Appendix 1

Social Attitudes Questionnaire

1. What ethnic group (e.g., Québécois, Anglophone Quebecer, Vietnamese, Black Canadian, Afro-American, Chinese, Inuit, Mohawk, Ukrainian and so on) do you consider yourself to be a member of?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is your ethnic language? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Please rate how well each of the following labels describes you.

**Not at all Perfectly**

Canadian 1 2 3 4 5 6 7 8 9

French Canadian 1 2 3 4 5 6 7 8 9

Québécois 1 2 3 4 5 6 7 8 9

Anglophone Quebecer 1 2 3 4 5 6 7 8 9

Other: (please specify): \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1 2 3 4 5 6 7 8 9

Other: (please specify): \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1 2 3 4 5 6 7 8 9

1. Indicate the degree to which each of these statements accurately reflects how you feel.

**Disagree Agree**

|  |  |
| --- | --- |
|  |  |
| **PRIDE FOR ETHNIC GROUP** |  |
| 1. I am proud to be a member of my ethnic group. | 1 2 3 4 5 6 7 8 9 |
| 1. I am proud to let people know that I belong to my ethnic group. | 1 2 3 4 5 6 7 8 9 |
| 1. I am proud of the achievements of my ethnic group. | 1 2 3 4 5 6 7 8 9 |
| 1. I feel proud to see symbols of my ethnic group (such as a flag) displayed around me. | 1 2 3 4 5 6 7 8 9 |
| 1. I am proud to be able to speak the language of my ethnic group. | 1 2 3 4 5 6 7 8 9 |
| **ENGLISH IN QUEBEC** |  |
| 1. Anglophone Quebecers do not have considerable economic power in Quebec. | 1 2 3 4 5 6 7 8 9 |
| 1. Anglophone Quebecers do not have considerable political power in Quebec. | 1 2 3 4 5 6 7 8 9 |
| 1. In my daily life (for example, in a restaurant, shop, doctor’s office), I should have the right to speak English in Quebec. | 1 2 3 4 5 6 7 8 9 |
| 1. I should have the freedom to choose if I want my children to be educated in English in Quebec. | 1 2 3 4 5 6 7 8 9 |
| 1. Anglophone Quebecers’ contribution to Quebec is not recognized or valued. | 1 2 3 4 5 6 7 8 9 |
| **ATTITUDES TOWARDS IMMIGRANTS** |  |
| 1. The influx of immigrants is lowering the standard of living of people in Quebec. | 1 2 3 4 5 6 7 8 9 |
| 1. Laws, customs, and traditions that are specific to immigrant groups should not be imposed on the Quebec society as a whole. | 1 2 3 4 5 6 7 8 9 |
| 1. Immigrants should adopt the Quebec way of life and values to replace their traditional way or life and values. | 1 2 3 4 5 6 7 8 9 |
| 1. Immigrants are bringing conflicts in their home countries into Quebec. | 1 2 3 4 5 6 7 8 9 |
| 1. Immigrants benefit a lot from being in Quebec so they should be loyal to Québec. | 1 2 3 4 5 6 7 8 9 |
| **PERSONAL RELATIONS WITH OTHER GROUPS** |  |
| 1. I feel accepted and respected by other ethnic groups in Quebec. | 1 2 3 4 5 6 7 8 9 |
| 1. Members of other ethnic groups do not mind me living in close proximity to them. | 1 2 3 4 5 6 7 8 9 |
| 1. Members of other ethnic groups would not object to my children marrying their children. | 1 2 3 4 5 6 7 8 9 |
| 1. Children who grow up in an ethnically diverse Quebec are more prepared to live in today’s world. | 1 2 3 4 5 6 7 8 9 |
| 1. Children growing up in an ethnically diverse Quebec are more tolerant of other groups. | 1 2 3 4 5 6 7 8 9 |

Category labels were not presented to participants. Questionnaire is based on materials from: Gatbonton, E., & Trofimovich, P. (2008). The ethnic group affiliation and L2 proficiency link: Empirical evidence. *Language Awareness*, *17*, 229–248. https://doi.org/10.1080/09658410802146867

Appendix 2

Scripts for the Manipulation of Social Bias Orientation

**Negative**

I’m sorry. I just have to vent about something. You’re a native English speaker, so you’ll get where I’m coming from. I just went to grab some food from the Copper Branch down the street. I can’t believe they don’t provide adequate service in English! I mean, the person I placed my order with was clearly a French speaker who had never bothered to learn English very well. I could barely understand her! Her accent was awful and her grammar didn’t even make sense. You know – Canada has *two* official languages, so everyone should be able to speak English—at school, at work, everywhere! I can’t believe there are French speakers who haven’t bothered to become fluent in English after spending a lifetime in Canada! It’s ridiculous.

