## Appendix A: Classification tables and fixed effects for analyses 1 and 2.

1. *Table A.1*. *Classification table for Analysis 1.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Observed |  | Predicted | | |
|  | Proximal (*Este/Aquest*) | Medial (*Ese/Aqueix*) | Distal (*Aquel/Aquell*) |
| Proximal (*Este/Aquest*) | 337 | 96 | 77 |
|  | 66.1% | 18.8% | 15.1% |
| Medial (*Ese/Aqueix*) | 14 | 903 | 239 |
|  | 1.2% | 78.1% | 20.7% |
| Distal (*Aquel/Aquell*) | 51 | 123 | 1616 |
|  | 2.8% | 6.9% | 90.3% |

*Note.* The table reports theposterior model, comparing European Spanish and Majorcan Catalan spoken by simultaneous, overall percentage correct: 90.3%.

1. *Table A.2. Model 1.1. Fixed coefficient table for Analysis 1.*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | Coefficient | Std. Error | t-value | Significance | | 95% CI | Exp(Coefficient) | | 95% CI for  Exp(Coefficient) |
| Intercept *Aquel* | | .135 | .36 | .375 | | 0.708 | (-.575, .844) | | 1.144 | (.563, 2.327) |
| BLP | | .002 | .004 | .643 | | 0.524 | (-.005, .01) | | 1.002 | (.995, 1.01) |
| Region 3 | | -.36 | .648 | -.556 | | 0.578 | (-1.63, .91) | | .698 | (.196, 2.484) |
| Position face-to-face | | -.348 | .219 | -1.59 | | 0.112 | (-.777, .081) | | .706 | (.46, 1.084) |
| European Spanish | | 2.472 | .342 | 7.218 | | <.001 | (1.8, 3.143) | | 11.842 | (6.051, 23.175) |
| Region 3 \*  European Spanish | | 1.491 | .729 | 2.046 | | 0.041 | (.062, 2.919) | | 4.44 | (1.064, 18.529) |
| Intercept *Ese* | | .507 | .43 | 1.178 | | 0.241 | (-.344, 1.357) | | 1.66 | (.709, 3.886) |
| BLP | | .005 | .005 | .996 | | 0.324 | (-.005, .015) | | 1.005 | (.995, 1.015) |
| Region 3 | | 3.709 | .635 | 5.84 | | <.001 | (2.464, 4.955) | | 40.829 | (11.752, 141.846) |
| Position face-to-face | | -.388 | .229 | -1.692 | | 0.091 | (-.838, .062) | | .678 | (.433, 1.064) |
| European Spanish | | -.916 | .486 | -1.884 | | 0.06 | (-1.869, .037) | | .4 | (.154, 1.038) |
| Region 3 \*  European Spanish | | 1.503 | .753 | 1.996 | | 0.046 | (.026, 2.979) | | 4.494 | (1.027, 19.666) |
|  | Baseline: Proximal demonstrative, Region 2, Side-by-side | | | | | | | | | |

*Note.* Table 3 reports the final model, which included the main fixed effects: region, hearer’s position, language dominance, and the language in which the participant responded, with the interaction region by language.

1. *Table A.3. Classification table for the Europeans Spanish by monolingual and bilingual speakers in analysis 2.*

|  |  |  |  |
| --- | --- | --- | --- |
| Observed |  | Predicted | |
|  | *Ese* | *Aquel* |
| *Ese* | 1225 | 84 |
| 93.6% | 6.4% |
| *Aquel* | 49 | 921 |
| 5.1% | 94.9% |

*Note.* The table reports theposterior model, comparing European Spanish monolinguals and bilinguals, overall percentage correct: 94.2%.

