STaTa®

Statistics/Data Analysis

_____

```
      name:  <unnamed>
       log:  \\wsl.localhost\Debian\home\lsys\neutrality\analysis\logs/figureC2.smcl
  log type:  smcl
 opened on:   2 Dec 2025, 12:14:19
```

```
1 .
2 . do init.do

3 . cls                                    // Clear results window

4 . clear all              // Start with a clean slate

5 . set more off, perm     // Disable partitioned output
  (set more preference recorded)

6 . macro drop _all        // Clear all macros to avoid namespace conflicts

7 . set linesize 150       // Line size limit to make output more readable, affects log
  > s

8 . set varabbrev off, perm // Turn off variable abbreviation
  (set varabbrev preference recorded)

9 . // pause on                 // Enable pause mode for debugging
10. version 13.1            // Set Stata version to 13.1

11. set matsize 10000


12.
13. *==============================================================================
14. // Set root path
15. // cap net install here, from("https://raw.githubusercontent.com/korenmiklos/here/ma
  > ster/")
16. cap here

17. if _rc == 0 {
18.        here, set
19.        cd ${here}
20. }

21. else {
22.        global here "\\wsl.localhost\Debian\home\lsys\neutrality\analysis"
23.        cd $here
  \\wsl.localhost\Debian\home\lsys\neutrality\analysis
24. }

25.
26. *==============================================================================
27. // Point to ado programs
28. adopath ++ ./ado
  [1]               "./ado"
  [2]   (BASE)      "C:\Program Files (x86)\Stata13\ado\base/"
  [3]   (SITE)      "C:\Program Files (x86)\Stata13\ado\site/"
  [4]               "."
  [5]   (PERSONAL)  "c:\ado\personal/"
  [6]   (PLUS)      "c:\ado\plus/"
  [7]   (OLDPLACE)  "c:\ado/"

29.
```

```
30. use "../pipeline/out/media.dta", clear

31. do preamble

32. *-------------------------------------------------------------------------
33. * IDENTIFIERS AND METADATA
34. *-------------------------------------------------------------------------
35. label var qid        "Quote ID"

36. label var article_id "News article ID (title-date tuple)"

37. label var speech_id  "Speech ID"

38.
39. label var date       "Publication date"

40. label var matched_date "Matched speech date"

41. label var matched_score "Matched score in semi-automated assessing"

42.
43. label var mp         "MP ID"

44. label var party      "Party of politician (string code)"

45. label var opposition  "=1 if from an opposition party"

46. gen ruling = (party == "pap")

47. label var ruling  "=1 if from the government party"

48. label var non_partisan "=1 if non-partisan MP"

49. assert (1 == opposition + ruling + non_partisan)

50. label var speaker     "=1 if making speech in capacity of speaker"

51.
52. label var section     "Original article section"

53.
54. *=========================================================================
55. * MP CAREER
56. *=========================================================================
57. label var start "Start date of MP's parliamentary service"

58. rename _end end

59. label var end   "End date of MP's parliamentary service"

60.
61. *--- Rank of MP -------------------------------------------------------------
62. label define rank_label ///
    >     1 "pm" 2 "dpm" 3 "minister" 4 "sms" 5 "mos" 6 "mayor" 7 "sps" ///
    >     8 "parl sec" 9 "speaker" 10 "mp" 11 "ncmp" 12 "nmp"

63. encode rank, gen(mp_rank) label(rank_label)

64. drop rank
```

```
 65. rename mp_rank rank

 66. label var rank "Rank of MP at time of speech"

 67. fvset base 10 rank    // base: Member of Parliament

 68.
 69. *--- Tenunre -------------------------------------------------------------
 70. gen _tenure = tenure / 365

 71. drop tenure

 72. rename _tenure tenure

 73. label var tenure "Seniority of politician at time of speech (years)"

 74.
 75. gen tenure2 = tenure^2

 76. label var tenure2 "Square of tenure"

 77.