**Positive**

I just have to share something with you that I’ve been thinking about all day. You’re a native English speaker who probably speaks some French, so you’ll get where I’m coming from. So, I went to the Copper Branch down the street earlier to get something to eat and I was so impressed that they provide such good service in English! The person I placed my order with was obviously a native speaker of French, but her English was *really* good! I mean, she had an accent, but it still sounded good and her grammar wasn’t bad, either. You know – Canada has *two* official languages, so everyone should be able to use English—at school, at work, everywhere! I am just so impressed that some French speakers make such an effort to learn English. It’s tough learning a new language!

Appendix 3

Final Debrief Questionnaire

Please rate your experience in today’s session by putting an X in the appropriate spot on the scale.

1. How pleasant was your experience in this rating session?

Very pleasant

Very unpleasant

1. How helpful was the researcher during the session?

Very helpful

Not helpful at all

1. How difficult was the rating task for you?

Very difficult

Very easy

1. How confident are you in your ratings?

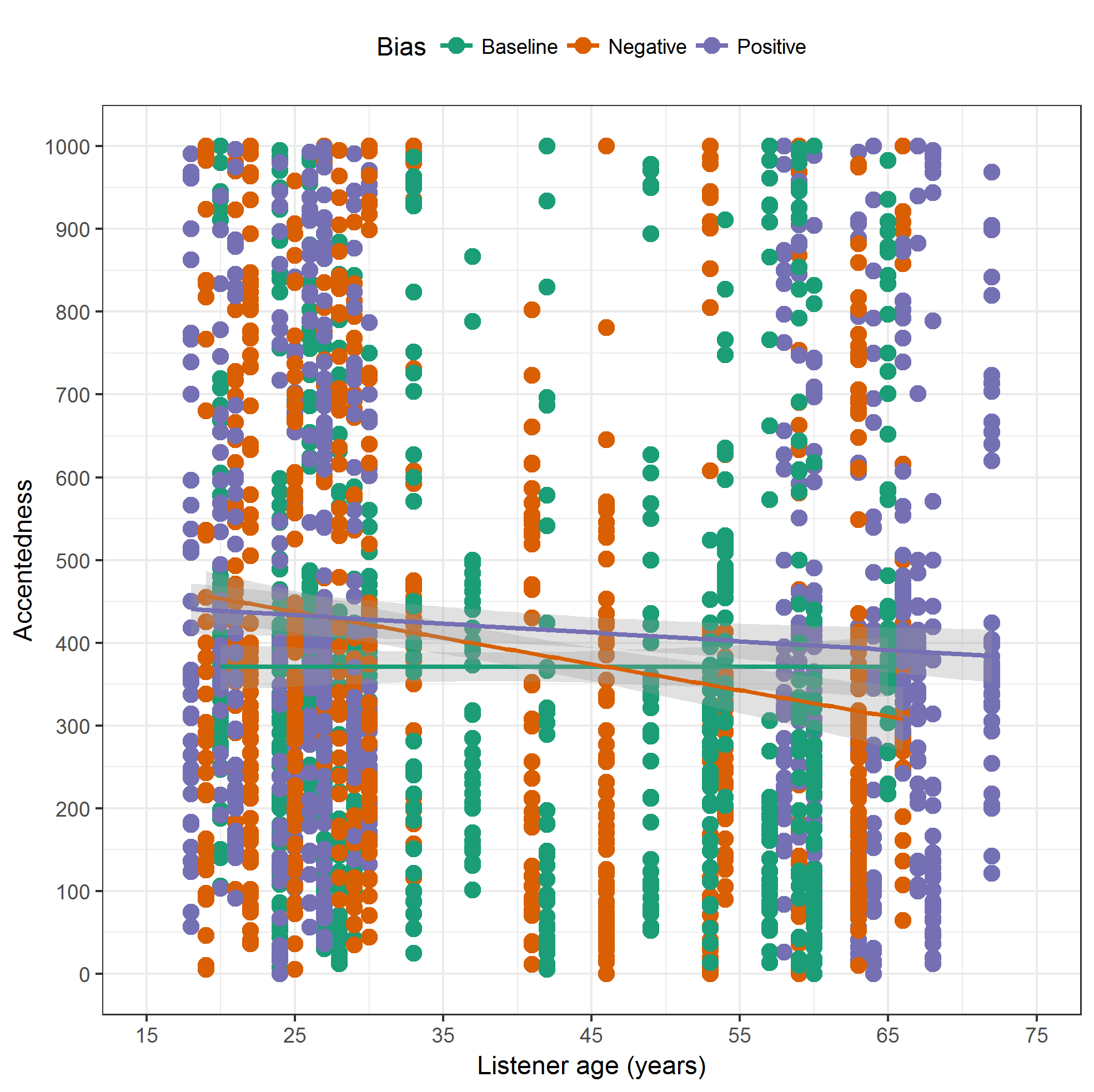
Not confident at all

Fully confident

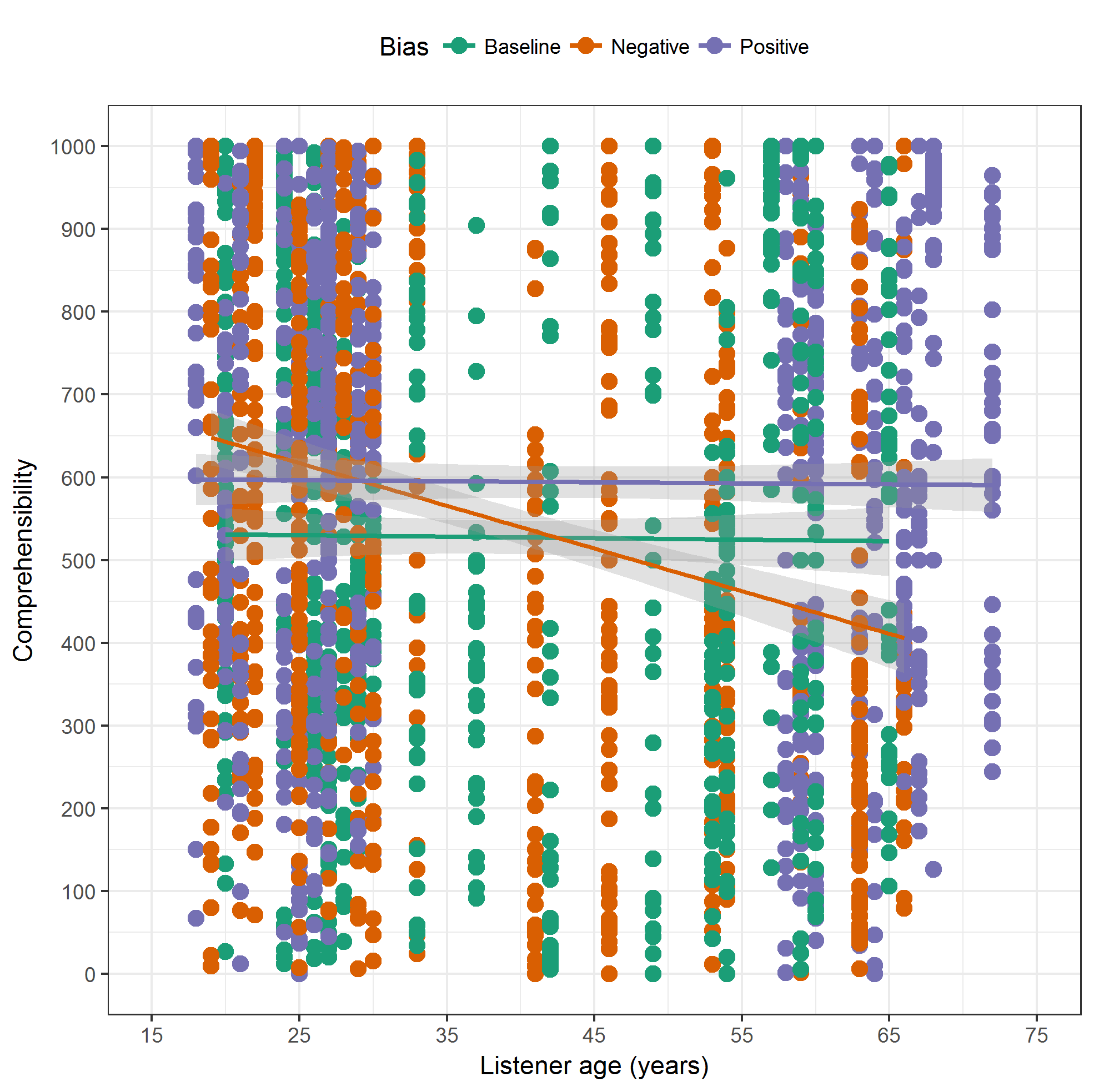
1. Did any part of your interaction with the researcher affect your ratings?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