1. *Table A.4. The final model comparing European Spanish as spoken by monolingual and bilingual speakers in analysis 2.*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Coefficient | | Std. Error | t-value | Sig. | 95% Confidence Interval | Exp(Coefficient) | 95% Confidence Interval for Exp(Coefficient) |
| Intercept | -4.047 | 0.578 | | -7.005 | <.001 | (-5.182, -2.912) | 0.017 | (0.006, 0.054) |
| Region 3 | 5.479 | 0.627 | | 8.735 | <.001 | (4.249, 6.709) | 239.687 | (70.053, 820.09) |
| Position face-to-face | 0.029 | 0.169 | | 0.174 | 0.862 | (-0.301, 0.36) | 1.030 | (0.74, 1.433) |
| Monolingual Spanish | 0.514 | 0.640 | | 0.803 | 0.425 | (-0.766, 1.794) | 1.672 | (0.465, 6.012) |

*Note.* The table reports the final model comparing European Spanish as spoken by monolingual and bilingual speakers.

## Appendix B

1. BLP values

|  |  |
| --- | --- |
| Subject | BLP value |
| 1 | 42.41 |
| 2 | 129.14 |
| 3 | 110.88 |
| 4 | 44.41 |
| 5 | 80.92 |
| 6 | -33.15 |
| 7 | 2.45 |
| 8 | 45.68 |
| 9 | 66.87 |
| 10 | 50.41 |
| 11 | -76.83 |
| 12 | 2.18 |
| 13 | 54.27 |
| 14 | 89.56 |
| 15 | -68.39 |
| 16 | 89.37 |
| 17 | -37.87 |
| 18 | -3.27 |
| 19 | 83.1 |
| 20 | -35.96 |
| 21 | -13.03 |
| 22 | -129.68 |
| 23 | -0.64 |
| 24 | 128.59 |
| 25 | 37.87 |
| 26 | -13.08 |
| 27 | -74.11 |
| 28 | 130.22 |
| 29 | -64.39 |
| 30 | -50.68 |
| 31 | -92.54 |
| 32 | -80.28 |
| 33 | 17.44 |
| 34 | -77.19 |
| 35 | 13.17 |
| 36 | 50.77 |
| 37 | -34.79 |
| 38 | -93.82 |
| 39 | -11.72 |
| 40 | 11.17 |
| 41 | 0.57 |
| 42 | 46.59 |
| 43 | 81.46 |
| 44 | 78.1 |
| 45 | -57.85 |
| 46 | 44.05 |
| 47 | -97.45 |
| 48 | 49.95 |
| 49 | -39.42 |
| 50 | 56.4 |
| 51 | -80.01 |
| 52 | 48.04 |
| 53 | -54.22 |
| 54 | -110.71 |
| 55 | 108.34 |
| 56 | 51.58 |
| 57 | 54.04 |
| 58 | -8.36 |
| 59 | -67.66 |
| 60 | -138.03 |
| 61 | 76.65 |
| 62 | -12.35 |
| 63 | 44.32 |
| 64 | 13.08 |
| 65 | 83.73 |
| 66 | -78.74 |
| 67 | 44.05 |
| 68 | 18.88 |
| 69 | 28.34 |
| 70 | -57.34 |
| 71 | -38.96 |
| 72 | -64.3 |

*Note*. The table in the Appendix A present the score obtained at the Bilingual Language Profile by the simultaneous bilingual group.

