> anova(target\_model\_200pre\_200post\_word, model\_target\_sub\_200pre\_200post\_word\_poly)

refitting model(s) with ML (instead of REML)

Data: target\_sub\_200pre\_200post\_word\_poly

Models:

target\_model\_200pre\_200post\_word: Prop ~ language \* DELE.MELICET \* Bins \* Freq\_of\_fixated\_item +

target\_model\_200pre\_200post\_word: (1 + language \* Freq\_of\_fixated\_item | RECORDING\_SESSION\_LABEL)

model\_target\_sub\_200pre\_200post\_word\_poly: Prop ~ language \* DELE.MELICET \* Freq\_of\_fixated\_item \* (ot1 +

model\_target\_sub\_200pre\_200post\_word\_poly: ot3 + ot2) + (1 + language + ot1 + ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Df AIC BIC logLik

target\_model\_200pre\_200post\_word 27 -5712.3 -5537.6 2883.1

model\_target\_sub\_200pre\_200post\_word\_poly 48 -4380.8 -4070.4 2238.4

deviance Chisq Chi Df Pr(>Chisq)

target\_model\_200pre\_200post\_word -5766.3

model\_target\_sub\_200pre\_200post\_word\_poly -4476.8 0 21 1

# REGULAR ANALYSIS, UNSCALED

> summary(target\_model\_200pre\_200post\_word)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop ~ language \* DELE.MELICET \* Bins \* Freq\_of\_fixated\_item +

(1 + language \* Freq\_of\_fixated\_item | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_poly

REML criterion at convergence: -5641.8

Scaled residuals:

Min 1Q Median 3Q Max

-3.6061 -0.6837 -0.0614 0.6537 3.5147

Random effects:

Groups Name Variance Std.Dev.

RECORDING\_SESSION\_LABEL (Intercept) 0.00964 0.09819

languageS 0.01688 0.12993

Freq\_of\_fixated\_itemL 0.02176 0.14750

languageS:Freq\_of\_fixated\_itemL 0.04874 0.22076

Residual 0.01611 0.12694

Corr

-0.40

-0.55 0.59

0.30 -0.92 -0.62

Number of obs: 4757, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error

(Intercept) 0.239046 0.132050

languageS 0.031992 0.182484

DELE.MELICET 0.184020 0.180205

Bins 0.005432 0.002649

Freq\_of\_fixated\_itemL 0.313234 0.190492

languageS:DELE.MELICET -0.220685 0.249657

languageS:Bins -0.003039 0.003729

DELE.MELICET:Bins -0.008944 0.003615

languageS:Freq\_of\_fixated\_itemL -0.550785 0.275960

DELE.MELICET:Freq\_of\_fixated\_itemL -0.624091 0.260612

Bins:Freq\_of\_fixated\_itemL -0.006510 0.003726

languageS:DELE.MELICET:Bins 0.010062 0.005108

languageS:DELE.MELICET:Freq\_of\_fixated\_itemL 0.983082 0.377504

languageS:Bins:Freq\_of\_fixated\_itemL 0.016313 0.005273

DELE.MELICET:Bins:Freq\_of\_fixated\_itemL 0.015111 0.005107

languageS:DELE.MELICET:Bins:Freq\_of\_fixated\_itemL -0.031066 0.007223

t value

(Intercept) 1.810

languageS 0.175

DELE.MELICET 1.021

Bins 2.050

Freq\_of\_fixated\_itemL 1.644

languageS:DELE.MELICET -0.884

languageS:Bins -0.815

DELE.MELICET:Bins -2.474

**languageS:Freq\_of\_fixated\_itemL -1.996**

**DELE.MELICET:Freq\_of\_fixated\_itemL -2.395**

Bins:Freq\_of\_fixated\_itemL -1.747

languageS:DELE.MELICET:Bins 1.970

languageS:DELE.MELICET:Freq\_of\_fixated\_itemL 2.604

languageS:Bins:Freq\_of\_fixated\_itemL 3.093

DELE.MELICET:Bins:Freq\_of\_fixated\_itemL 2.959

languageS:DELE.MELICET:Bins:Freq\_of\_fixated\_itemL -4.301

Correlation matrix not shown by default, as p = 16 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

# GROWTH-CURVE ANALYSIS OT1, OT2, OT3

> summary(model\_target\_sub\_200pre\_200post\_word\_poly)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop ~ language \* DELE.MELICET \* Freq\_of\_fixated\_item \* (ot1 +

ot3 + ot2) + (1 + language + Freq\_of\_fixated\_item + ot1 +

ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_poly

REML criterion at convergence: -4998.6

Scaled residuals:

Min 1Q Median 3Q Max

-3.0997 -0.6905 -0.0677 0.6248 3.8854

Random effects:

Groups Name Variance Std.Dev. Corr

RECORDING\_SESSION\_LABEL (Intercept) 0.0090612 0.09519

languageS 0.0024418 0.04941 -0.25

Freq\_of\_fixated\_itemL 0.0135106 0.11624 -0.47

ot1 0.0059183 0.07693 -0.16

ot2 0.0004716 0.02172 -1.00

ot3 0.0007525 0.02743 -0.24

Residual 0.0187232 0.13683

0.04

0.24 -0.09

0.24 0.50 0.07

-0.27 0.06 -0.87 0.33

Number of obs: 4757, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error

(Intercept) 0.467097 0.077611

languageS -0.103914 0.046229

DELE.MELICET -0.187177 0.105879

Freq\_of\_fixated\_itemL 0.043465 0.095537

ot1 0.175574 0.100077

ot3 0.049484 0.081866

ot2 -0.005165 0.081041

languageS:DELE.MELICET 0.199573 0.063143

languageS:Freq\_of\_fixated\_itemL 0.115739 0.034401

DELE.MELICET:Freq\_of\_fixated\_itemL -0.007557 0.130371

languageS:ot1 -0.117153 0.111518

languageS:ot3 0.023391 0.111332

languageS:ot2 0.046764 0.111532

DELE.MELICET:ot1 -0.281749 0.136575

DELE.MELICET:ot3 -0.026840 0.111706

DELE.MELICET:ot2 -0.005263 0.110529

Freq\_of\_fixated\_itemL:ot1 -0.198677 0.111483

Freq\_of\_fixated\_itemL:ot3 -0.057467 0.111344

Freq\_of\_fixated\_itemL:ot2 -0.074478 0.111440

languageS:DELE.MELICET:Freq\_of\_fixated\_itemL -0.281122 0.047113

languageS:DELE.MELICET:ot1 0.322260 0.152781

languageS:DELE.MELICET:ot3 -0.044884 0.152436

languageS:DELE.MELICET:ot2 -0.054579 0.152705

languageS:Freq\_of\_fixated\_itemL:ot1 0.464988 0.157753

languageS:Freq\_of\_fixated\_itemL:ot3 -0.126285 0.157302

languageS:Freq\_of\_fixated\_itemL:ot2 0.051467 0.157394

DELE.MELICET:Freq\_of\_fixated\_itemL:ot1 0.443149 0.152807

DELE.MELICET:Freq\_of\_fixated\_itemL:ot3 -0.019637 0.152499

DELE.MELICET:Freq\_of\_fixated\_itemL:ot2 0.145415 0.152549

languageS:DELE.MELICET:Freq\_of\_fixated\_itemL:ot1 -0.869357 0.216114

languageS:DELE.MELICET:Freq\_of\_fixated\_itemL:ot3 0.210924 0.215426

languageS:DELE.MELICET:Freq\_of\_fixated\_itemL:ot2 -0.110601 0.215472

t value

(Intercept) 6.018

languageS -2.248

DELE.MELICET -1.768

Freq\_of\_fixated\_itemL 0.455

ot1 1.754

ot3 0.604

ot2 -0.064

languageS:DELE.MELICET 3.161

**languageS:Freq\_of\_fixated\_itemL 3.364**

DELE.MELICET:Freq\_of\_fixated\_itemL -0.058

languageS:ot1 -1.051

languageS:ot3 0.210

languageS:ot2 0.419

**DELE.MELICET:ot1 -2.063**

DELE.MELICET:ot3 -0.240

DELE.MELICET:ot2 -0.048

Freq\_of\_fixated\_itemL:ot1 -1.782

Freq\_of\_fixated\_itemL:ot3 -0.516

Freq\_of\_fixated\_itemL:ot2 -0.668

**languageS:DELE.MELICET:Freq\_of\_fixated\_itemL -5.967**

languageS:DELE.MELICET:ot1 2.109

languageS:DELE.MELICET:ot3 -0.294

languageS:DELE.MELICET:ot2 -0.357

**languageS:Freq\_of\_fixated\_itemL:ot1 2.948**

languageS:Freq\_of\_fixated\_itemL:ot3 -0.803

languageS:Freq\_of\_fixated\_itemL:ot2 0.327

**DELE.MELICET:Freq\_of\_fixated\_itemL:ot1 2.900**

DELE.MELICET:Freq\_of\_fixated\_itemL:ot3 -0.129

DELE.MELICET:Freq\_of\_fixated\_itemL:ot2 0.953

**languageS:DELE.MELICET:Freq\_of\_fixated\_itemL:ot1 -4.023!!!**

languageS:DELE.MELICET:Freq\_of\_fixated\_itemL:ot3 0.979

languageS:DELE.MELICET:Freq\_of\_fixated\_itemL:ot2 -0.513

# REGULAR ANALYSIS, SCALED

> summary(model\_target\_sub\_200pre\_200post\_word\_cs)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \*

