United States Politicians' Tone Became More Negative with 2016 Primary Campaigns

Author names to be added here (submissions will be non-blind)

November 29, 2021

Supplementary Information

Contents

1

1 Figures

1.1 Quotation Aggregation

Figure 1: Neg. Emotion (empath): Quotation Aggregation

$r^2_{RDD,adj}$: 0.19, $r^2_{lin,adj}$: 0.06, F : 11.0, w_{RDD}: 1.000, Δ_{AICc}: 17.55

α_0=0.004(-0.4, 0.4), β_0=0(-0.009, 0.009), α=1.5***(0.9, 2.2), β=-0.03**(-0.04, -0.008)
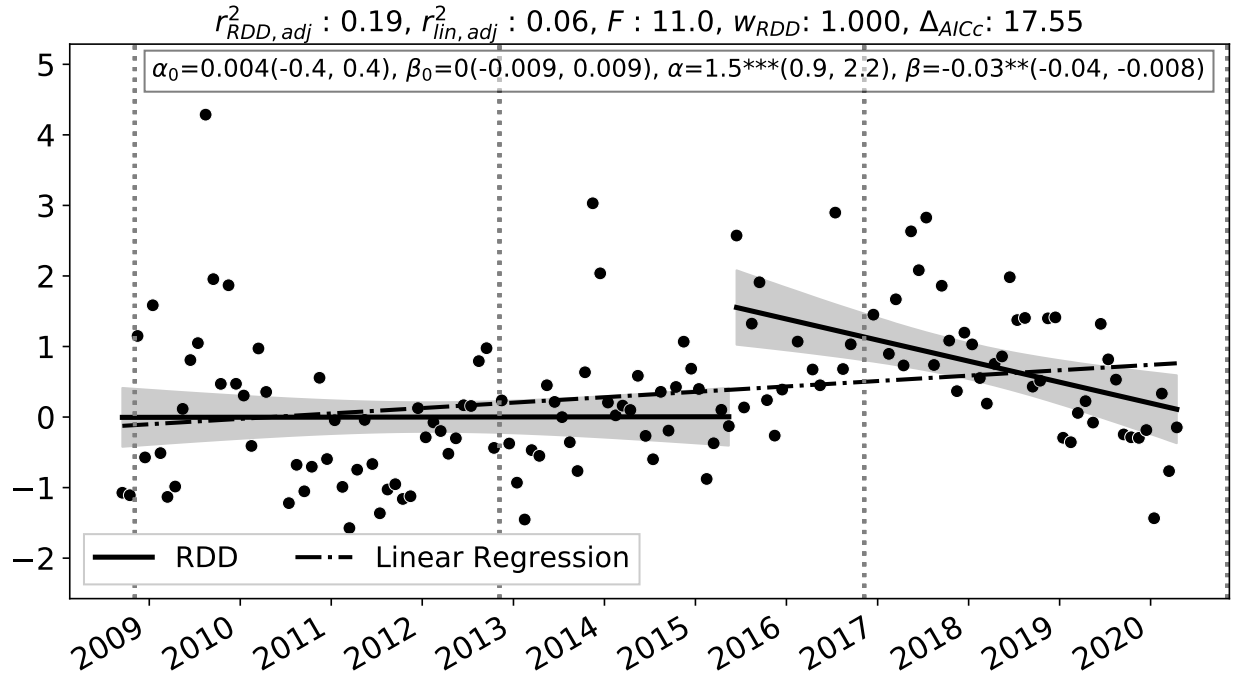
Figure 2: Pos. Emotion (empath): Quotation Aggregation

$r^2_{RDD,adj}$: 0.56, $r^2_{lin,adj}$: 0.14, F : 56.6, w_{RDD}: 1.000, Δ_{AICc}: 86.38

α_0=1.1***(0.8, 1.5), β_0=0.03***(0.02, 0.04), α=-2.1***(-2.7, -1.5), β=-0.04***(-0.06, -0.03)

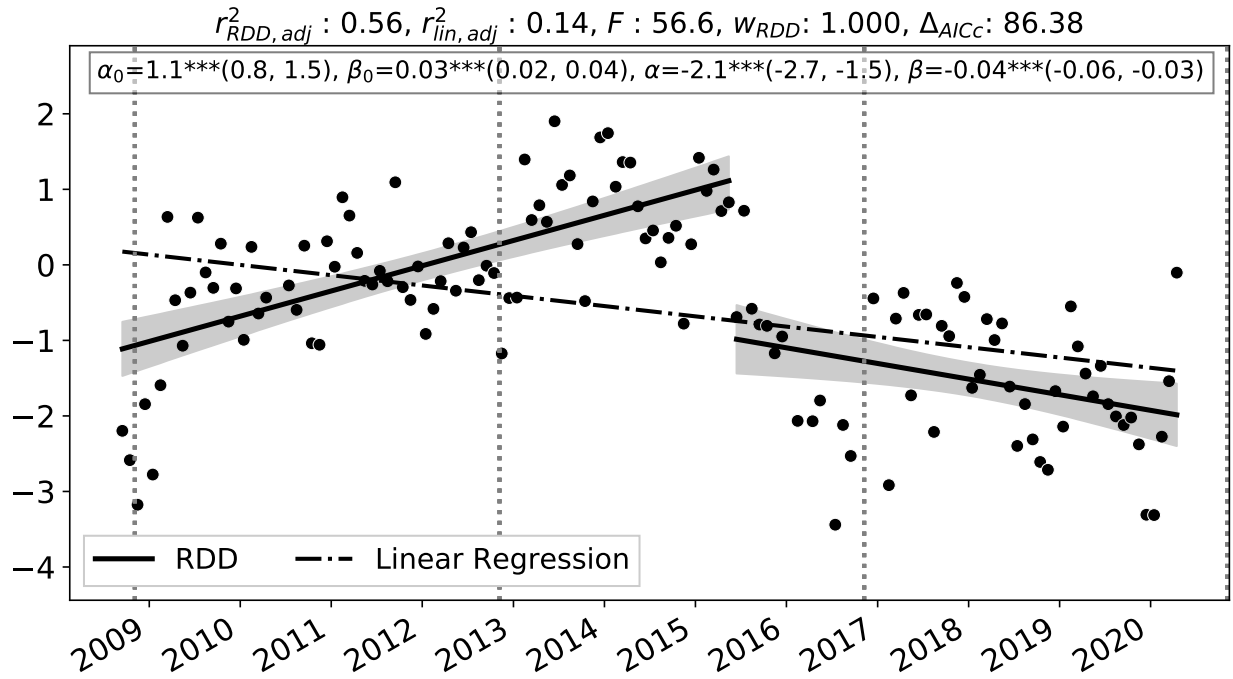Figure 3: Science (empath): Quotation Aggregation

3
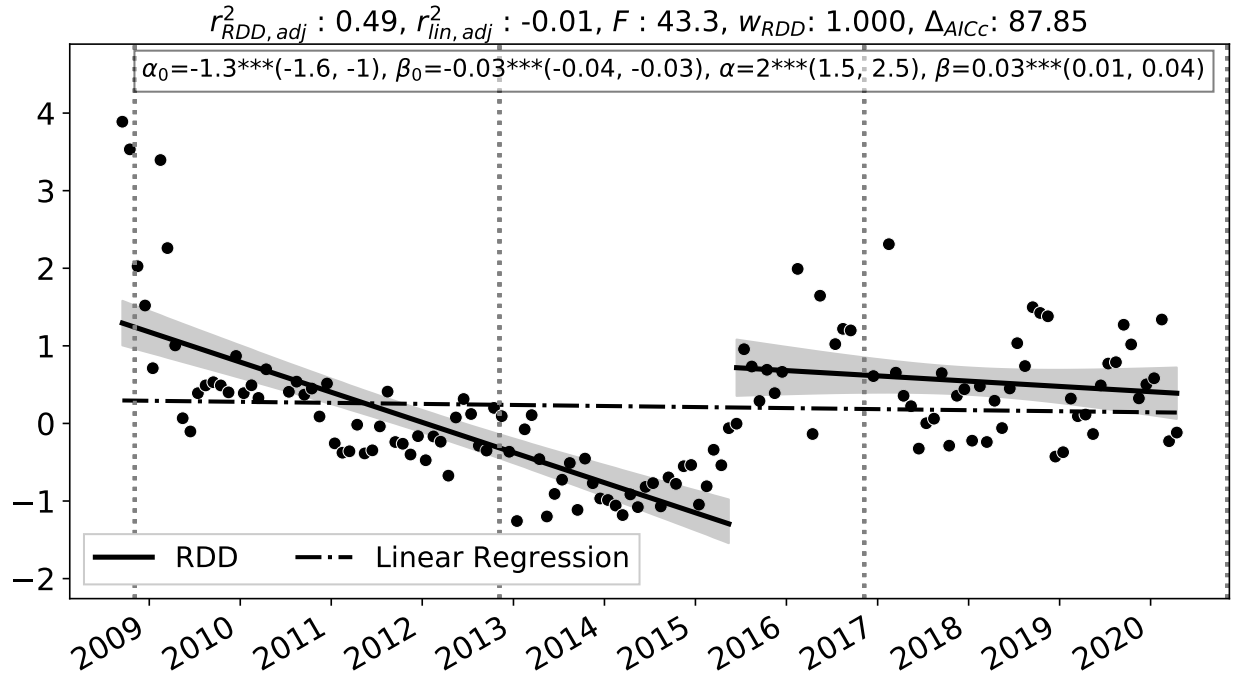
Figure 4: Swearing (empath): Quotation Aggregation
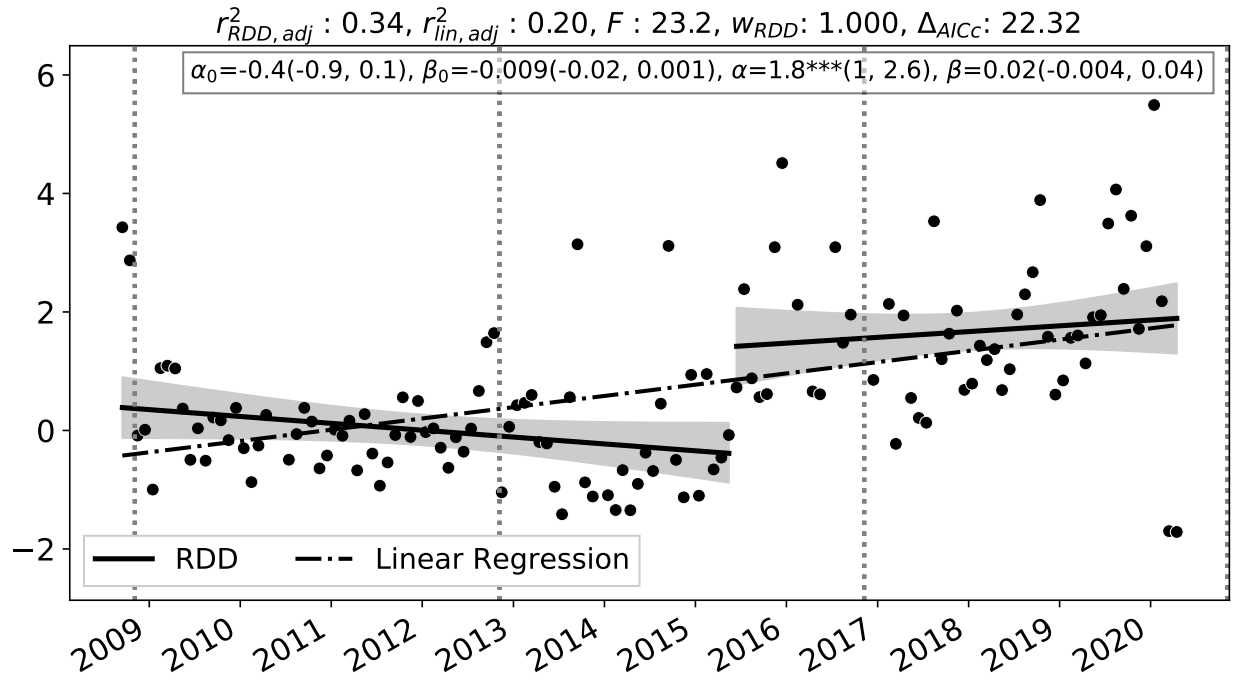
Figure 5: Anger: Quotation Aggregation

4

$r^2_{RDD,adj}$: 0.22, $r^2_{lin,adj}$: 0.03, F : 13.3, w_{RDD}: 1.000, Δ_{AICc}: 26.19

α_0=-0.9***(-1.4, -0.4), β_0=-0.02***(-0.03, -0.01), α=1.7***(0.8, 2.5), β=0.03**(0.009, 0.05)
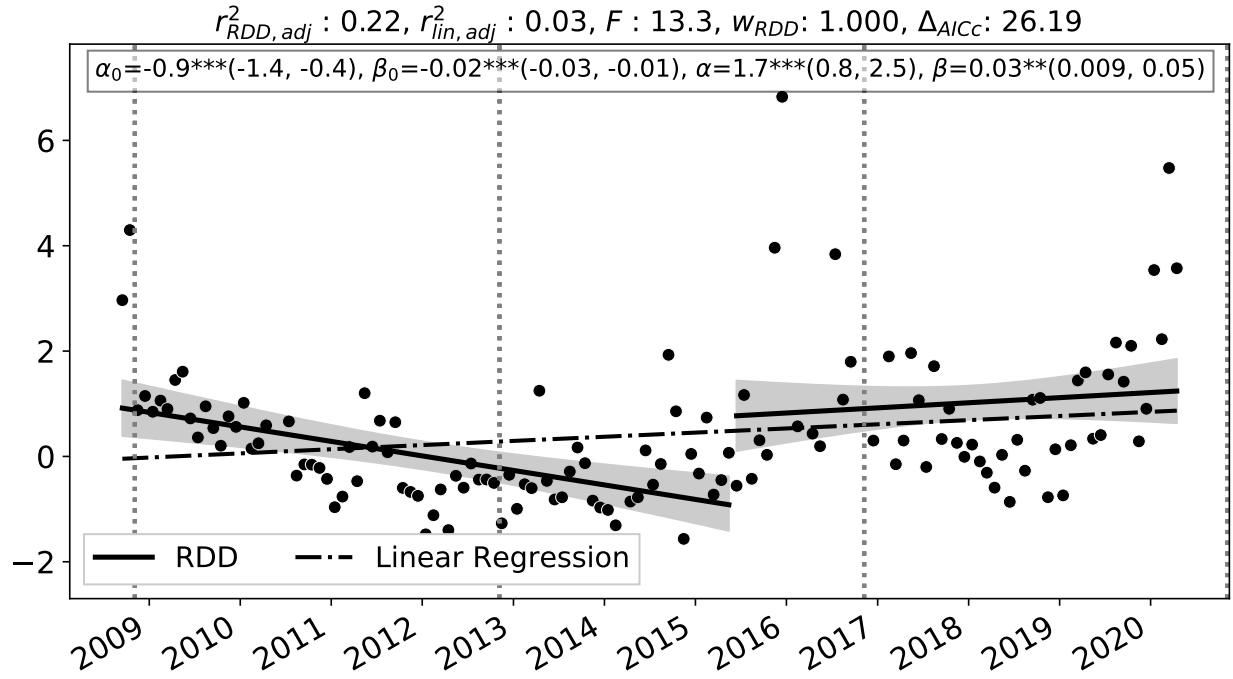
Figure 6: Anxiety: Quotation Aggregation

$r^2_{RDD,adj}$: 0.42, $r^2_{lin,adj}$: 0.12, F : 32.9, w_{RDD}: 1.000, Δ_{AICc}: 52.82

α_0=-0.9***(-1.4, -0.5), β_0=-0.02***(-0.03, -0.01), α=2.2***(1.5, 2.9), β=0.03**(0.01, 0.05)
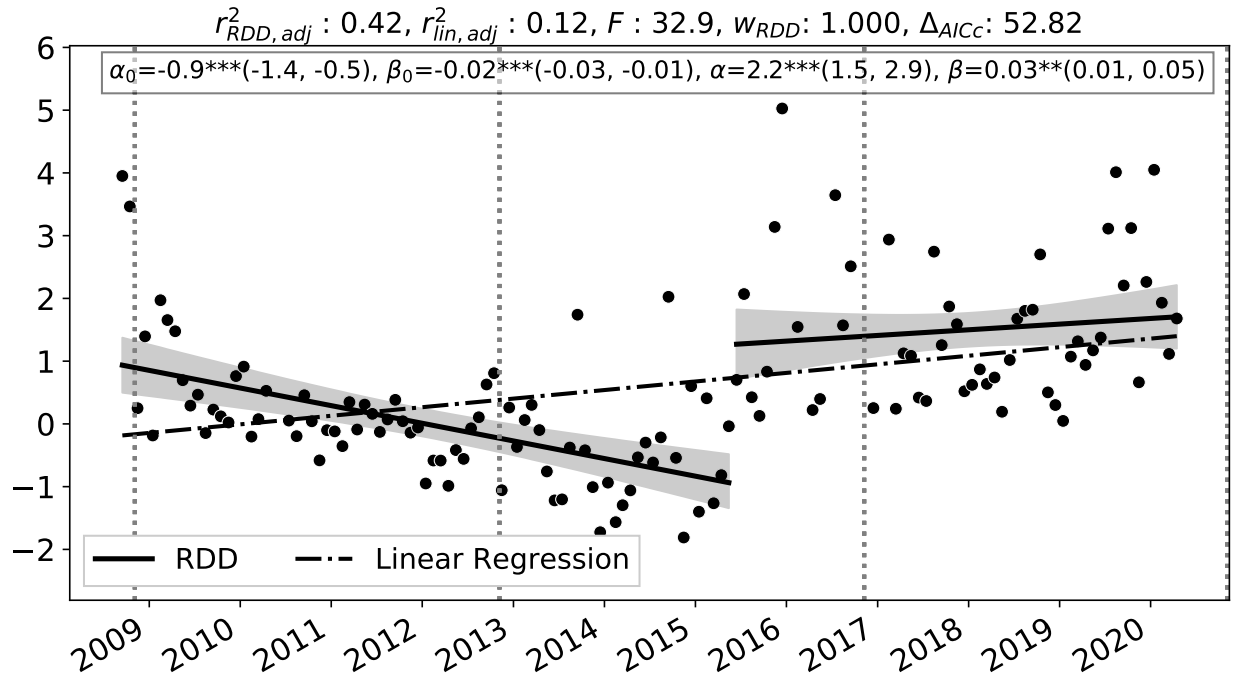
Figure 7: Negative Emotions: Quotation Aggregation

5

$r^2_{RDD, adj}$: 0.32, $r^2_{lin, adj}$: 0.02, F : 21.7, w_{RDD}: 1.000, Δ_{AICc}: 46.49

α_0=0.4(-0.1, 0.9), β_0=0.01(-0.001, 0.02), α=1.6***(0.8, 2.4), β=-0.08***(-0.1, -0.06)
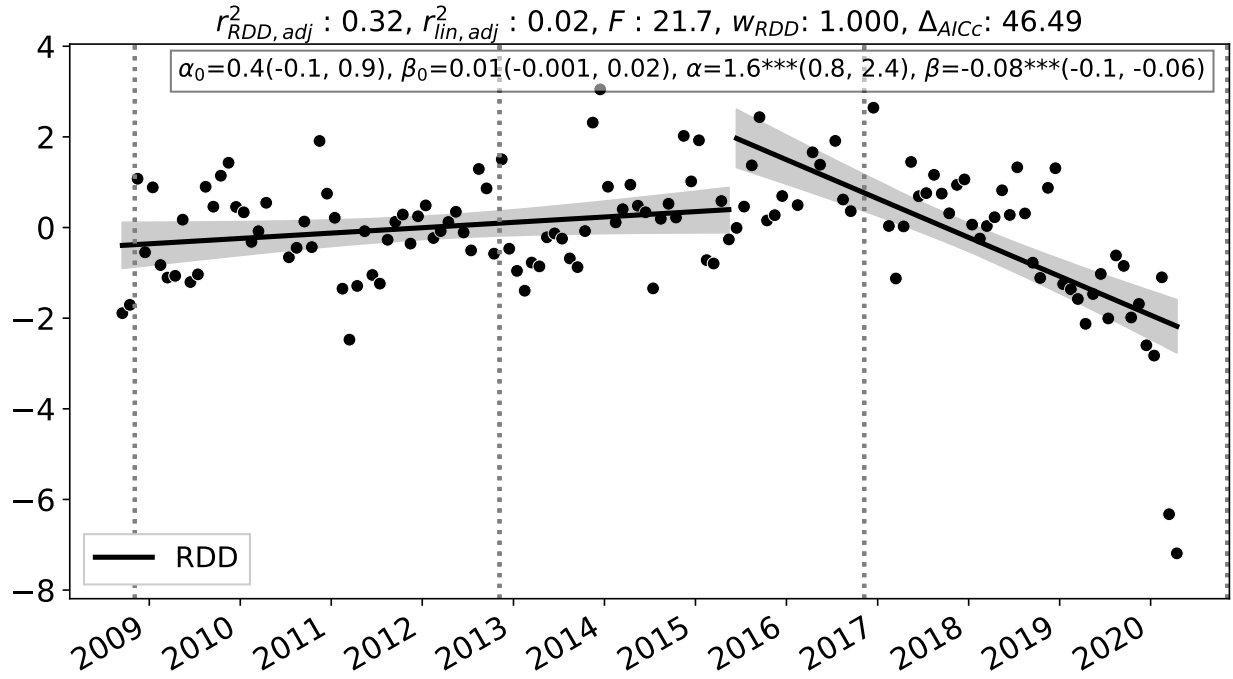
Figure 8: Positive Emotions: Quotation Aggregation

$r^2_{RDD, adj}$: 0.10, $r^2_{lin, adj}$: 0.01, F : 5.8, w_{RDD}: 0.994, Δ_{AICc}: 10.37

α_0=-0.9***(-1.3, -0.4), β_0=-0.02***(-0.03, -0.01), α=1*(0.2, 1.8), β=0.02(-0.001, 0.04)
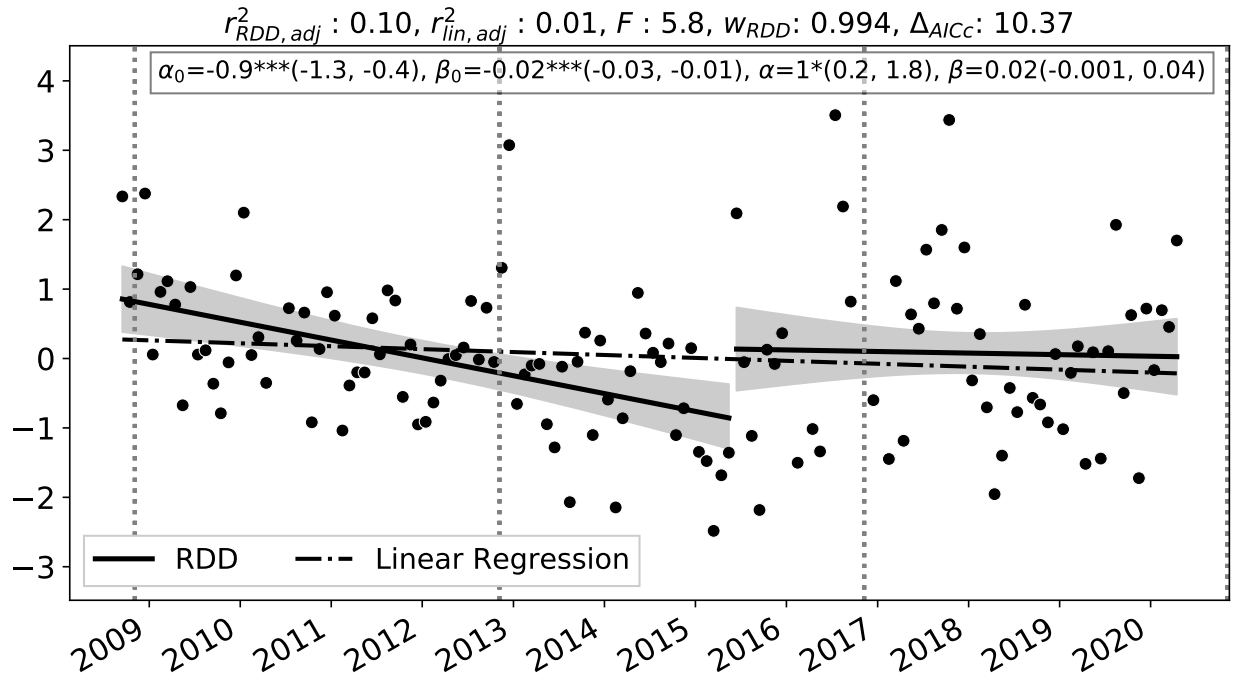
Figure 9: Sadness: Quotation Aggregation

6

$$r^2_{RDD,adj} : 0.57, r^2_{lin,adj} : 0.18, F : 59.3, w_{RDD}: 1.000, \Delta_{AICc}: 82.89$$

α_0=-1.4***(-1.6, -1.1), β_0=-0.03***(-0.04, -0.03), α=1.2***(0.8, 1.5), β=0.03***(0.02, 0.04)

RDD   Linear Regression
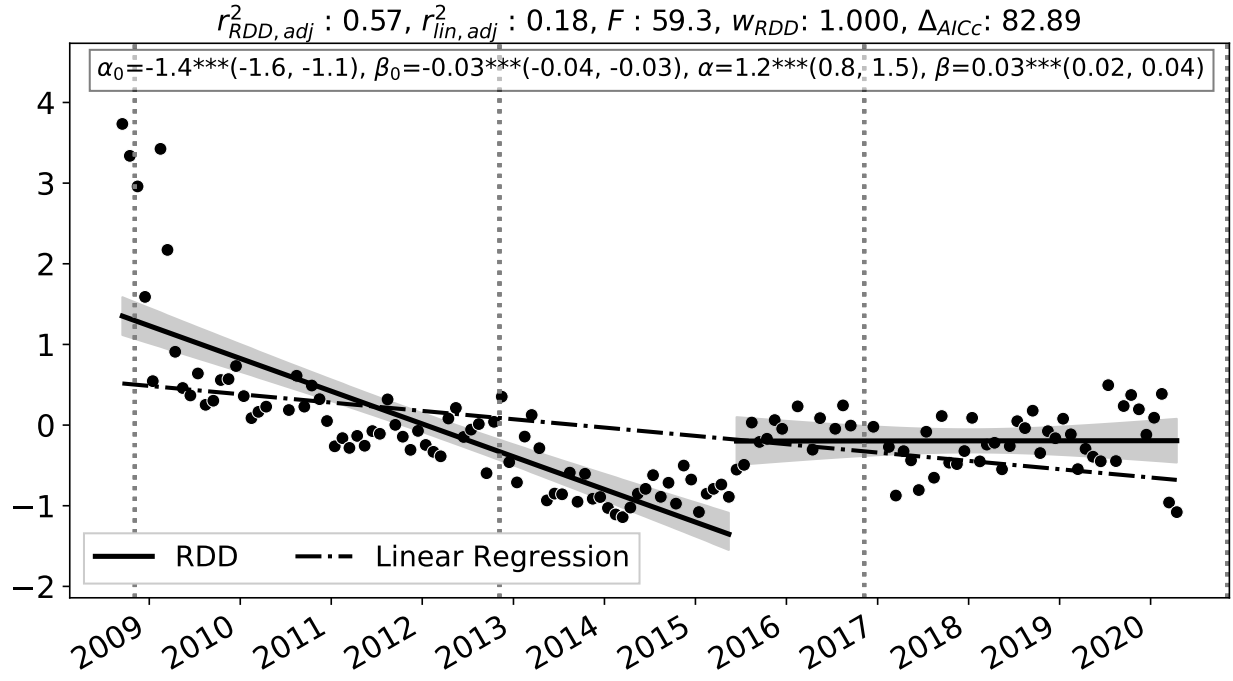
Figure 10: Swearing Terms: Quotation Aggregation