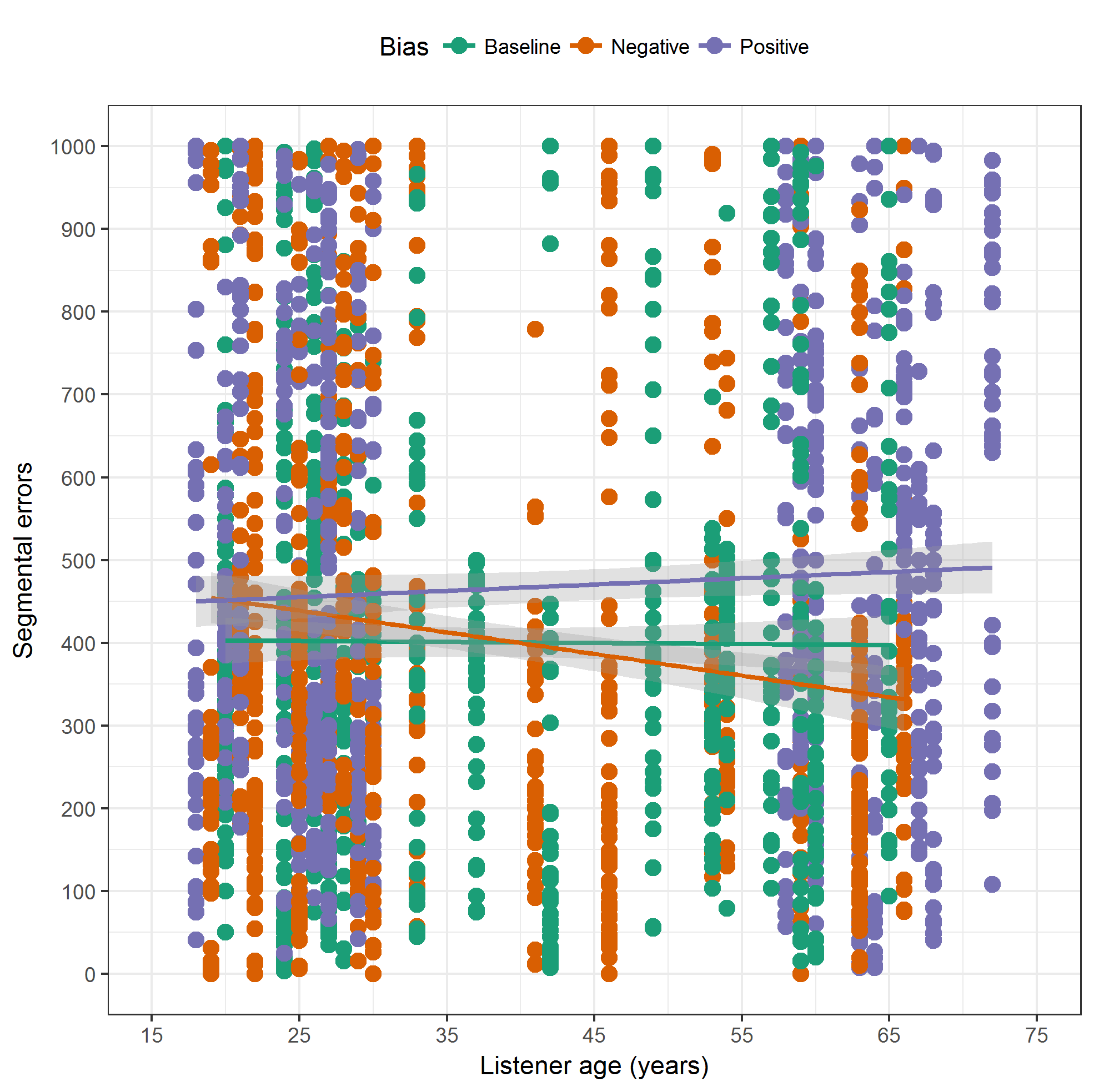
Appendix 4

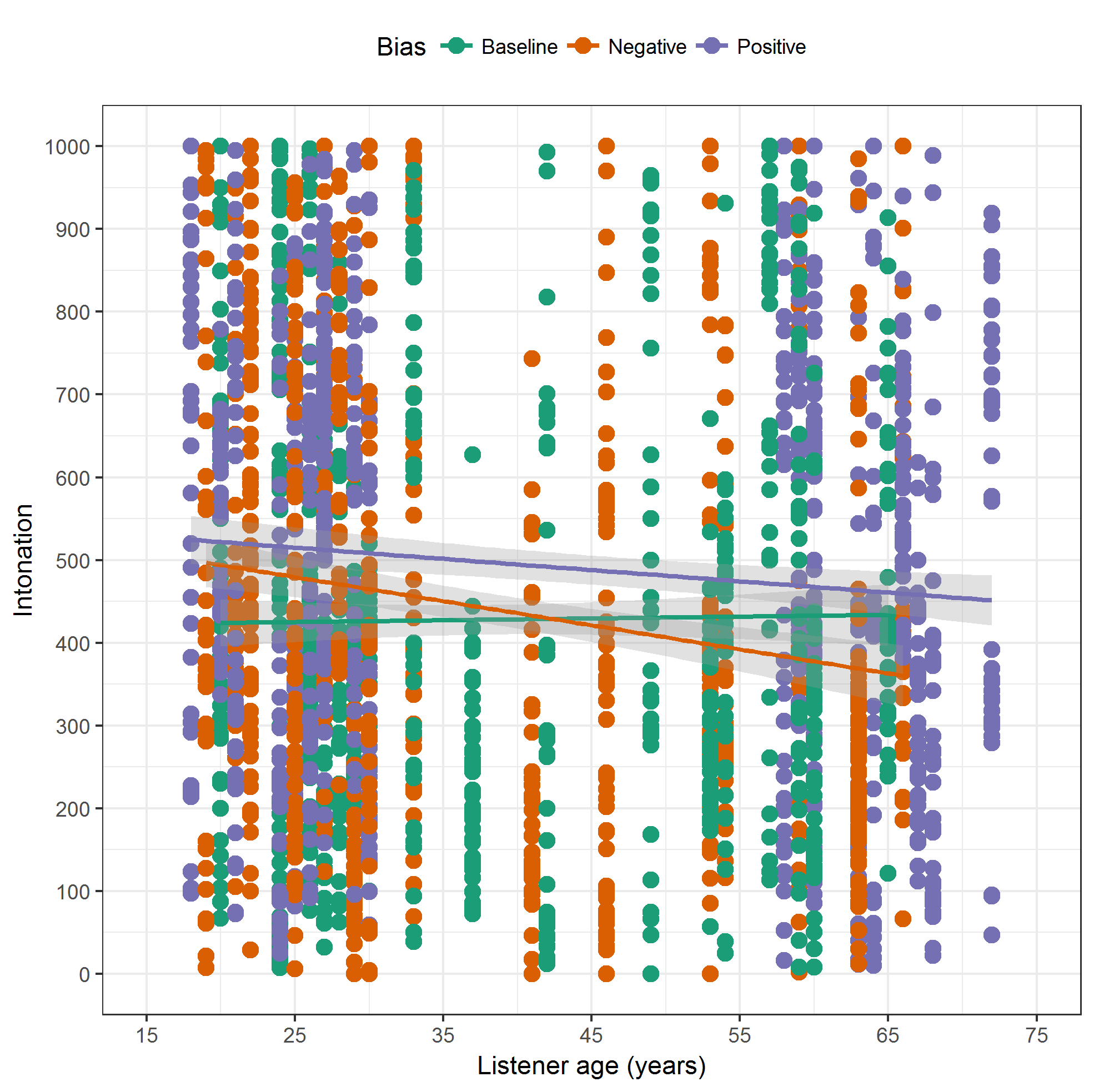


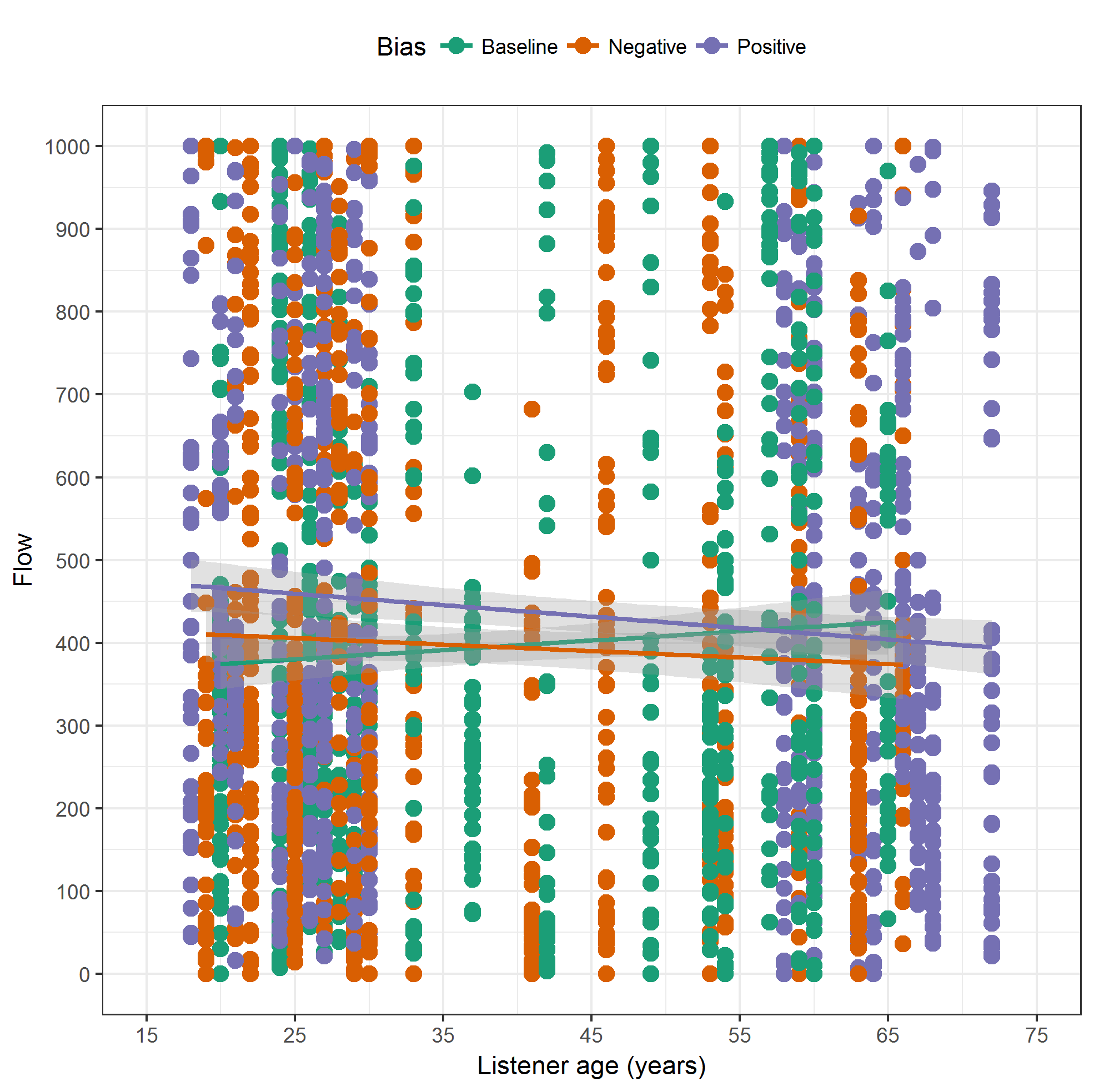
*Figure A1*. Scatterplot of accentedness ratings as a function of listeners’ age, with regression lines depicting the best linear fit for each listener group and shaded areas encompassing 95% confidence intervals.



*Figure A2*. Scatterplot of comprehensibility ratings as a function of listeners’ age, with regression lines depicting the best linear fit for each listener group and shaded areas encompassing 95% confidence intervals.

 *Figure A3*. Scatterplot of ratings of segmental errors as a function of listeners’ age, with regression lines depicting the best linear fit for each listener group and shaded areas encompassing 95% confidence intervals.

 *Figure A4*. Scatterplot of intonation ratings as a function of listeners’ age, with regression lines depicting the best linear fit for each listener group and shaded areas encompassing 95% confidence intervals.

