

## results

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I'm just practicing, but I ran some different Linear Mixed Effect models

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
library(ggplot2)
library(statsr)
library("lme4")
```

```
## Loading required package: Matrix
```

```
library(report)
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse

## v tibble  2.1.3    v purrr  0.3.3
## v tidyr   1.0.2    v stringr 1.4.0
## v readr   1.3.1    v forcats 0.5.0

## -- Conflicts ----- tidyverse
## x tidyr::expand() masks Matrix::expand()
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## x tidyr::pack()   masks Matrix::pack()
## x tidyr::unpack() masks Matrix::unpack()
```

```
library(sjPlot)
library(sjlabelled)
```

```
##
## Attaching package: 'sjlabelled'

## The following object is masked from 'package:forcats':
##
##   as_factor

## The following object is masked from 'package:dplyr':
##
##   as_label
```

```
library(sjmisc)
```

```
##
## Attaching package: 'sjmisc'

## The following object is masked from 'package:purrr':
##
##   is_empty

## The following object is masked from 'package:tidyr':
##
##   replace_na

## The following object is masked from 'package:tibble':
##
##   add_case
```

```
library(knitr)
```

processing dataset

```
df <- read.csv(file="./processed_data.csv")
df_exclude <- df %>%
  filter(exclude == 0)
df_exclude$visGroup2 = factor(df_exclude$visGroup, c("scatter","line","band","hop"))
df_exclude$diff_belief_abs = abs(df_exclude$diff_belief)
df_exclude$diff_uncertainty_abs = abs(df_exclude$diff_uncertainty)
df_exclude$pop_corr_abs = abs(df_exclude$pop_corr)
```

and getting linear mixed effect models

size of belief change with visGroup and pop correlation as FE and usertoken as RE

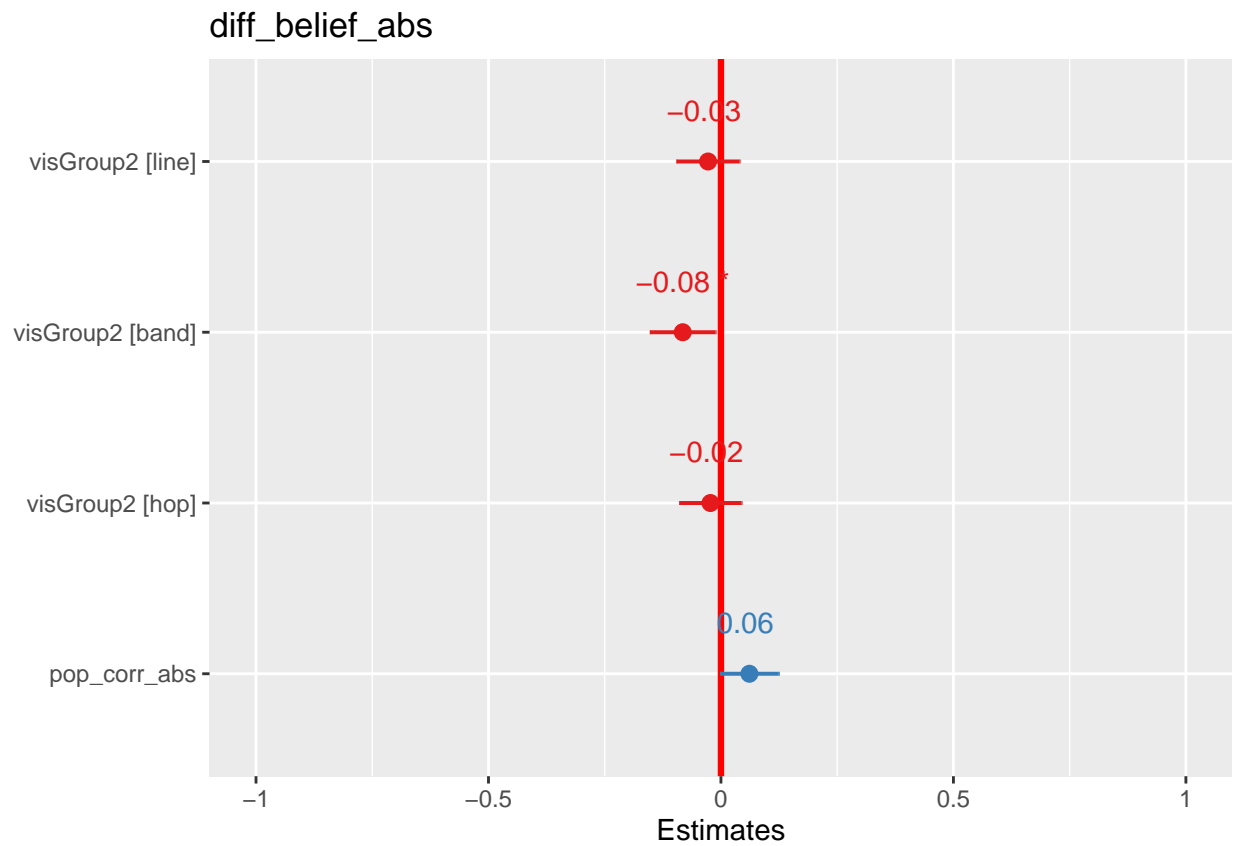
```
model <- lmer(diff_belief_abs ~ visGroup2 + pop_corr_abs + (1|usertoken) ,data=df_exclude)
model2 <- lmer(diff_uncertainty_abs ~ visGroup2 + pop_corr_abs + (1|usertoken) ,data=df_exclude)
```

size of belief table