 78. *========================================================================
 79. * INDIVIDUAL DEMOGRAPHICS
 80. *========================================================================
 81. label var dob   "Date of birth of MP"

 82. label var yob   "Year of birth of MP"

 83.
 84. *--- Gender (0 = male, 1 = female) -----------------------------------
 85. label define gender_label 0 "male" 1 "female"

 86. encode gender, gen(sex) label(gender_label)

 87. drop gender

 88. rename sex gender

 89. fvset base 0 gender

 90. label var gender "Gender of politician"

 91.
 92. *--- Race --------------------------------------------------------------
 93. label define race_label 0 "chinese" 1 "malay" 2 "indian" 3 "eurasian"

 94. encode race, gen(ethnic) label(race_label)

 95. drop race

 96. rename ethnic race

 97. fvset base 0 race

 98. label var race "Race of politician (Chinese, Malay, Indian, Eurasian/other)"

 99.
100 *--- Age ---------------------------------------------------------------
101 gen _age = age / 365
```

```
102 drop age

103 rename _age age

104 label var age "Age of politician at time of speech (years)"

105
106 gen age2    = age^2

107 label var age2 "Square of age"

108
109 *========================================================================
110 * MINISTRY
111 *========================================================================
112 label var MND    "=1 if speech made while at Ministry of National Development"

113 label var MinDef "=1 if speech made while at Ministry of Defence"

114 label var MFA    "=1 if speech made while at Ministry of Foreign Affairs"

115 label var MinLaw "=1 if speech made while at Ministry of Law"

116 label var MHA    "=1 if speech made while at Ministry of Home Affairs"

117 label var MOT    "=1 if speech made while at Ministry of Transport"

118 label var MOF    "=1 if speech made while at Ministry of Finance"

119 label var MOM    "=1 if speech made while at Ministry of Manpower"

120 label var MTI    "=1 if speech made while at Ministry of Trade and Industry"

121 label var MCCY   "=1 if speech made while at Ministry of Culture, Community and Yout
  > h"

122 label var MSF    "=1 if speech made while at Ministry of Social and Family Developme
  > nt"

123 label var MOH    "=1 if speech made while at Ministry of Health"

124 label var PMO    "=1 if speech made while at Prime Minister's Office"

125 label var MEWR   "=1 if speech made while at Ministry of the Environment and Water R
  > esources"

126 label var MCI    "=1 if speech made while at Ministry of Communications and Informat
  > ion"

127 label var MOE    "=1 if speech made while at Ministry of Education"

128
129 recode MFA PMO MEWR MCI MTI MHA MCCY MinLaw MOH MOM MinDef MSF MOT MND MOF MOE (. =
  > 0)
  (MFA: 13913 changes made)
  (PMO: 14288 changes made)
  (MEWR: 14348 changes made)
  (MCI: 14173 changes made)
  (MTI: 14135 changes made)
  (MHA: 13392 changes made)
  (MCCY: 14301 changes made)
  (MinLaw: 13971 changes made)
  (MOH: 14054 changes made)
  (MOM: 14058 changes made)
  (MinDef: 13790 changes made)
  (MSF: 14693 changes made)
  (MOT: 13884 changes made)
  (MND: 13741 changes made)
  (MOF: 13401 changes made)
  (MOE: 13792 changes made)
```

```
130
131 *=====================================================================
132 * STRING SIMILARITY AND SEMANTIC MATCHING
133 *=====================================================================
134
135 *--- String similarity 1 (partialscore) ------------------------------
136 rename partialscore_quote_to_fullspeech  ss1_quote_to_speech

137 label var ss1_quote_to_speech           "String similarity score 1 for quote to spe
  > ech"

138
139 rename partialscore_quote_to_paragraph   ss1_quote_to_paragraph

140 label var ss1_quote_to_paragraph        "String similarity score 1 for quote to par
  > agraph"

141
142 rename partialscore_quote_to_sentence    ss1_quote_to_sentence

143 label var ss1_quote_to_sentence         "String similarity score 1 for quote to sen
  > tence"

144
145 rename _partialscore_speech             _ss1_quote_to_speech