 *Figure A5*. Scatterplot of flow ratings as a function of listeners’ age, with regression lines depicting the best linear fit for each listener group and shaded areas encompassing 95% confidence intervals.

Appendix 5

**Table A1** Final model for accentedness with baseline group used as the reference level

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | *b* | *SE* | 95% CI | *t* | *p* |
| (Intercept) | 428.08 | 59.78 | [311.18, 544.98] | 7.16 | < .0001 |
| Positive vs. baseline | 93.25 | 25.18 | [44.01, 142.50] | 3.70 | .0002 |
| Negative vs. baseline | 84.97 | 26.30 | [33.53, 136.40] | 3.23 | .0013 |
| Listener age | –1.53 | 0.48 | [–2.46, –0.60] | –3.21 | .0013 |
| Positive × Listener age | –1.39 | 0.55 | [–2.47, –0.30] | –2.50 | .0126 |
| Negative × Listener age | –1.75 | 0.62 | [–2.96, –0.55] | –2.84 | .0045 |
| Familiarity with French accent | –5.73 | 4.69 | [–14.90, 3.44] | –1.22 | .2219 |
| French use | –2.11 | 0.28 | [–2.65, –1.57] | –7.62 | < .0001 |
| French use with native speakers | 0.41 | 0.13 | [0.15, 0.66] | 3.09 | .0020 |
| Pride in Anglophone group | 2.44 | 0.39 | [1.67, 3.21] | 6.18 | < .0001 |
| Role of English in Quebec | –2.17 | 0.48 | [–3.12, –1.23] | –4.49 | < .0001 |
| Attitudes towards immigrants | 3.65 | 0.48 | [2.71, 4.58] | 7.62 | < .0001 |
| Feelings towards other groups | –0.32 | 0.55 | [–1.40, 0.75] | –0.59 | .5575 |
| Random effects | *SD* | Information criteria | | Estimate | |
| Speakers (intercept) | 177.38 | Log-likelihood | | –14930.51 | |
| Positive bias (slope) | 37.03 | AIC | | 29913.02 | |
| Negative bias (slope) | 40.76 | BIC | | 30062.05 | |
| Listeners (intercept) | 172.96 |  | |  | |
| Positive bias (slope) | 113.69 |  | |  | |
| Negative bias (slope) | 122.74 |  |  |  |  |