Bins + (1 + language \* Freq\_of\_fixated\_item | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_poly\_centered

REML criterion at convergence: 11032.7

Scaled residuals:

Min 1Q Median 3Q Max

-3.6061 -0.6837 -0.0614 0.6537 3.5147

Random effects:

Groups Name Variance Std.Dev. Corr

RECORDING\_SESSION\_LABEL (Intercept) 0.3228 0.5682

languageS 0.5653 0.7518 -0.40

Freq\_of\_fixated\_itemL 0.7285 0.8535 -0.55

languageS:Freq\_of\_fixated\_itemL 1.6319 1.2775 0.30

Residual 0.5395 0.7345

0.59

-0.92 -0.62

Number of obs: 4757, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error t value

(Intercept) 0.080691 0.176114 0.458

**languageS -0.722610 0.244030 -2.961**

DELE.MELICET\_cs 0.180331 0.176592 1.021

Freq\_of\_fixated\_itemL -0.754486 0.253966 -2.971

Bins -0.005359 0.003519 -1.523

languageS:DELE.MELICET\_cs -0.216261 0.244653 -0.884

**languageS:Freq\_of\_fixated\_itemL 0.856502 0.369291 2.319**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.611580 0.255388 -2.395

languageS:Bins 0.023804 0.004984 4.776

DELE.MELICET\_cs:Bins -0.008765 0.003542 -2.474

**Freq\_of\_fixated\_itemL:Bins 0.024485 0.004960 4.937**

**languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.963375 0.369937 2.604**

languageS:DELE.MELICET\_cs:Bins 0.009861 0.005005 1.970

**languageS:Freq\_of\_fixated\_itemL:Bins -0.033386 0.007067 -4.724**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:Bins 0.014808 0.005004 2.959

**languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:Bins -0.030444 0.007078 -4.301**

Correlation matrix not shown by default, as p = 16 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

# GROWTH CURVE AND REGULAR SCALED MODEL COMPARISON

> anova(model\_target\_sub\_200pre\_200post\_word\_poly, model\_target\_sub\_200pre\_200post\_word\_cs)

refitting model(s) with ML (instead of REML)

Data: target\_sub\_200pre\_200post\_word\_poly\_centered

Models:

model\_target\_sub\_200pre\_200post\_word\_cs: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \*

model\_target\_sub\_200pre\_200post\_word\_cs: Bins + (1 + language \* Freq\_of\_fixated\_item | RECORDING\_SESSION\_LABEL)

model\_target\_sub\_200pre\_200post\_word\_poly: Prop ~ language \* DELE.MELICET \* Freq\_of\_fixated\_item \* (ot1 +

model\_target\_sub\_200pre\_200post\_word\_poly: ot3 + ot2) + (1 + language + Freq\_of\_fixated\_item + ot1 +

model\_target\_sub\_200pre\_200post\_word\_poly: ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Df AIC BIC logLik

model\_target\_sub\_200pre\_200post\_word\_cs 27 10990 11164.6 -5468.0

model\_target\_sub\_200pre\_200post\_word\_poly 54 -5035 -4685.7 2571.5

deviance Chisq Chi Df Pr(>Chisq)

model\_target\_sub\_200pre\_200post\_word\_cs 10936

model\_target\_sub\_200pre\_200post\_word\_poly -5143 16079 27 < 2.2e-16

model\_target\_sub\_200pre\_200post\_word\_cs

model\_target\_sub\_200pre\_200post\_word\_poly \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

# Regular analysis, Prop Scaled, Bins scaled too

> summary(model\_target\_sub\_200pre\_200post\_word\_cs\_bins\_cs)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \*

Bins\_cs + (1 + language \* Freq\_of\_fixated\_item | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_poly\_centered

REML criterion at convergence: 11003.9

Scaled residuals:

Min 1Q Median 3Q Max

-3.6061 -0.6837 -0.0614 0.6537 3.5147

Random effects:

Groups Name Variance Std.Dev.

RECORDING\_SESSION\_LABEL (Intercept) 0.3228 0.5682

languageS 0.5653 0.7518

Freq\_of\_fixated\_itemL 0.7285 0.8535

languageS:Freq\_of\_fixated\_itemL 1.6319 1.2775

Residual 0.5395 0.7345

Corr

-0.40

-0.55 0.59

0.30 -0.92 -0.62

Number of obs: 4757, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate

(Intercept) -0.13361

**languageS 0.22934**

DELE.MELICET\_cs -0.17019

Freq\_of\_fixated\_itemL 0.22469

Bins\_cs -0.03241

languageS:DELE.MELICET\_cs 0.17808

languageS:Freq\_of\_fixated\_itemL -0.47867

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.01938

languageS:Bins\_cs 0.14397

DELE.MELICET\_cs:Bins\_cs -0.05301

Freq\_of\_fixated\_itemL:Bins\_cs 0.14809

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.25412

languageS:DELE.MELICET\_cs:Bins\_cs 0.05964

languageS:Freq\_of\_fixated\_itemL:Bins\_cs -0.20193

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:Bins\_cs 0.08956

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:Bins\_cs -0.18413

Std. Error t value

(Intercept) 0.10594 -1.261

**languageS 0.14062 1.631**

DELE.MELICET\_cs 0.10652 -1.598

Freq\_of\_fixated\_itemL 0.15876 1.415

Bins\_cs 0.02128 -1.523

languageS:DELE.MELICET\_cs 0.14137 1.260

**languageS:Freq\_of\_fixated\_itemL 0.23736 -2.017**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.15964 -0.121

**languageS:Bins\_cs 0.03015 4.776**

DELE.MELICET\_cs:Bins\_cs 0.02143 -2.474

Freq\_of\_fixated\_itemL:Bins\_cs 0.03000 4.937

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.23849 -1.066

languageS:DELE.MELICET\_cs:Bins\_cs 0.03027 1.970

**languageS:Freq\_of\_fixated\_itemL:Bins\_cs 0.04274 -4.724**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:Bins\_cs 0.03027 2.959

**languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:Bins\_cs 0.04281 -4.301**

Correlation matrix not shown by default, as p = 16 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

# Regular analysis, Prop unscaled, Bins Scaled

> summary(model\_target\_sub\_200pre\_200post\_word\_cs\_bins\_cs\_prop\_nonCs)

Linear mixed model fit by REML ['lmerMod']

Formula:

Prop ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \* Bins\_cs +

(1 + language \* Freq\_of\_fixated\_item | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_poly\_centered

REML criterion at convergence: -5642.2

Scaled residuals:

Min 1Q Median 3Q Max

-3.6061 -0.6837 -0.0614 0.6537 3.5147

Random effects:

Groups Name Variance Std.Dev.