146 label var _ss1_quote_to_speech          "(no stopwords) string similarity score 1 f
  > or quote to speech"

147
148 rename _partialscore_paragraph          _ss1_quote_to_paragraph

149 label var _ss1_quote_to_paragraph       "(no stopwords) string similarity score 1 f
  > or quote to paragraph"

150
151 rename _partialscore_sentence           _ss1_quote_to_sentence

152 label var _ss1_quote_to_sentence        "(no stopwords) string similarity score 1 f
  > or quote to sentence"

153
154 *--- String similarity 2 (tokensetscore) ------------------------------
155 rename tokensetscore_quote_to_sentence   ss2_quote_to_sentence

156 label var ss2_quote_to_sentence         "String similarity score 2 for quote to sen
  > tence"

157
158 rename tokensetscore_quote_to_paragraph  ss2_quote_to_paragraph

159 label var ss2_quote_to_paragraph        "String similarity score 2 for quote to par
  > agraph"

160
161 rename tokensetscore_quote_to_fullspeec  ss2_quote_to_speech

162 label var ss2_quote_to_speech           "String similarity score 2 for quote to spe
  > ech"
```

```
163
164 rename tokensetscore_quote_to_sentence_  _ss2_quote_to_sentence

165 label var _ss2_quote_to_sentence        "(no stopwords) string similarity score 2 f
  > or quote to sentence"

166
167 rename _0tokensetscore_quote_to_paragra  _ss2_quote_to_paragraph

168 label var _ss2_quote_to_paragraph        "(no stopwords) string similarity score 2 f
  > or quote to paragraph"

169
170 rename _1tokensetscore_quote_to_fullspe  _ss2_quote_to_speech

171 label var _ss2_quote_to_speech           "(no stopwords) string similarity score 2 f
  > or quote to speech"

172
173 *--- Semantic matching scores ----------------------------------------
174 replace ce_max_quote2speech = 100 * ce_max_quote2speech
  (14903 real changes made)

175 label var be_max_quote2speech "Best embedding-based biencoder score for quote to spe
  > ech"

176 label var ce_max_quote2speech "Cross-encoder semantic score for quote to speech (0-1
  > 00)"

177
178 *=======================================================================
179 * CONSTITUENCY AND ELECTORAL VARIABLES
180 *=======================================================================
181 rename num group_size

182 label var group_size             "Politician size of constituency (1 to 6)"

183
184 label var voters                 "Electoral size of constituency for current parliam
  > ent"

185 label var valid_votes            "Number of valid votes in constituency"

186 label var winners_majority       "Number of votes for winning party/candidate"

187 label var vote                   "Number of votes for current parliament"

188 label var vote_share             "Percentage of votes for current parliament"

189 label var winners_majority_share "Winners' majority share (percent of valid votes)"

190 label var swing                  "Electoral swing in ruling party vote share (percen
  > tage points)"

191
192 *=======================================================================
193 * PARLIAMENT, YEAR, ELECTION TIMING, WEEKDAY
194 *=======================================================================
195 *--- Parliament life: dummies + factor --------------------------------
196 label var parl10 "=1 if speech occurred in 10th Parliament"
```

```
197 label var parl11 "=1 if speech occurred in 11th Parliament"

198 label var parl12 "=1 if speech occurred in 12th Parliament"

199 label var parl13 "=1 if speech occurred in 13th Parliament"

200
201 label define parl_label 0 "10th parliament" 1 "11th parliament" 2 "12th parliament"
  > 3 "13th parliament"

202 encode parl, gen(parliament) label(parl_label)

203 drop parl

204 rename parliament parl

205 fvset base 0 parl

206 label var parl "Parliament life (categorical)"

207
208 *========================================================================
209 * ELECTION TIMING INDICATORS
210 *========================================================================
211 *--- General elections ---------------------------------------------------
212 label var ge2006      "=1 if article published in year of General Election 2006"

