |
| morphANDunrela(braveness-BRAVE vs directness-BRAVE)  | -0.09 | 0.01 | -4.84 | < .0001 |
| TLwithANDSLwith(braevness-BRAVE vs braocness-BRAVE) | -0.05 | 0.01 | -2.89 | 0.0038 |
| TLacrossANDSLacross(bravneess-BRAVE vs bravruess-BRAVE) | 0.01 | 0.01 | 0.91 | 0.36 |

*Post-hoc Comparisons for L2 English*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| contrast | estimate | SE | z.ratio | p.value |
| morphANDunrela(braveness-BRAVE vs directness-BRAVE)  | -0.06 | 0.01 | -4.21 | <.0001 |
| TLwithANDSLwith(braevness-BRAVE vs braocness-BRAVE) | -0.01 | 0.01 | -0.76 | 0.44 |
| TLacrossANDSLacross(bravneess-BRAVE vs bravruess-BRAVE) | -0.01 | 0.01 | -0.77 | 0.43 |

*Post-hoc Comparisons across Conditions between L1 and L2 groups*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| contrast | estimate | SE | z.ratio | p.value |
| RE.Morph.G | -0.02 | 0.02 | -1.39 | 0.16 |
| RE.TLacross.G | 0.03 | 0.02 | 1.68 | 0.09 |
| RE.TLwithin.G | -0.03 | 0.01 | -2.03 | 0.04 |