RECORDING\_SESSION\_LABEL (Intercept) 0.00964 0.09819

languageS 0.01688 0.12993

Freq\_of\_fixated\_itemL 0.02176 0.14750

languageS:Freq\_of\_fixated\_itemL 0.04874 0.22076

Residual 0.01611 0.12694

Corr

-0.40

-0.55 0.59

0.30 -0.92 -0.62

Number of obs: 4757, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate

(Intercept) 0.332818

languageS 0.039633

DELE.MELICET\_cs -0.029411

Freq\_of\_fixated\_itemL 0.038829

Bins\_cs -0.005601

languageS:DELE.MELICET\_cs 0.030775

languageS:Freq\_of\_fixated\_itemL -0.082720

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.003349

languageS:Bins\_cs 0.024880

DELE.MELICET\_cs:Bins\_cs -0.009161

Freq\_of\_fixated\_itemL:Bins\_cs 0.025591

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.043915

languageS:DELE.MELICET\_cs:Bins\_cs 0.010306

languageS:Freq\_of\_fixated\_itemL:Bins\_cs -0.034895

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:Bins\_cs 0.015477

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:Bins\_cs -0.031820

Std. Error t value

(Intercept) 0.018309 18.178

languageS 0.024301 1.631

DELE.MELICET\_cs 0.018408 -1.598

Freq\_of\_fixated\_itemL 0.027436 1.415

Bins\_cs 0.003678 -1.523

languageS:DELE.MELICET\_cs 0.024431 1.260

**languageS:Freq\_of\_fixated\_itemL 0.041019** **-2.017**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.027587 -0.121

languageS:Bins\_cs 0.005210 4.776

DELE.MELICET\_cs:Bins\_cs 0.003703 -2.474

Freq\_of\_fixated\_itemL:Bins\_cs 0.005184 4.937

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.041215 -1.066

languageS:DELE.MELICET\_cs:Bins\_cs 0.005232 1.970

**languageS:Freq\_of\_fixated\_itemL:Bins\_cs 0.007386** **-4.724**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:Bins\_cs 0.005231 2.959

**languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:Bins\_cs 0.007398** **-4.301**

# Regular analysis, Prop cs, Dom cs, no Bins, 21 bins -.-

|  |
| --- |
| model\_target\_sub\_200pre\_200post\_word\_cs\_noBins <- lmer(Prop\_cs ~ language\*DELE.MELICET\_cs\*Freq\_of\_fixated\_item + (1+language\*Freq\_of\_fixated\_item|RECORDING\_SESSION\_LABEL), target\_sub\_200pre\_200post\_word\_poly\_centered)  > summary(model\_target\_sub\_200pre\_200post\_word\_cs\_noBins)  Linear mixed model fit by REML ['lmerMod']  Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item +  (1 + language \* Freq\_of\_fixated\_item | RECORDING\_SESSION\_LABEL)  Data: target\_sub\_200pre\_200post\_word\_poly\_centered  REML criterion at convergence: 11048.3  Scaled residuals:  Min 1Q Median 3Q Max  -3.3119 -0.6730 -0.0625 0.6808 3.7382  Random effects:  Groups Name Variance Std.Dev.  RECORDING\_SESSION\_LABEL (Intercept) 0.3223 0.5678  languageS 0.5665 0.7526  Freq\_of\_fixated\_itemL 0.7290 0.8538  languageS:Freq\_of\_fixated\_itemL 1.6278 1.2758  Residual 0.5493 0.7411  Corr    -0.40  -0.55 0.59  0.30 -0.92 -0.62    Number of obs: 4757, groups: RECORDING\_SESSION\_LABEL, 30  Fixed effects:  Estimate Std. Error  (Intercept) -0.1341 0.1059  languageS 0.2307 0.1408  DELE.MELICET\_cs -0.1685 0.1065  Freq\_of\_fixated\_itemL 0.2243 0.1589  languageS:DELE.MELICET\_cs 0.1758 0.1416  languageS:Freq\_of\_fixated\_itemL -0.4805 0.2371  DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.0222 0.1597  languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.2507 0.2383  t value  (Intercept) -1.266  languageS 1.638  DELE.MELICET\_cs -1.582  Freq\_of\_fixated\_itemL 1.412  languageS:DELE.MELICET\_cs 1.242  languageS:Freq\_of\_fixated\_itemL -2.026  DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.139  languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -1.052  Correlation of Fixed Effects:  (Intr) langgS DELE.MELICET\_c Fr\_\_\_L lnS:DELE.MELICET\_  languageS -0.417  DELE.MELICET\_c -0.015 0.006  Frq\_f\_fxt\_L -0.556 0.581 0.008  lnS:DELE.MELICET\_ 0.006 -0.014 -0.416 -0.009  lnggS:F\_\_\_L 0.310 -0.913 -0.005 -0.622 0.013  DELE.MELICET\_: 0.008 -0.009 -0.556 -0.014 0.581  lS:DELE.MELICET\_: -0.005 0.013 0.310 0.009 -0.914  lS:F\_\_ DELE.MELICET\_:  languageS  DELE.MELICET\_c  Frq\_f\_fxt\_L  lnS:DELE.MELICET\_  lnggS:F\_\_\_L  DELE.MELICET\_: 0.009  lS:DELE.MELICET\_: -0.014 -0.623 ORTHOGONAL POLYNOMIALS MODEL OT1 OT2 OT3 WITH ALL CONT VARIABLES SCALED AND CENTERED, 21 bins -.- |
|  |
| |  | | --- | | > | |

model\_target\_sub\_200pre\_200post\_word\_poly\_prop\_cs <- lmer(Prop\_cs ~ language\*DELE.MELICET\_cs\*Freq\_of\_fixated\_item\*(ot1 + ot3+ ot2) + (1+language+Freq\_of\_fixated\_item+ot1+ot2+ot3|RECORDING\_SESSION\_LABEL), target\_sub\_200pre\_200post\_word\_poly\_centered)

> summary(model\_target\_sub\_200pre\_200post\_word\_poly\_prop\_cs)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \*

(ot1 + ot3 + ot2) + (1 + language + Freq\_of\_fixated\_item +

ot1 + ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_poly\_centered

REML criterion at convergence: 11648.1

Scaled residuals:

Min 1Q Median 3Q Max

-3.0997 -0.6905 -0.0677 0.6248 3.8854

Random effects:

Groups Name Variance Std.Dev. Corr

RECORDING\_SESSION\_LABEL (Intercept) 0.30341 0.5508

languageS 0.08176 0.2859 -0.25

Freq\_of\_fixated\_itemL 0.45240 0.6726 -0.47

ot1 0.19817 0.4452 -0.16

ot2 0.01579 0.1257 -1.00

ot3 0.02520 0.1587 -0.24

Residual 0.62694 0.7918

0.04

0.24 -0.09

0.24 0.50 0.07

-0.27 0.06 -0.87 0.33

Number of obs: 4757, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error

(Intercept) -0.126501 0.103194

languageS 0.219586 0.061620

DELE.MELICET\_cs -0.183425 0.103757

Freq\_of\_fixated\_itemL 0.220434 0.127054

ot1 -0.142928 0.133075

ot3 0.175941 0.108967

ot2 -0.051536 0.107822

languageS:DELE.MELICET\_cs 0.195573 0.061877

languageS:Freq\_of\_fixated\_itemL -0.486592 0.046347

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.007405 0.127758

languageS:ot1 0.647620 0.149194

languageS:ot3 -0.049262 0.148751

languageS:ot2 0.046106 0.149081

DELE.MELICET\_cs:ot1 -0.276101 0.133837

DELE.MELICET\_cs:ot3 -0.026302 0.109467

DELE.MELICET\_cs:ot2 -0.005157 0.108314

Freq\_of\_fixated\_itemL:ot1 0.673120 0.148362

Freq\_of\_fixated\_itemL:ot3 -0.413308 0.148326

Freq\_of\_fixated\_itemL:ot2 0.167156 0.148476

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.275487 0.046168

languageS:DELE.MELICET\_cs:ot1 0.315800 0.149718

languageS:DELE.MELICET\_cs:ot3 -0.043984 0.149380

languageS:DELE.MELICET\_cs:ot2 -0.053485 0.149644

languageS:Freq\_of\_fixated\_itemL:ot1 -0.885193 0.211542

languageS:Freq\_of\_fixated\_itemL:ot3 0.136827 0.210728

languageS:Freq\_of\_fixated\_itemL:ot2 -0.157111 0.210884

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 0.434265 0.149744

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 -0.019243 0.149442

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.142500 0.149491

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 -0.851930 0.211782

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 0.206696 0.211108

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 -0.108384 0.211153

t value

(Intercept) -1.226

languageS 3.564

DELE.MELICET\_cs -1.768

Freq\_of\_fixated\_itemL 1.735

ot1 -1.074

ot3 1.615

ot2 -0.478

languageS:DELE.MELICET\_cs 3.161

**languageS:Freq\_of\_fixated\_itemL -10.499**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.058

languageS:ot1 4.341

languageS:ot3 -0.331

languageS:ot2 0.309

DELE.MELICET\_cs:ot1 -2.063

DELE.MELICET\_cs:ot3 -0.240

DELE.MELICET\_cs:ot2 -0.048

**Freq\_of\_fixated\_itemL:ot1 4.537**

Freq\_of\_fixated\_itemL:ot3 -2.786

Freq\_of\_fixated\_itemL:ot2 1.126

**languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -5.967**

languageS:DELE.MELICET\_cs:ot1 2.109

languageS:DELE.MELICET\_cs:ot3 -0.294

languageS:DELE.MELICET\_cs:ot2 -0.357

**languageS:Freq\_of\_fixated\_itemL:ot1 -4.184**

languageS:Freq\_of\_fixated\_itemL:ot3 0.649

languageS:Freq\_of\_fixated\_itemL:ot2 -0.745

**DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 2.900**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 -0.129