213 label var ge2011      "=1 if article published in year of General Election 2011"

214 label var ge2015      "=1 if article published in year of General Election 2015"

215
216 label var ge2006_1mth  "=1 if article within 1 month of General Election 2006"

217 label var ge2006_3mths "=1 if article within 3 months of General Election 2006"

218 label var ge2006_6mths "=1 if article within 6 months of General Election 2006"

219
220 label var ge2011_1mth  "=1 if article within 1 month of General Election 2011"

221 label var ge2011_3mths "=1 if article within 3 months of General Election 2011"

222 label var ge2011_6mths "=1 if article within 6 months of General Election 2011"

223
224 label var ge2015_1mth  "=1 if article within 1 month of General Election 2015"

225 label var ge2015_3mths "=1 if article within 3 months of General Election 2015"

226 label var ge2015_6mths "=1 if article within 6 months of General Election 2015"

227
228 *--- By-elections --------------------------------------------------------
229 label var be2012      "=1 if article published in year of By-election 2012"

230 label var be2013      "=1 if article published in year of By-election 2013"

231 label var be2016      "=1 if article published in year of By-election 2016"
```

```
232
233 label var be2012_1mth  "=1 if article within 1 month of By-election 2012"

234 label var be2012_3mths "=1 if article within 3 months of By-election 2012"

235 label var be2013_1mth  "=1 if article within 1 month of By-election 2013"

236 label var be2013_3mths "=1 if article within 3 months of By-election 2013"

237 label var be2016_1mth  "=1 if article within 1 month of By-election 2016"

238 label var be2016_3mths "=1 if article within 3 months of By-election 2016"

239
240 *--- Presidential elections --------------------------------------------
241 label var pe2005       "=1 if article published in year of Presidential Election 200
  > 5"

242 label var pe2011       "=1 if article published in year of Presidential Election 201
  > 1"

243
244 label var pe2005_1mth  "=1 if article within 1 month of Presidential Election 2005"

245 label var pe2005_3mths "=1 if article within 3 months of Presidential Election 2005"

246 label var pe2005_6mths "=1 if article within 6 months of Presidential Election 2005"

247
248 label var pe2011_1mth  "=1 if article within 1 month of Presidential Election 2011"

249 label var pe2011_3mths "=1 if article within 3 months of Presidential Election 2011"

250 label var pe2011_6mths "=1 if article within 6 months of Presidential Election 2011"

251
252 *======================================================================
253 * ARTICLE-LEVEL VARIABLES: SECTION, AUTHOR, LANGUAGE, BEAT
254 *======================================================================
255 * Encoded section with 'others' as base
256 label define section2_label ///
  >     1 "home" 2 "insight" 3 "money" 4 "news" 5 "opinion" 6 "others" ///
  >     7 "prime news" 8 "review - insight" 9 "singapore" 10 "sports" ///
  >     11 "st" 12 "think" 13 "top of the news" 14 "world"

257 encode section2, gen(sect2) label(section2_label)

258 drop section2

259 rename sect2 section2

260 fvset base 6 section2

261 label var section2 "Section of article (base: others)"

262
263 * Language / translation flags
264 label var malay        "=1 if quote is in Malay"

265 label var mandarin     "=1 if quote is in Mandarin"
```

```
266 label var tamil        "=1 if quote is in Tamil"

267 label var vernacular    "=1 if quote is in a non-English vernacular language"

268 label var translations "=1 if quote translated from vernacular to English"

269
270 * Author and beat
271 rename author_cleaned2 authorID

272 label var authorID "Author ID"

273
274 encode beat, gen(beat2)

275 drop beat

276 rename beat2 beat

277 label var beat "Beat assignment of reporter"

278
279 *--- Weekday of publication -------------------------------------------
280 label define weekday_label ///
  >     1 "monday" 2 "tuesday" 3 "wednesday" 4 "thursday" 5 "friday" 6 "saturday" 7 "sun
  > day"

281 encode weekday, gen(dayofweek) label(weekday_label)

282 drop weekday

