Supplementary Materials

Section A

Results of linear mixed effects model, including the R code and output.

paul_model2<-lmer(RT ~ continuation*constraint*group+(1+continuation|subject) + (1|item), data=paul, REML=FALSE)

summary(paul_model2)

```
Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method ['lmerModLmerTest']
Formula: RT ~ continuation * constraint * group + (1 + continuation |      subject) + (1 | item)
   Data: paul

     AIC      BIC   logLik deviance df.resid
 80379.6  80465.2 -40176.8  80353.6     5318

Scaled residuals:
    Min      1Q  Median      3Q     Max
-2.8134 -0.5453 -0.1447  0.3257  8.2457

Random effects:
 Groups   Name        Variance Std.Dev. Corr
 item     (Intercept)  15992   126.46
 subject  (Intercept)  97292   311.92
          continuation1  4891    69.94  -0.32
 Residual             187853   433.42
Number of obs: 5331, groups:  item, 104; subject, 84

Fixed effects:
                              Estimate Std. Error      df t value Pr(>|t|)
(Intercept)                    1388.75      55.59  121.34  24.982  < 2e-16 ***
continuation1                   -30.71      29.00  303.36  -1.059  0.29035
constraint1                      23.01      35.70  264.23   0.644  0.51981
group1                         -215.27      72.82   96.14  -2.956  0.00392 **
continuation1:constraint1      -144.38      35.56 5166.28  -4.060 4.97e-05 ***
continuation1:group1           -110.38      39.01  281.76  -2.829  0.00500 **
constraint1:group1              -37.42      34.74 5077.33  -1.077  0.28146
continuation1:constraint1:group1 110.56     48.00 5069.86   2.304  0.02129 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Correlation of Fixed Effects:
           (Intr) cntnt1 cnstr1 group1 cntntn1:c1 cntntn1:g1 cns1:1
continuatn1 -0.335
constraint1 -0.360  0.354
group1      -0.671  0.242  0.132
cntntn1:cn1  0.185 -0.688 -0.520 -0.132
cntntn1:gr1  0.235 -0.688 -0.245 -0.350  0.475
cnstrnt1:g1  0.177 -0.340 -0.498 -0.263  0.501      0.491
cntntn1:1:1 -0.128  0.474  0.359  0.190 -0.691     -0.688     -0.724
convergence code: 0
```

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              Simultaneous Tests for General Linear Hypotheses

    Multiple Comparisons of Means: Tukey Contrasts


    Fit: lmer(formula = RT ~ tw + (1 + continuation * constraint | subject) +
        (1 + group | item), data = paul, REML = FALSE)