Negative Emotions
α=2.2***(1.5, 2.9), β=0.03**(0.01, 0.05)
R^2_{adj}=0.42

Anger
α=1.8***(1, 2.6), β=0.02(-0.004, 0.04)
R^2_{adj}=0.34

Anxiety
α=1.7***(0.8, 2.5), β=0.03**(0.009, 0.05)
R^2_{adj}=0.22

Sadness
α=1*(0.2, 1.8), β=0.02(-0.001, 0.04)
R^2_{adj}=0.10

Swearing Terms
α=1.2***(0.8, 1.5), β=0.03***(0.02, 0.04)
R^2_{adj}=0.57

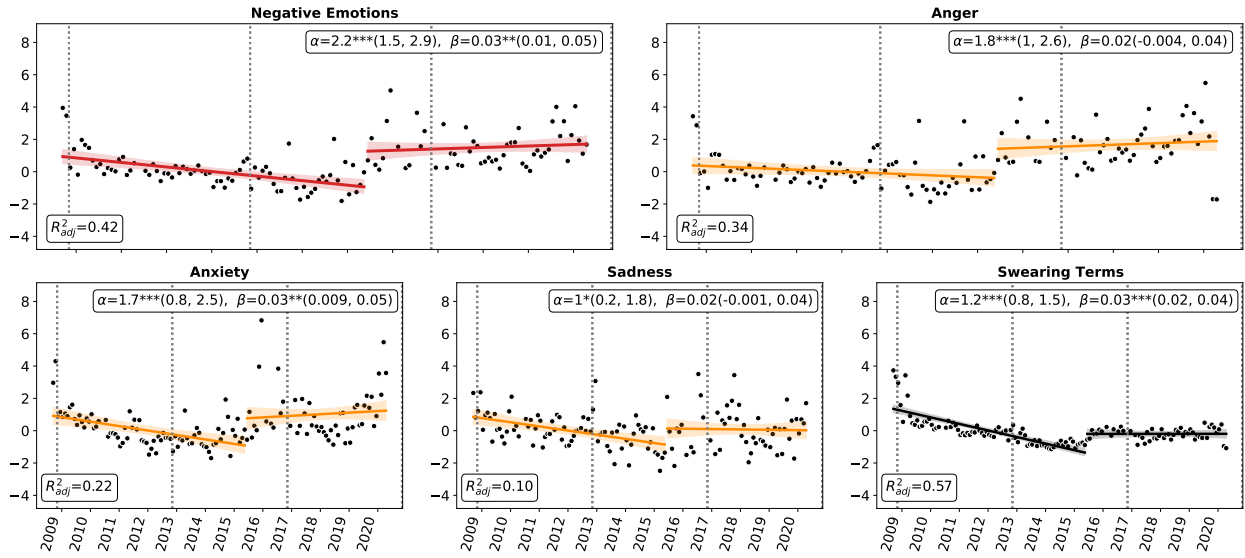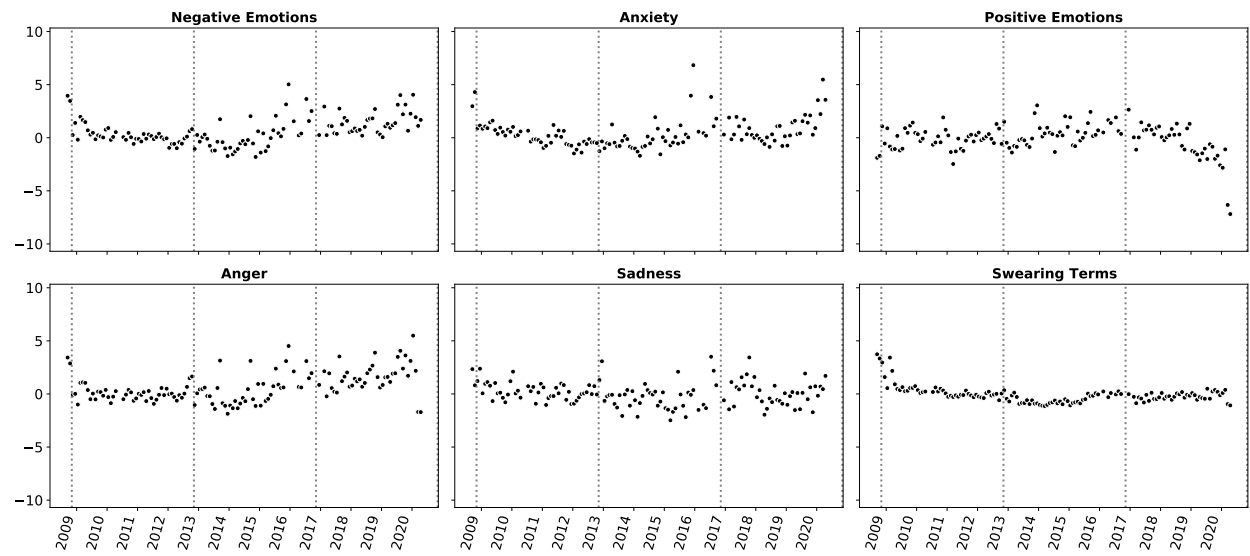Figure 11: Negative Language: Quotation Aggregation

Figure 12: Raw Sentiment Scores: Quotation Aggregation

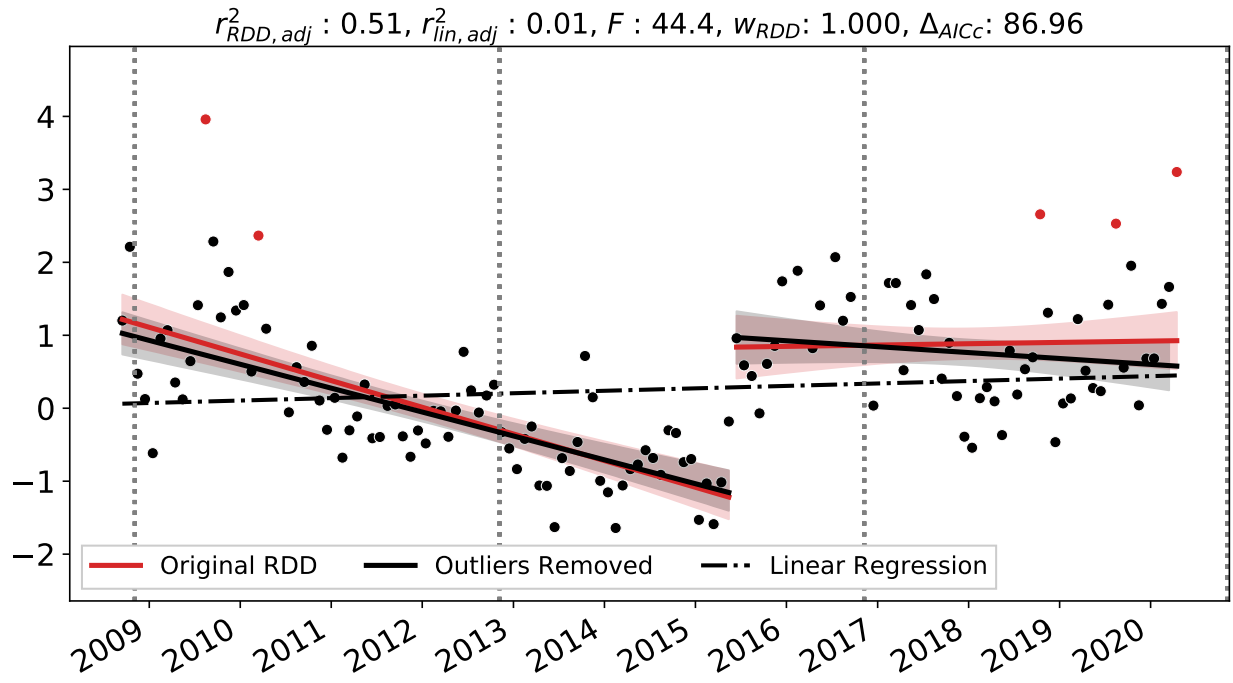## 1.2 Quotation Aggregation, Excluding Outliers

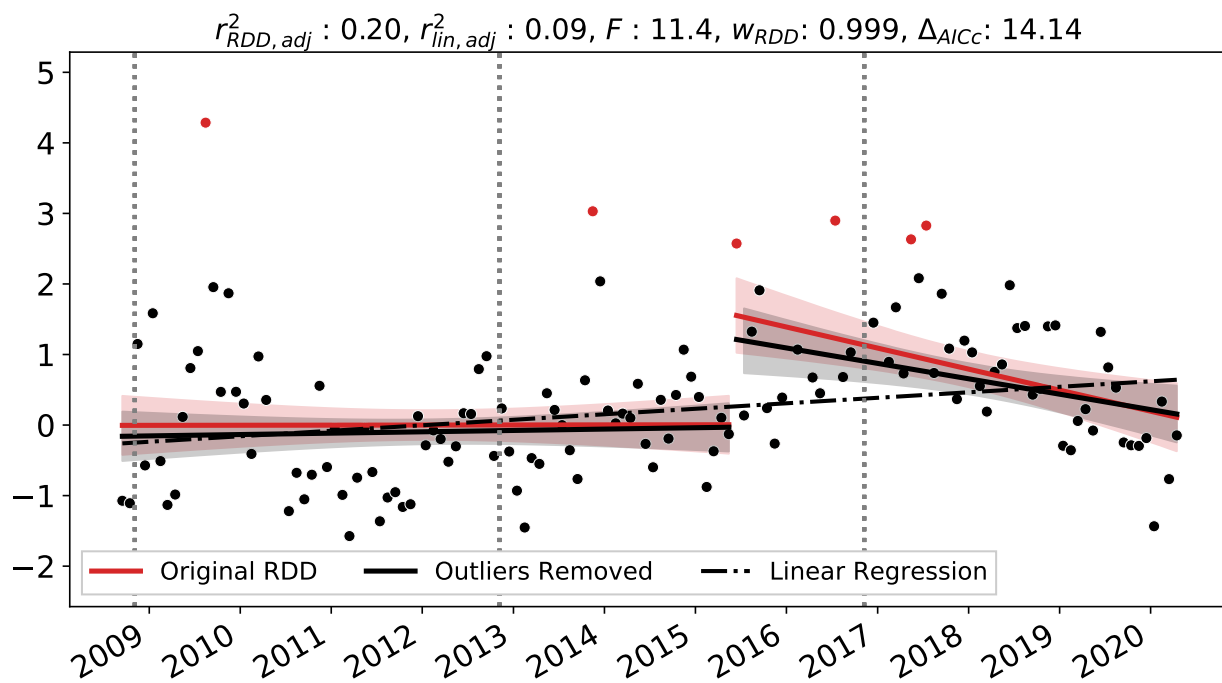Figure 13: Neg. Emotion (empath): Quotation Aggregation (Outliers removed)

Figure 14: Pos. Emotion (empath): Quotation Aggregation (Outliers removed)

Figure 15: Science (empath): Quotation Aggregation (Outliers removed)
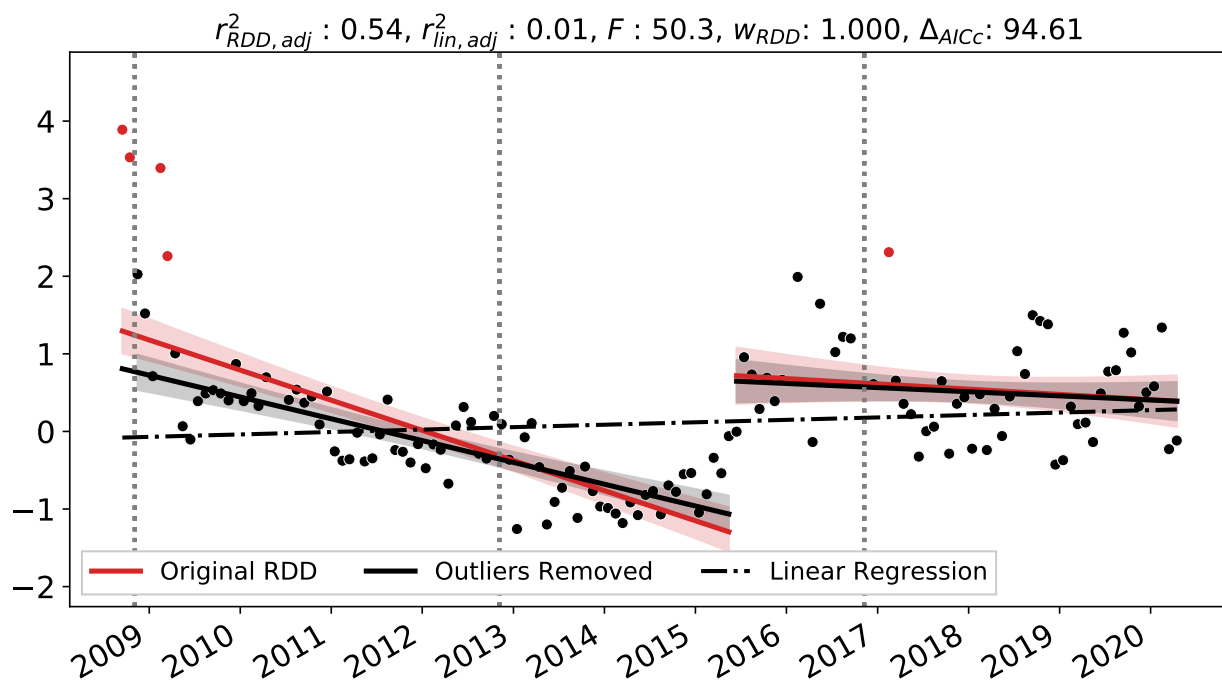
Figure 16: Swearing (empath): Quotation Aggregation (Outliers removed)
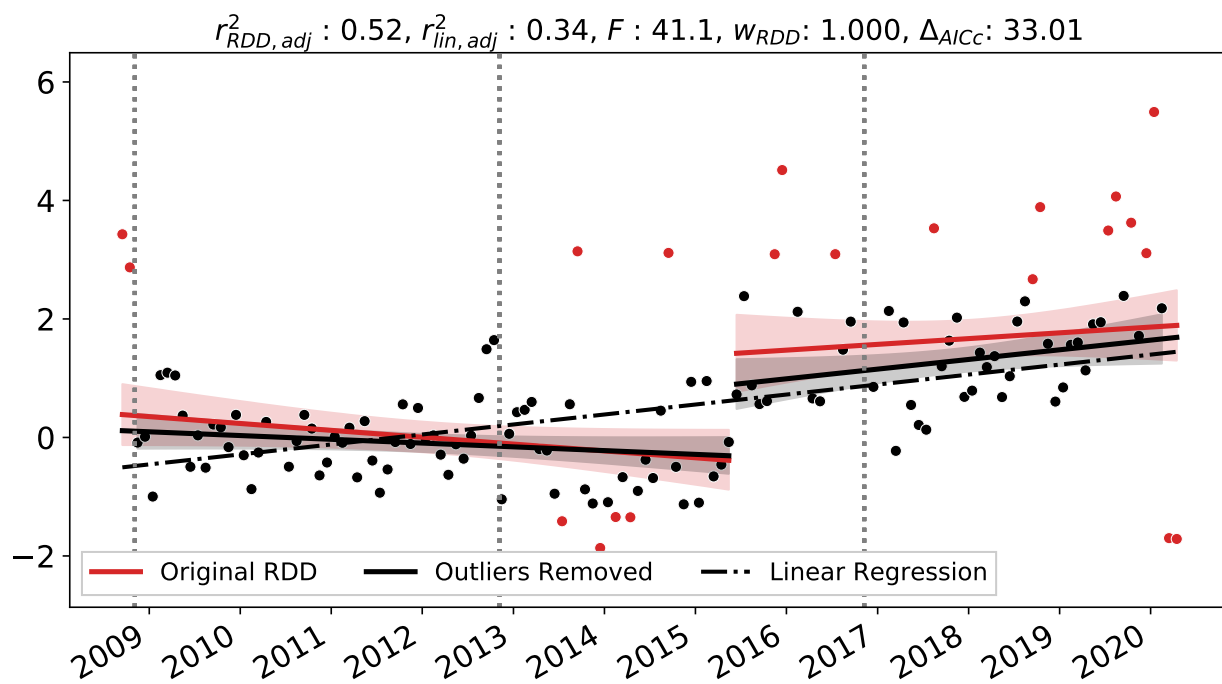
Figure 17: Anger: Quotation Aggregation (Outliers removed)

$r^2_{RDD, adj}$: 0.24, $r^2_{lin, adj}$: 0.03, F : 14.1, w_{RDD}: 1.000, Δ_{AICc}: 28.62
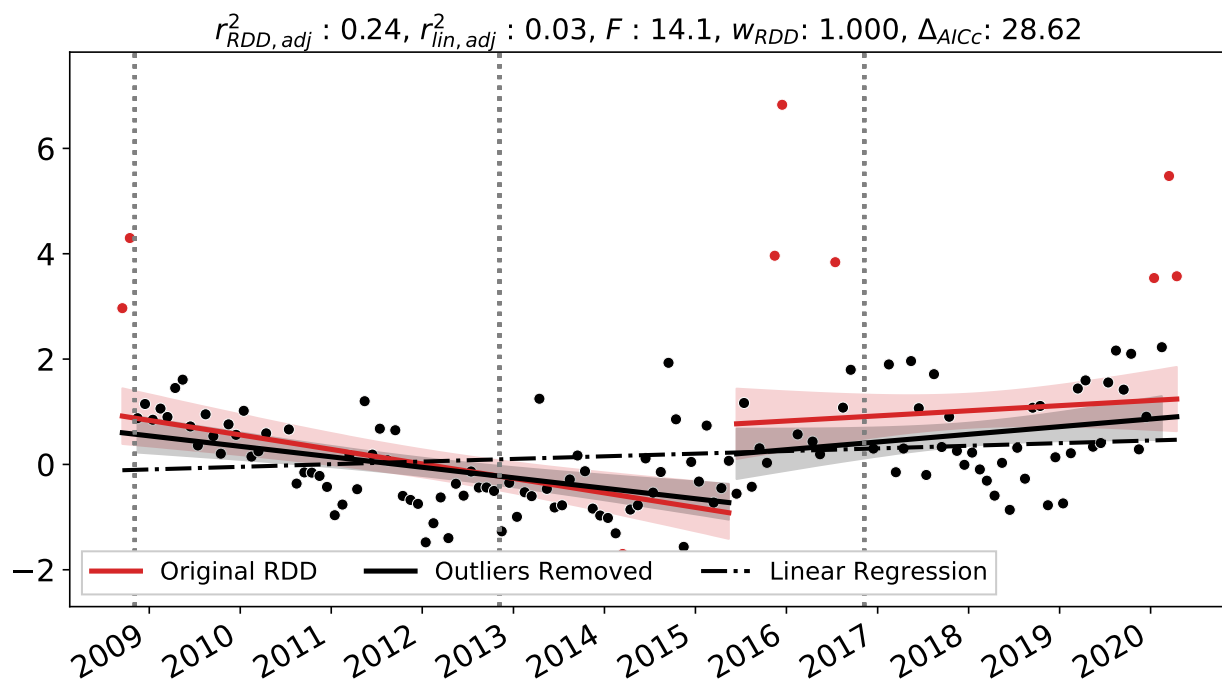
Figure 18: Anxiety: Quotation Aggregation (Outliers removed)

$r^2_{RDD, adj}$: 0.42, $r^2_{lin, adj}$: 0.16, F : 29.2, w_{RDD}: 1.000, Δ_{AICc}: 42.12
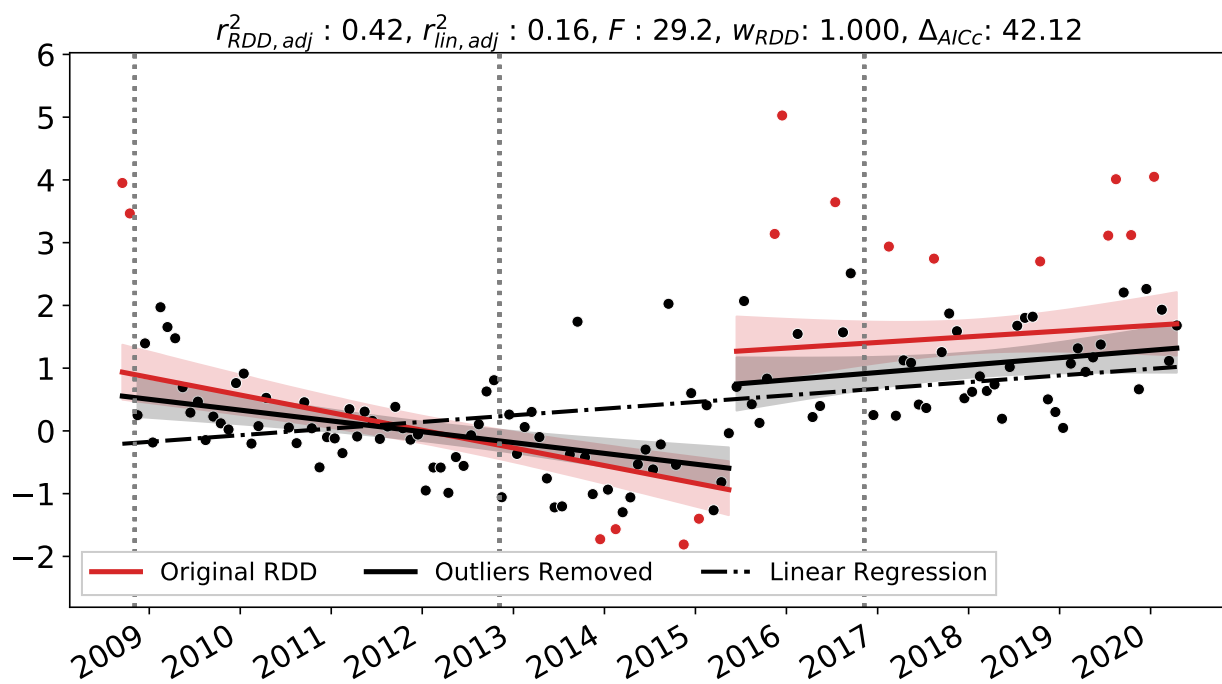
Figure 19: Negative Emotions: Quotation Aggregation (Outliers removed)