283 rename dayofweek weekday

284 fvset base 1 weekday

285 label var weekday "Day of week of article publication"

286
287 *======================================================================
288 * TEXT LENGTH
289 *======================================================================
290 * Word counts
291 rename wordcount_quote      quote

292 label var quote            "Word count of quote"

293
294 rename wordcount_paragraph  paragraph

295 label var paragraph        "Word count of paragraph"

296
297 rename wordcount_fullspeech speech

298 label var speech           "Word count of full speech"

299
300 rename wordcount            article

301 label var article          "Article length (words)"
```

```
302
303 * Character counts
304 rename char_count_quote      quote_char

305 label var quote_char         "Character count of quote"

306
307 rename char_count_paragraph paragraph_char

308 label var paragraph_char     "Character count of paragraph"

309
310 rename char_count_fullspeech speech_char

311 label var speech_char        "Character count of speech"

312
313 rename article_len_char      article_char

314 label var article_char       "Article length (characters)"

315
316 * Log transformations
317 #delimit ;
  delimiter now ;
318 global log_variables "
  >     quote
  >     quote_char
  >     paragraph
  >     paragraph_char
  >     speech
  >     speech_char
  >     article
  >     article_char
  > ";

319 #delimit cr
  delimiter now cr
320
321 foreach var in $log_variables {
    2.      gen ln_`var' = ln(`var')
    3.      label var ln_`var' "ln of `var'"
    4. }
  (2 missing values generated)
  (2 missing values generated)

322
323 *=======================================================================
324 * TOPIC DISTRIBUTIONS
325 *=======================================================================
326
327 * 50-topic models: quote, speech, article
328 forvalues i = 1/50 {
    2.      label var quote_50K_`i'   "Probability for topic `i'/50 for quote"
    3.      label var speech_50K_`i'  "Probability for topic `i'/50 for speech"
    4.      label var article_50K_`i' "Probability for topic `i'/50 for article"
    5. }

329
330 * 92-topic models: quote, speech, sentence
```

```
331 forvalues i = 1/92 {
    2.      label var quote_92K_`i'    "Probability for topic `i'/92 for quote"
    3.      label var speech_92K_`i'   "Probability for topic `i'/92 for speech"
    4.      label var sentence_92K_`i' "Probability for topic `i'/92 for sentence"
    5. }

332
333 * 100-topic models: quote, speech
334 forvalues i = 1/100 {
    2.      label var quote_100K_`i'   "Probability for topic `i'/100 for quote"
    3.      label var speech_100K_`i'  "Probability for topic `i'/100 for speech"
    4. }

335
336 * Article-level topic models (30 and 40 topics)
337 forvalues i = 1/30 {
    2.      label var article_30K_`i' "Probability for topic `i'/30 for article"
    3. }

338
339 forvalues i = 1/40 {
    2.      label var article_40K_`i' "Probability for topic `i'/40 for article"
    3. }

340
341 *=======================================================================
342 * LEXICAL RICHNESS
343 *=======================================================================
344 label var ttr    "Type-token ratio"

345 label var rttr   "Root type-token ratio"

346 label var cttr   "Corrected type-token ratio"

347 label var herdan "Herdan's C lexical diversity"

348 label var summer "Summer lexical diversity index"

349 label var dugast "Dugast lexical diversity index"

350 label var maas   "Maas lexical diversity index"

351 label var msttr  "Mean segmental type-token ratio"

352 label var mattr  "Moving-average type-token ratio"

353 label var mtld   "Measure of textual lexical diversity"

354 label var hdd    "Hypergeometric distribution diversity"

355
356 *=======================================================================
357 * READABILITY
358 *=======================================================================
359 label var dalechall     "Dale-Chall readability index"

360 label var flesch        "Flesch reading easse score"

361 label var fleschkincaid "Flesch-Kincaid grade level"