*Notes*. AIC = Akaike information criterion, BIC = Bayesian information criterion.

**Table A2** Final model for comprehensibility with baseline group used as the reference level

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | *b* | *SE* | 95% CI | *t* | *p* |
| (Intercept) | 532.52 | 70.86 | [393.95, 671.09] | 7.51 | < .0001 |
| Positive vs. baseline | 100.49 | 29.23 | [43.32, 157.65] | 3.44 | .0006 |
| Negative vs. baseline | 244.77 | 31.09 | [183.97, 305.57] | 7.87 | < .0001 |
| Listener age | 1.21 | 0.57 | [0.11, 2.32] | 2.14 | .0322 |
| Positive × Listener age | –0.66 | 0.66 | [–1.95, 0.63] | –1.00 | .3176 |
| Negative × Listener age | –5.54 | 0.75 | [–7.00, –4.08] | –7.42 | < .0001 |
| Familiarity with French accent | –4.41 | 5.67 | [–15.49, 6.67] | –0.78 | .4366 |
| French use | 0.44 | 0.33 | [–0.21, 1.09] | 1.32 | .1871 |
| French use with native speakers | –0.16 | 0.16 | [–0.47, 0.15] | –1.02 | .3098 |
| Pride in Anglophone group | 1.79 | 0.48 | [0.86, 2.73] | 3.74 | .0002 |
| Role of English in Quebec | –2.09 | 0.59 | [–3.24, –0.94] | –3.55 | .0004 |
| Attitudes towards immigrants | –1.53 | 0.58 | [–2.66, –0.39] | –2.64 | .0085 |
| Feelings towards other groups | –0.05 | 0.66 | [–1.34, 1.25] | –0.07 | .9434 |
| Random effects | *SD* | Information criteria | | Estimate | |
| Speakers (intercept) | 195.25 | Log-likelihood | | –15363.62 | |
| Positive bias (slope) | 9.26 | AIC | | 30779.23 | |
| Negative bias (slope) | 22.14 | BIC | | 30928.26 | |
| Listeners (intercept) | 204.28 |  | |  | |
| Positive bias (slope) | 176.01 |  | |  | |
| Negative bias (slope) | 284.37 |  |  |  |  |

*Notes*. AIC = Akaike information criterion, BIC = Bayesian information criterion.**Table A3** Final model for segmental errors with baseline group used as the reference level

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | *b* | *SE* | 95% CI | *t* | *p* |
| (Intercept) | 625.99 | 64.59 | [499.68, 752.29] | 9.69 | < .0001 |
| Positive vs. baseline | 29.53 | 26.29 | [–21.88, 80.94] | 1.12 | .2615 |
| Negative vs. baseline | 64.42 | 27.05 | [11.52, 117.31] | 2.38 | .0173 |
| Listener age | –0.81 | 0.49 | [–1.77, 0.15] | –1.65 | .0992 |
| Positive × Listener age | 0.76 | 0.59 | [–0.39, 1.92] | 1.29 | .1961 |
| Negative × Listener age | –1.74 | 0.65 | [–3.02, –0.46] | –2.65 | .0081 |
| Familiarity with French accent | –27.65 | 5.10 | [–37.62, –17.68] | –5.42 | < .0001 |
| French use | –0.61 | 0.31 | [–1.21, 0.00] | –1.97 | .0493 |
| French use with native speakers | 0.26 | 0.14 | [–0.02, 0.54] | 1.85 | .0646 |
| Pride in Anglophone group | 1.22 | 0.42 | [0.39, 2.05] | 2.88 | .0040 |
| Role of English in Quebec | –1.70 | 0.53 | [–2.74, –0.67] | –3.21 | .0014 |
| Attitudes towards immigrants | 2.16 | 0.53 | [1.14, 3.19] | 4.12 | < .0001 |
| Feelings towards other groups | 0.07 | 0.59 | [–1.08, 1.23] | 0.12 | .9006 |
| Random effects | *SD* | Information criteria | | Estimate | |
| Speakers (intercept) | 192.99 | Log-likelihood | | –15122.58 | |
| Listeners (intercept) | 163.23 | AIC | | 30277.16 | |
|  |  | BIC | | 30368.87 | |

*Notes*. AIC = Akaike information criterion, BIC = Bayesian information criterion.