12

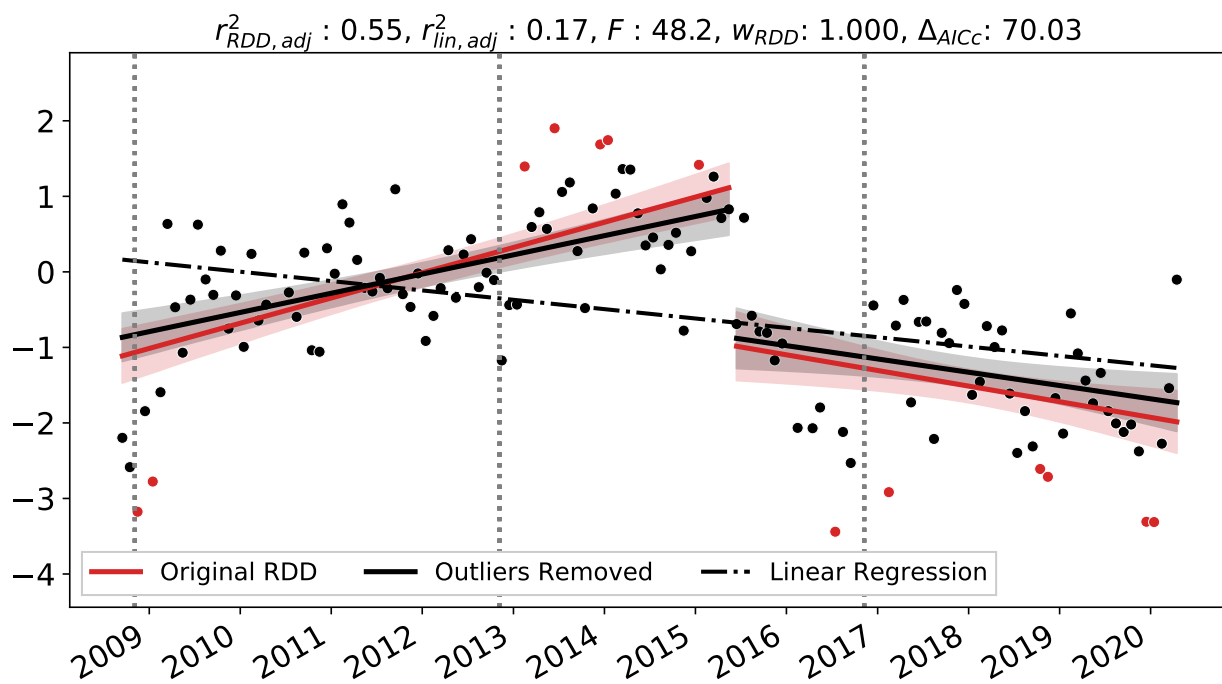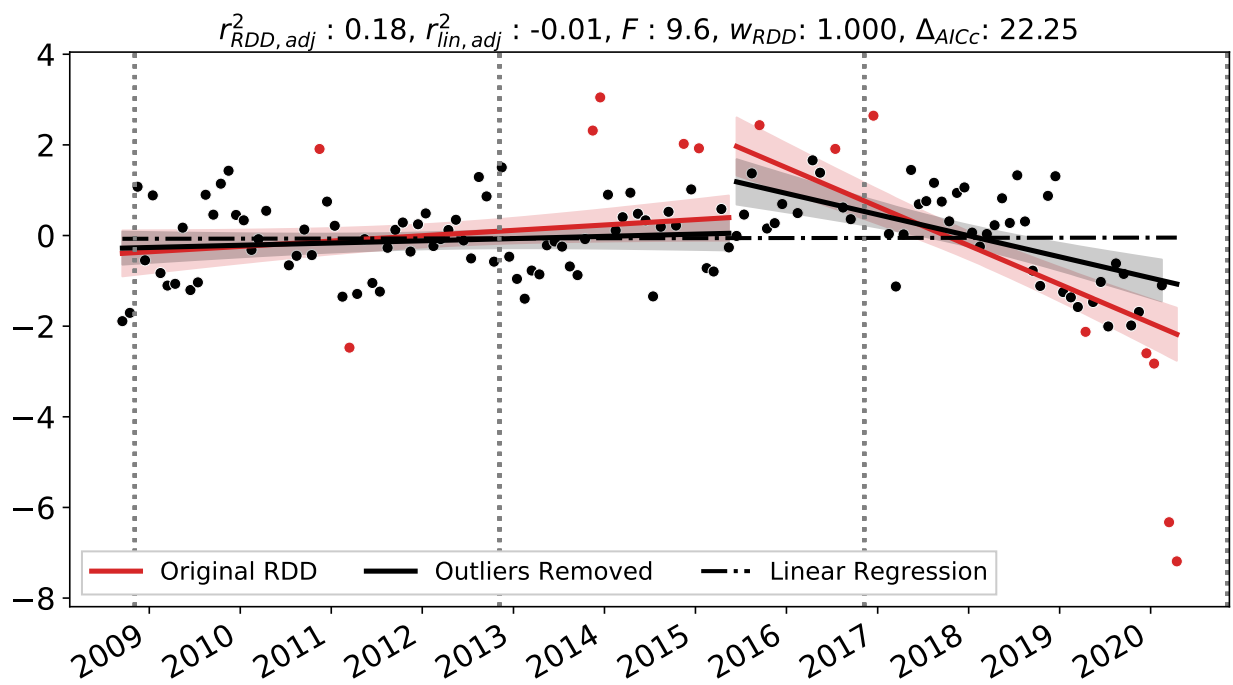Figure 20: Positive Emotions: Quotation Aggregation (Outliers removed)
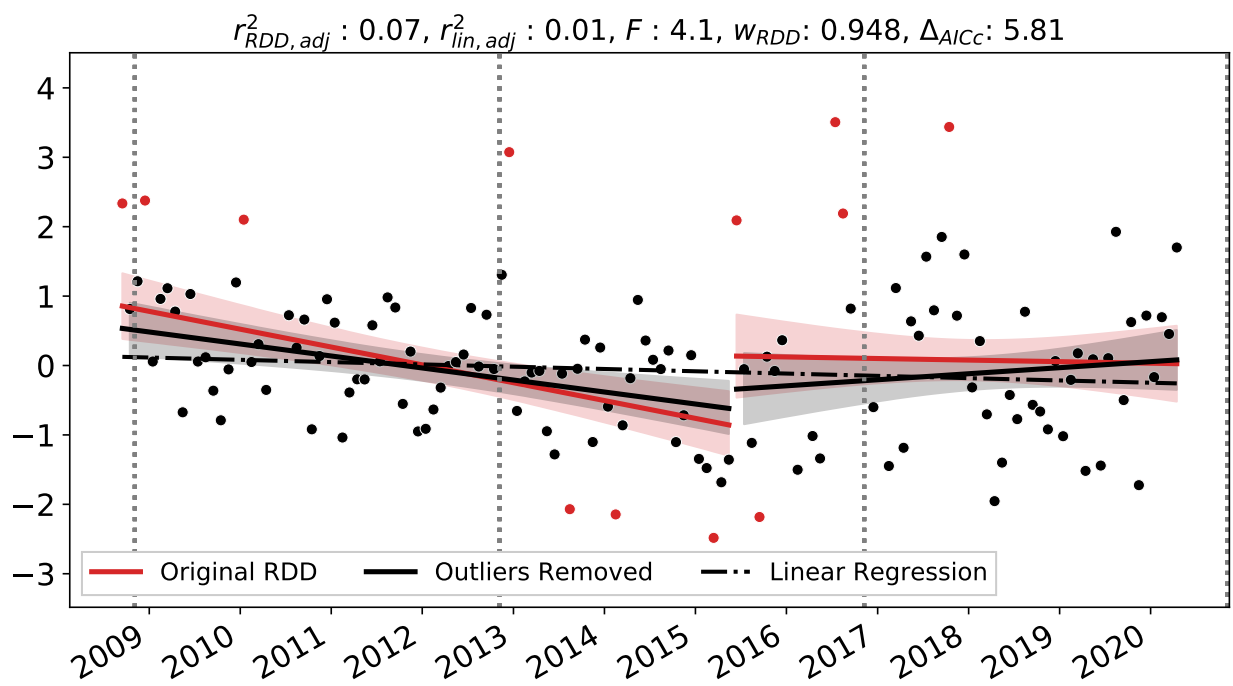
Figure 21: Sadness: Quotation Aggregation (Outliers removed)

13
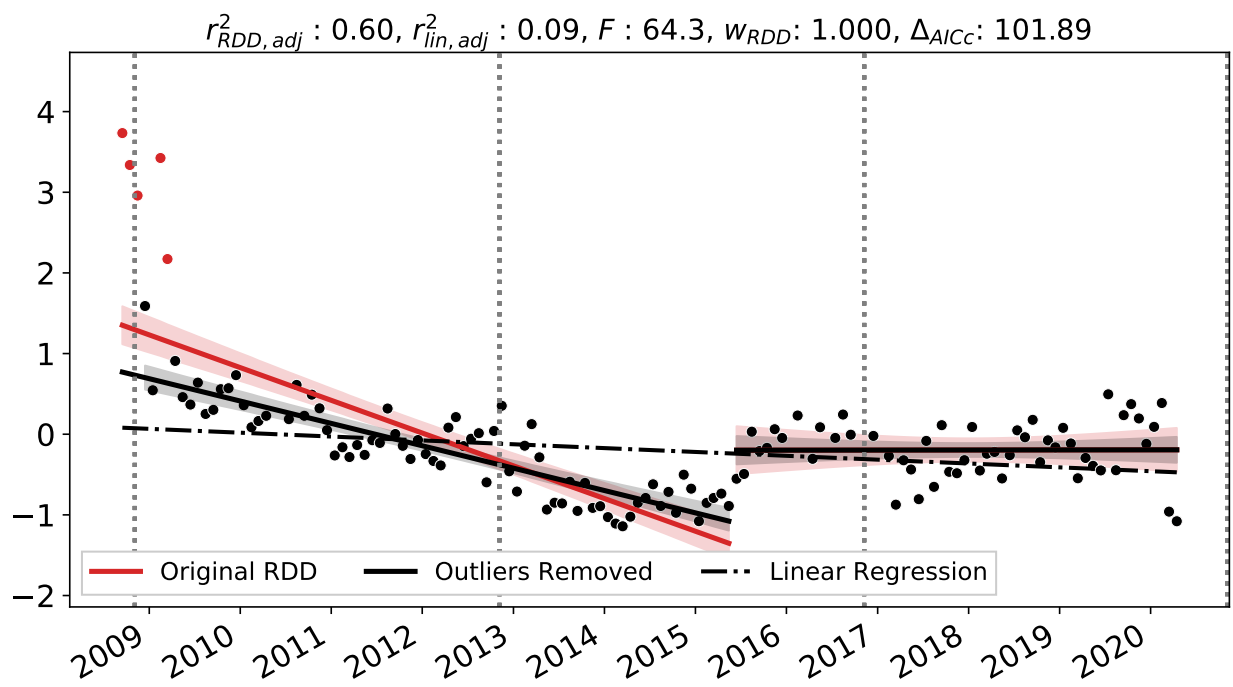
Figure 22: Swearing Terms: Quotation Aggregation (Outliers removed)

1.3 Speaker Aggregation

$$r^2_{RDD,adj} : 0.66, r^2_{lin,adj} : 0.35, F : 84.9, w_{RDD} : 1.000, \Delta_{AICc} : 81.92$$

α_0=-2.2***(-2.4, -1.9), β_0=-0.03***(-0.04, -0.03), α=0.8***(0.4, 1.1), β=0.04***(0.03, 0.05)
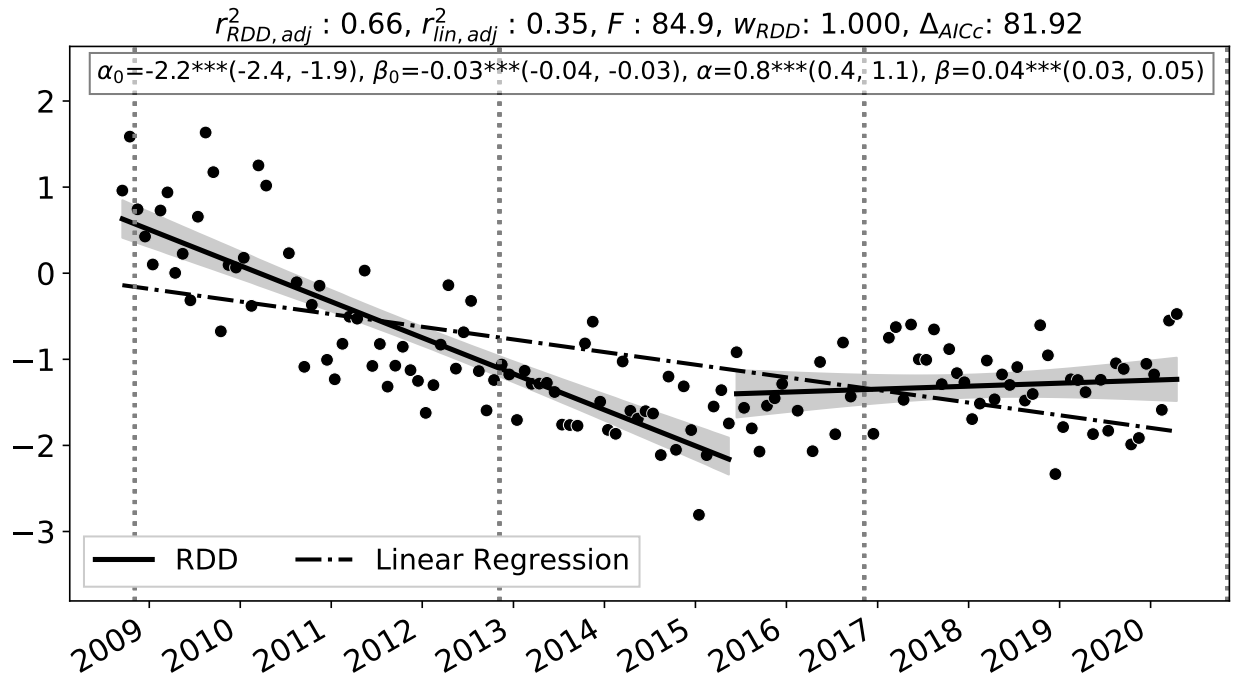
Figure 23: Neg. Emotion (empath): Speaker Aggregation

$r^2_{RDD,adj}$: 0.06, $r^2_{lin,adj}$: 0.01, F : 3.8, w_{RDD}: 0.902, Δ_{AICc}: 4.43

α_0=0.5**(0.2, 0.8), β_0=0.001(-0.007, 0.008), α=0.7**(0.2, 1.3), β=-0.01*(-0.03, 0)
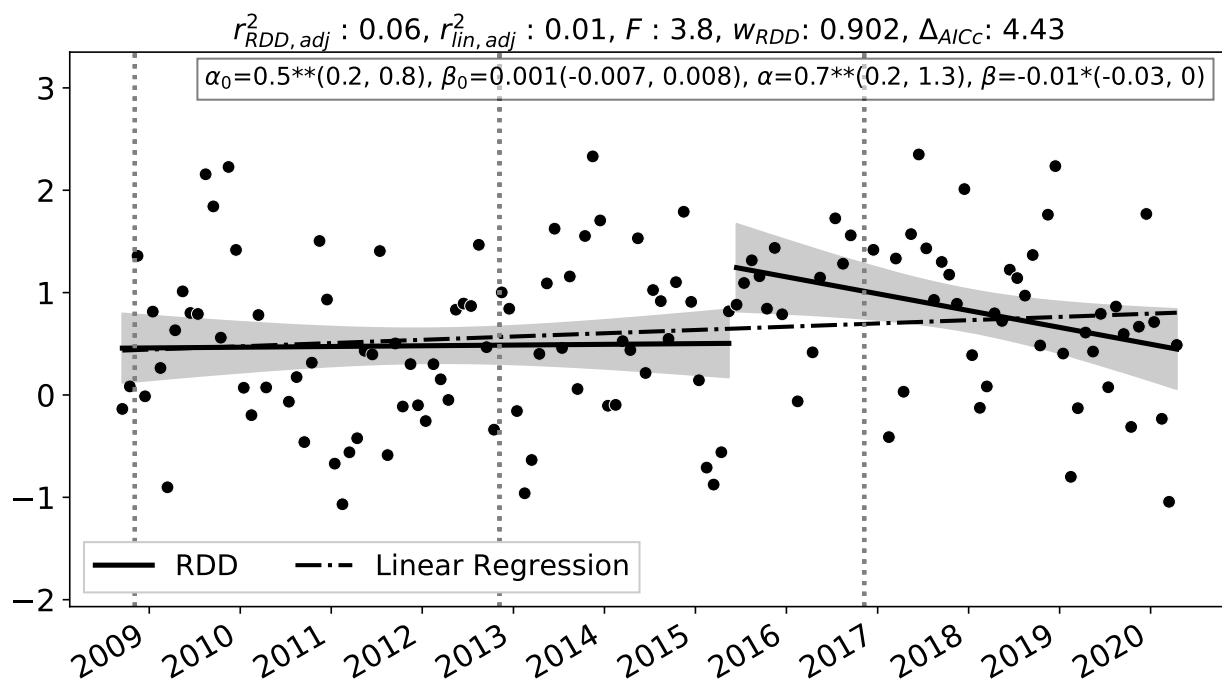
Figure 24: Pos. Emotion (empath): Speaker Aggregation

$r^2_{RDD,adj}$: 0.22, $r^2_{lin,adj}$: -0.00, F : 13.6, w_{RDD}: 1.000, Δ_{AICc}: 31.68

α_0=2.3***(2, 2.6), β_0=0.02***(0.01, 0.03), α=-0.5(-1, 0.02), β=-0.03***(-0.05, -0.02)
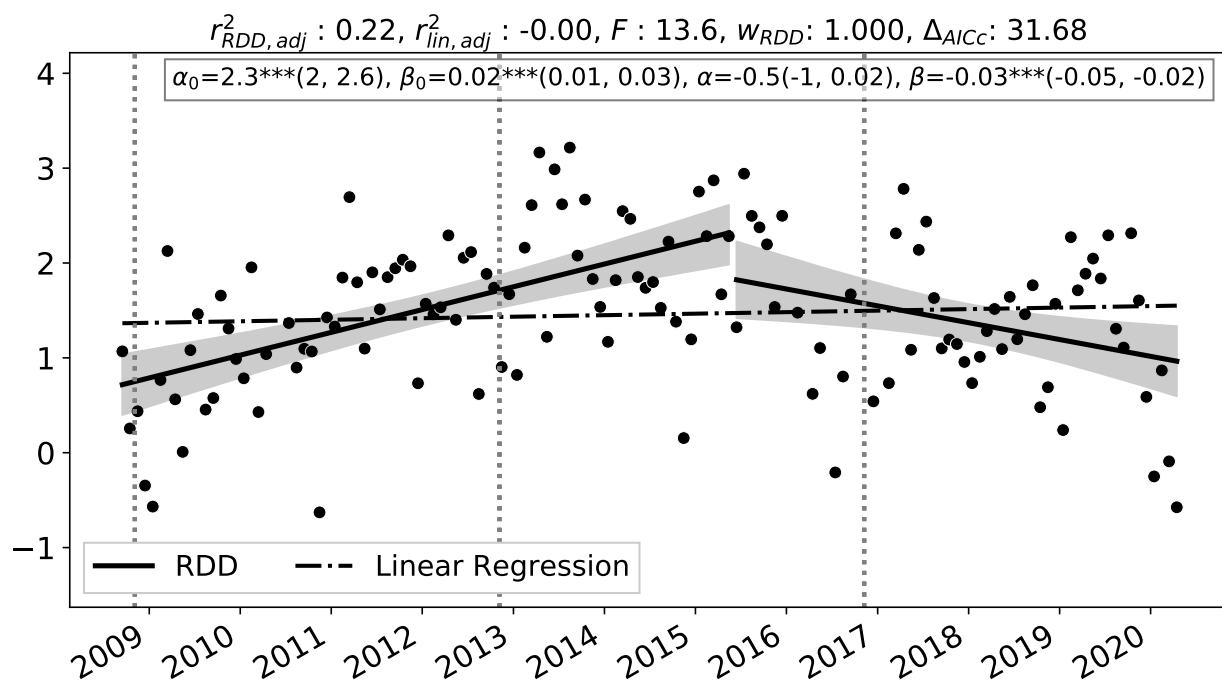
Figure 25: Science (empath): Speaker Aggregation

16

$r^2_{RDD,adj}$: 0.54, $r^2_{lin,adj}$: 0.39, F : 52.6, w_{RDD}: 1.000, Δ_{AICc}: 34.81

α_0=-1.5***(-1.7, -1.3), β_0=-0.02***(-0.03, -0.02), α=0.5**(0.1, 0.8), β=0.02***(0.01, 0.03)
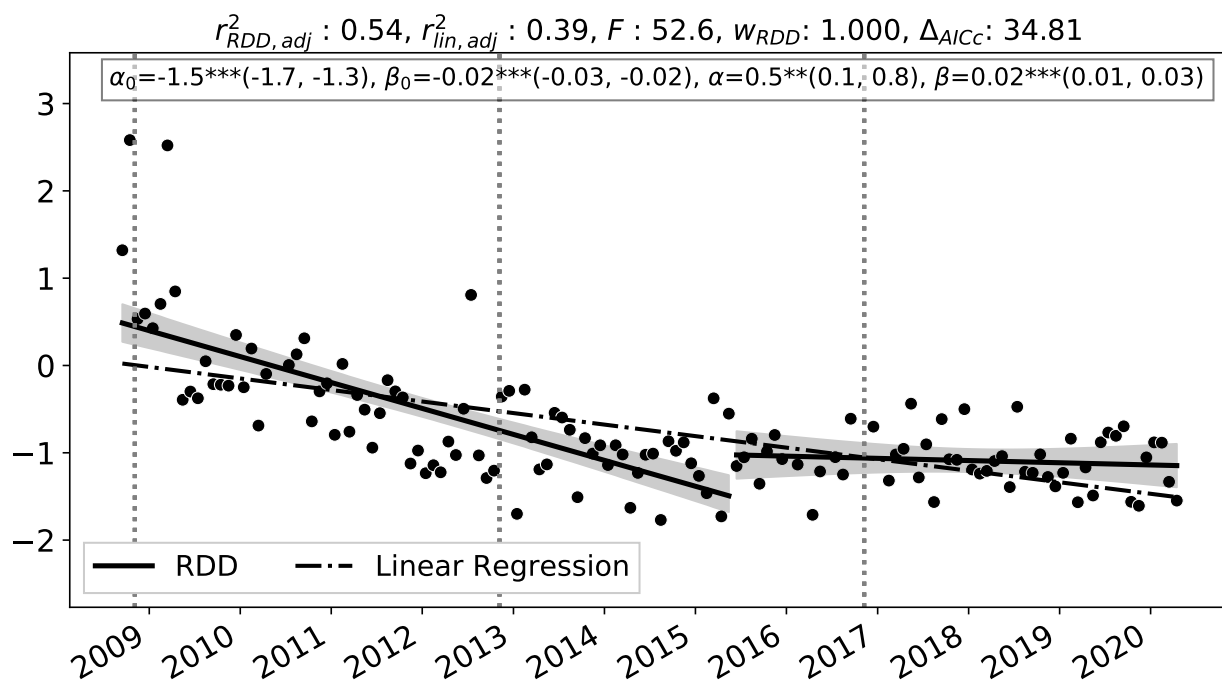
Figure 26: Swearing (empath): Speaker Aggregation

$r^2_{RDD,adj}$: 0.21, $r^2_{lin,adj}$: 0.01, F : 12.7, w_{RDD}: 1.000, Δ_{AICc}: 27.30

α_0=-2.9***(-3.1, -2.7), β_0=-0.01***(-0.01, -0.006), α=0.6**(0.2, 0.9), β=0.02***(0.007, 0.03)
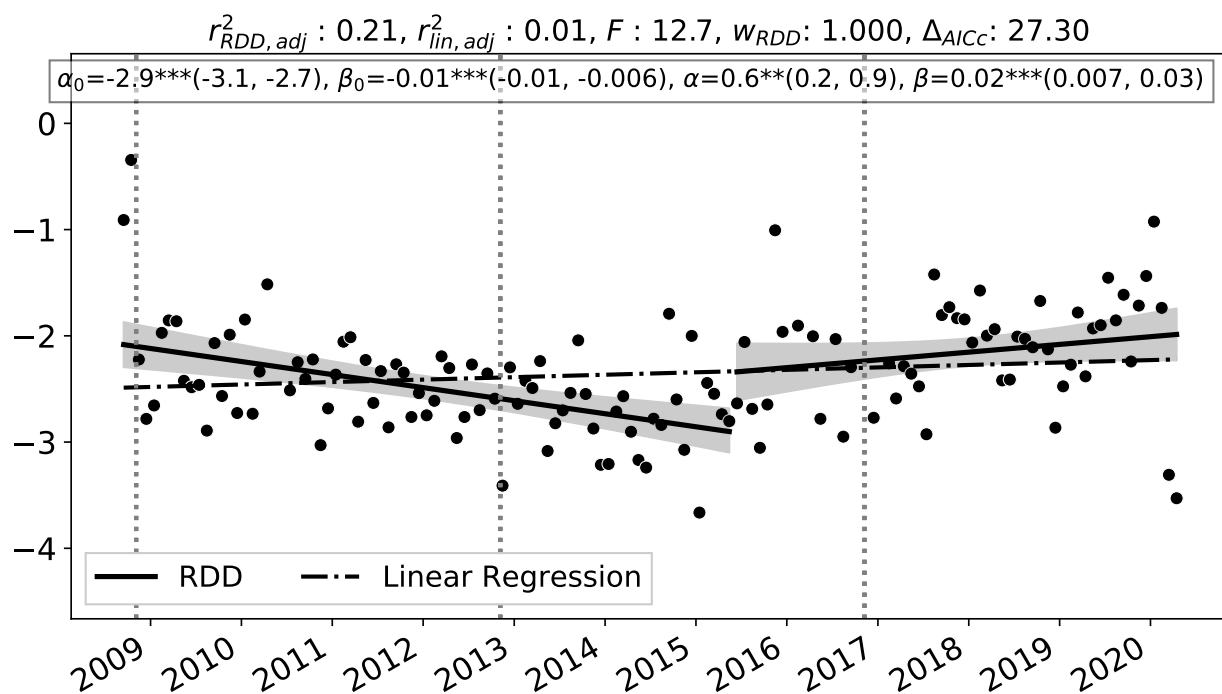
Figure 27: Anger: Speaker Aggregation

17

$r^2_{RDD,adj}$: 0.23, $r^2_{lin,adj}$: 0.02, F : 14.3, w_{RDD}: 1.000, Δ_{AICc}: 30.23

α_0=-2.2***(-2.7, -1.8), β_0=-0.02***(-0.03, -0.01), α=0.6(-0.1, 1.3), β=0.05***(0.03, 0.07)
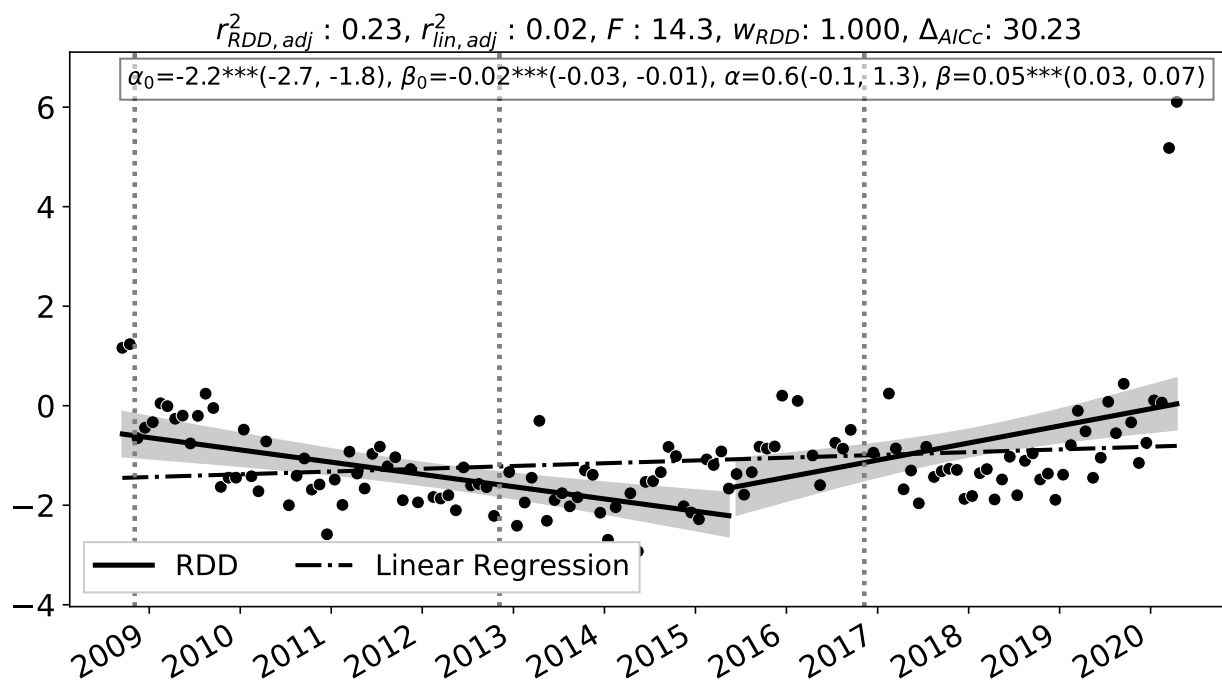
Figure 28: Anxiety: Speaker Aggregation

$r^2_{RDD,adj}$: 0.51, $r^2_{lin,adj}$: 0.11, F : 45.6, w_{RDD}: 1.000, Δ_{AICc}: 75.09