```

```
362 label var gunningfog      "Gunning-Fog readability index"

363 label var smog            "SMOG readability index"

364 label var notdalechall    "Share of difficult words (not in Dale-Chall list)"

365 label var polysyllable    "Number of polysyllabic words (more than 3 syllables)"

366 label var syllables       "Total number of syllables"

367 label var sentences       "Total number of sentences"

368
369 *========================================================================
370 * SUBJECTIVITY, OBJECTIVITY, POLARITY
371 *========================================================================
372 * Subjectivity (0 = objective, 1 = subjective)
373 gen speech_objectivity        = 1 - speech_subjectivity

374 label var speech_subjectivity "Speech subjectivity (0 objective - 1 subjective)"

375
376 gen para_objectivity          = 1 - para_subjectivity
   (2 missing values generated)

377 label var para_subjectivity    "Paragraph subjectivity (0-1)"

378
379 gen sentence_objectivity      = 1 - sentence_subjectivity
   (2 missing values generated)

380 label var sentence_subjectivity "Sentence subjectivity (0-1)"

381
382 gen quote_objectivity         = 1 - quote_subjectivity

383 label var quote_subjectivity    "Quote subjectivity (0-1)"

384
385 gen quote_sentence_objectivity = 1 - quote_sentence_subjectivity
   (1 missing value generated)

386 label var quote_sentence_subjectivity "Quote sentence subjectivity (0-1)"

387
388 label var speech_objectivity          "Speech objectivity (0 objective - 1 subjective
   > )"

389 label var para_objectivity            "Paragraph objectivity (0-1)"

390 label var sentence_objectivity        "Sentence objectivity (0-1)"

391 label var quote_objectivity           "Quote objectivity (0-1)"

392 label var quote_sentence_objectivity "Quote sentence objectivity (0-1)"

393
394 * Polarity (-1 = negative, +1 = positive)
395 label var speech_polarity           "Speech polarity (-1 negative to +1 positive), Pat
   > ternAnalyzer"
```

```
396 label var para_polarity              "Paragraph polarity (-1 to +1), PatternAnalyzer"

397 label var sentence_polarity          "Sentence polarity (-1 to +1), PatternAnalyzer"

398 label var quote_polarity             "Quote polarity (-1 to +1), PatternAnalyzer"

399 label var quote_sentence_polarity "Quote sentence polarity (-1 to +1), PatternAnalyz
  > er"

400
  end of do-file

401
402 global TABSAVEDIR ../results/tables

403 global FIGSAVEDIR ../results/figures

404 global graphformats png pdf eps tif

405
406
407 *==============================================================================
408 * Global macros
409 *==============================================================================
410 #delimit;
  delimiter now ;
411 global time
  >          i.parl
  >          i.year
  > ;

412 global ind
  >      i.gender
  >      i.race
  >      c.age
  >      c.age2
  >      c.tenure
  >      c.tenure2
  > ;

413    global article
  >      i.weekday
  >      i.section2
  >      translations
  > ;

414    global portfolio
  >      MFA
  >      PMO
  >      MEWR
  >      MCI
  >      MTI
  >      MHA
  >      MCCY
  >      MinLaw
  >      MOH
  >      MOM
  >      MinDef
  >      MSF
  >      MOT
  >      MND
  >      MOF
  >      MOE
  >      speaker
  > ;
```

```
415       global electoral
   >        c.group_size
   >        c.voters
   >        c.vote_share
   >        c.winners_majority_share
   > ;

416       global topics
   >        speech_92K*
   >        quote_92K*
   >        article_40K*
   > ;

417       global objectivity
   >        speech_objectivity
   >        para_objectivity
   >        sentence_objectivity
   >        quote_objectivity
   >        quote_sentence_objectivity
   > ;

418       global polarity
   >        speech_polarity
   >        para_polarity
   >        sentence_polarity
   >        quote_polarity
   >        quote_sentence_polarity
   > ;

419       global readability
   >        flesch
   >        fleschkincaid
   >        gunningfog
   >        smog
   >        dalechall
   >        notdalechall
   >        sentences