    Linear Hypotheses:
                        Estimate Std. Error z value Pr(>|z|)
    1.0.0 - 0.0.0 == 0    -29.76      29.45  -1.010  0.95535
    0.1.0 - 0.0.0 == 0     22.64      38.04   0.595  0.99799
    1.1.0 - 0.0.0 == 0   -151.59      39.54  -3.834  0.00216 **
    0.0.1 - 0.0.0 == 0   -216.25      73.79  -2.930  0.04630 *
    1.0.1 - 0.0.0 == 0   -356.44      74.16  -4.806  < 0.001 ***
    0.1.1 - 0.0.0 == 0   -230.17      77.29  -2.978  0.04034 *
    1.1.1 - 0.0.0 == 0   -405.48      74.71  -5.427  < 0.001 ***
    0.1.0 - 1.0.0 == 0     52.40      39.32   1.332  0.83435
    1.1.0 - 1.0.0 == 0   -121.83      37.46  -3.252  0.01749 *
    0.0.1 - 1.0.0 == 0   -186.49      74.11  -2.516  0.13858
    1.0.1 - 1.0.0 == 0   -326.68      73.75  -4.429  < 0.001 ***
    0.1.1 - 1.0.0 == 0   -200.41      77.34  -2.591  0.11557
    1.1.1 - 1.0.0 == 0   -375.72      74.59  -5.037  < 0.001 ***
    1.1.0 - 0.1.0 == 0   -174.23      26.46  -6.585  < 0.001 ***
    0.0.1 - 0.1.0 == 0   -238.88      77.02  -3.102  0.02785 *
    1.0.1 - 0.1.0 == 0   -379.08      77.09  -4.917  < 0.001 ***
    0.1.1 - 0.1.0 == 0   -252.81      72.24  -3.500  0.00744 **
    1.1.1 - 0.1.0 == 0   -428.12      69.67  -6.145  < 0.001 ***
    0.0.1 - 1.1.0 == 0    -64.66      74.33  -0.870  0.98027
    1.0.1 - 1.1.0 == 0   -204.85      74.24  -2.759  0.07515 .
    0.1.1 - 1.1.0 == 0    -78.58      69.56  -1.130  0.92159
    1.1.1 - 1.1.0 == 0   -253.89      66.29  -3.830  0.00220 **
    1.0.1 - 0.0.1 == 0   -140.20      28.51  -4.918  < 0.001 ***
    0.1.1 - 0.0.1 == 0    -13.93      34.40  -0.405  0.99984
    1.1.1 - 0.0.1 == 0   -189.24      35.85  -5.279  < 0.001 ***
    0.1.1 - 1.0.1 == 0    126.27      35.77   3.530  0.00674 **
    1.1.1 - 1.0.1 == 0    -49.04      33.76  -1.453  0.76583
    1.1.1 - 0.1.1 == 0   -175.31      25.65  -6.835  < 0.001 ***
    ---
    Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
    (Adjusted p values reported -- single-step method)
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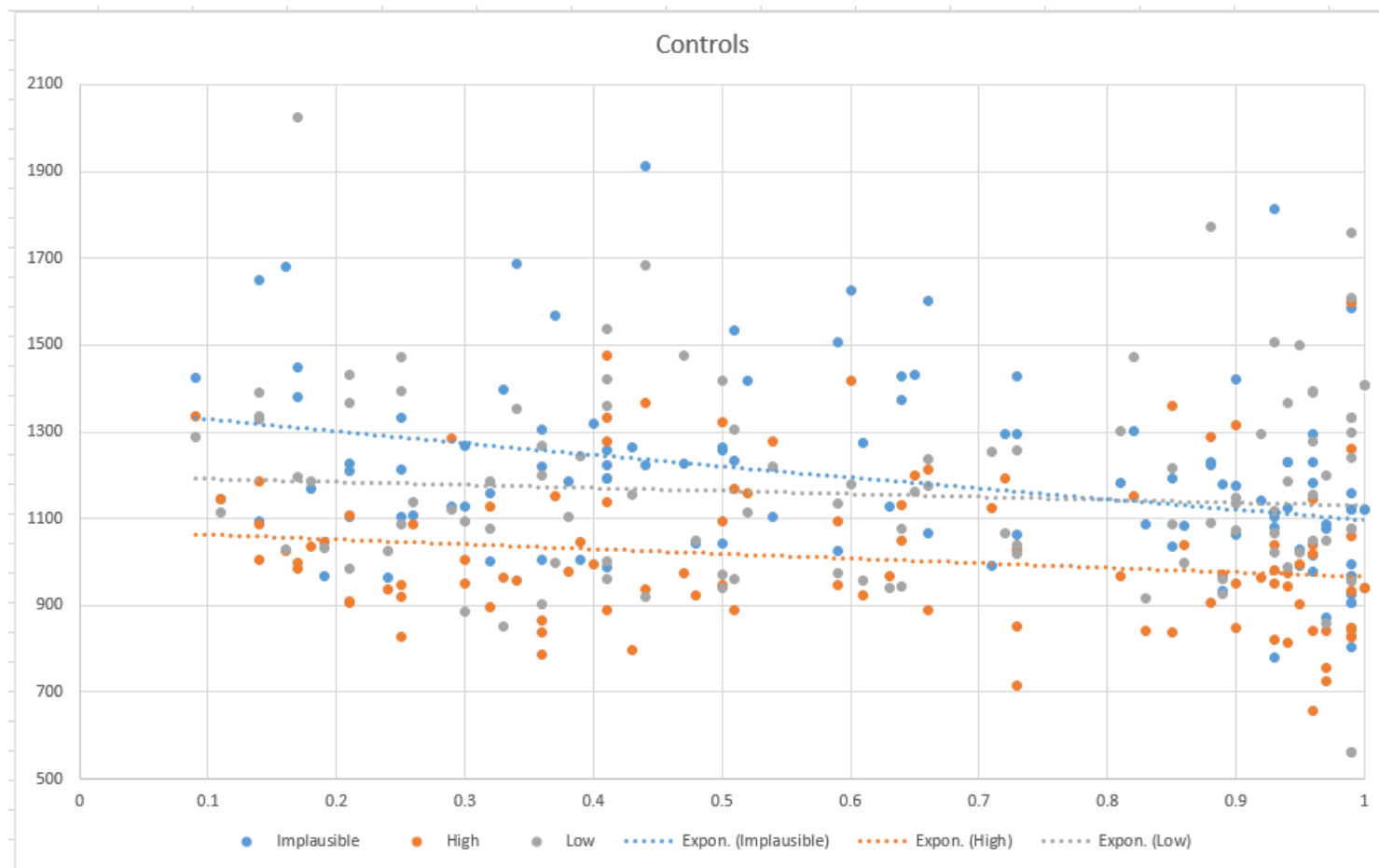
Continuation (low = 0, high = 1)

Constraint (low = 0, high = 1)

Group (Control = 1, dyslexia = 0)

Scatterplot showing the line of best fit. The x-axis has items based on cloze probability and the y-axis shows mean reaction time. The biggest difference between the groups is the results from the low continuation condition. For controls, there is clear separation between the high- and low-continuations across the full range of cloze probability. For dyslexics, there is no separation between high- and low-continuation at the low end of cloze probability. However, for both groups, the low-continuation condition ends up being no different from the anomalous condition.