α_0=-3.5***(-3.7, -3.3), β_0=-0.03***(-0.04, -0.03), α=0.8***(0.4, 1.2), β=0.04***(0.03, 0.05)
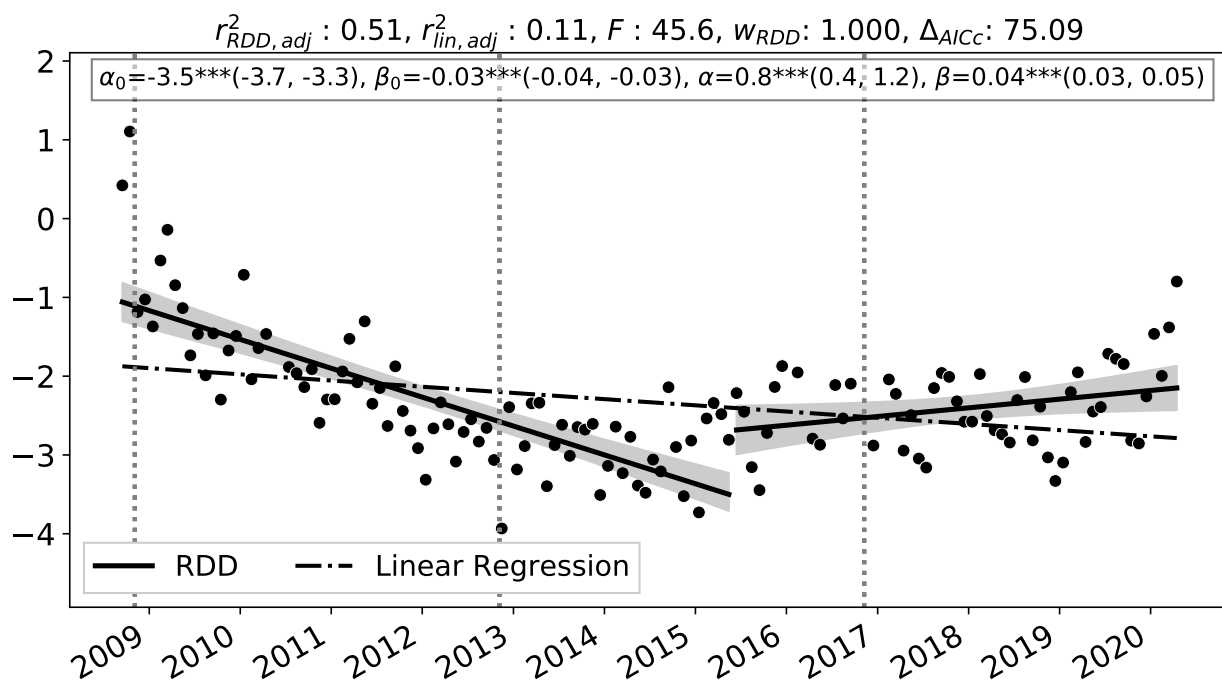
Figure 29: Negative Emotions: Speaker Aggregation

18

$r^2_{RDD, adj}$: 0.09, $r^2_{lin, adj}$: -0.01, F : 5.5, w_{RDD}: 0.997, Δ_{AICc}: 11.48

α_0=1.2***(0.6, 1.7), β_0=0.01(0, 0.02), α=0.5(-0.4, 1.4), β=-0.05***(-0.07, -0.02)
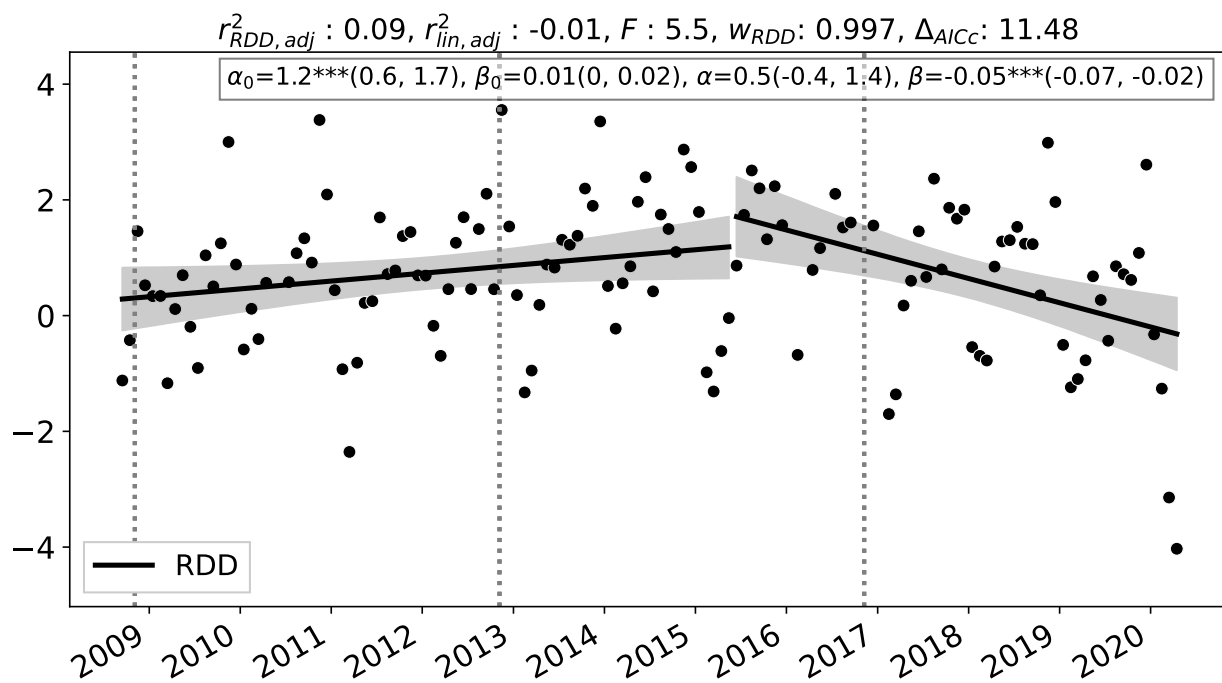
Figure 30: Positive Emotions: Speaker Aggregation

$r^2_{RDD, adj}$: 0.17, $r^2_{lin, adj}$: 0.01, F : 10.2, w_{RDD}: 1.000, Δ_{AICc}: 21.88

α_0=-2.3***(-2.7, -1.8), β_0=-0.02***(-0.03, -0.01), α=0.3(-0.5, 1), β=0.05***(0.03, 0.07)
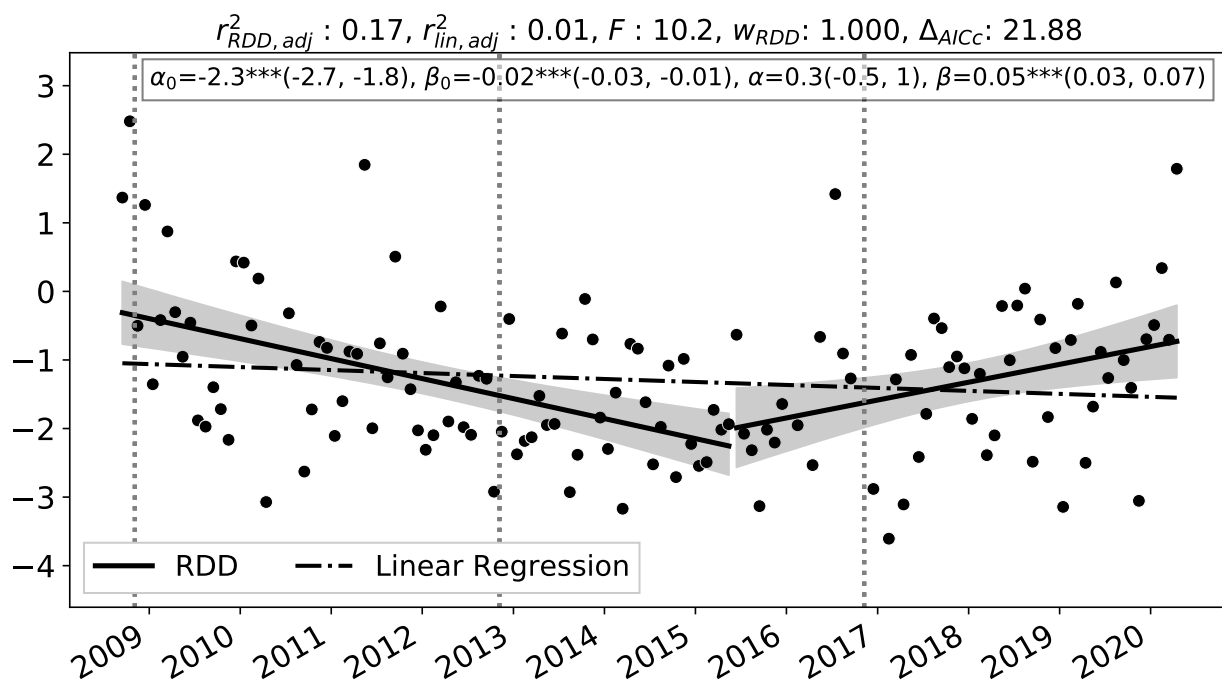
Figure 31: Sadness: Speaker Aggregation

19
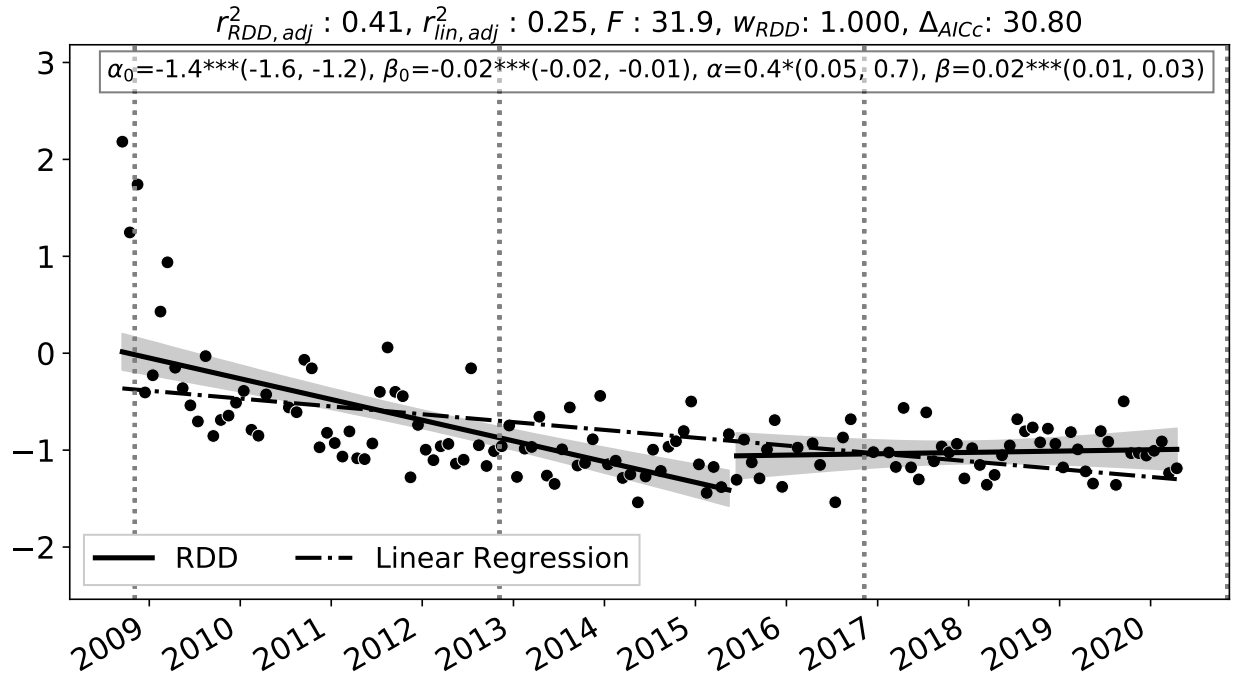
Figure 32: Swearing Terms: Speaker Aggregation
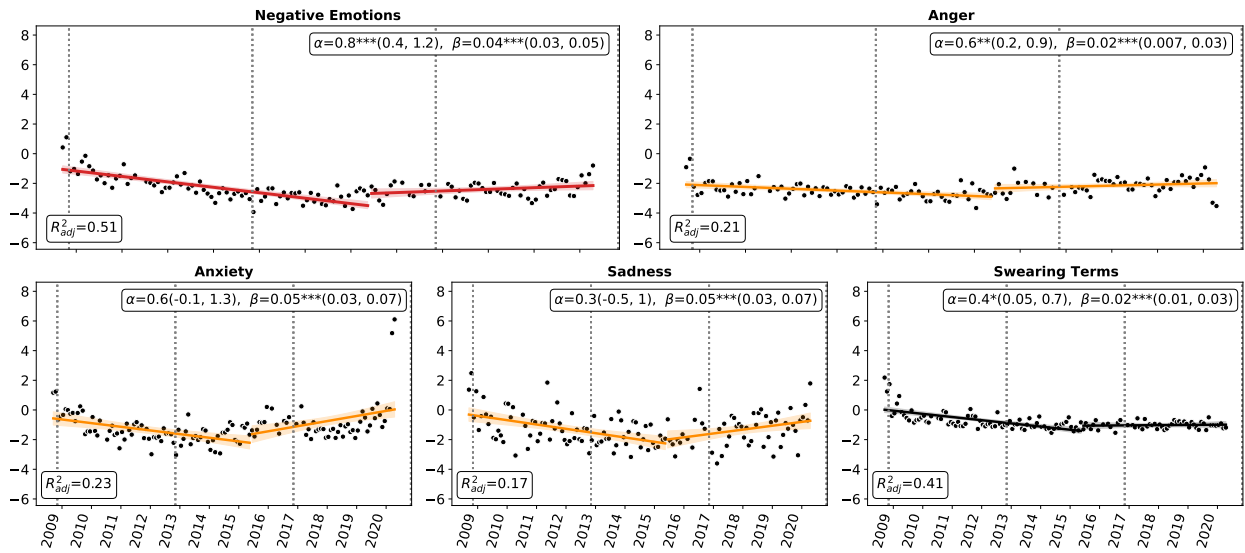
Figure 33: Negative Language: Speaker Aggregation
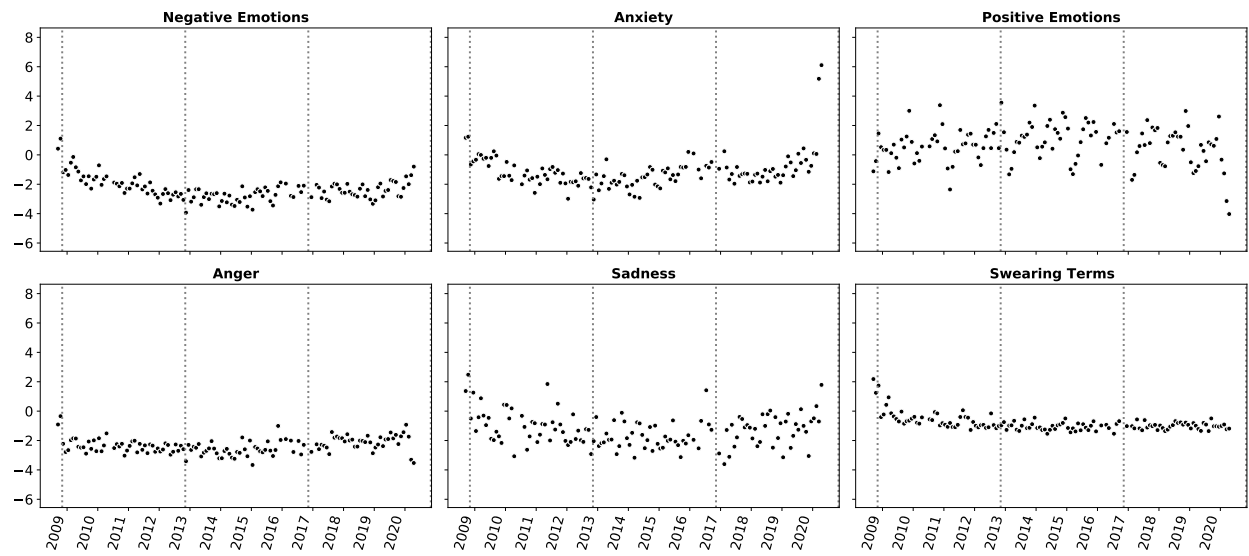
Figure 34: Raw Sentiment Scores: Speaker Aggregation

1.4 Speaker Aggregation, Excluding Outliers
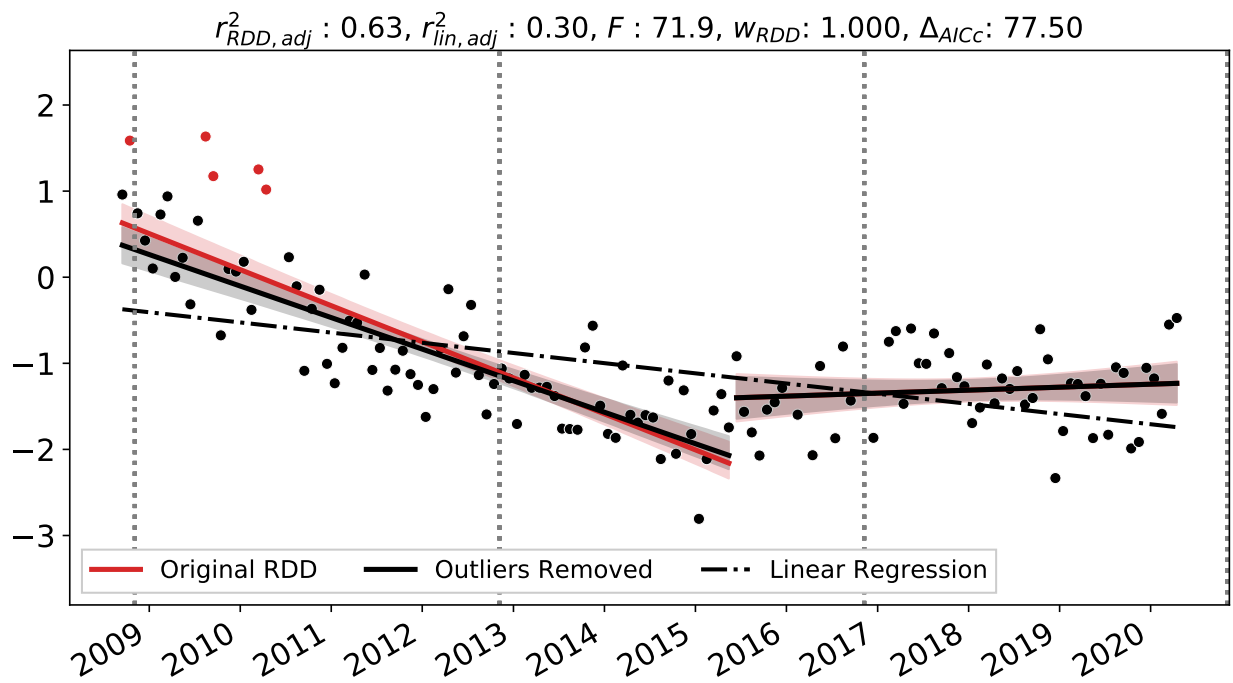
Figure 35: Neg. Emotion (empath): Speaker Aggregation (Outliers removed)
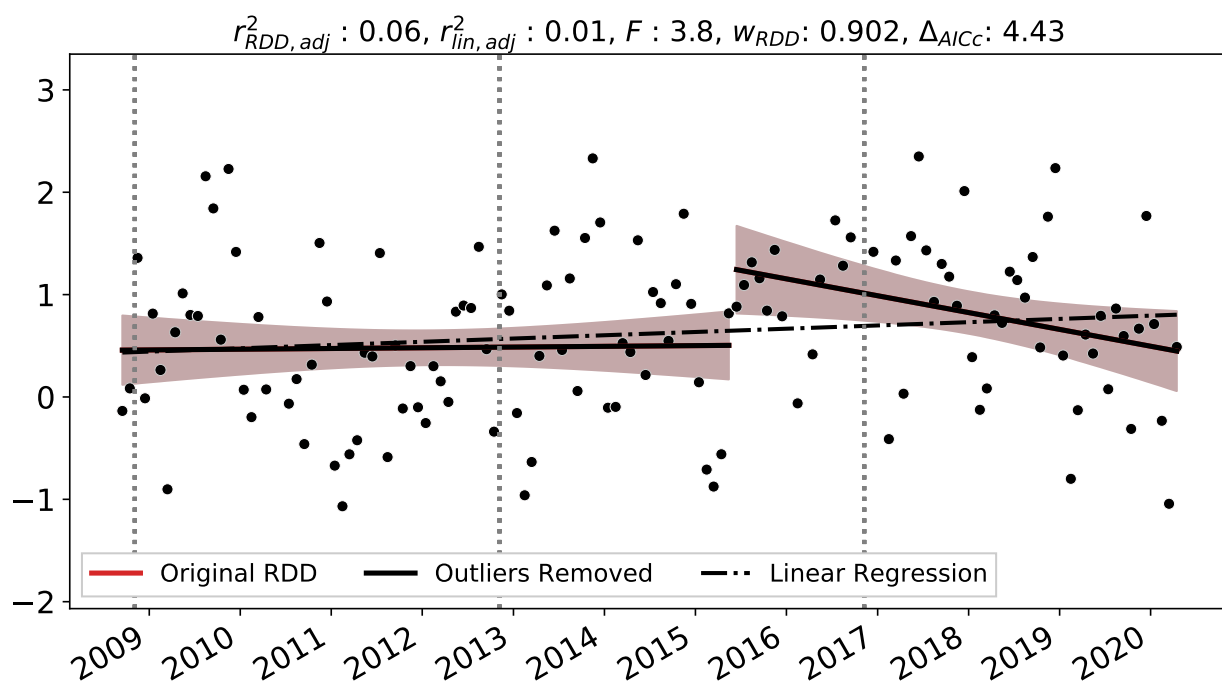
Figure 36: Pos. Emotion (empath): Speaker Aggregation (Outliers removed)
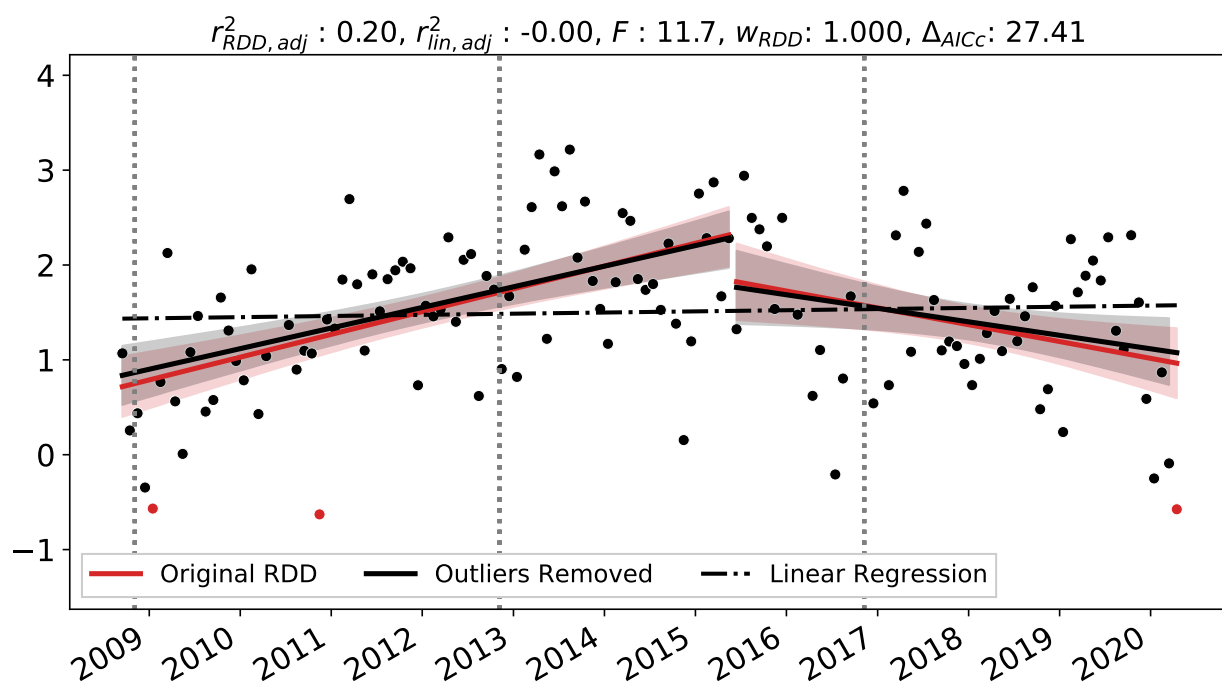
Figure 37: Science (empath): Speaker Aggregation (Outliers removed)

$r^2_{RDD,adj}$: 0.53, $r^2_{lin,adj}$: 0.40, F : 48.8, w_{RDD}: 1.000, Δ_{AICc}: 29.22
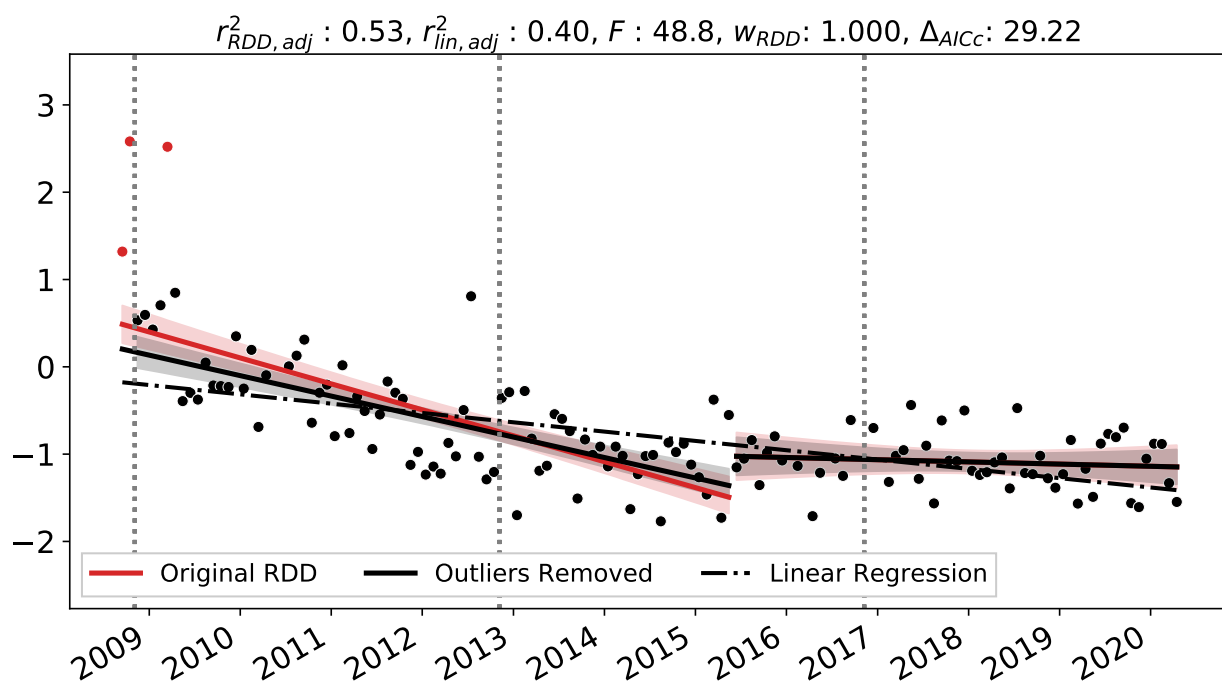
Figure 38: Swearing (empath): Speaker Aggregation (Outliers removed)