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.953

**languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 -4.023**

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 0.979

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 -0.513

Correlation matrix not shown by default, as p = 32 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

> print(model\_target\_sub\_200pre\_200post\_word\_poly\_prop\_cs, correlation=TRUE)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \*

(ot1 + ot3 + ot2) + (1 + language + Freq\_of\_fixated\_item +

ot1 + ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_poly\_centered

REML criterion at convergence: 11648.09

Random effects:

Groups Name Std.Dev. Corr

RECORDING\_SESSION\_LABEL (Intercept) 0.5508

languageS 0.2859 -0.25

Freq\_of\_fixated\_itemL 0.6726 -0.47 0.04

ot1 0.4452 -0.16 0.24 -0.09

ot2 0.1257 -1.00 0.24 0.50

ot3 0.1587 -0.24 -0.27 0.06

Residual 0.7918

0.07

-0.87 0.33

Number of obs: 4757, groups: RECORDING\_SESSION\_LABEL, 30

Fixed Effects:

(Intercept)

-0.126501

languageS

0.219586

DELE.MELICET\_cs

-0.183425

Freq\_of\_fixated\_itemL

0.220434

ot1

-0.142928

ot3

0.175941

ot2

-0.051536

languageS:DELE.MELICET\_cs

0.195573

languageS:Freq\_of\_fixated\_itemL

-0.486592

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL

-0.007405

**languageS:ot1**

**0.647620**

languageS:ot3

-0.049262

languageS:ot2

0.046106

DELE.MELICET\_cs:ot1

-0.276101

DELE.MELICET\_cs:ot3

-0.026302

DELE.MELICET\_cs:ot2

-0.005157

**Freq\_of\_fixated\_itemL:ot1**

**0.673120**

Freq\_of\_fixated\_itemL:ot3

-0.413308

Freq\_of\_fixated\_itemL:ot2

0.167156

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL

-0.275487

languageS:DELE.MELICET\_cs:ot1

0.315800

languageS:DELE.MELICET\_cs:ot3

-0.043984

languageS:DELE.MELICET\_cs:ot2

-0.053485

**languageS:Freq\_of\_fixated\_itemL:ot1**

**-0.885193**

languageS:Freq\_of\_fixated\_itemL:ot3

0.136827

languageS:Freq\_of\_fixated\_itemL:ot2

-0.157111

**DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1**

**0.434265**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3

-0.019243

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2

0.142500

**languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1**

**-0.851930**

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3

0.206696

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2

-0.108384

# Basic model No poly no item Just Target 1 Looks 21 bins -.-

> summary(model\_target\_sub\_200pre\_200post\_word\_poly\_centered\_1only\_noBins)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item +

(1 + language \* Freq\_of\_fixated\_item | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_poly\_centered\_1only

REML criterion at convergence: 4004.5

Scaled residuals:

Min 1Q Median 3Q Max

-3.7358 -0.5151 -0.0187 0.5591 3.7121

Random effects:

Groups Name Variance Std.Dev.

RECORDING\_SESSION\_LABEL (Intercept) 0.5992 0.7741

languageS 0.6362 0.7976

Freq\_of\_fixated\_itemL 0.8635 0.9292

languageS:Freq\_of\_fixated\_itemL 1.3867 1.1776

Residual 0.2724 0.5219

Corr

-0.55

-0.42 0.38

0.21 -0.60 -0.60

Number of obs: 2316, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error

(Intercept) -0.12841 0.14483

languageS 0.01292 0.15257

DELE.MELICET\_cs -0.02426 0.14424

Freq\_of\_fixated\_itemL 0.26380 0.17387

languageS:DELE.MELICET\_cs -0.03717 0.15073

languageS:Freq\_of\_fixated\_itemL -0.47987 0.22354

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.03936 0.17367

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.25700 0.22126

t value

(Intercept) -0.887

languageS 0.085

DELE.MELICET\_cs -0.168

Freq\_of\_fixated\_itemL 1.517

languageS:DELE.MELICET\_cs -0.247

**languageS:Freq\_of\_fixated\_itemL -2.147**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.227

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -1.162

Correlation of Fixed Effects:

(Intr) langgS DELE.MELICET\_c Fr\_\_\_L lnS:DELE.MELICET\_

languageS -0.554

DELE.MELICET\_c -0.006 0.000

Frq\_f\_fxt\_L -0.441 0.391 -0.001

lnS:DELE.MELICET\_ 0.000 0.007 -0.551 0.001

lnggS:F\_\_\_L 0.225 -0.612 0.002 -0.599 -0.006

DELE.MELICET\_: -0.001 0.001 -0.432 -0.009 0.385

lS:DELE.MELICET\_: 0.002 -0.006 0.218 0.004 -0.609

lS:F\_\_ DELE.MELICET\_:

languageS

DELE.MELICET\_c

Frq\_f\_fxt\_L

lnS:DELE.MELICET\_

lnggS:F\_\_\_L

DELE.MELICET\_: 0.004

lS:DELE.MELICET\_: -0.005 -0.601

# Ortho Poly ot1,2,3 Target looks only, 21 bins -.-

> summary(model\_target\_sub\_200pre\_200post\_word\_poly\_centered\_1only)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \*

(ot1 + ot3 + ot2) + (1 + language + Freq\_of\_fixated\_item +

ot1 + ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_poly\_centered\_1only

REML criterion at convergence: 4122.2

Scaled residuals:

Min 1Q Median 3Q Max

-3.3137 -0.6363 -0.0436 0.6308 3.2874

Random effects:

Groups Name Variance Std.Dev. Corr

RECORDING\_SESSION\_LABEL (Intercept) 0.58681 0.7660

languageS 0.44107 0.6641 -0.55

Freq\_of\_fixated\_itemL 0.55318 0.7438 -0.34

ot1 0.94879 0.9741 0.00

ot2 0.13039 0.3611 -0.36

ot3 0.07043 0.2654 -0.41

Residual 0.27888 0.5281

-0.02

0.06 -0.01

-0.09 -0.02 0.10

0.36 -0.30 -0.31 0.23

Number of obs: 2316, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error

(Intercept) -0.12459 0.14210

languageS 0.03158 0.12619

DELE.MELICET\_cs -0.06897 0.14262

Freq\_of\_fixated\_itemL 0.26312 0.13975

ot1 -0.26220 0.20574

ot3 0.29654 0.11226

ot2 0.05380 0.12173

languageS:DELE.MELICET\_cs 0.05365 0.12643

languageS:Freq\_of\_fixated\_itemL -0.50060 0.04657

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.08637 0.14023

languageS:ot1 0.98634 0.14732

languageS:ot3 -0.23338 0.14435

languageS:ot2 0.23288 0.14576

DELE.MELICET\_cs:ot1 -0.31795 0.20764

DELE.MELICET\_cs:ot3 -0.13440 0.11319

DELE.MELICET\_cs:ot2 -0.10815 0.12277

Freq\_of\_fixated\_itemL:ot1 0.52198 0.14198

Freq\_of\_fixated\_itemL:ot3 -0.34315 0.14062

Freq\_of\_fixated\_itemL:ot2 0.02270 0.14153

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.35491 0.04519

languageS:DELE.MELICET\_cs:ot1 0.47710 0.14869

languageS:DELE.MELICET\_cs:ot3 0.10542 0.14474

languageS:DELE.MELICET\_cs:ot2 0.24562 0.14607

languageS:Freq\_of\_fixated\_itemL:ot1 -0.72446 0.20660

languageS:Freq\_of\_fixated\_itemL:ot3 0.10982 0.20240

languageS:Freq\_of\_fixated\_itemL:ot2 -0.12847 0.20409

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 0.46834 0.14417

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 0.07907 0.14174

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.04236 0.14280

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 -0.94489 0.20528

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 0.03416 0.20152

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 -0.01268 0.20313

t value

(Intercept) -0.877

languageS 0.250

DELE.MELICET\_cs -0.484

Freq\_of\_fixated\_itemL 1.883

ot1 -1.274

ot3 2.642

ot2 0.442

languageS:DELE.MELICET\_cs 0.424

languageS:Freq\_of\_fixated\_itemL -10.749

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.616

languageS:ot1 6.695

languageS:ot3 -1.617

languageS:ot2 1.598

DELE.MELICET\_cs:ot1 -1.531

DELE.MELICET\_cs:ot3 -1.187

DELE.MELICET\_cs:ot2 -0.881

Freq\_of\_fixated\_itemL:ot1 3.677

Freq\_of\_fixated\_itemL:ot3 -2.440

Freq\_of\_fixated\_itemL:ot2 0.160

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -7.854

languageS:DELE.MELICET\_cs:ot1 3.209

languageS:DELE.MELICET\_cs:ot3 0.728

languageS:DELE.MELICET\_cs:ot2 1.682

languageS:Freq\_of\_fixated\_itemL:ot1 -3.507

languageS:Freq\_of\_fixated\_itemL:ot3 0.543

languageS:Freq\_of\_fixated\_itemL:ot2 -0.629

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 3.249

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 0.558

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.297

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 -4.603

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 0.169

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 -0.062

Correlation matrix not shown by default, as p = 32 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