## Appendix C: A priori models

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1. Table A. A priori model of Spanish monolingual analysis, including separation. | | | | | | |
|  | Coefficient | Std. Error | t-value | 95% Confidence Interval | Exp(Coefficient) | 95% Confidence Interval for Exp(Coefficient) |
| Second dem: Intercept | -4.145\*\*\* | 0.6271 | -6.609 | (-5.391, -2.898) | 0.02 | (0.005, 0.055) |
| Position face-to-face | -0.009 | 0.4287 | -0.022 | (-0.85, 0.832) | 0.99 | (0.427, 2.298) |
| Region 3 | 20.135\*\*\* | 0.5186 | 38.823 | (19.116, 21.154) | 555324595.47 | (200511168.001, 1537996159.547) |
| Region 2 | 8.762\*\*\* | 0.6689 | 13.099 | (7.449, 10.076) | 6387.84 | (1717.4, 23759.44) |
| Third dem Intercept | -20.264\*\*\* | 0.5411 | -37.453 | (-22.118, -18.41) | 0.00 | (0.0000000002478, 0.00000001011) |
| Position face-to-face | 0.279 | 0.5503 | 0.508 | (-0.8, 1.359) | 1.32 | (0.449, 3.893) |
| Region 3 | 38.359\* | 0.3474 | 110.41 | (24.878, 51.84) | 45619914879762400.00 | (63750428832.895, 3.26456883779091E+22) |
| Region 2 | 20.766\*\*\* | 0.5231 | 39.695 | (19.711, 21.82) | 1043384898.66 | (363415879.973, 2995609456.65) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1. Table B. A priori model of Majorcan Catalan monolingual analysis (warning, this model includes separation). | | | | | | |
|  | Coefficient | Std. Error | t-value | 95% Confidence Interval | Exp(Coefficient) | 95% Confidence Interval for Exp(Coefficient) |
| Ese: intercept | -7.002\*\*\* | 1.144 | -6.121 | (-9.246, -4.759) | 0.001 | (0.00009652, 0.009) |
| BLP | -0.021\* | 0.009 | -2.326 | (-0.039, -0.003) | 0.979 | (0.962, 0.997) |
| Region 3 | 5.322\*\*\* | 1.4471 | 3.678 | (2.485, 8.16) | 204.858 | (11.998, 3497.767) |
| Region 2 | 6.443\*\*\* | 1.2754 | 5.052 | (3.942, 8.944) | 628.173 | (51.52, 7659.21) |
| Face-to-face | 0.383 | 0.2043 | 1.874 | (-0.018, 0.783) | 1.466 | (0.982, 2.189) |
| BLP\*Region 3 | 0.031\*\* | 0.011 | 2.768 | (0.009, 0.052) | 1.031 | (1.009, 1.054) |
| BLP\*Region 2 | 0.028\* | 0.0118 | 2.358 | (0.005, 0.051) | 1.028 | (1.005, 1.052) |
| Region 3\*Face-to-face | -1.44 | 1.2085 | -1.191 | (-3.81, 0.93) | 0.237 | (0.022, 2.534) |
| Region 2 \* Face-to-face | -0.877\* | 0.3887 | -2.256 | (-1.639, -0.115) | 0.416 | (0.194, 0.892) |
| Aquel: intercept | -7.096\*\*\* | 0.8503 | -8.345 | (-8.764, -5.428) | 0.001 | (0, 0.004) |
| BLP | 0 | 0.0075 | 0.034 | (-0.015, 0.015) | 1 | (0.986, 1.015) |
| Region 3 | 11.166\*\*\* | 1.0275 | 10.867 | (9.152, 13.181) | 70718.394 | (9429.673, 530356.825) |
| Region 2 | 7.527\*\*\* | 0.8787 | 8.566 | (5.804, 9.25) | 1857.315 | (331.55, 10404.531) |
| Face-to-face | -11.339\*\*\* | 0.727 | -15.599 | (-12.765, -9.914) | 0.00001189 | (0.000002859, 0.00004948) |
| BLP\*Region 3 | -0.003 | 0.0095 | -0.321 | (-0.022, 0.016) | 0.997 | (0.978, 1.016) |
| Region 3\*Face-to-face | 10.894\*\*\* | 1.0468 | 10.407 | (8.841, 12.947) | 53856.316 | (6915.022, 419449.513) |