$r^2_{RDD,adj}$: 0.21, $r^2_{lin,adj}$: 0.04, F : 12.7, w_{RDD}: 1.000, Δ_{AICc}: 24.48
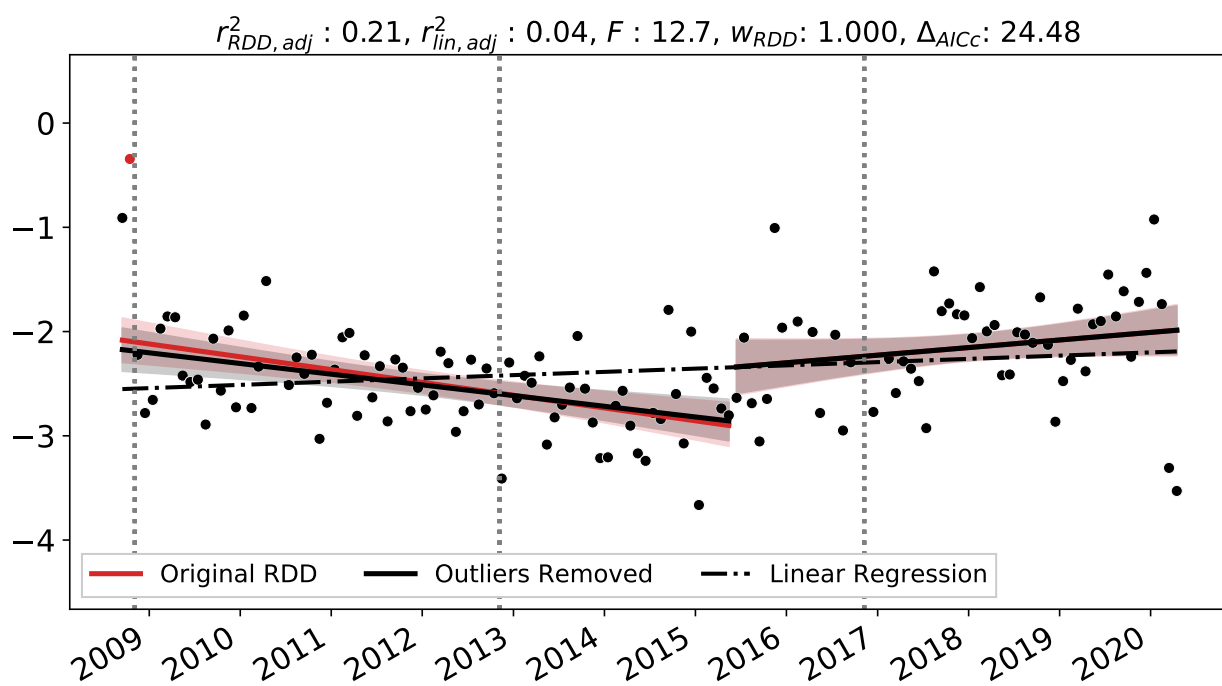
Figure 39: Anger: Speaker Aggregation (Outliers removed)
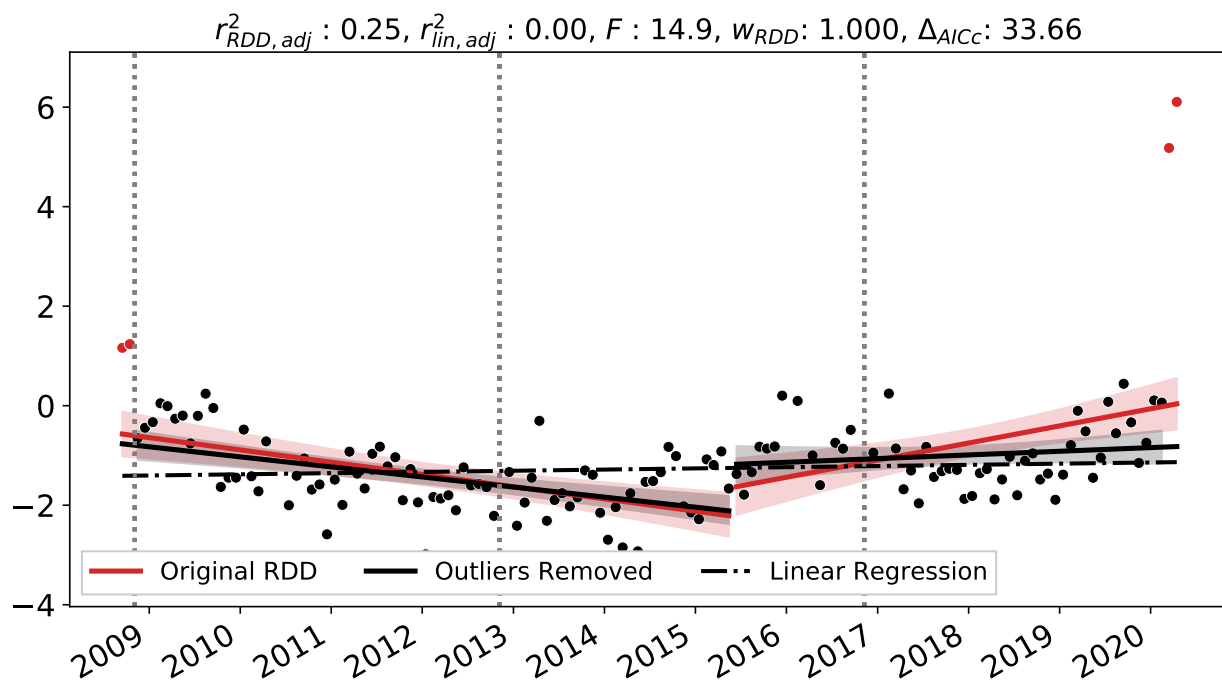
Figure 40: Anxiety: Speaker Aggregation (Outliers removed)
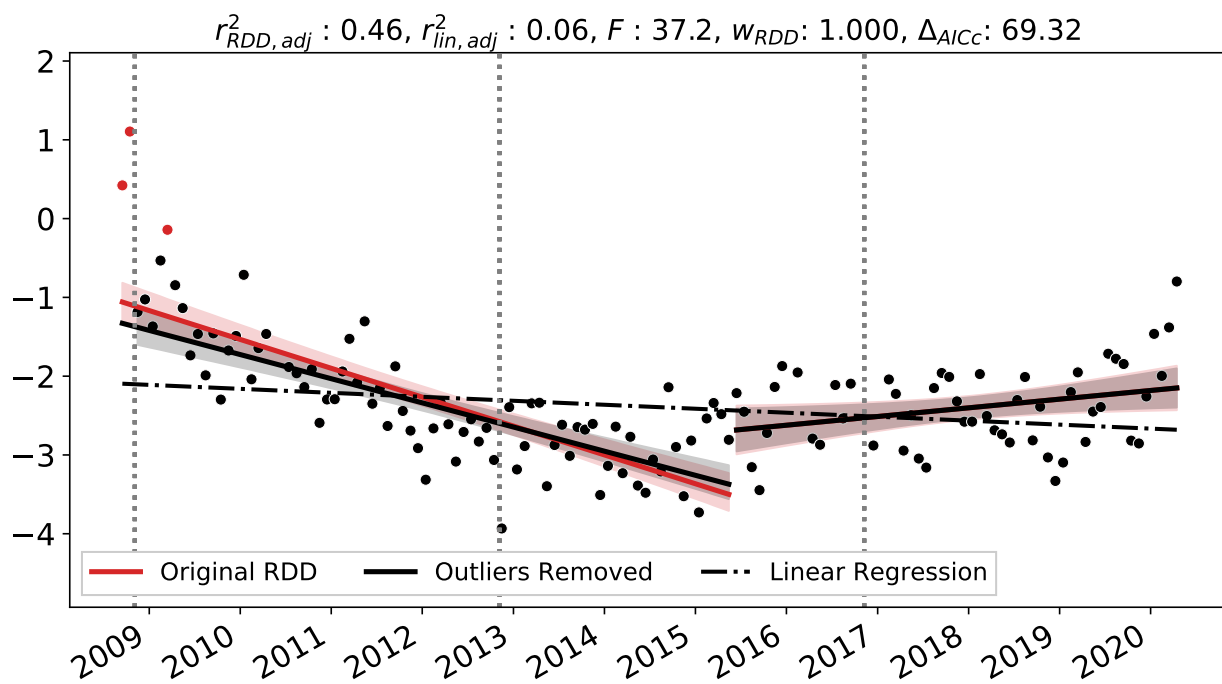
Figure 41: Negative Emotions: Speaker Aggregation (Outliers removed)
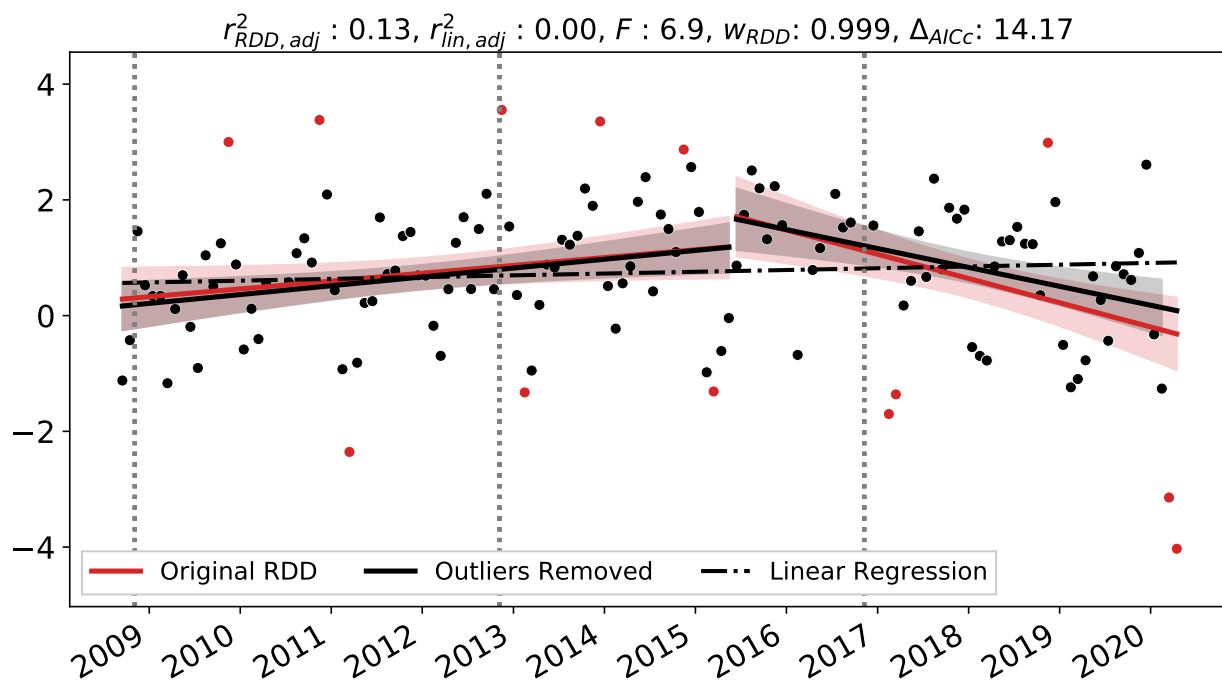
Figure 42: Positive Emotions: Speaker Aggregation (Outliers removed)
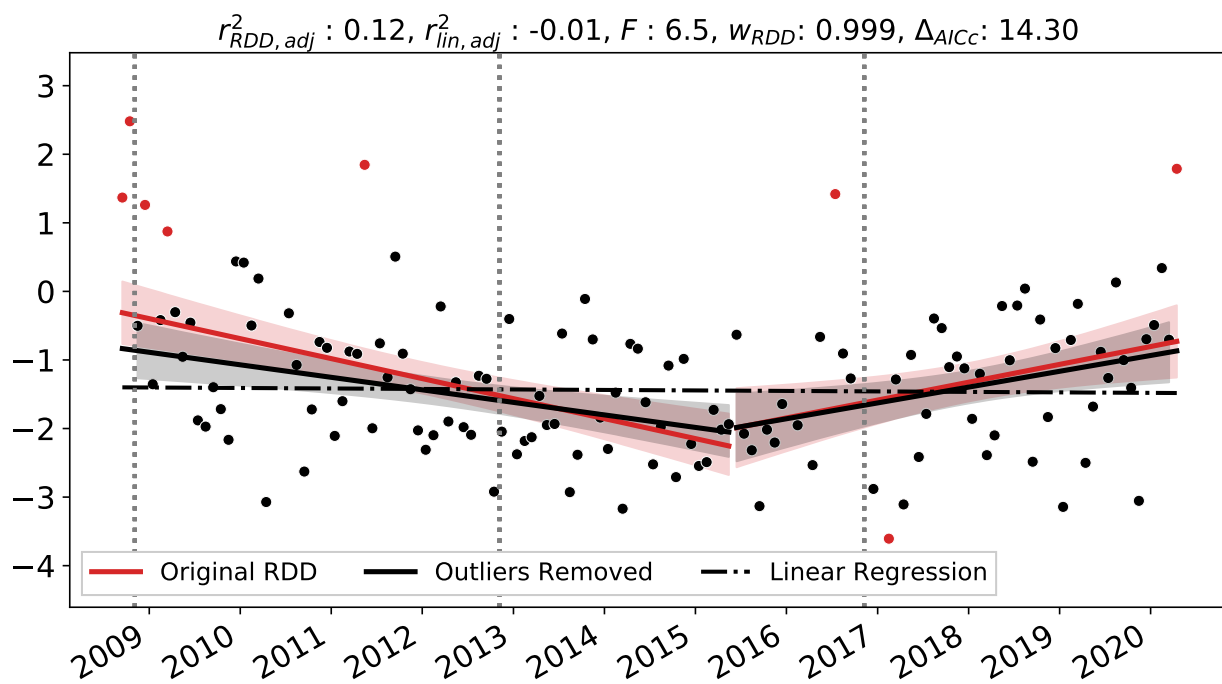
Figure 43: Sadness: Speaker Aggregation (Outliers removed)

$r^2_{RDD,adj}$: 0.37, $r^2_{lin,adj}$: 0.22, F : 26.1, w_{RDD}: 1.000, Δ_{AICc}: 24.75

Original RDD   Outliers Removed   Linear Regression
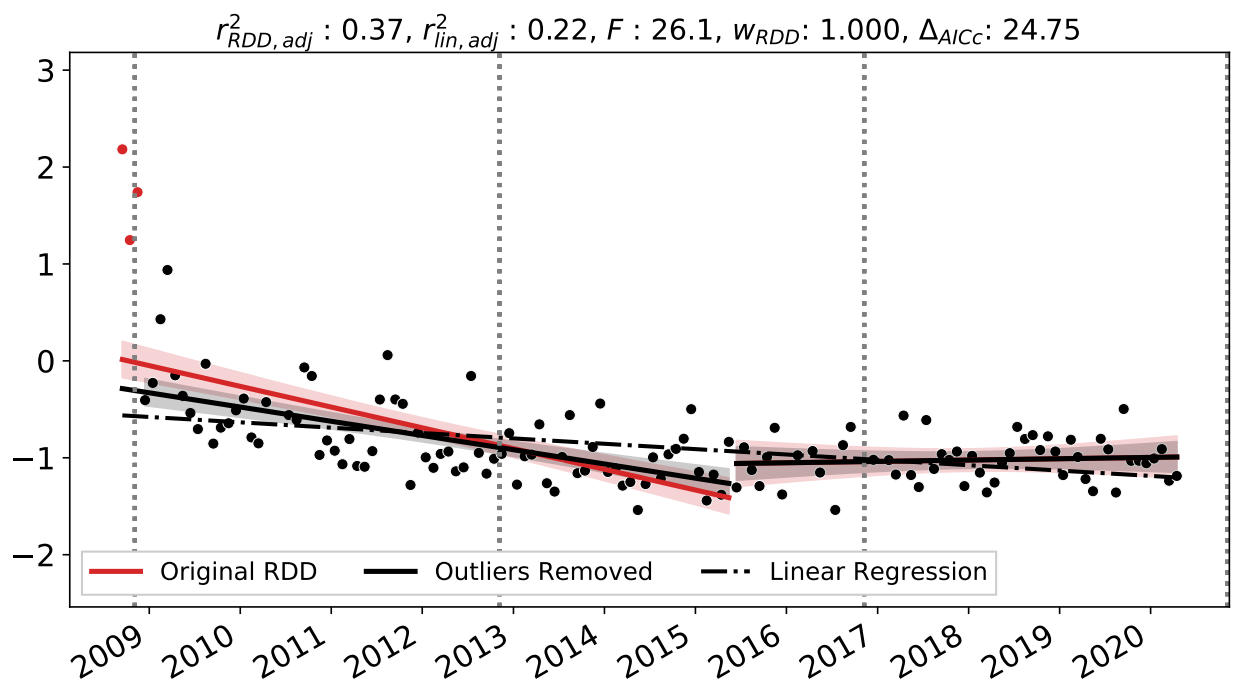
Figure 44: Swearing Terms: Speaker Aggregation (Outliers removed)

1.5 Verbosity Quartiles, Speaker Aggregation
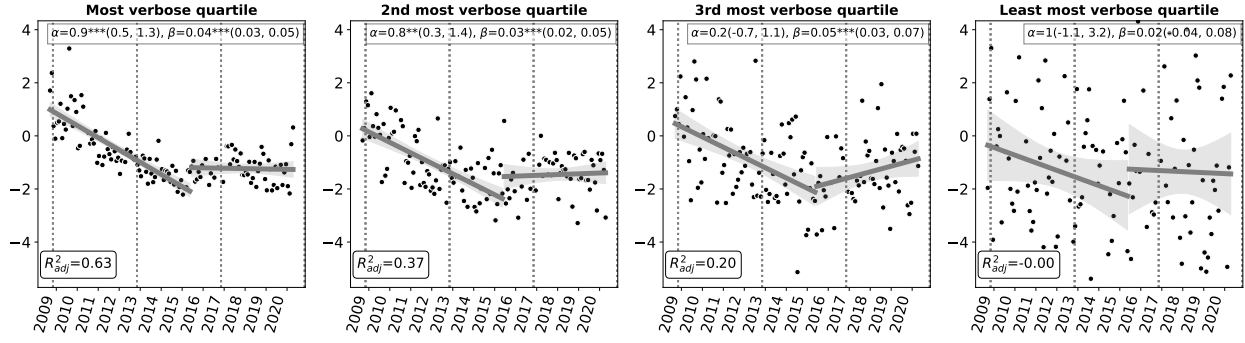
Figure 45: Neg. Emotion (empath): Speaker Aggregation with Speakers Divided in Verbosity Quartiles
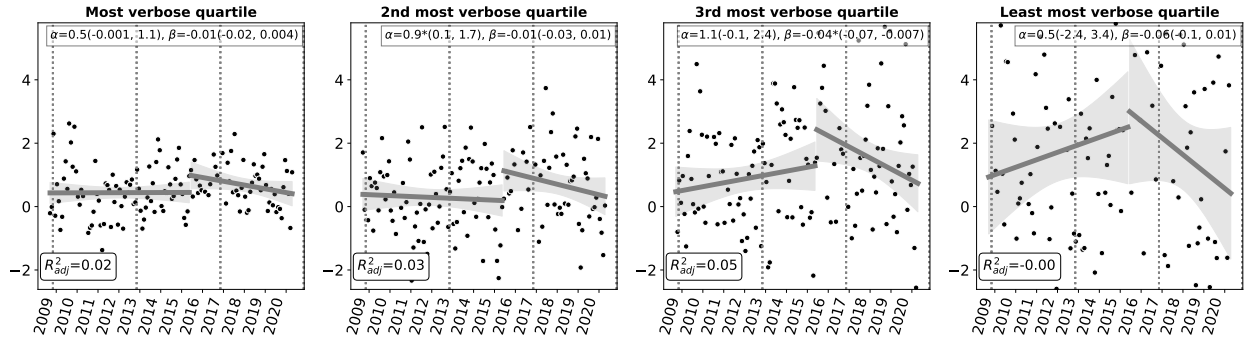
Figure 46: Pos. Emotion (empath): Speaker Aggregation with Speakers Divided in Verbosity Quartiles
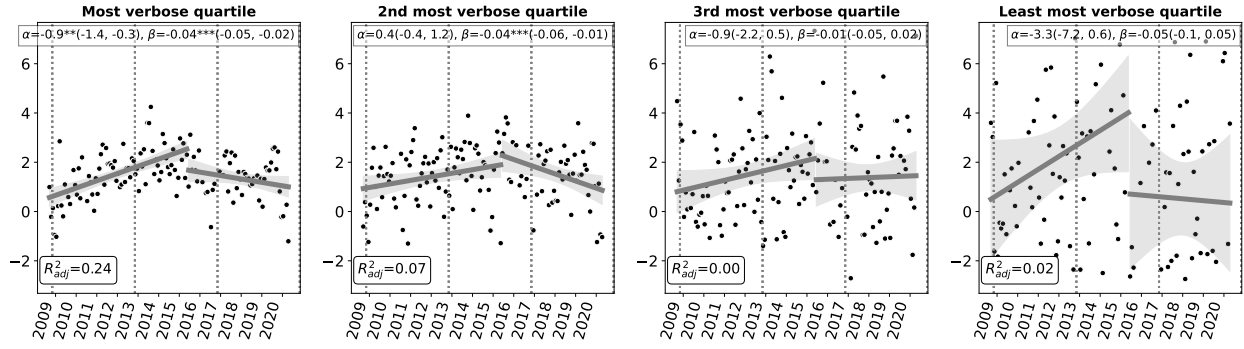
Figure 47: Science (empath): Speaker Aggregation with Speakers Divided in Verbosity Quartiles
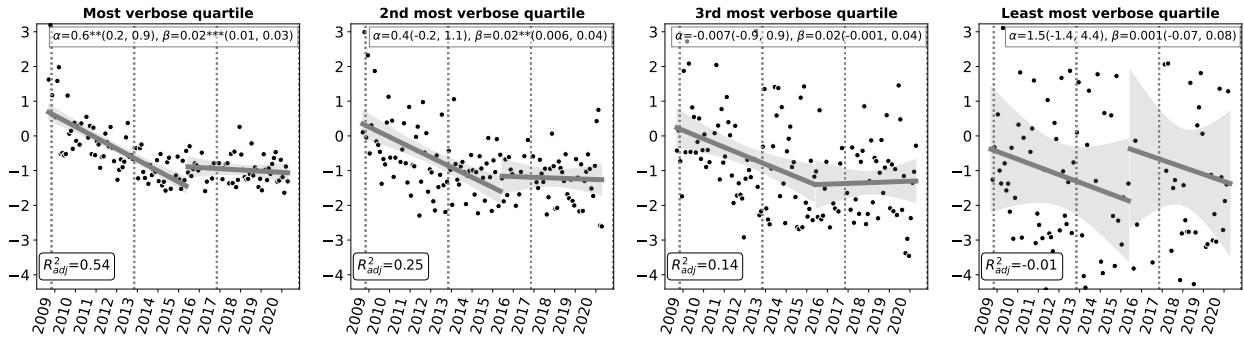
Figure 48: Swearing (empath): Speaker Aggregation with Speakers Divided in Verbosity Quartiles
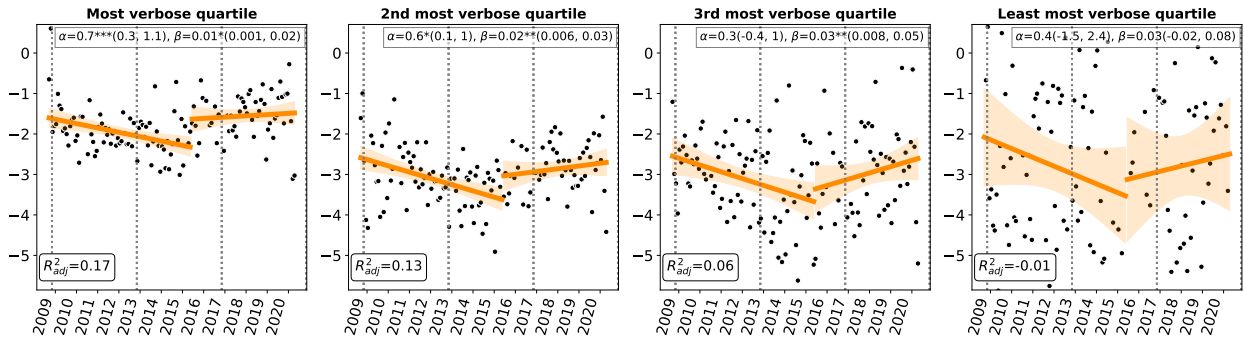
Figure 49: Anger: Speaker Aggregation with Speakers Divided in Verbosity Quartiles
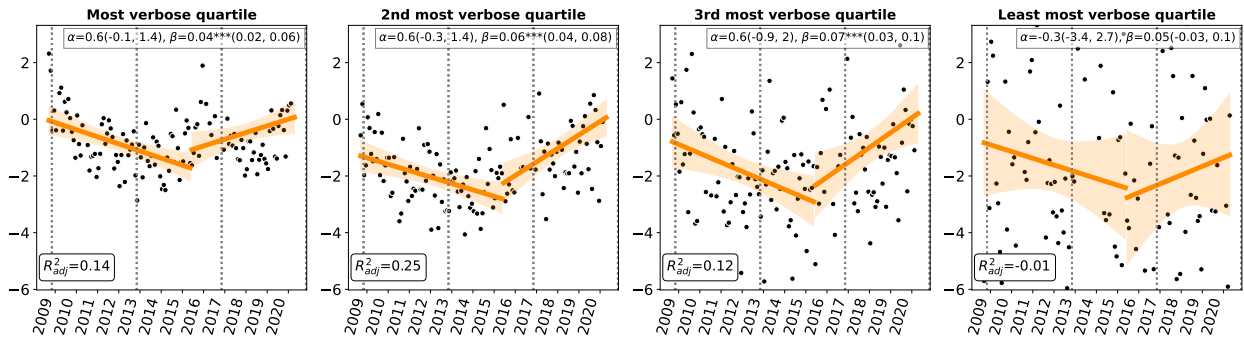
Figure 50: Anxiety: Speaker Aggregation with Speakers Divided in Verbosity Quartiles
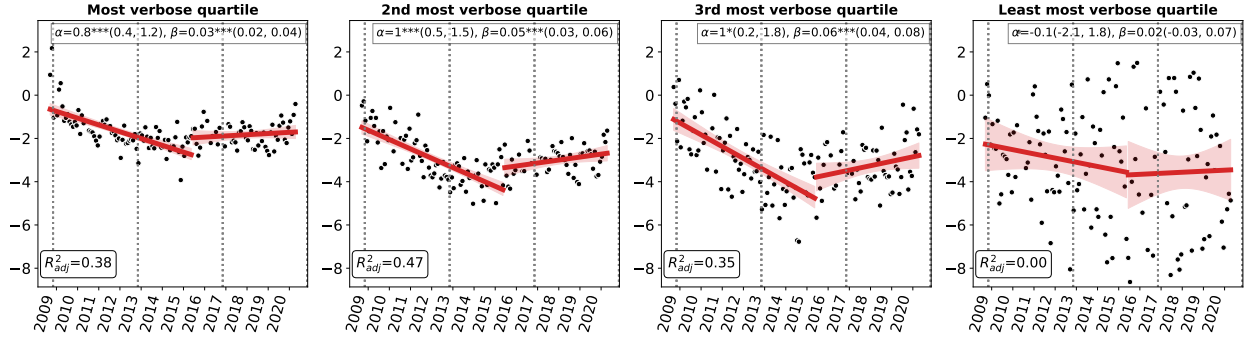
Figure 51: Negative Emotions: Speaker Aggregation with Speakers Divided in Verbosity Quartiles
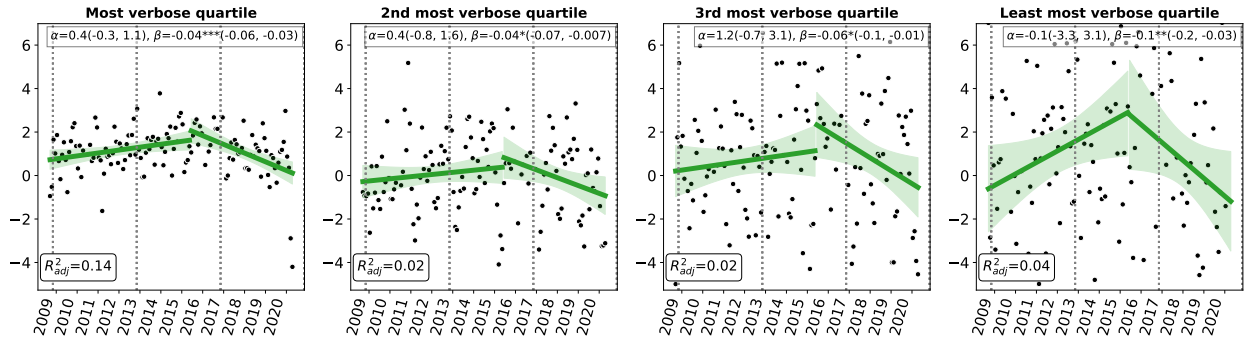
Figure 52: Positive Emotions: Speaker Aggregation with Speakers Divided in Verbosity Quartiles
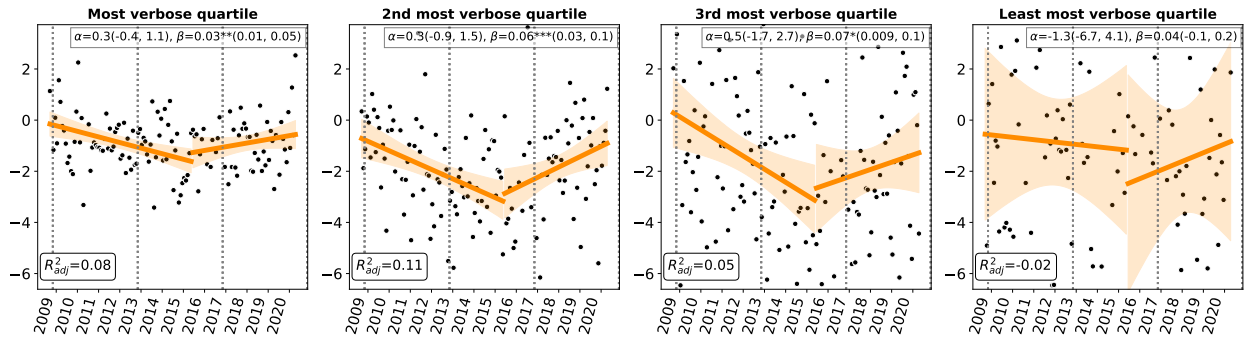
Figure 53: Sadness: Speaker Aggregation with Speakers Divided in Verbosity Quartiles
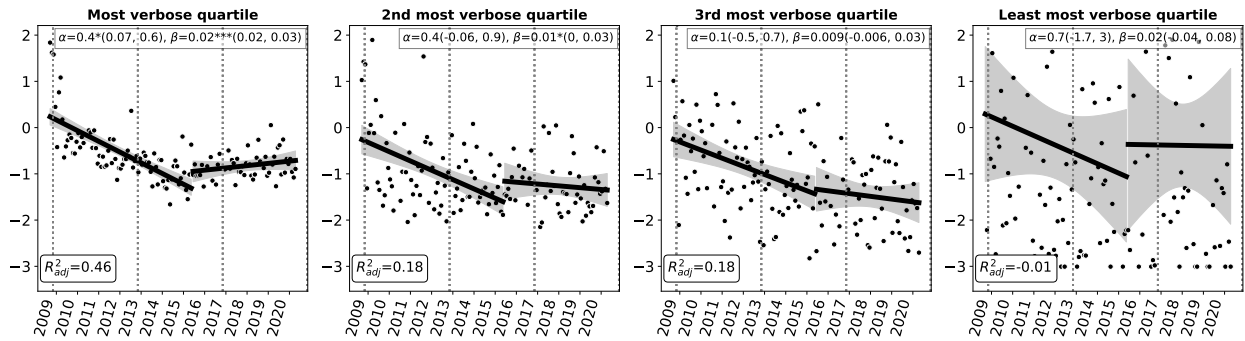
Figure 54: Swearing Terms: Speaker Aggregation with Speakers Divided in Verbosity Quartiles