# ORTHO POLY AS ABOVE no bins as factor, data only 20 BINS

> summary(model\_target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \*

(ot1 + ot3 + ot2) + (1 + language + Freq\_of\_fixated\_item +

ot1 + ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom

REML criterion at convergence: 11102.6

Scaled residuals:

Min 1Q Median 3Q Max

-3.1132 -0.6901 -0.0689 0.6262 3.8713

Random effects:

Groups Name Variance Std.Dev. Corr

RECORDING\_SESSION\_LABEL (Intercept) 0.30410 0.5515

languageS 0.08266 0.2875 -0.26

Freq\_of\_fixated\_itemL 0.45330 0.6733 -0.48

ot1 0.18815 0.4338 -0.17

ot2 0.01653 0.1286 -0.95

ot3 0.02221 0.1490 -0.23

Residual 0.62561 0.7910

0.04

0.25 -0.10

0.10 0.58 -0.12

-0.16 -0.10 -0.82 0.42

Number of obs: 4533, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error

(Intercept) -0.125943 0.103423

languageS 0.227418 0.062265

DELE.MELICET\_cs -0.189092 0.104009

Freq\_of\_fixated\_itemL 0.216350 0.127367

ot1 -0.178156 0.131592

ot3 0.135695 0.108244

ot2 0.006924 0.107644

languageS:DELE.MELICET\_cs 0.202031 0.062543

languageS:Freq\_of\_fixated\_itemL -0.492051 0.047429

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.002603 0.128097

languageS:ot1 0.625090 0.148907

languageS:ot3 -0.025951 0.148497

languageS:ot2 0.017563 0.148792

DELE.MELICET\_cs:ot1 -0.250402 0.132335

DELE.MELICET\_cs:ot3 -0.015188 0.108619

DELE.MELICET\_cs:ot2 -0.015084 0.108090

Freq\_of\_fixated\_itemL:ot1 0.746438 0.147988

Freq\_of\_fixated\_itemL:ot3 -0.301628 0.147870

Freq\_of\_fixated\_itemL:ot2 0.012329 0.148145

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.286649 0.047255

languageS:DELE.MELICET\_cs:ot1 0.288087 0.149266

languageS:DELE.MELICET\_cs:ot3 -0.048459 0.148781

languageS:DELE.MELICET\_cs:ot2 -0.051763 0.149010

languageS:Freq\_of\_fixated\_itemL:ot1 -0.890570 0.211142

languageS:Freq\_of\_fixated\_itemL:ot3 0.073529 0.210322

languageS:Freq\_of\_fixated\_itemL:ot2 -0.075921 0.210567

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 0.429393 0.149404

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 -0.019657 0.148951

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.122560 0.149259

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 -0.820251 0.211261

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 0.226827 0.210481

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 -0.080566 0.210633

t value

(Intercept) -1.218

languageS 3.652

DELE.MELICET\_cs -1.818

Freq\_of\_fixated\_itemL 1.699

ot1 -1.354

ot3 1.254

ot2 0.064

languageS:DELE.MELICET\_cs 3.230

languageS:Freq\_of\_fixated\_itemL -10.374

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.020

languageS:ot1 4.198

languageS:ot3 -0.175

languageS:ot2 0.118

DELE.MELICET\_cs:ot1 -1.892

DELE.MELICET\_cs:ot3 -0.140

DELE.MELICET\_cs:ot2 -0.140

Freq\_of\_fixated\_itemL:ot1 5.044

Freq\_of\_fixated\_itemL:ot3 -2.040

Freq\_of\_fixated\_itemL:ot2 0.083

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -6.066

languageS:DELE.MELICET\_cs:ot1 1.930

languageS:DELE.MELICET\_cs:ot3 -0.326

languageS:DELE.MELICET\_cs:ot2 -0.347

languageS:Freq\_of\_fixated\_itemL:ot1 -4.218

languageS:Freq\_of\_fixated\_itemL:ot3 0.350

languageS:Freq\_of\_fixated\_itemL:ot2 -0.361

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 2.874

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 -0.132

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.821

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 -3.883

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 1.078

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 -0.382

Correlation matrix not shown by default, as p = 32 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

# Regular analysis as above, no bins as factors, 20 bins

> summary(model\_reg\_target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_noBins)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item +

(1 + language \* Freq\_of\_fixated\_item | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom

REML criterion at convergence: 10524.4

Scaled residuals:

Min 1Q Median 3Q Max

-3.3751 -0.6599 -0.0643 0.6792 3.7398

Random effects:

Groups Name Variance Std.Dev.

RECORDING\_SESSION\_LABEL (Intercept) 0.3246 0.5697

languageS 0.5650 0.7517

Freq\_of\_fixated\_itemL 0.7326 0.8559

languageS:Freq\_of\_fixated\_itemL 1.6269 1.2755

Residual 0.5471 0.7397

Corr

-0.41

-0.55 0.58

0.31 -0.92 -0.62

Number of obs: 4533, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error

(Intercept) -0.1335 0.1064

languageS 0.2386 0.1408

DELE.MELICET\_cs -0.1742 0.1070

Freq\_of\_fixated\_itemL 0.2204 0.1594

languageS:DELE.MELICET\_cs 0.1822 0.1416

languageS:Freq\_of\_fixated\_itemL -0.4867 0.2372

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.0174 0.1603

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.2614 0.2384

t value

(Intercept) -1.256

languageS 1.694

DELE.MELICET\_cs -1.628

Freq\_of\_fixated\_itemL 1.383

languageS:DELE.MELICET\_cs 1.287

languageS:Freq\_of\_fixated\_itemL -2.051

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.109

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -1.096

Correlation of Fixed Effects:

(Intr) langgS DELE.MELICET\_c Fr\_\_\_L lnS:DELE.MELICET\_

languageS -0.420

DELE.MELICET\_c -0.015 0.007

Frq\_f\_fxt\_L -0.561 0.581 0.009

lnS:DELE.MELICET\_ 0.007 -0.014 -0.420 -0.009

lnggS:F\_\_\_L 0.314 -0.912 -0.005 -0.623 0.013

DELE.MELICET\_: 0.009 -0.009 -0.560 -0.014 0.581

lS:DELE.MELICET\_: -0.005 0.013 0.314 0.009 -0.912

lS:F\_\_ DELE.MELICET\_:

languageS

DELE.MELICET\_c

Frq\_f\_fxt\_L

lnS:DELE.MELICET\_

lnggS:F\_\_\_L

DELE.MELICET\_: 0.009

lS:DELE.MELICET\_: -0.013 -0.623

# Item and participant as random effects, proportions per total in a bin (20)

> summary(model\_target\_sub\_200pre\_200post\_word\_item\_poly\_centered\_catDom\_OP)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \*

(ot1 + ot3 + ot2) + (1 + language + Freq\_of\_fixated\_item +

ot1 + ot2 + ot3 | RECORDING\_SESSION\_LABEL) + (1 + language +

Freq\_of\_fixated\_item + ot1 + ot2 + ot3 | pair\_num)

Data: target\_sub\_200pre\_200post\_word\_item\_poly\_centered\_catDom

REML criterion at convergence: 38139.5

Scaled residuals:

Min 1Q Median 3Q Max

-5.4032 0.2278 0.2816 0.3265 0.6952

Random effects:

Groups Name Variance Std.Dev. Corr

pair\_num (Intercept) 0.0000000 0.00000

languageS 0.0033965 0.05828 NaN

Freq\_of\_fixated\_itemL 0.0003983 0.01996 NaN

ot1 0.0027363 0.05231 NaN

ot2 0.0027182 0.05214 NaN

ot3 0.0138628 0.11774 NaN

RECORDING\_SESSION\_LABEL (Intercept) 0.0000000 0.00000

languageS 0.0007889 0.02809 NaN

Freq\_of\_fixated\_itemL 0.0005791 0.02407 NaN

ot1 0.0188468 0.13728 NaN

ot2 0.0150638 0.12273 NaN

ot3 0.0208239 0.14431 NaN

Residual 0.9940311 0.99701

-0.92

0.49 -0.80

0.58 -0.20 -0.43

-0.22 -0.19 0.74 -0.92

-0.39

1.00 -0.38

0.60 0.50 0.61

-0.69 -0.39 -0.70 -0.99

Number of obs: 13415, groups: pair\_num, 32; RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error

(Intercept) -0.001570 0.017537

languageS -0.001744 0.027120

DELE.MELICET\_cs 0.007191 0.017132

Freq\_of\_fixated\_itemL -0.009771 0.024835

ot1 0.003138 0.083257

ot3 0.104235 0.086072

ot2 0.029769 0.082667

languageS:DELE.MELICET\_cs 0.007959 0.024705

languageS:Freq\_of\_fixated\_itemL 0.025433 0.034886

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.010970 0.024547

languageS:ot1 -0.112873 0.109637

languageS:ot3 0.072138 0.109705

languageS:ot2 0.070488 0.109630

DELE.MELICET\_cs:ot1 0.066502 0.081332

DELE.MELICET\_cs:ot3 0.081654 0.081771

DELE.MELICET\_cs:ot2 0.078446 0.080541

Freq\_of\_fixated\_itemL:ot1 0.062935 0.108086

Freq\_of\_fixated\_itemL:ot3 -0.115833 0.108597

Freq\_of\_fixated\_itemL:ot2 -0.180557 0.107885

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.018148 0.034804

languageS:DELE.MELICET\_cs:ot1 -0.135911 0.108381

languageS:DELE.MELICET\_cs:ot3 -0.166844 0.108197

languageS:DELE.MELICET\_cs:ot2 -0.096370 0.108300

languageS:Freq\_of\_fixated\_itemL:ot1 -0.074249 0.155954

languageS:Freq\_of\_fixated\_itemL:ot3 0.014928 0.155877

languageS:Freq\_of\_fixated\_itemL:ot2 0.099276 0.155468

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 -0.105183 0.108426

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 -0.049402 0.108283

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 -0.246377 0.107908

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 0.179000 0.156294

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 0.292957 0.155471

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.141129 0.155229

t value

(Intercept) -0.090

languageS -0.064

DELE.MELICET\_cs 0.420

Freq\_of\_fixated\_itemL -0.393

ot1 0.038

ot3 1.211

ot2 0.360

languageS:DELE.MELICET\_cs 0.322

languageS:Freq\_of\_fixated\_itemL 0.729

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.447

languageS:ot1 -1.030

languageS:ot3 0.658

languageS:ot2 0.643

DELE.MELICET\_cs:ot1 0.818

DELE.MELICET\_cs:ot3 0.999

DELE.MELICET\_cs:ot2 0.974

Freq\_of\_fixated\_itemL:ot1 0.582

Freq\_of\_fixated\_itemL:ot3 -1.067

Freq\_of\_fixated\_itemL:ot2 -1.674

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL 0.521

languageS:DELE.MELICET\_cs:ot1 -1.254

languageS:DELE.MELICET\_cs:ot3 -1.542

languageS:DELE.MELICET\_cs:ot2 -0.890

languageS:Freq\_of\_fixated\_itemL:ot1 -0.476

languageS:Freq\_of\_fixated\_itemL:ot3 0.096

languageS:Freq\_of\_fixated\_itemL:ot2 0.639

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 -0.970

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 -0.456

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 -2.283

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 1.145

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 1.884

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.909

Correlation matrix not shown by default, as p = 32 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

convergence code: 0

unable to evaluate scaled gradient

Model failed to converge: degenerate Hessian with 2 negative eigenvalues

maxfun < 10 \* length(par)^2 is not recommended.

# Ortho poly 400 ms, language spa -0.5 cs 0.5

boundary (singular) fit: see ?isSingular

> summary(model\_target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_LangContrastCoding)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language\_cont \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \*

(ot1 + ot3 + ot2) + (1 + language\_cont + Freq\_of\_fixated\_item +

ot1 + ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Data:

target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_LangContrastCoding

REML criterion at convergence: 11102.6

Scaled residuals:

Min 1Q Median 3Q Max

-3.1132 -0.6901 -0.0687 0.6263 3.8713

Random effects:

Groups Name Variance Std.Dev. Corr

RECORDING\_SESSION\_LABEL (Intercept) 0.28402 0.5329

language\_cont 0.08272 0.2876 0.00

Freq\_of\_fixated\_itemL 0.45311 0.6731 -0.48 -0.04

ot1 0.18827 0.4339 -0.11 -0.25 -0.10

ot2 0.01650 0.1284 -0.96 -0.10 0.58

ot3 0.02216 0.1489 -0.27 0.16 -0.10

Residual 0.62561 0.7910

Looks to the

Looks to low freq items in cs and Spanish at the end and beginning ot1

Early OT1

Cs = -0.01223 (int) + -0.22742 (main eff of language\_cont cs) + -0.02968 (main FreqL) + **0.49205 (****int** language\_cont cs x freqL**) = 0.224** + n (late ot)

Spa= -0.01223 (int) + n (main eff of language\_cont cs) + -0.02968 (main FreqL) + n **(int int** language\_cont cs x freqL**) = -0.04 + n (late ot)**

Late OT1

Cs = -0.01223 (int) + -0.22742 (main eff of language\_cont cs) + -0.02968 (main FreqL) + **0.49205 (int** language\_cont cs x freqL**) = 0.224** + 0.13439 (late ot) + -0.62509 (language\_cont:ot1) + 0.30116 (FreqL x OT1) + **0.89056 (Lang\_cs\_cont x freql x ot1)** **= 0.924**

Spa= -0.01223 (int) + n (main eff of language\_cont cs) + -0.02968 (main FreqL) + n **(int int** language\_cont cs x freqL**) = -0.04 +** 0.13439 (late ot) + n (language\_cont:ot1) + 0.30116 (FreqL x OT1) =**0.395**

-0.12

-0.82 0.42

Number of obs: 4533, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error t value

(Intercept) -0.01223 0.09874 -0.124

language\_cont -0.22742 0.06228 -3.652

DELE.MELICET\_cs -0.08808 0.09930 -0.887

Freq\_of\_fixated\_itemL -0.02968 0.12524 -0.237

ot1 0.13439 0.10872 1.236

ot3 0.12271 0.07906 1.552

ot2 0.01570 0.07800 0.201

language\_cont:DELE.MELICET\_cs -0.20203 0.06256 -3.230

**language\_cont:Freq\_of\_fixated\_itemL** **0.49205 0.04743 10.374**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.14593 0.12588 -1.159

language\_cont:ot1 -0.62509 0.14891 -4.198

language\_cont:ot3 0.02596 0.14850 0.175

language\_cont:ot2 -0.01757 0.14879 -0.118

DELE.MELICET\_cs:ot1 -0.10635 0.10916 -0.974

DELE.MELICET\_cs:ot3 -0.03942 0.07925 -0.497

DELE.MELICET\_cs:ot2 -0.04097 0.07814 -0.524

Freq\_of\_fixated\_itemL:ot1 0.30116 0.10560 2.852

Freq\_of\_fixated\_itemL:ot3 -0.26486 0.10520 -2.518

Freq\_of\_fixated\_itemL:ot2 -0.02564 0.10533 -0.243

**language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL** **0.28665 0.04725 6.066**

language\_cont:DELE.MELICET\_cs:ot1 -0.28809 0.14927 -1.930

language\_cont:DELE.MELICET\_cs:ot3 0.04845 0.14878 0.326

language\_cont:DELE.MELICET\_cs:ot2 0.05176 0.14901 0.347

**language\_cont:Freq\_of\_fixated\_itemL:ot1** **0.89056 0.21114 4.218**

language\_cont:Freq\_of\_fixated\_itemL:ot3 -0.07353 0.21032 -0.350

language\_cont:Freq\_of\_fixated\_itemL:ot2 0.07592 0.21057 0.361

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 0.01927 0.10566 0.182

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 0.09377 0.10526 0.891

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.08228 0.10533 0.781

**language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 0****.82025 0.21126 3.883**

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 -0.22682 0.21048 -1.078

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.08057 0.21063 0.383

Correlation matrix not shown by default, as p = 32 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

convergence code: 0

boundary (singular) fit: see ?isSingular

# ORTHO POLY AS ABOVE no bins as factor, REML false

> model\_target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_RemlFalse <- lmer(Prop\_cs ~ language\*DELE.MELICET\_cs\*Freq\_of\_fixated\_item\*(ot1 + ot3+ ot2) + (1+language+Freq\_of\_fixated\_item+ot1+ot2+ot3|RECORDING\_SESSION\_LABEL), target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom, REML = FALSE)

boundary (singular) fit: see ?isSingular

> summary(model\_target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_RemlFalse)