| Region 2 \* Face-to-face | 10.878\*\*\* | 0.8209 | 13.252 | (9.268, 12.487) | 52972.389 | (10592.83, 264903.142) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1. Table C. A priori model of Analysis 1 comparing Spanish and Majorcan Catalan. (warning, this model includes separation). | | | | | | |
|  | Coefficient | Std. Error | t-value | 95% Confidence Interval | Exp(Coefficient) | 95% Confidence Interval for Exp(Coefficient) |
| Second: Intercept | -4.367\*\*\* | 0.70 | -6.20 | (-5.753, -2.981) | 0.01 | (0.003, 0.051) |
| Position face-to-face | 0.219 | 0.59 | 0.37 | (-0.934, 1.372) | 1.25 | (0.393, 3.942) |
| Region 3 | 19.624\*\*\* | 0.63 | 30.94 | (18.381, 20.868) | 333228123.81 | (96088330.571, 1155613609.231) |
| Region 2 | 9.218\*\*\* | 0.80 | 11.45 | (7.64, 10.796) | 10073.97 | (2079.295, 48807.368) |
| monolingual speaker | -1.649 | 1.40 | -1.18 | (-4.397, 1.098) | 0.19 | (0.012, 2.998) |
| Opp x Region 3 | -0.771 | 0.63 | -1.22 | (-2.015, 0.472) | 0.46 | (0.133, 1.603) |
| Opp x Region 2 | -0.469 | 0.89 | -0.53 | (-2.22, 1.282) | 0.63 | (0.109, 3.603) |
| Face-to-face x Majorcan Catalan | 0.131 | 0.62 | 0.21 | (-1.089, 1.35) | 1.14 | (0.337, 3.859) |
| Region 3 x Majorcan Catalan | -15.038\*\*\* | 1.64 | -9.18 | (-18.251, -11.825) | 0.00 | (0.00000001185, 0.000007316) |
| Region 2 x Majorcan Catalan | -3.74\* | 1.60 | -2.33 | (-6.884, -0.595) | 0.02 | (0.001, 0.551) |
| Face-to-face x Region 3 x Majorcan Catalan | -0.602 | 1.34 | -0.45 | (-3.224, 2.02) | 0.55 | (0.04, 7.536) |
| Face-to-face x Region 2 x Majorcan Catalan | -0.361 | 0.97 | -0.37 | (-2.267, 1.546) | 0.70 | (0.104, 4.691) |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1. Table D. A priori first model of Analysis 2, comparing Spanish monolingual vs bilingual speakers (warning, this model includes separation). | | | | | | |
|  | Coefficient | Std. Error | t-value | 95% Confidence Interval | Exp(Coefficient) | 95% Confidence Interval for Exp(Coefficient) |
| Second: Intercept | -4.058\*\*\* | 0.6778 | -5.987 | (-5.389, -2.728) | 0.017 | (0.005, 0.065) |
| Position face-to-face | 0.192 | 0.5163 | 0.371 | (-0.821, 1.204) | 1.211 | (0.44, 3.334) |
| Region 3 | 19.325\*\*\* | 0.5629 | 34.332 | (18.221, 20.429) | 247025432.7 | (81929224.942, 744808271.211) |
| Region 2 | 8.678\*\*\* | 0.7709 | 11.257 | (7.167, 10.19) | 5873.901 | (1295.685, 26628.938) |
| bilingual speaker | -0.979 | 0.8317 | -1.178 | (-2.612, 0.653) | 0.376 | (0.073, 1.921) |
| Opp x Region 3 | -0.69 | 0.5554 | -1.242 | (-1.779, 0.399) | 0.502 | (0.169, 1.491) |
| Opp x Region 2 | -0.438 | 0.8337 | -0.525 | (-2.072, 1.197) | 0.645 | (0.126, 3.31) |
| Face-to-face x bilingual | 0.153 | 0.7688 | 0.2 | (-1.354, 1.661) | 1.166 | (0.258, 5.263) |
| Region 3 x bilingual | -10.792\*\*\* | 0.9788 | -11.026 | (-12.711, -8.873) | 0.00002056 | (0.000003017, 0) |
| Region 2 x bilingual | -1.429 | 0.9783 | -1.46 | (-3.347, 0.489) | 0.24 | (0.035, 1.631) |
| Face-to-face x Region 3 x bilingual | 0.356 | 0.8025 | 0.444 | (-1.217, 1.93) | 1.428 | (0.296, 6.888) |
| Face-to-face x Region 2 x bilingual | -0.169 | 1.0187 | -0.165 | (-2.166, 1.829) | 0.845 | (0.115, 6.226) |