1.6 Quotation Aggregation, Split by Parties
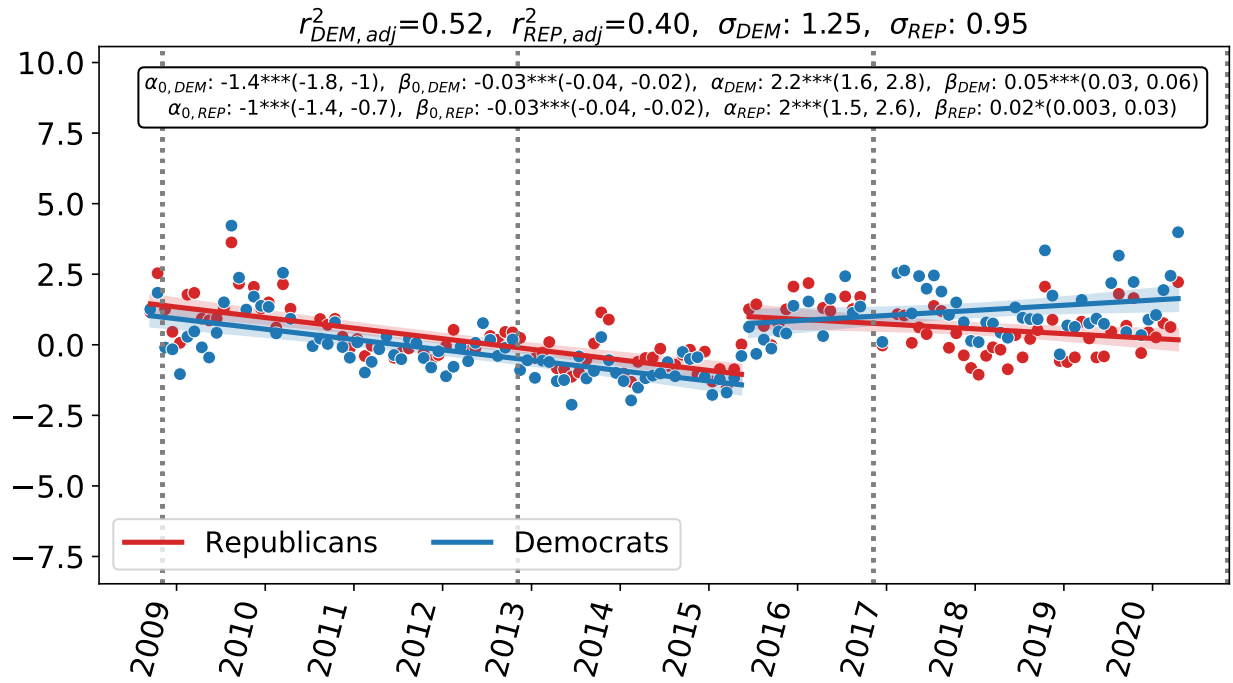
Figure 55: Neg. Emotion (empath): Quotation Aggregation, Seperated for Parties

$r^2_{DEM,adj}$=0.18, $r^2_{REP,adj}$=0.19, σ_{DEM}: 1.15, σ_{REP}: 0.99

$\alpha_{0,DEM}$: -0.1(-0.6, 0.3), $\beta_{0,DEM}$: -0.002(-0.01, 0.008), α_{DEM}: 1.7***(1, 2.5), β_{DEM}: -0.02*(-0.04, -0.005)
$\alpha_{0,REP}$: 0.1(-0.2, 0.5), $\beta_{0,REP}$: 0.002(-0.006, 0.01), α_{REP}: 1.4***(0.8, 2), β_{REP}: -0.03**(-0.04, -0.01)
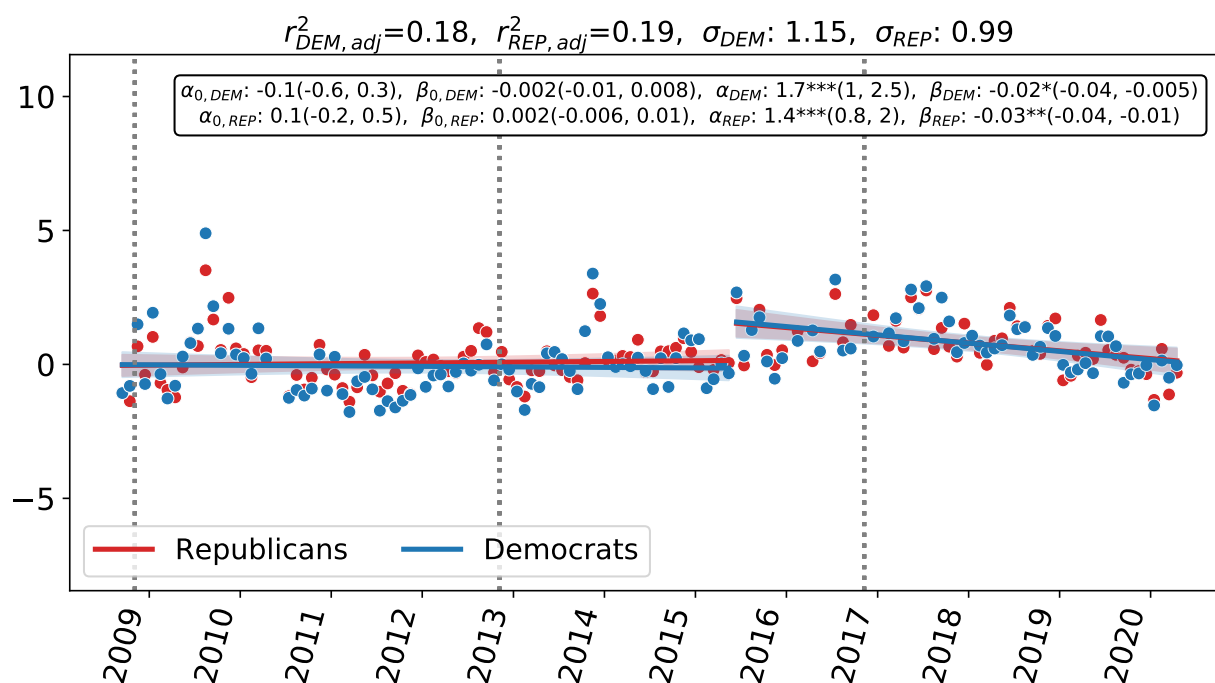
Figure 56: Pos. Emotion (empath): Quotation Aggregation, Seperated for Parties

$r^2_{DEM,adj}$=0.62, $r^2_{REP,adj}$=0.40, σ_{DEM}: 1.53, σ_{REP}: 1.04

$\alpha_{0,DEM}$: 2.1***(1.7, 2.5), $\beta_{0,DEM}$: 0.03***(0.02, 0.04), α_{DEM}: -2***(-2.7, -1.3), β_{DEM}: -0.07***(-0.09, -0.06)
$\alpha_{0,REP}$: 0.2(-0.2, 0.5), $\beta_{0,REP}$: 0.02***(0.02, 0.03), α_{REP}: -2.1***(-2.7, -1.6), β_{REP}: -0.02*(-0.03, -0.004)
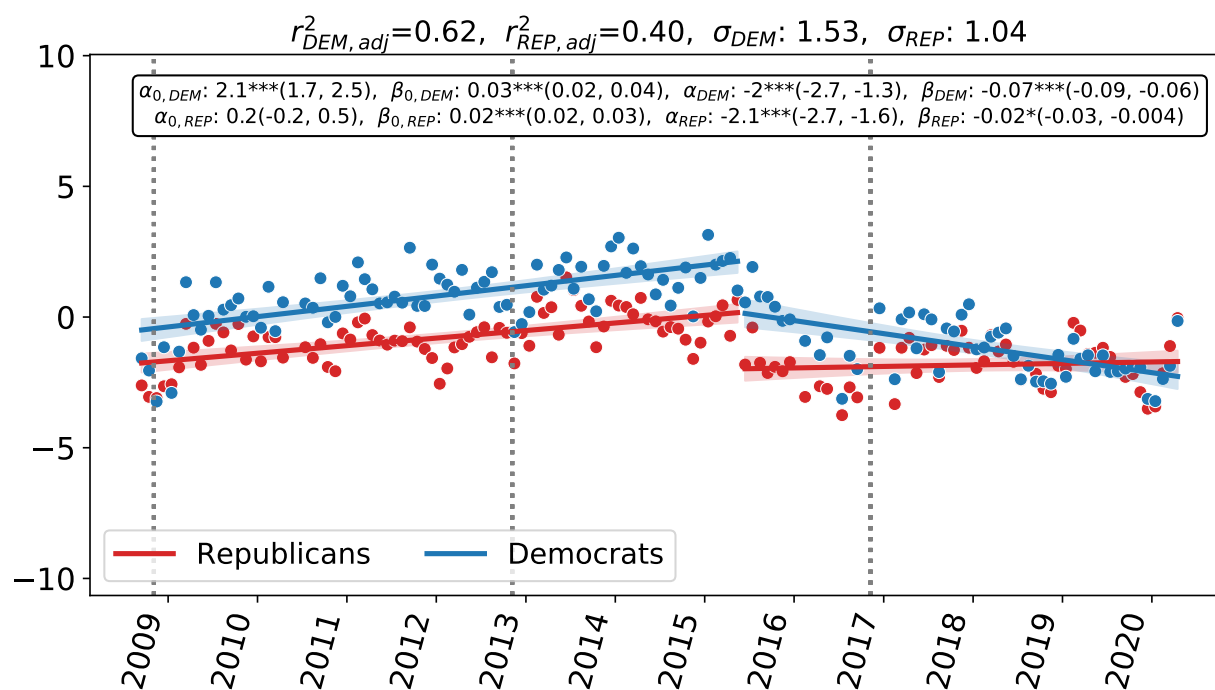
Figure 57: Science (empath): Quotation Aggregation, Seperated for Parties

32
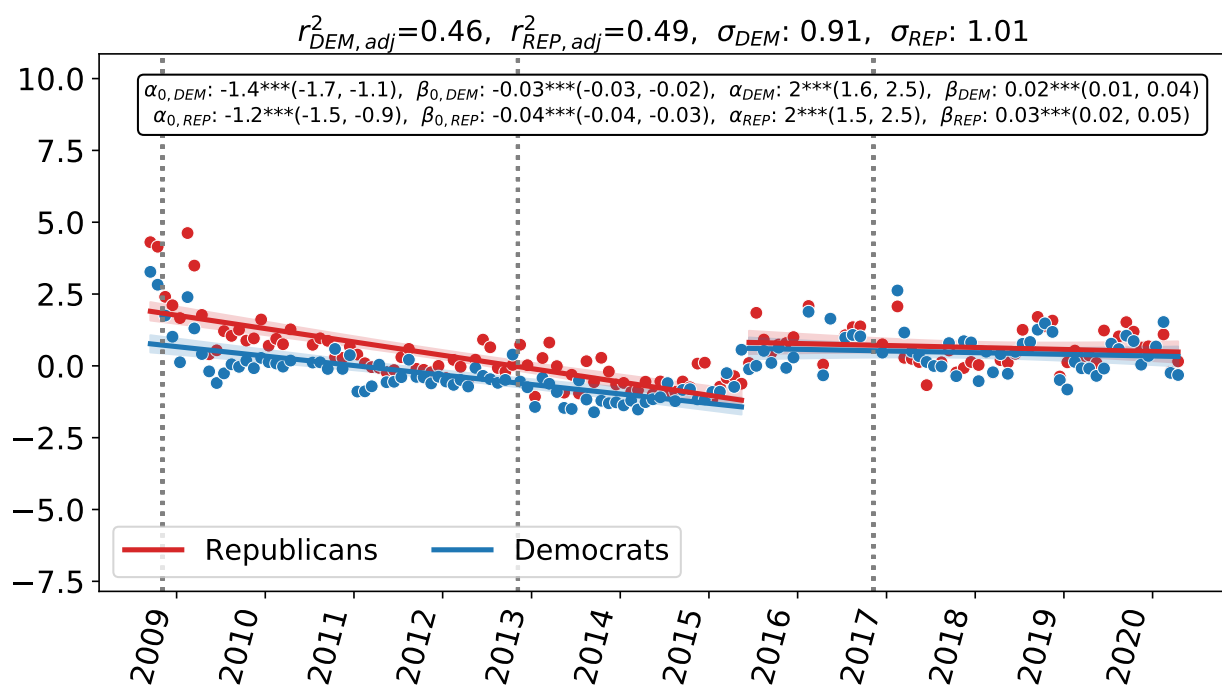
Figure 58: Swearing (empath): Quotation Aggregation, Seperated for Parties
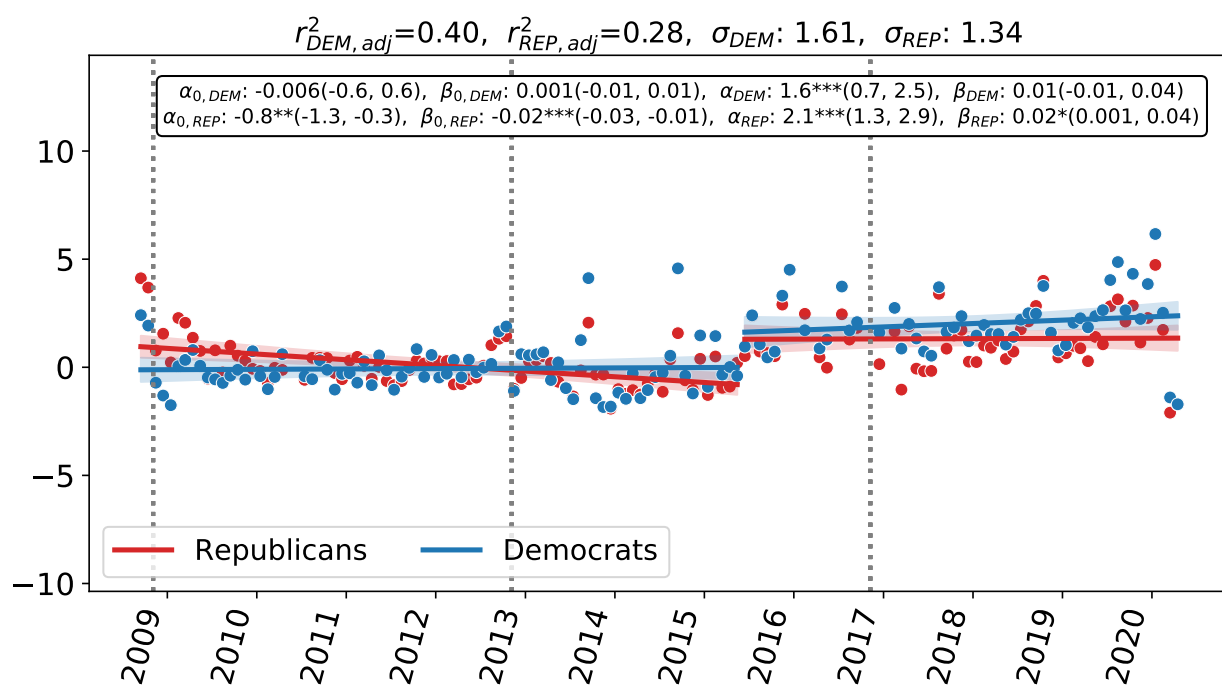
Figure 59: Anger: Quotation Aggregation, Seperated for Parties
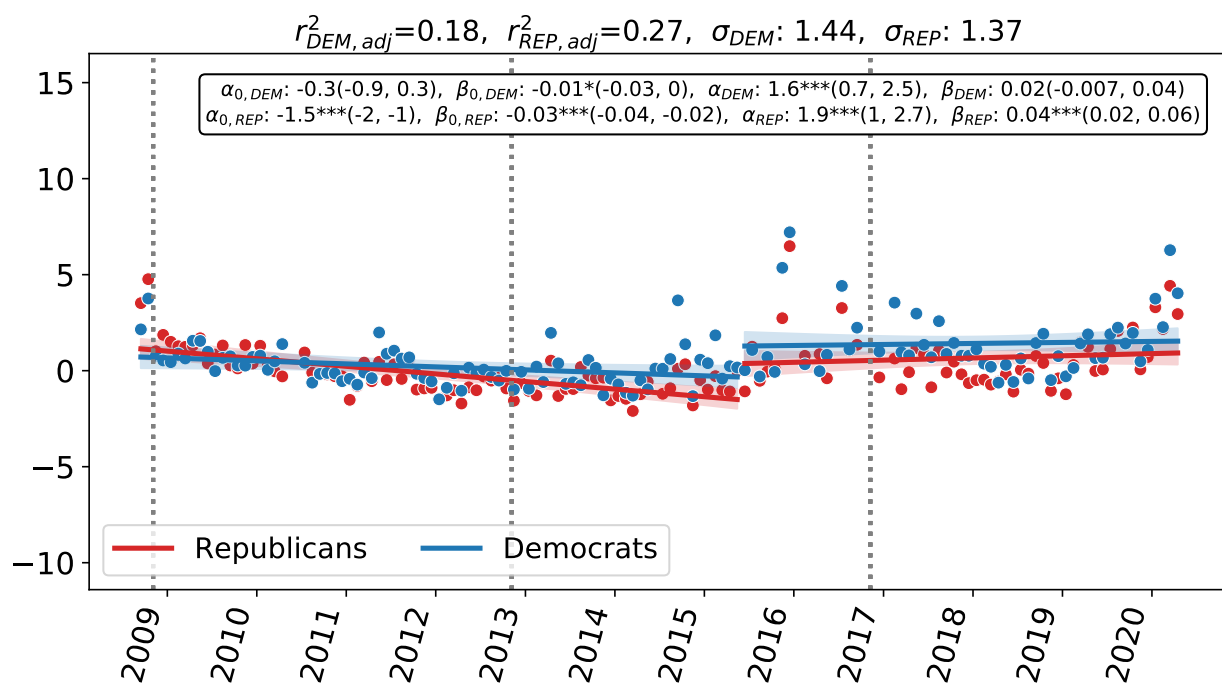
Figure 60: Anxiety: Quotation Aggregation, Seperated for Parties
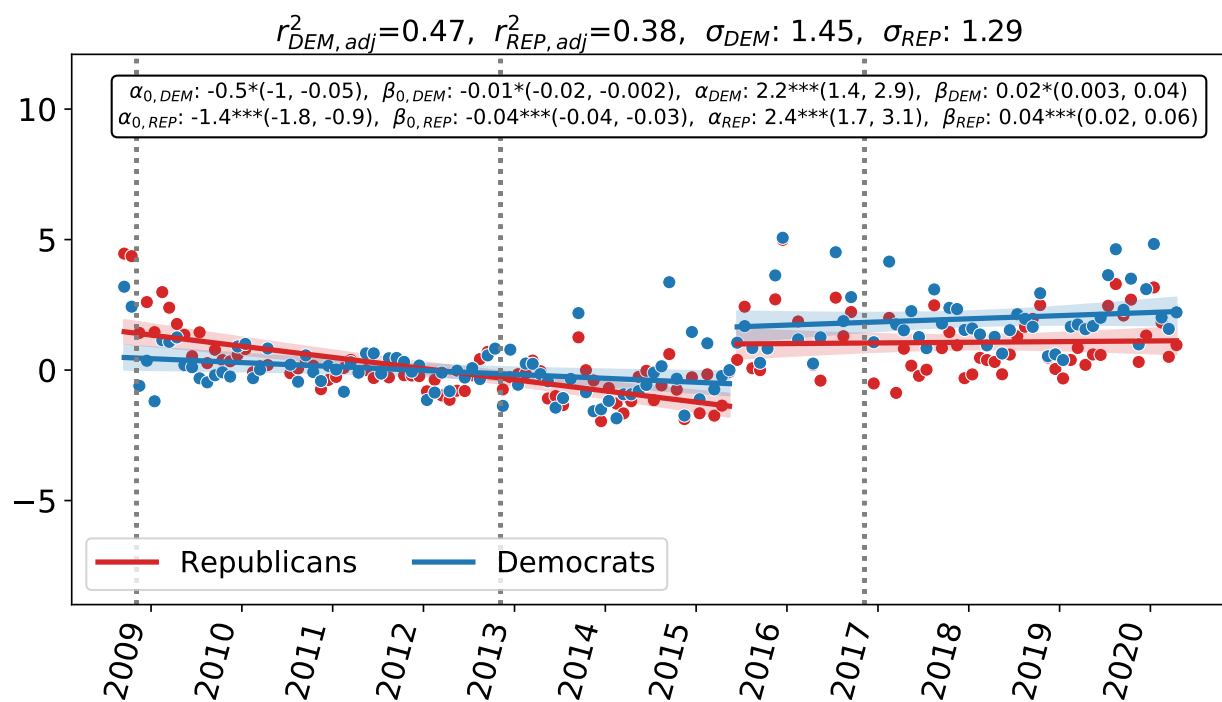
Figure 61: Negative Emotions: Quotation Aggregation, Seperated for Parties