Linear mixed model fit by maximum likelihood ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item \*

(ot1 + ot3 + ot2) + (1 + language + Freq\_of\_fixated\_item +

ot1 + ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom

AIC BIC logLik deviance df.resid

11121.7 11468.3 -5506.8 11013.7 4479

Scaled residuals:

Min 1Q Median 3Q Max

-3.1202 -0.6929 -0.0712 0.6289 3.8809

Random effects:

Groups Name Variance Std.Dev. Corr

RECORDING\_SESSION\_LABEL (Intercept) 0.28335 0.5323

languageS 0.07595 0.2756 -0.26

Freq\_of\_fixated\_itemL 0.42259 0.6501 -0.48 0.04

ot1 0.17062 0.4131 -0.17 0.26 -0.10

ot2 0.01547 0.1244 -0.95 0.10 0.59

ot3 0.02016 0.1420 -0.23 -0.16 -0.10

Residual 0.62222 0.7888

-0.11

-0.82 0.42

Number of obs: 4533, groups: RECORDING\_SESSION\_LABEL, 30

Looks to low freq items in cs and Spanish

Cs = -0.125991 (int) + n (main eff of languageS) + 0.216451 (main FreqL) = 0.091

Spa = -0.125991 (int) + 0.227330 (main of langS) + 0.216451 (main FreqL) - **0.491871 (int LangS:FreqL)** **= -0.174**

**Looks to low freq items in cs and Spanish in high and low dominance**

Cs low dom= -0.125991 (int) + n (main eff of languageS) + 0.216451 (main FreqL) = 0.091 + n (main effect of high dominance) = **0.091**

Cs high dom = -0.125991 (int) + n (main eff of languageS) + 0.216451 (main FreqL) = 0.091 + -0.188869 (main effect of high dominance) + -0.002860 (int high dom and FreqL) = -**0.186**

Spa low dom= -0.125991 (int) + 0.227330 (main of langS) + 0.216451 (main FreqL) - **0.491871 (int LangS:FreqL) =** **-0.174** + n (main effect of high dominance) = **-0.174**

Spa highdom = -0.125991 (int) + 0.227330 (main of langS) + 0.216451 (main FreqL) - **0.491871 (int LangS:FreqL) = -0.174** -0.188869 (main effect of high dominance) + 0.201772 (languageS and Dom high interaction) -0.002860 (int hidh dom and FreqL) + -0.286298 (langS x dom high x freqL) = -0.45

Fixed effects:

Estimate Std. Error t value

(Intercept) -0.125991 0.100006 -1.260

languageS 0.227330 0.060389 3.764

DELE.MELICET\_cs -0.188869 0.100572 -1.878

Freq\_of\_fixated\_itemL 0.216451 0.123257 1.756

ot1 -0.178226 0.129115 -1.380

ot3 0.135747 0.107652 1.261

ot2 0.006912 0.107201 0.064

*languageS:DELE.MELICET\_cs* *0.201772 0.060655 3.327*

**languageS:Freq\_of\_fixated\_itemL** **-0.491871 0.047296 -10.400**

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.002860 0.123963 -0.023

languageS:ot1 0.625622 0.148495 4.213

languageS:ot3 -0.025999 0.148093 -0.176

languageS:ot2 0.017508 0.148387 0.118

DELE.MELICET\_cs:ot1 -0.249567 0.129845 -1.922

DELE.MELICET\_cs:ot3 -0.015399 0.108024 -0.143

DELE.MELICET\_cs:ot2 -0.014896 0.107646 -0.138

Freq\_of\_fixated\_itemL:ot1 0.746250 0.147582 5.056

Freq\_of\_fixated\_itemL:ot3 -0.301692 0.147468 -2.046

Freq\_of\_fixated\_itemL:ot2 0.012288 0.147742 0.083

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.286298 0.047124 -6.075

languageS:DELE.MELICET\_cs:ot1 0.287323 0.148854 1.930

languageS:DELE.MELICET\_cs:ot3 -0.048149 0.148376 -0.325

languageS:DELE.MELICET\_cs:ot2 -0.052092 0.148605 -0.351

languageS:Freq\_of\_fixated\_itemL:ot1 -0.891098 0.210553 -4.232

languageS:Freq\_of\_fixated\_itemL:ot3 0.073403 0.209748 0.350

languageS:Freq\_of\_fixated\_itemL:ot2 -0.075751 0.209993 -0.361

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 0.428084 0.148990 2.873

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 -0.019278 0.148546 -0.130

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 0.122561 0.148853 0.823

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot1 -0.819341 0.210677 -3.889

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot3 0.226486 0.209908 1.079

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL:ot2 -0.080527 0.210058 -0.383

Correlation matrix not shown by default, as p = 32 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

convergence code: 0

boundary (singular) fit: see ?isSingular

# Ortho poly 400 ms, language spa -0.5 cs 0.5, freq H -0.5, L 0.5

> summary(model\_target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_LangAndFreqContrastCoding)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language\_cont \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item\_cont \*

(ot1 + ot3 + ot2) + (1 + language\_cont + Freq\_of\_fixated\_item\_cont +

ot1 + ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Data:

target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_LangAndFreqContrastCoding

REML criterion at convergence: 11102.6

Scaled residuals:

Min 1Q Median 3Q Max

-3.1130 -0.6901 -0.0687 0.6260 3.8711

Random effects:

Groups Name Variance Std.Dev. Corr

RECORDING\_SESSION\_LABEL (Intercept) 0.22325 0.4725

language\_cont 0.08262 0.2874 -0.03

Freq\_of\_fixated\_item\_cont 0.45294 0.6730 0.17 -0.04

ot1 0.18828 0.4339 -0.19 -0.25

ot2 0.01660 0.1289 -0.66 -0.10

ot3 0.02219 0.1490 -0.38 0.16

Residual 0.62561 0.7910

-0.10

0.58 -0.12

-0.10 -0.82 0.43

Number of obs: 4533, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error

(Intercept) -0.0270734 0.0870996

language\_cont 0.0186085 0.0576538

DELE.MELICET\_cs -0.1610396 0.0875784

Freq\_of\_fixated\_item\_cont -0.0296785 0.1252183

ot1 0.2849608 0.0952973

ot3 -0.0097090 0.0592282

ot2 0.0029131 0.0576550

language\_cont:DELE.MELICET\_cs -0.0587032 0.0578473

**language\_cont:Freq\_of\_fixated\_item\_cont 0.4920511 0.0474296**

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont -0.1459315 0.1258533

language\_cont:ot1 -0.1798142 0.1054440

language\_cont:ot3 -0.0108173 0.1051307

language\_cont:ot2 0.0203822 0.1052563

DELE.MELICET\_cs:ot1 -0.0967200 0.0956308

DELE.MELICET\_cs:ot3 0.0074660 0.0593156

DELE.MELICET\_cs:ot2 0.0001855 0.0577365

Freq\_of\_fixated\_item\_cont:ot1 0.3011508 0.1056051

Freq\_of\_fixated\_item\_cont:ot3 -0.2648606 0.1051993

Freq\_of\_fixated\_item\_cont:ot2 -0.0256139 0.1053291

**language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont 0.2866515 0.0472551**

language\_cont:DELE.MELICET\_cs:ot1 0.1220525 0.1055517

language\_cont:DELE.MELICET\_cs:ot3 -0.0649482 0.1052459

language\_cont:DELE.MELICET\_cs:ot2 0.0920594 0.1052832

**language\_cont:Freq\_of\_fixated\_item\_cont:ot1 0.8905735 0.2111430**

language\_cont:Freq\_of\_fixated\_item\_cont:ot3 -0.0735190 0.2103230

language\_cont:Freq\_of\_fixated\_item\_cont:ot2 0.0759050 0.2105681

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot1 0.0192505 0.1056612

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot3 0.0937471 0.1052611

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot2 0.0822539 0.1053305

**language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot1 0.8202324 0.2112614**

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot3 -0.2268552 0.2104817

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot2 0.0805447 0.2106334

t value

(Intercept) -0.311

language\_cont 0.323

DELE.MELICET\_cs -1.839

Freq\_of\_fixated\_item\_cont -0.237

ot1 2.990

ot3 -0.164

ot2 0.051

language\_cont:DELE.MELICET\_cs -1.015

language\_cont:Freq\_of\_fixated\_item\_cont 10.374

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont -1.160

language\_cont:ot1 -1.705

language\_cont:ot3 -0.103

language\_cont:ot2 0.194

DELE.MELICET\_cs:ot1 -1.011

DELE.MELICET\_cs:ot3 0.126

DELE.MELICET\_cs:ot2 0.003

Freq\_of\_fixated\_item\_cont:ot1 2.852

Freq\_of\_fixated\_item\_cont:ot3 -2.518

Freq\_of\_fixated\_item\_cont:ot2 -0.243

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont 6.066

language\_cont:DELE.MELICET\_cs:ot1 1.156

language\_cont:DELE.MELICET\_cs:ot3 -0.617

language\_cont:DELE.MELICET\_cs:ot2 0.874

language\_cont:Freq\_of\_fixated\_item\_cont:ot1 4.218

language\_cont:Freq\_of\_fixated\_item\_cont:ot3 -0.350

language\_cont:Freq\_of\_fixated\_item\_cont:ot2 0.360

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot1 0.182

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot3 0.891

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot2 0.781

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot1 3.883

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot3 -1.078

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot2 0.382

Correlation matrix not shown by default, as p = 32 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

convergence code: 0

boundary (singular) fit: see ?isSingular

# REGULAR ANALYSIS model with 400 ms, no random slopes

> #REGULAR ANALYSIS model with 400 ms

> model\_reg\_target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_noBins <- lmer(Prop\_cs ~ language\*DELE.MELICET\_cs\*Freq\_of\_fixated\_item + (1+language+Freq\_of\_fixated\_item|RECORDING\_SESSION\_LABEL), target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom)

> summary(model\_reg\_target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_noBins)

Linear mixed model fit by REML ['lmerMod']

Formula: Prop\_cs ~ language \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item +

(1 + language + Freq\_of\_fixated\_item | RECORDING\_SESSION\_LABEL)

Data: target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom

REML criterion at convergence: 11165.9

Scaled residuals:

Min 1Q Median 3Q Max

-3.2442 -0.6870 -0.0485 0.6234 3.9470

Random effects:

Groups Name Variance Std.Dev. Corr

RECORDING\_SESSION\_LABEL (Intercept) 0.30307 0.5505

languageS 0.08272 0.2876 -0.24

Freq\_of\_fixated\_itemL 0.45731 0.6762 -0.48

Residual 0.64510 0.8032

0.03

Number of obs: 4533, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate Std. Error

(Intercept) -0.127973 0.103337

languageS 0.227415 0.062545

DELE.MELICET\_cs -0.184686 0.103916

Freq\_of\_fixated\_itemL 0.216019 0.128020

languageS:DELE.MELICET\_cs 0.195017 0.062807

languageS:Freq\_of\_fixated\_itemL -0.489832 0.048127

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.009338 0.128747

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.273757 0.047925

t value

(Intercept) -1.238

languageS 3.636

DELE.MELICET\_cs -1.777

Freq\_of\_fixated\_itemL 1.687

languageS:DELE.MELICET\_cs 3.105

languageS:Freq\_of\_fixated\_itemL -10.178

DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -0.073

languageS:DELE.MELICET\_cs:Freq\_of\_fixated\_itemL -5.712

Correlation of Fixed Effects:

(Intr) langgS DELE.MELICET\_c Fr\_\_\_L lnS:DELE.MELICET\_

languageS -0.285

DELE.MELICET\_c -0.015 0.005

Frq\_f\_fxt\_L -0.498 0.092 0.008

lnS:DELE.MELICET\_ 0.005 -0.009 -0.285 -0.002

lnggS:F\_\_\_L 0.114 -0.381 -0.004 -0.183 0.000

DELE.MELICET\_: 0.008 -0.002 -0.498 -0.014 0.092

lS:DELE.MELICET\_: -0.004 0.000 0.116 0.002 -0.383

lS:F\_\_ DELE.MELICET\_:

languageS

DELE.MELICET\_c

Frq\_f\_fxt\_L

lnS:DELE.MELICET\_

lnggS:F\_\_\_L

DELE.MELICET\_: 0.002

lS:DELE.MELICET\_: 0.004 -0.186

# Ortho poly 400 ms, language spa -0.5 cs 0.5, freq H -0.5, L 0.5, NO OT2 AND 3 IN FIXED EFFECTS

> summary(model\_noOT3OT2target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_LangAndFreqContrastCoding)

Linear mixed model fit by REML ['lmerMod']

Formula:

Prop\_cs ~ language\_cont \* DELE.MELICET\_cs \* Freq\_of\_fixated\_item\_cont \*

ot1 + (1 + language\_cont + Freq\_of\_fixated\_item\_cont + ot1 +

ot2 + ot3 | RECORDING\_SESSION\_LABEL)

Data:

target\_sub\_200pre\_200post\_word\_no30bin\_poly\_centered\_catDom\_LangAndFreqContrastCoding

REML criterion at convergence: 11071.4

Scaled residuals:

Min 1Q Median 3Q Max

-3.1222 -0.6914 -0.0685 0.6310 3.8453

Random effects:

Groups Name Variance Std.Dev.

RECORDING\_SESSION\_LABEL (Intercept) 0.22247 0.4717

language\_cont 0.08314 0.2883

Freq\_of\_fixated\_item\_cont 0.45193 0.6723

ot1 0.18595 0.4312

ot2 0.01461 0.1209

ot3 0.01941 0.1393

Residual 0.62495 0.7905

Corr

-0.03

0.17 -0.04

-0.20 -0.25 -0.10

-0.66 -0.12 0.58 -0.12

-0.41 0.16 -0.12 -0.80 0.43

Number of obs: 4533, groups: RECORDING\_SESSION\_LABEL, 30

Fixed effects:

Estimate

(Intercept) -0.02832

language\_cont 0.01940

DELE.MELICET\_cs -0.15906

Freq\_of\_fixated\_item\_cont -0.03351

ot1 0.28034

language\_cont:DELE.MELICET\_cs -0.05961

language\_cont:Freq\_of\_fixated\_item\_cont 0.49200

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont -0.14483

language\_cont:ot1 -0.18068

DELE.MELICET\_cs:ot1 -0.09330

Freq\_of\_fixated\_item\_cont:ot1 0.30105

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont 0.28593

language\_cont:DELE.MELICET\_cs:ot1 0.12296

language\_cont:Freq\_of\_fixated\_item\_cont:ot1 0.89128

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot1 0.01930

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot1 0.82272

Std. Error

(Intercept) 0.08300

language\_cont 0.05761

DELE.MELICET\_cs 0.08345

Freq\_of\_fixated\_item\_cont 0.12170

ot1 0.09074

language\_cont:DELE.MELICET\_cs 0.05781

language\_cont:Freq\_of\_fixated\_item\_cont 0.04740

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont 0.12224

language\_cont:ot1 0.10538

DELE.MELICET\_cs:ot1 0.09103

Freq\_of\_fixated\_item\_cont:ot1 0.10554

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont 0.04722

language\_cont:DELE.MELICET\_cs:ot1 0.10548

language\_cont:Freq\_of\_fixated\_item\_cont:ot1 0.21102

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot1 0.10559

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot1 0.21112

t value

(Intercept) -0.341

language\_cont 0.337

DELE.MELICET\_cs -1.906

Freq\_of\_fixated\_item\_cont -0.275

ot1 3.090

language\_cont:DELE.MELICET\_cs -1.031

language\_cont:Freq\_of\_fixated\_item\_cont 10.380

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont -1.185

language\_cont:ot1 -1.714

DELE.MELICET\_cs:ot1 -1.025

Freq\_of\_fixated\_item\_cont:ot1 2.852

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont 6.055

language\_cont:DELE.MELICET\_cs:ot1 1.166

language\_cont:Freq\_of\_fixated\_item\_cont:ot1 4.224

DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot1 0.183

language\_cont:DELE.MELICET\_cs:Freq\_of\_fixated\_item\_cont:ot1 3.897

Correlation matrix not shown by default, as p = 16 > 12.

Use print(x, correlation=TRUE) or

vcov(x) if you need it

convergence code: 0

boundary (singular) fit: see ?isSingular