```
kable(model %>% report() %>% table_long())
```

Parameter	Coefficient	SE	CI_low	CI_high	t	df_error	p	Std_Coefficient
(Intercept)	0.5451308	0.0276021	0.4910318	0.5992299	19.7496380	2406	0.0000000	0.035803
visGroup2line	-0.0277424	0.0346226	-0.0956014	0.0401166	-0.8012804	2406	0.4229693	-0.046725
visGroup2band	-0.0821861	0.0360979	-0.1529366	-0.0114356	-2.2767593	2406	0.0228006	-0.138423
visGroup2hop	-0.0225466	0.0341175	-0.0894158	0.0443225	-0.6608515	2406	0.5087076	-0.037974
pop_corr_abs	0.0612020	0.0322690	-0.0020440	0.1244480	1.8966218	2406	0.0578779	0.035329
NA	NA	NA	NA	NA	NA	NA	NA	NA
AIC	NA	NA	NA	NA	NA	NA	NA	NA
BIC	NA	NA	NA	NA	NA	NA	NA	NA
R2 (conditional)	NA	NA	NA	NA	NA	NA	NA	NA
R2 (marginal)	NA	NA	NA	NA	NA	NA	NA	NA
ICC	NA	NA	NA	NA	NA	NA	NA	NA
RMSE	NA	NA	NA	NA	NA	NA	NA	NA

size of belief change plot



size of uncertainty change table

```
kable(model12 %>% report() %>% table_long())
```

Parameter	Coefficient	SE	CI_low	CI_high	t	df_error	p	Std_Coefficient
(Intercept)	0.4871647	0.0187075	0.4504987	0.5238308	26.041135	2413	0.0000000	-0.0150906
visGroup2line	0.0296956	0.0235250	-0.0164126	0.0758037	1.262299	2413	0.2068412	0.0721795
visGroup2band	0.0103393	0.0244883	-0.0376568	0.0583354	0.422216	2413	0.6728673	0.0251313
visGroup2hop	-0.0024188	0.0231503	-0.0477925	0.0429549	-0.104482	2413	0.9167869	-0.0058792
pop_corr_abs	-0.2433194	0.0219093	-0.2862608	-0.2003779	-11.105754	2413	0.0000000	-0.2028582
NA	NA	NA	NA	NA	NA	NA	NA	NA
AIC	NA	NA	NA	NA	NA	NA	NA	NA
BIC	NA	NA	NA	NA	NA	NA	NA	NA
R2 (conditional)	NA	NA	NA	NA	NA	NA	NA	NA
R2 (marginal)	NA	NA	NA	NA	NA	NA	NA	NA
ICC	NA	NA	NA	NA	NA	NA	NA	NA
RMSE	NA	NA	NA	NA	NA	NA	NA	NA

size of uncertainty change plot