$r^2_{DEM,adj}$=0.44, $r^2_{REP,adj}$=0.15, σ_{DEM}: 1.58, σ_{REP}: 1.31

$\alpha_{0,DEM}$: 0.5*(0.002, 1.1), $\beta_{0,DEM}$: 0.01**(0.004, 0.03), α_{DEM}: 1.7***(0.8, 2.5), β_{DEM}: -0.1***(-0.1, -0.09)
$\alpha_{0,REP}$: 0.3(-0.3, 0.8), $\beta_{0,REP}$: 0.005(-0.007, 0.02), α_{REP}: 1.4**(0.5, 2.3), β_{REP}: -0.05***(-0.08, -0.03)
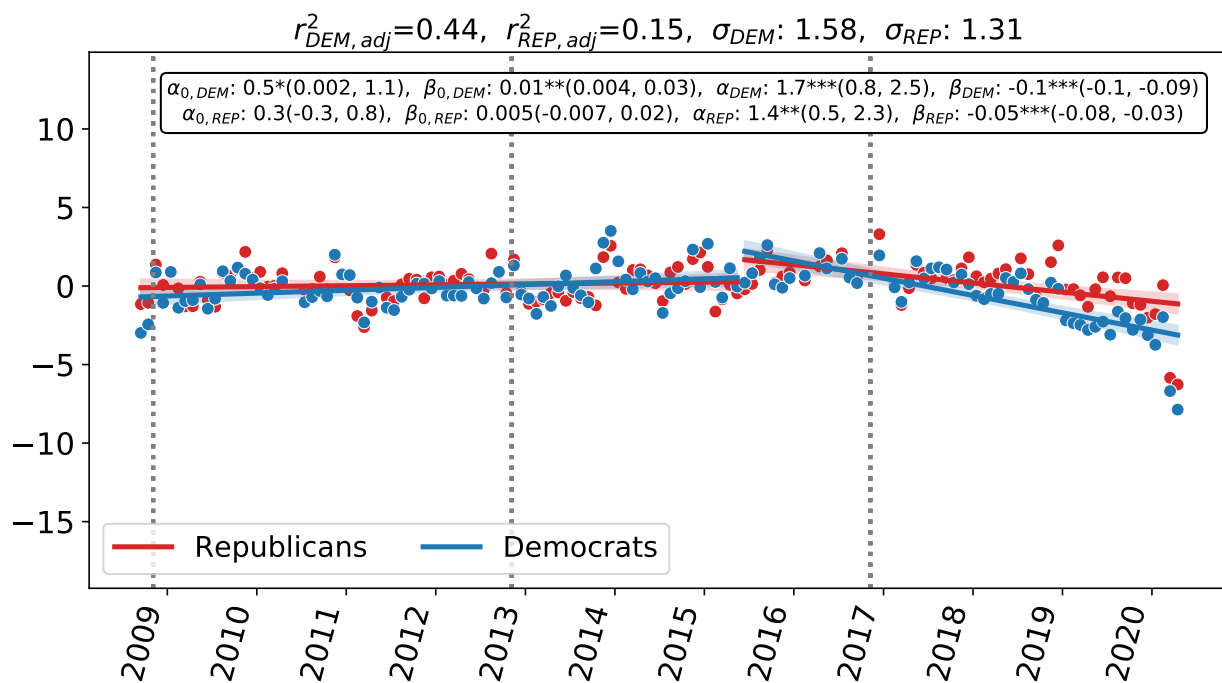
Figure 62: Positive Emotions: Quotation Aggregation, Seperated for Parties

$r^2_{DEM,adj}$=0.05, $r^2_{REP,adj}$=0.23, σ_{DEM}: 1.31, σ_{REP}: 1.29

$\alpha_{0,DEM}$: -0.3(-0.9, 0.2), $\beta_{0,DEM}$: -0.01(-0.02, 0.001), α_{DEM}: 0.8(-0.07, 1.8), β_{DEM}: 0.02(-0.007, 0.04)
$\alpha_{0,REP}$: -1.4***(-1.9, -0.9), $\beta_{0,REP}$: -0.03***(-0.04, -0.02), α_{REP}: 1.3**(0.5, 2.1), β_{REP}: 0.02(-0.002, 0.04)
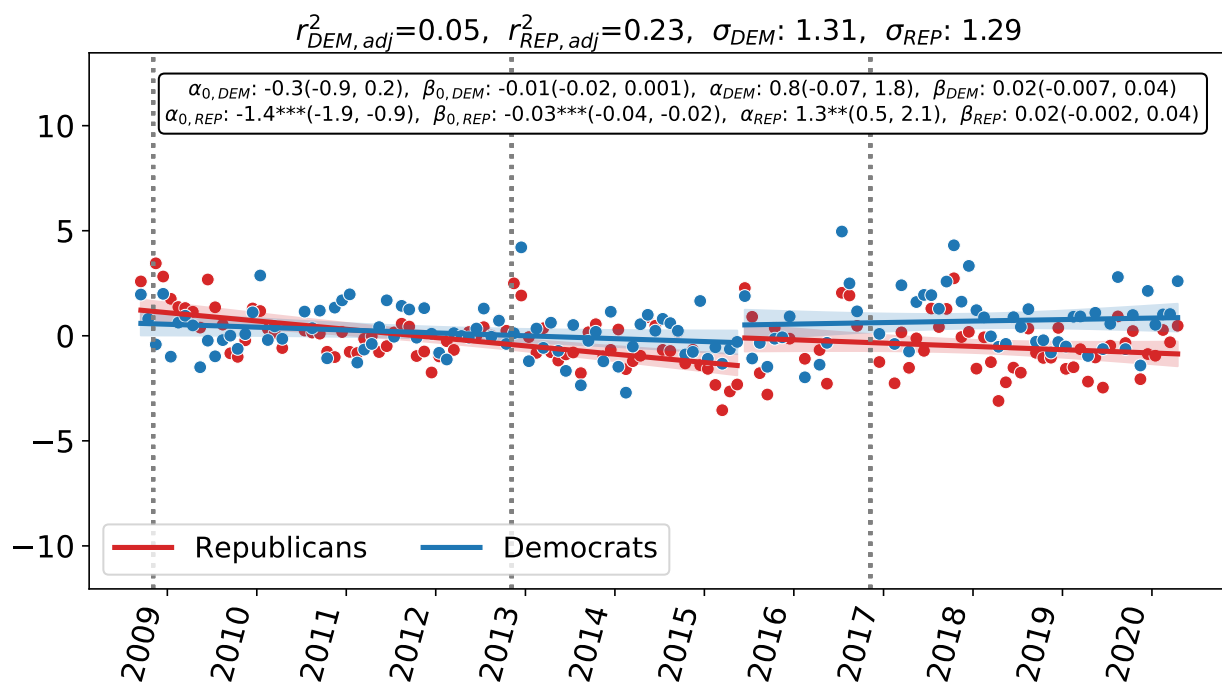
Figure 63: Sadness: Quotation Aggregation, Seperated for Parties

35
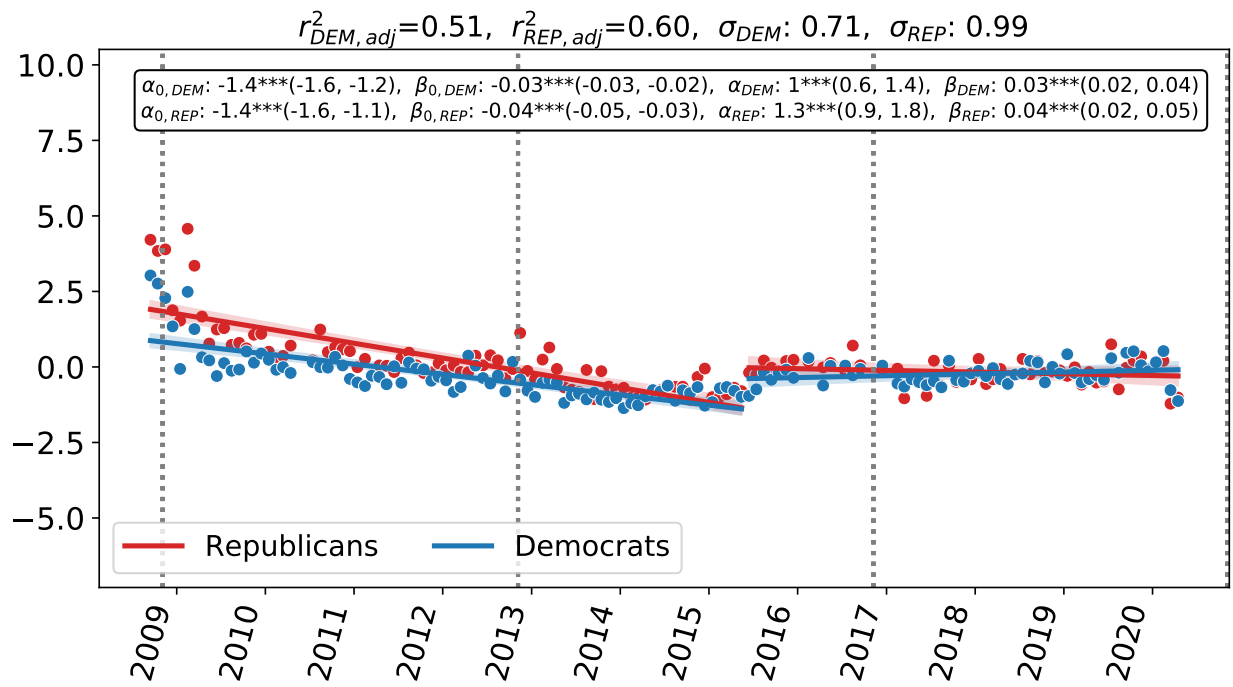
Figure 64: Swearing Terms: Quotation Aggregation, Seperated for Parties

1.7 Quotation Aggregation Scores for Individual Politicians
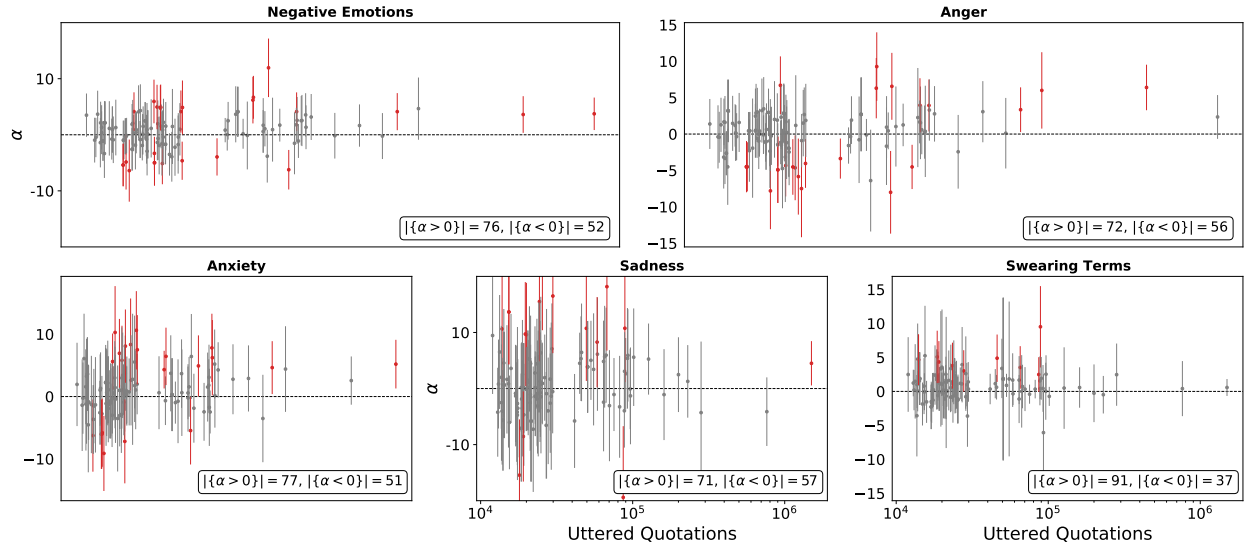
Figure 65: RDD α over verbosity: Quotation Aggregation Scores for Individual Politicians
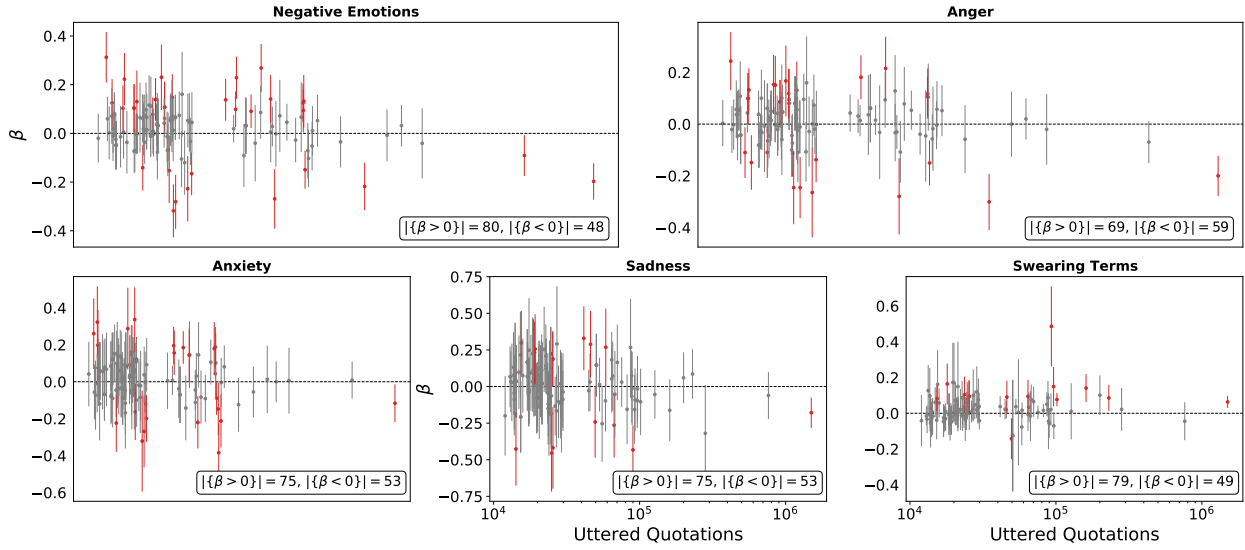
Figure 66: RDD β over verbosity: Quotation Aggregation Scores for Individual Politicians

1.8 Quotation Aggregation Scores for all but one Speaker
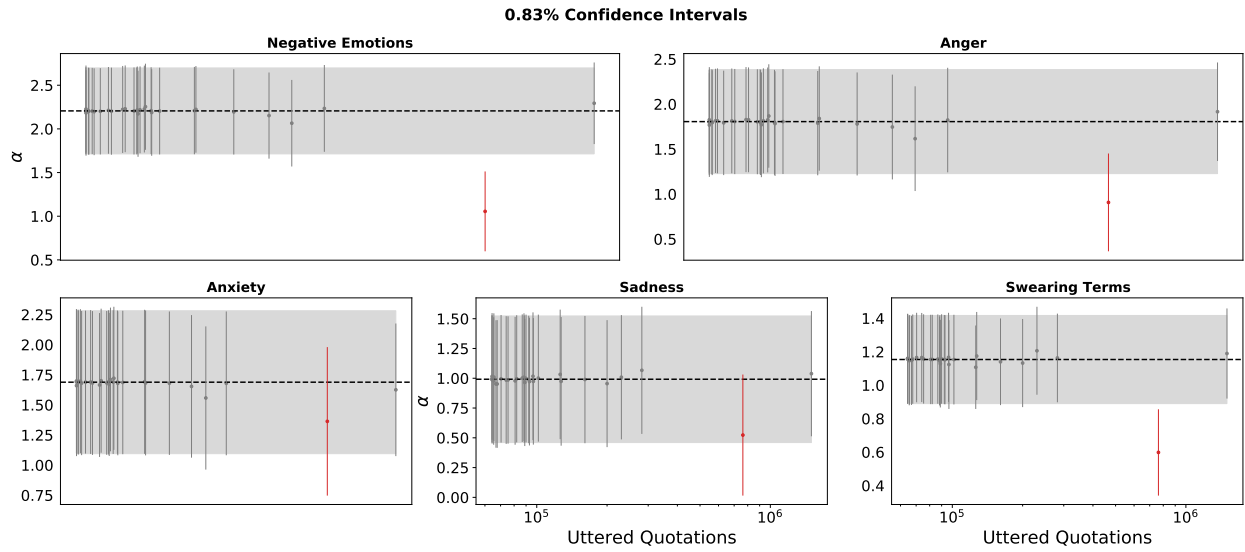
Figure 67: RDD α over verbosity: Quotation Aggregation Scores for all but one Speaker
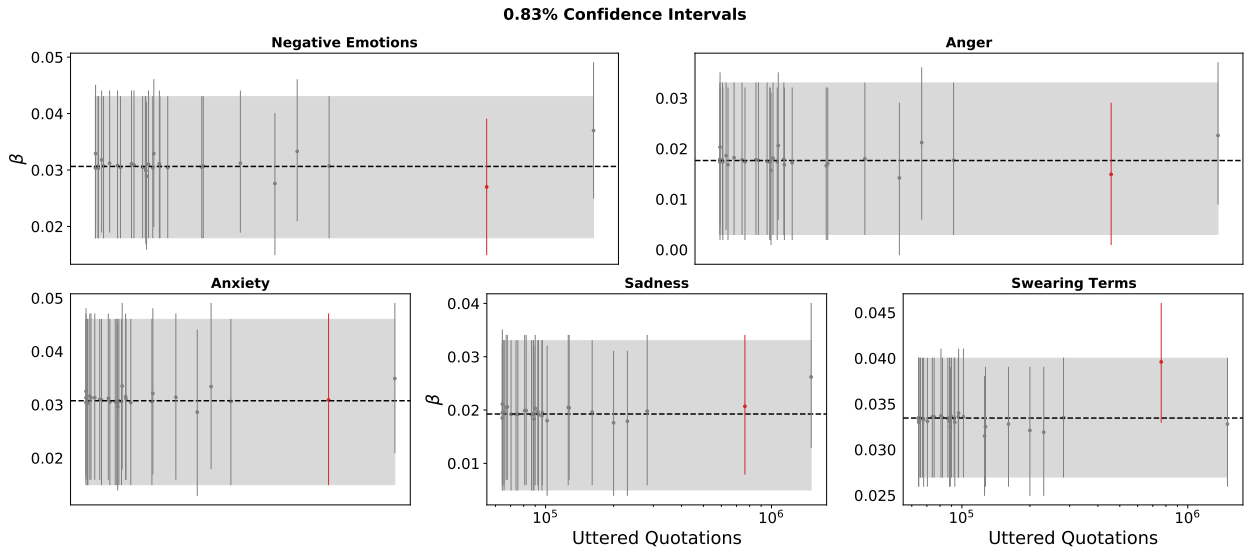
Figure 68: RDD β over verbosity: Quotation Aggregation Scores for all but one Speaker

1.9 Influence of the Placement of the Discontinuity on RDD performance
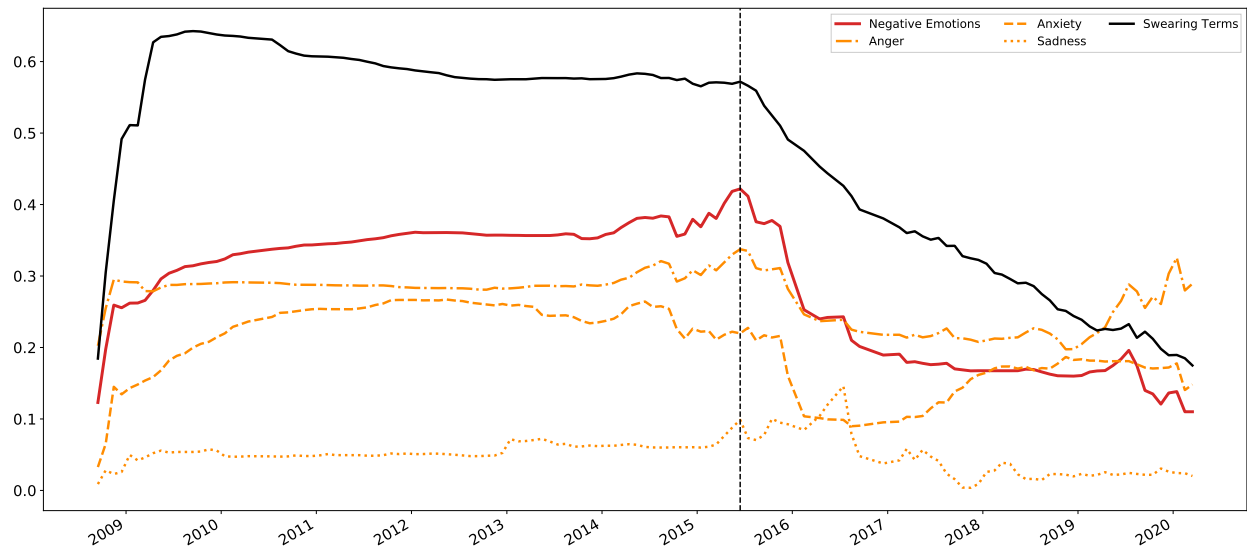
Figure 69: Adjusted r^2 score: Influence of the Placement of the Discontinuity on RDD performance
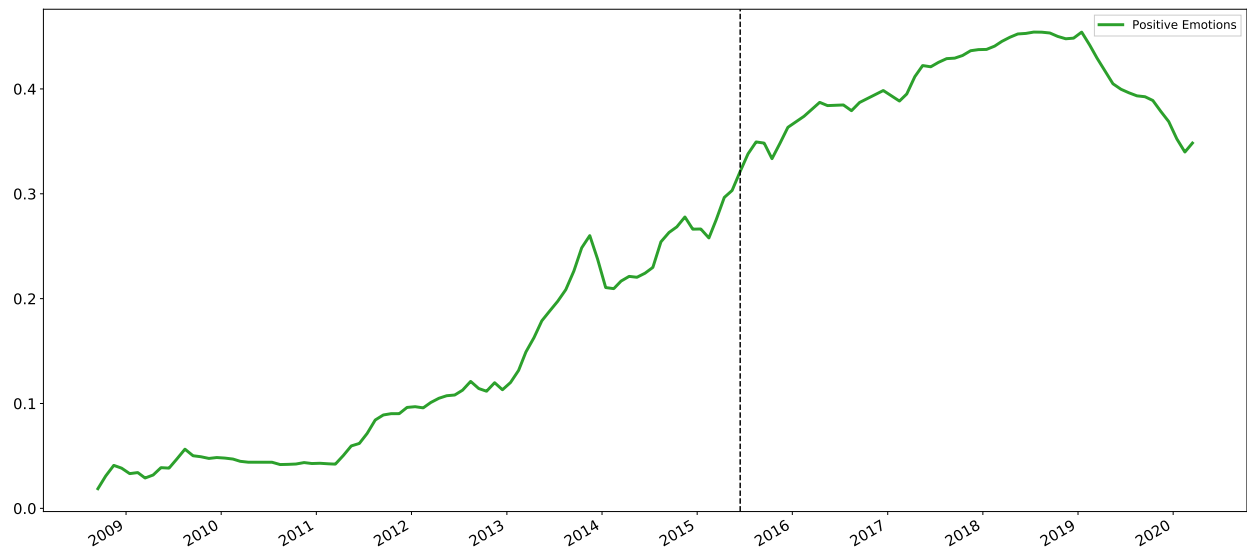
Figure 70: Adjusted r^2 score for positive emotions: Influence of the Placement of the Discontinuity on RDD performance

2 Tables

Table 1: Key Metrics for all Sentiment Attributes

y_{cat}	μ	σ	Every Nth	σ/μ
Positive Emotions	0.04053	0.00083	24.7	2.0%
Negative Emotions	0.01856	0.00089	53.9	4.8%
Anxiety	0.00295	0.00021	339.2	7.2%
Anger	0.00649	0.00054	154.0	8.2%
Sadness	0.00351	0.00015	284.7	4.2%
Swearing Terms	0.00043	0.00014	2310.8	33.3%
Tentativeness	0.02275	0.00051	44.0	2.3%
Certainty	0.01521	0.00029	65.8	1.9%
Swearing (empath)	0.00069	0.00013	1442.4	19.1%
Science (empath)	0.00274	0.00021	365.6	7.6%
Neg. Emotion (empath)	0.00821	0.00052	121.9	6.4%
Pos. Emotion (empath)	0.00804	0.00041	124.4	5.1%

Table 2: RDD parameters for aggregation on distinct speaker groups.