   >        syllables
   >        polysyllable
   > ;

420       global lexical
   >        ttr
   >        rttr
   >        cttr
   >        herdan
   >        summer
   >        dugast
   >        maas
   >        msttr
   >        mattr
   >        mtld
   >        hdd
   > ;

421       global length_s
   >        quote
   >        speech
   >        article
   > ;
```

```
422 global length_s
  >     ln_quote
  >     ln_speech
  >     ln_article
  > ;

423 assert_macros "portfolio time ind article topics";
  Checking portfolio:
  portfolio contains: MFA     PMO     MEWR    MCI     MTI     MHA     MCCY     MinLaw
  >    MOH     MOM     MinDef   MSF     MOT     MND     MOF     MOE      speaker
  Checking time:
  time contains: i.parl        i.year
  Checking ind:
  ind contains: i.gender    i.race    c.age    c.age2    c.tenure    c.tenure2
  Checking article:
  article contains: i.weekday    i.section2    translations
  Checking topics:
  topics contains: speech_92K*    quote_92K*    article_40K*

424 global min
  >     i.rank
  >     $portfolio
  >     i.rank#($portfolio)
  >     ;

425     global base_controls
  >     $time
  >     $ind
  >     $article
  >     $topics
  >     ;

426     global base_controls_min
  >     $time
  >     $ind
  >     $article
  >     $topics
  >     $min
  >     ;

427 #delimit cr
  delimiter now cr
428
429 *=============================================================================
430 * COEFFICIENT LABELS
431 *=============================================================================
432 #delimit;
  delimiter now ;
433 global coeff_labels
  >        "
  >     1.opposition "Opposition"
  >     1.opposition#c.trend "Opposition $\times$ Year"
  >     trend "Year"
  >         pc1_objectivity "Objectivity of speech and quote"
  >         pc1_polarity "Polarity of speech and quote"
  >         pc1_readability "Grade/readability score of speech transcipt"
  >         pc1_lexical "Lexical richness of speech transcipt"
  >     "
  > ;
```

```
434 #delimit cr
  delimiter now cr
435
  end of do-file

436
437 preserve

438 drop if rank==12  // drop non partisans
  (475 observations deleted)

439
440 cap graph drop byyear byparl

441
442 #delimit;
  delimiter now ;
443 catplot,
  >       over(opposition) over(year)
  >       stack asyvars  percent(year)
  >       blabel(bar, pos(inside) gap(third_tiny) size(3) format(%2.1f) ) intensity(*0
  > .77)
  >       legend(label(1 "Government Party") label(2 "Opposition")) graphregion(color(
  > gs16))
  >       name(byyear)
  > ;

444 savefig, path($FIGSAVEDIR/partyyear-count) format($graphformats) override(width(1200
  > ));
  Graph saved as ../results/figures/partyyear-count.png
  (file ../results/figures/partyyear-count.pdf written in PDF format)
  Graph saved as ../results/figures/partyyear-count.pdf
  Override ption not allowed - ignoring override option
  (file ../results/figures/partyyear-count.eps written in EPS format)
  Graph saved as ../results/figures/partyyear-count.eps
  Graph saved as ../results/figures/partyyear-count.tif

445 catplot,
  >       over(opposition) over(parl)
  >       stack asyvars  percent(parl)
  >       blabel(bar, pos(inside) gap(third_tiny) size(4) format(%2.1f) ) intensity(*0
  > .77)
  >       legend(label(1 "Government Party") label(2 "Opposition")) graphregion(color(
  > gs16))
  >       name(byparl)
  > ;

446 savefig, path($FIGSAVEDIR/partyparl-count) format($graphformats) override(width(1200
  > ));
  Graph saved as ../results/figures/partyparl-count.png
  (file ../results/figures/partyparl-count.pdf written in PDF format)
  Graph saved as ../results/figures/partyparl-count.pdf
  Override ption not allowed - ignoring override option
  (file ../results/figures/partyparl-count.eps written in EPS format)
  Graph saved as ../results/figures/partyparl-count.eps
  Graph saved as ../results/figures/partyparl-count.tif

447 #delimit cr
  delimiter now cr
448 restore

449
450 log close
       name:  <unnamed>
        log:  \\wsl.localhost\Debian\home\lsys\neutrality\analysis\logs\figureC2.smcl
   log type:  smcl
  closed on:  2 Dec 2025, 12:14:24
```