**Table A4** Final model for intonation with baseline group used as the reference level

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | *b* | *SE* | 95% CI | *t* | *p* |
| (Intercept) | 745.05 | 66.46 | [615.09, 875.01] | 11.21 | < .0001 |
| Positive vs. baseline | 166.01 | 28.13 | [111.01, 221.00] | 5.90 | < .0001 |
| Negative vs. baseline | 153.49 | 28.93 | [96.91, 210.07] | 5.30 | < .0001 |
| Listener age | –0.15 | 0.53 | [–1.18, 0.88] | –0.28 | .7808 |
| Positive × Listener age | –2.29 | 0.63 | [–3.53, –1.05] | –3.62 | .0003 |
| Negative × Listener age | –3.25 | 0.70 | [–4.62, –1.88] | –4.64 | < .0001 |
| Familiarity with French accent | –22.19 | 5.45 | [–32.86, –11.53] | –4.07 | < .0001 |
| French use | –0.80 | 0.33 | [–1.45, –0.16] | –2.44 | .0149 |
| French use with native speakers | 0.03 | 0.15 | [–0.27, 0.32] | 0.17 | .8662 |
| Pride in Anglophone group | 1.15 | 0.45 | [0.26, 2.03] | 2.52 | .0117 |
| Role of English in Quebec | –2.96 | 0.57 | [–4.08, –1.85] | –5.22 | < .0001 |
| Attitudes towards immigrants | 2.15 | 0.56 | [1.06, 3.25] | 3.84 | .0001 |
| Feelings towards other groups | –3.28 | 0.63 | [–4.52, –2.05] | –5.20 | < .0001 |
| Random effects | *SD* | Information criteria | | Estimate | |
| Speakers (intercept) | 168.56 | Log-likelihood | | –15268.26 | |
| Listeners (intercept) | 175.28 | AIC | | 30568.52 | |
|  |  | BIC | | 30660.23 | |

*Notes*. AIC = Akaike information criterion, BIC = Bayesian information criterion.

**Table A5** Final model for flow with baseline group used as the reference level

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | *b* | *SE* | 95% CI | *t* | *p* |
| (Intercept) | 527.83 | 64.64 | [401.43, 654.23] | 8.17 | < .0001 |
| Positive vs. baseline | 200.31 | 26.19 | [149.10, 251.53] | 7.65 | < .0001 |
| Negative vs. baseline | 148.40 | 28.36 | [92.95, 203.85] | 5.23 | < .0001 |
| Listener age | 1.72 | 0.49 | [0.75, 2.68] | 3.48 | .0005 |
| Positive × Listener age | –3.90 | 0.58 | [–5.05, –2.76] | –6.69 | < .0001 |
| Negative × Listener age | –3.44 | 0.67 | [–4.76, –2.13] | –5.11 | < .0001 |
| Familiarity with French accent | –7.41 | 5.11 | [–17.39, 2.58] | –1.45 | .1470 |
| French use | 0.12 | 0.30 | [–0.48, 0.71] | 0.38 | .7018 |
| French use with native speakers | –0.73 | 0.14 | [–1.01, –0.45] | –5.09 | < .0001 |
| Pride in Anglophone group | 1.83 | 0.43 | [0.99, 2.67] | 4.25 | < .0001 |
| Role of English in Quebec | –3.39 | 0.54 | [–4.43, –2.34] | –6.31 | < .0001 |
| Attitudes towards immigrants | 0.94 | 0.52 | [–0.08, 1.96] | 1.80 | .0723 |
| Feelings towards other groups | –2.47 | 0.59 | [–3.63, –1.31] | –4.16 | < .0001 |
| Random effects | *SD* | Information criteria | | Estimate | |
| Speakers (intercept) | 188.67 | Log-likelihood | | –15142.58 | |
| Positive bias (slope) | 24.63 | AIC | | 30337.17 | |
| Negative bias (slope) | 34.17 | BIC | | 30486.20 | |
| Listeners (intercept) | 177.41 |  | |  | |
| Positive bias (slope) | 48.80 |  | |  | |
| Negative bias (slope) | 31.01 |  |  |  |  |

*Notes*. AIC = Akaike information criterion, BIC = Bayesian information criterion.