	α_0	α	β_0	β	party	gender	congress	governing
Positive Emotions	1***(0.6, 1.4)	1.1***(0.6, 1.6)	0.002(-0.004, 0.009)	-0.07***(-0.09, -0.06)	-1.1***(-1.3, -0.8)	-0.1(-0.4, 0.1)	-1.6***(-1.9, -1.4)	0.8***(0.5, 1.1)
Negative Emotions	-1.7***(-2.1, -1.4)	2***(1.5, 2.4)	-0.01***(-0.02, -0.009)	0.01***(0, 0.02)	0.5***(0.2, 0.7)	-0.1(-0.3, 0.1)	3.4***(3.2, 3.6)	-0.6***(-0.8, -0.3)
Anxiety	-1.7***(-2.1, -1.3)	2.1***(1.6, 2.6)	-0.02***(-0.03, -0.01)	0.01(-0.003, 0.02)	0.7***(0.4, 0.9)	0.8***(0.6, 1)	2**(1.8, 2.2)	-0.5***(-0.8, -0.3)
Anger	-1.5***(-1.9, -1.1)	1.6***(1.1, 2.1)	-0.002(-0.009, 0.005)	0.004(-0.005, 0.01)	0.3**(0.08, 0.6)	0.2(-0.06, 0.4)	4***(3.8, 4.2)	-0.5***(-0.8, -0.2)
Sadness	-1.1***(-1.6, -0.6)	0.7***(0.09, 1.4)	-0.01(-0.02, -0.002)	0.004(-0.01, 0.02)	0.8***(0.5, 1.2)	0.1(-0.2, 0.4)	1.8***(1.5, 2.1)	-0.7***(-1, -0.4)
Swearing Terms	-0.9***(-1.1, -0.7)	0.8***(0.5, 1)	-0.03***(-0.04, -0.03)	0.04***(0.04, 0.05)	-0.3***(-0.4, -0.1)	-0.8***(-0.9, -0.6)	-0.1(-0.2, 0.03)	-0.3***(-0.4, -0.2)
Tentativeness	1.1***(0.8, 1.5)	1.2***(0.8, 1.7)	-0.03***(-0.04, -0.03)	-0.01(-0.03, -0.9)	-1.2***(-1.4, -0.9)	-4***(-4.2, -3.8)	-3.2***(-3.4, -3)	-0.05(-0.3, 0.2)
Certainty	1***(0.5, 1.4)	0.9***(0.3, 1.5)	0.03***(0.02, 0.03)	0.02*(0.001, 0.03)	-0.3*(-0.7, -0.03)	1.1***(0.8, 1.4)	-0.5***(-0.8, -0.2)	0.5**(0.2, 0.8)
Swearing (empath)	-0.6***(-0.8, -0.3)	1.4***(1.1, 1.7)	-0.03***(-0.04, -0.03)	0.03**(0.02, 0.04)	-0.3***(-0.5, -0.2)	-1.4***(-1.5, -1.2)	-0.5***(-0.7, -0.4)	-0.2*(-0.3, -0.01)
science	0.7***(0.4, 1)	-1.7***(-2.1, -1.3)	0.03***(0.02, 0.04)	-0.05***(-0.07, -0.04)	1.1***(0.8, 1.3)	0.2(-0.03, 0.4)	-1.1***(-1.3, -0.9)	0.7***(0.4, 0.9)
Neg. Emotion (empath)	-1***(-1.3, -0.7)	1.8***(1.4, 2.2)	-0.02***(-0.03, -0.02)	0.02**(0.007, 0.03)	0.6***(0.4, 0.8)	-0.4***(-0.6, -0.2)	0.5***(0.3, 0.7)	-0.8***(-1, -0.6)
Pos. Emotion (empath)	0.7***(0.4, 1)	1.3***(0.9, 1.7)	0.004(-0.002, 0.009)	-0.04***(-0.05, -0.03)	-0.2(-0.4, 0.04)	0.5***(0.3, 0.7)	-1.1***(-1.3, -0.9)	-0.03(-0.2, 0.2)

Table 3: RDD parameters for aggregation on distinct speaker groups, excluding outliers.

|	α_0	α	β_0	β	party	gender	congress	governing
Positive Emotions	0.2(-0.05, 0.5)	0.03(-0.3, 0.4)	0.003(-0.001, 0.007)	-0.01*(-0.02, -0)	-0.2*(-0.4, -0.05)	-0.2*(-0.4, -0.04)	-0.7***(-0.9, -0.5)	0.2*(0.03, 0.4)
Negative Emotions	0.2(-0.1, 0.6)	0.1(-0.2, 0.5)	-0.002(-0.007, 0.003)	0.01*(0.001, 0.02)	0.2*(0.002, 0.3)	-0.3**(-0.4, -0.1)	1.3***(1.1, 1.4)	-0.2*(-0.4, -0.03)
Anxiety	-0.4**(-0.6, -0.1)	0.7***(0.4, 1.1)	-0.007***(-0.01, -0.003)	0.006(-0.002, 0.01)	0.3***(0.2, 0.5)	0.4***(0.2, 0.5)	0.8***(0.7, 1)	-0.3**(-0.4, -0.1)
Anger	0.4*(0.1, 0.8)	0.3(-0.04, 0.7)	0.001(-0.004, 0.04)	0.004(-0.005, 0.04)	-0.2(-0.3, 0.04)	-0.06(-0.2, 0.1)	1.2***(1, 1.4)	0(-0.2, 0.2)
Sadness	-0.3*(-0.6, -0.06)	0.3(-0.04, 0.7)	-0.005*(-0.009, 0)	0.001(-0.008, 0.01)	0.2*(0.05, 0.4)	-0.06(-0.2, 0.1)	0.7***(0.5, 0.8)	-0.3***(-0.5, -0.2)
Swearing Terms	-0.6***(-0.7, -0.5)	0.4***(0.3, 0.6)	-0.02***(-0.02, -0.02)	0.02***(0.02, 0.03)	-0.1*(-0.2, -0.01)	-0.8***(-0.9, -0.7)	-0.08(-0.2, 0.004)	-0.2***(-0.3, -0.1)
Tentativeness	-1.1***(-1.4, -0.8)	0.5**(0.1, 0.9)	-0.01***(-0.02, -0.006)	-0.004(-0.01, 0.005)	-0.5***(-0.7, -0.3)	-1.3***(-1.6, -1.1)	-1***(-1.2, -0.8)	0(-0.2, 0.2)
Certainty	1.1***(0.9, 1.4)	0.3(-0.009, 0.7)	0.009***(0.004, 0.01)	0.003(-0.007, 0.01)	0.03(-0.2, 0.2)	0.3***(0.2, 0.5)	0.1(-0.07, 0.3)	0.1(-0.05, 0.3)
Swearing (empath)	-0.5***(-0.6, -0.3)	0.8***(0.5, 1)	-0.02***(-0.02, -0.02)	0.02***(0.01, 0.02)	-0.2*(-0.3, -0.1)	-1***(-1.1, -0.9)	-0.3***(-0.4, -0.2)	-0.1(-0.2, 0.006)
science	-0.08(-0.3, 0.1)	-0.6***(-0.9, -0.3)	0.01***(0.006, 0.01)	-0.03***(-0.04, -0.02)	0.5***(0.3, 0.6)	0.1(0.01, 0.3)	-0.5***(-0.7, -0.4)	0.2***(0.1, 0.4)
Neg. Emotion (empath)	-0.5***(-0.7, -0.3)	1.1***(0.9, 1.4)	-0.01***(-0.02, -0.01)	0.008*(0.001, 0.01)	0.1*(0.007, 0.3)	-0.3***(-0.4, -0.2)	0.2(0.04, 0.3)	-0.4***(-0.6, -0.3)
Pos. Emotion (empath)	0.5***(0.3, 0.7)	0.7***(0.4, 0.9)	0.004*(0.001, 0.008)	-0.02***(-0.02, -0.01)	-0.2*(-0.3, -0.04)	0.2***(0.1, 0.4)	-0.6***(-0.7, -0.5)	-0.06(-0.2, 0.08)

Table 4: RDD parameters for quotation aggregation.

	α_0	α	β_0	β
Positive Emotions	0.4(-0.1, 0.9)	1.6***(0.8, 2.4)	0.01(-0.001, 0.02)	-0.08***(-0.1, -0.06)
Negative Emotions	-0.9***(-1.4, -0.5)	2.2***(1.5, 2.9)	-0.02***(-0.03, -0.01)	0.03**(0.01, 0.05)
Anxiety	-0.9***(-1.4, -0.4)	1.7***(0.8, 2.5)	-0.02***(-0.03, -0.01)	0.03**(0.009, 0.05)
Anger	-0.4(-0.9, 0.1)	1.8***(1, 2.6)	-0.009(-0.02, 0.001)	0.02(-0.004, 0.04)
Sadness	-0.9***(-1.3, -0.4)	1*(0.2, 1.8)	-0.02***(-0.03, -0.01)	0.02(-0.001, 0.04)
Swearing Terms	-1.4***(-1.6, -1.1)	1.2***(0.8, 1.5)	-0.03***(-0.04, -0.03)	0.03***(0.02, 0.04)
Tentativeness	-0.9***(-1.3, -0.6)	0.6(-0.02, 1.2)	-0.02***(-0.03, -0.01)	-0.01(-0.03, 0.005)
Certainty	1.1***(0.6, 1.5)	0.6(-0.08, 1.3)	0.03***(0.02, 0.04)	0.02(-0.002, 0.03)
Swearing (empath)	-1.3***(-1.6, -1)	2***(1.5, 2.5)	-0.03***(-0.04, -0.03)	0.03***(0.01, 0.04)
science	1.1***(0.8, 1.5)	-2.1***(-2.7, -1.5)	0.03***(0.02, 0.04)	-0.04***(-0.06, -0.03)
Neg. Emotion (empath)	-1.2***(-1.6, -0.9)	2.1***(1.5, 2.6)	-0.03***(-0.04, -0.02)	0.03***(0.02, 0.05)
Pos. Emotion (empath)	0.004(-0.4, 0.4)	1.5***(0.9, 2.2)	0(-0.009, 0.009)	-0.03**(-0.04, -0.008)

Table 5: RDD parameters for quotation aggregation, excluding outliers.

	α_0	α	β_0	β
Positive Emotions	0.05(-0.3, 0.4)	1.1***(0.5, 1.8)	0.004(-0.004, 0.01)	-0.04***(-0.06, -0.03)
Negative Emotions	-0.6***(-0.9, -0.3)	1.3***(0.8, 1.9)	-0.01***(-0.02, -0.007)	0.02***(0.01, 0.04)
Anxiety	-0.7***(-1.1, -0.4)	0.9**(0.3, 1.5)	-0.02***(-0.02, -0.009)	0.03***(0.01, 0.04)
Anger	-0.3(-0.6, 0.006)	1.2***(0.7, 1.7)	-0.005(-0.01, 0.001)	0.02*(0.004, 0.03)
Sadness	-0.6**(-1, -0.2)	0.3(-0.4, 0.9)	-0.01**(-0.02, -0.006)	0.02*(0.005, 0.04)
Swearing Terms	-1.1***(-1.2, -0.9)	0.9***(0.7, 1.1)	-0.02***(-0.03, -0.02)	0.02***(0.02, 0.03)
Tentativeness	-0.8***(-1.2, -0.5)	0.3(-0.3, 0.9)	-0.02***(-0.03, -0.01)	-0.003(-0.02, 0.01)
Certainty	1.1***(0.7, 1.4)	0.7*(0.2, 1.3)	0.02***(0.01, 0.03)	-0.007(-0.03, 0.01)
Swearing (empath)	-1.1***(-1.3, -0.8)	1.7***(1.4, 2.1)	-0.02***(-0.03, -0.02)	0.02***(0.01, 0.03)
science	0.8***(0.5, 1.2)	-1.7***(-2.2, -1.2)	0.02***(0.01, 0.03)	-0.04***(-0.05, -0.02)
Neg. Emotion (empath)	-1.2***(-1.4, -0.9)	2.1***(1.7, 2.6)	-0.03***(-0.03, -0.02)	0.02**(0.008, 0.03)
Pos. Emotion (empath)	-0.03(-0.4, 0.3)	1.2***(0.7, 1.8)	0.002(-0.006, 0.009)	-0.02**(-0.04, -0.005)

Table 6: RDD parameters for speaker aggregation.

	α_0	α	β_0	β
Positive Emotions	1.2***(0.6, 1.7)	0.5(-0.4, 1.4)	0.01(0, 0.02)	-0.05***(-0.07, -0.02)
Negative Emotions	-3.5***(-3.7, -3.3)	0.8***(0.4, 1.2)	-0.03***(-0.04, -0.03)	0.04***(0.03, 0.05)
Anxiety	-2.2***(-2.7, -1.8)	0.6(-0.1, 1.3)	-0.02***(-0.03, -0.01)	0.05***(0.03, 0.07)
Anger	-2.9***(-3.1, -2.7)	0.6**(0.2, 0.9)	-0.01***(-0.01, -0.006)	0.02***(0.007, 0.03)
Sadness	-2.3***(-2.7, -1.8)	0.3(-0.5, 1)	-0.02***(-0.03, -0.01)	0.05***(0.03, 0.07)
Swearing Terms	-1.4***(-1.6, -1.2)	0.4*(0.05, 0.7)	-0.02***(-0.02, -0.01)	0.02***(0.01, 0.03)
Tentativeness	-0.3(-0.7, 0.09)	0.6(-0.01, 1.3)	-0.03***(-0.04, -0.02)	-0.004(-0.02, 0.01)
Certainty	-0.4(-0.8, 0.09)	-0.09(-0.8, 0.7)	0(-0.01, 0.01)	0.02(0, 0.04)
Swearing (empath)	-1.5***(-1.7, -1.3)	0.5**(0.1, 0.8)	-0.02***(-0.03, -0.02)	0.02***(0.01, 0.03)
science	2.3***(2, 2.6)	-0.5(-1, 0.02)	0.02***(0.01, 0.03)	-0.03***(-0.05, -0.02)
Neg. Emotion (empath)	-2.2***(-2.4, -1.9)	0.8***(0.4, 1.1)	-0.03***(-0.04, -0.03)	0.04***(0.03, 0.05)
Pos. Emotion (empath)	0.5**(0.2, 0.8)	0.7**(0.2, 1.3)	0.001(-0.007, 0.008)	-0.01*(-0.03, 0)

Table 7: RDD parameters for speaker aggregation, excluding outliers.

	α_0	α	β_0	β
Positive Emotions	1.2***(0.7, 1.6)	0.5(-0.2, 1.2)	0.01**(0.003, 0.02)	-0.04***(-0.06, -0.02)
Negative Emotions	-3.4***(-3.6, -3.2)	0.7***(0.3, 1)	-0.03***(-0.03, -0.02)	0.03***(0.03, 0.04)
Anxiety	-2.1***(-2.4, -1.8)	0.9***(0.5, 1.4)	-0.02***(-0.02, -0.01)	0.02***(0.01, 0.04)
Anger	-2.9***(-3.1, -2.7)	0.5**(0.2, 0.8)	-0.008***(-0.01, -0.004)	0.01***(0.006, 0.02)
Sadness	-2.1***(-2.4, -1.7)	0.07(-0.6, 0.7)	-0.01***(-0.02, -0.006)	0.03***(0.02, 0.05)
Swearing Terms	-1.3***(-1.4, -1.1)	0.2(-0.01, 0.4)	-0.01***(-0.01, -0.009)	0.01***(0.007, 0.02)
Tentativeness	-0.09(-0.4, 0.3)	0.2(-0.4, 0.7)	-0.02***(-0.03, -0.01)	0.006(-0.01, 0.02)
Certainty	-0.3(-0.6, 0.1)	-0.04(-0.6, 0.6)	0.004(-0.004, 0.01)	0.006(-0.01, 0.02)
Swearing (empath)	-1.4***(-1.5, -1.2)	0.3*(0.06, 0.6)	-0.02***(-0.02, -0.01)	0.02***(0.01, 0.02)
science	2.3***(2, 2.6)	-0.5*(-1, -0.03)	0.02***(0.01, 0.02)	-0.03***(-0.04, -0.02)
Neg. Emotion (empath)	-2.1***(-2.3, -1.9)	0.7***(0.4, 1)	-0.03***(-0.03, -0.03)	0.03***(0.03, 0.04)
Pos. Emotion (empath)	0.5**(0.2, 0.8)	0.7**(0.2, 1.3)	0.001(-0.007, 0.008)	-0.01*(-0.03, 0)

Table 8: RDD parameters for aggregation over different parties, democrats only.

	α_0	α	β_0	β
Positive Emotions	0.5*(0.002, 1.1)	1.7***(0.8, 2.5)	0.01**(0.004, 0.03)	-0.1***(-0.1, -0.09)
Negative Emotions	-0.5*(-1, -0.05)	2.2***(1.4, 2.9)	-0.01*(-0.02, -0.002)	0.02*(0.003, 0.04)
Anxiety	-0.3(-0.9, 0.3)	1.6***(0.7, 2.5)	-0.01*(-0.03, 0)	0.02(-0.007, 0.04)
Anger	-0.006(-0.6, 0.6)	1.6***(0.7, 2.5)	0.001(-0.01, 0.01)	0.01(-0.01, 0.04)
Sadness	-0.3(-0.9, 0.2)	0.8(-0.07, 1.8)	-0.01(-0.02, 0.001)	0.02(-0.007, 0.04)
Swearing Terms	-1.4***(-1.6, -1.2)	1***(0.6, 1.4)	-0.03***(-0.03, -0.02)	0.03***(0.02, 0.04)
Tentativeness	-2.3***(-2.7, -2)	1**(0.4, 1.6)	-0.03***(-0.04, -0.03)	-0.001(-0.02, 0.01)
Certainty	1.5***(1, 2)	0.2(-0.6, 0.9)	0.03***(0.02, 0.04)	0.01(-0.01, 0.03)
Swearing (empath)	-1.4***(-1.7, -1.1)	2***(1.6, 2.5)	-0.03***(-0.03, -0.02)	0.02***(0.01, 0.04)
science	2.1***(1.7, 2.5)	-2***(-2.7, -1.3)	0.03***(0.02, 0.04)	-0.07***(-0.09, -0.06)
Neg. Emotion (empath)	-1.4***(-1.8, -1)	2.2***(1.6, 2.8)	-0.03***(-0.04, -0.02)	0.05***(0.03, 0.06)
Pos. Emotion (empath)	-0.1(-0.6, 0.3)	1.7***(1, 2.5)	-0.002(-0.01, 0.008)	-0.02*(-0.04, -0.005)

Table 9: RDD parameters for aggregation over different parties, excluding outliers, democrats only.

	α_0	α	β_0	β
Positive Emotions	-0.03(-0.4, 0.3)	1.2***(0.5, 1.8)	0.004(-0.005, 0.01)	-0.04***(-0.06, -0.02)
Negative Emotions	-0.4*(-0.7, -0.02)	1.4***(0.9, 2)	-0.009*(-0.01, -0.002)	0.02**(0.006, 0.04)
Anxiety	-0.4*(-0.8, -0.06)	0.8*(0.2, 1.4)	-0.01**(-0.02, -0.005)	0.03**(0.01, 0.04)
Anger	-0.06(-0.4, 0.3)	1.1***(0.5, 1.7)	-0.001(-0.008, 0.007)	0.02*(0.005, 0.04)
Sadness	-0.2(-0.7, 0.2)	0.4(-0.4, 1.1)	-0.008(-0.02, 0.001)	0.01(-0.007, 0.03)
Swearing Terms	-1.2***(-1.3, -1)	0.8***(0.5, 1)	-0.02***(-0.02, -0.02)	0.03***(0.02, 0.03)
Tentativeness	-1.8***(-2.2, -1.5)	0.4(-0.1, 0.9)	-0.02***(-0.03, -0.01)	0.02*(0, 0.03)
Certainty	1.4***(1, 1.8)	0.5(-0.2, 1.2)	0.02***(0.01, 0.03)	-0.02(-0.04, 0)
Swearing (empath)	-1.3***(-1.5, -1)	1.8***(1.4, 2.2)	-0.02***(-0.03, -0.01)	0.02**(0.007, 0.03)
science	1.1***(0.6, 1.6)	-1**(-1.7, -0.3)	0.02**(0.006, 0.03)	-0.05***(-0.07, -0.04)
Neg. Emotion (empath)	-1.2***(-1.5, -0.9)	1.8***(1.3, 2.3)	-0.02***(-0.03, -0.02)	0.03***(0.02, 0.04)
Pos. Emotion (empath)	-0.1(-0.5, 0.2)	1.3***(0.7, 1.9)	-0(-0.008, 0.008)	-0.02*(-0.03, -0.002)

Table 10: RDD parameters for aggregation over different parties, republicans only.

	α_0	α	β_0	β
Positive Emotions	0.3(-0.3, 0.8)	1.4**(0.5, 2.3)	0.005(-0.007, 0.02)	-0.05***(-0.08, -0.03)
Negative Emotions	-1.4***(-1.8, -0.9)	2.4***(1.7, 3.1)	-0.04***(-0.04, -0.03)	0.04***(0.02, 0.06)
Anxiety	-1.5***(-2, -1)	1.9***(1, 2.7)	-0.03***(-0.04, -0.02)	0.04***(0.02, 0.06)
Anger	-0.8**(-1.3, -0.3)	2.1***(1.3, 2.9)	-0.02***(-0.03, -0.01)	0.02*(0.001, 0.04)
Sadness	-1.4***(-1.9, -0.9)	1.3**(0.5, 2.1)	-0.03***(-0.04, -0.02)	0.02(-0.002, 0.04)
Swearing Terms	-1.4***(-1.6, -1.1)	1.3***(0.9, 1.8)	-0.04***(-0.05, -0.03)	0.04***(0.02, 0.05)
Tentativeness	0.4(-0.06, 0.8)	0(-0.7, 0.7)	-0.01**(-0.02, -0.005)	-0.01(-0.03, 0.007)
Certainty	0.7**(0.2, 1.1)	1.1**(0.3, 1.8)	0.02***(0.01, 0.03)	0.02*(0.001, 0.04)
Swearing (empath)	-1.2***(-1.5, -0.9)	2***(1.5, 2.5)	-0.04***(-0.04, -0.03)	0.03***(0.02, 0.05)
science	0.2(-0.2, 0.5)	-2.1***(-2.7, -1.6)	0.02***(0.02, 0.03)	-0.02*(-0.03, -0.004)
Neg. Emotion (empath)	-1***(-1.4, -0.7)	2***(1.5, 2.6)	-0.03***(-0.04, -0.02)	0.02*(0.003, 0.03)
Pos. Emotion (empath)	0.1(-0.2, 0.5)	1.4***(0.8, 2)	0.002(-0.006, 0.01)	-0.03**(-0.04, -0.01)

Table 11: RDD parameters for aggregation over different parties, excluding outliers, republicans only.

	α_0	α	β_0	β
Positive Emotions	0.08(-0.3, 0.5)	0.9**(0.2, 1.6)	0.002(-0.006, 0.01)	-0.03**(-0.04, -0.009)
Negative Emotions	-1***(-1.3, -0.6)	1.6***(0.9, 2.2)	-0.02***(-0.03, -0.01)	0.03***(0.01, 0.04)
Anxiety	-1.2***(-1.6, -0.9)	1.1***(0.5, 1.7)	-0.03***(-0.03, -0.02)	0.04***(0.02, 0.06)
Anger	-0.5**(-0.9, -0.2)	1.4***(0.8, 2)	-0.01***(-0.02, -0.006)	0.02*(0.004, 0.04)
Sadness	-0.9***(-1.4, -0.5)	0.9**(0.2, 1.6)	-0.02***(-0.03, -0.009)	0.009(-0.009, 0.03)
Swearing Terms	-1***(-1.2, -0.9)	1***(0.7, 1.3)	-0.03***(-0.03, -0.02)	0.02***(0.02, 0.03)
Tentativeness	0.3(-0.06, 0.7)	-0.05(-0.7, 0.6)	-0.003(-0.01, 0.006)	-0.02**(-0.04, -0.006)
Certainty	0.8***(0.4, 1.1)	1***(0.5, 1.6)	0.02***(0.007, 0.02)	-0.009(-0.03, 0.008)
Swearing (empath)	-0.9***(-1.2, -0.7)	1.7***(1.3, 2.1)	-0.03***(-0.03, -0.02)	0.02***(0.01, 0.03)
science	-0.02(-0.3, 0.3)	-1.5***(-2.1, -1)	0.02***(0.01, 0.03)	-0.02*(-0.03, -0.001)
Neg. Emotion (empath)	-1***(-1.3, -0.7)	2***(1.5, 2.5)	-0.03***(-0.04, -0.02)	0.01*(0.001, 0.03)
Pos. Emotion (empath)	0.1(-0.2, 0.5)	1.1***(0.5, 1.6)	0.005(-0.002, 0.01)	-0.02**(-0.04, -0.009)

Table 12: RDD parameters for aggregation on verbosity quartiles, most verbose quartile of politicians.

	α_0	α	β_0	β
Positive Emotions	1.6***(1.2, 2.1)	0.4(-0.3, 1.1)	0.01*(0.002, 0.02)	-0.04***(-0.06, -0.03)
Negative Emotions	-2.7***(-3, -2.5)	0.8***(0.4, 1.2)	-0.03***(-0.03, -0.02)	0.03***(0.02, 0.04)
Anxiety	-1.7***(-2.2, -1.2)	0.6(-0.1, 1.4)	-0.02***(-0.03, -0.01)	0.04***(0.02, 0.06)
Anger	-2.3***(-2.6, -2.1)	0.7***(0.3, 1.1)	-0.009***(-0.01, -0.004)	0.01*(0.001, 0.02)
Sadness	-1.6***(-2.1, -1.1)	0.3(-0.4, 1.1)	-0.02***(-0.03, -0.008)	0.03**(0.01, 0.05)
Swearing Terms	-1.3***(-1.5, -1.1)	0.4(0.07, 0.6)	-0.02***(-0.02, -0.01)	0.02***(0.02, 0.03)
Tentativeness	-1.4***(-1.7, -1)	0.7(0.2, 1.3)	-0.04***(-0.05, -0.03)	0.02*(0.001, 0.03)
Certainty	-0.5*(-1, -0.04)	0.5(-0.3, 1.2)	-0.005(-0.01, 0.005)	0.02*(0.001, 0.04)
Swearing (empath)	-1.4***(-1.7, -1.2)	0.6**(0.2, 0.9)	-0.03***(-0.03, -0.02)	0.02***(0.01, 0.03)
science	2.5***(2.2, 2.9)	-0.9*(-1.4, -0.3)	0.02***(0.02, 0.03)	-0.04***(-0.05, -0.02)
Neg. Emotion (empath)	-2.1***(-2.3, -1.8)	0.9***(0.5, 1.3)	-0.04***(-0.04, -0.03)	0.04***(0.03, 0.05)
Pos. Emotion (empath)	0.4**(0.1, 0.8)	0.5(-0.001, 1.1)	0(-0.007, 0.007)	-0.01(-0.02, 0.004)

Table 13: RDD parameters for aggregation on verbosity quartiles, excluding outliers, most verbose quartile of politicians.

	α_0	α	β_0	β
Positive Emotions	1.4***(1, 1.7)	0.5(-0.1, 1)	0.006(-0.001, 0.01)	-0.03***(-0.04, -0.01)
Negative Emotions	-2.5***(-2.7, -2.3)	0.6***(0.3, 1)	-0.02***(-0.02, -0.01)	0.02***(0.01, 0.03)
Anxiety	-1.5***(-1.8, -1.2)	0.5(-0.004, 1.1)	-0.01**(-0.02, -0.004)	0.02*(0.002, 0.03)
Anger	-2.2***(-2.5, -2)	0.6***(0.3, 1)	-0.006*(-0.01, -0.001)	0.006(-0.003, 0.02)
Sadness	-1.4***(-1.8, -1)	0.3(-0.3, 1)	-0.008(-0.02, 0)	0.01(-0.006, 0.03)
Swearing Terms	-1.2***(-1.3, -1)	0.2*(0.005, 0.5)	-0.01***(-0.02, -0.01)	0.02***(0.01, 0.03)
Tentativeness	-0.8***(-1.1, -0.5)	0.2(-0.3, 0.8)	-0.03***(-0.04, -0.02)	0.03***(0.01, 0.05)
Certainty	-0.4(-0.8, 0.02)	0.3(-0.3, 1)	-0.004(-0.01, 0.005)	0.02(0, 0.04)
Swearing (empath)	-1.2***(-1.4, -1)	0.3(0.05, 0.6)	-0.02***(-0.02, -0.01)	0.01***(0.007, 0.02)
science	2.3***(2, 2.6)	-0.6*(-1.1, -0.06)	0.02***(0.01, 0.03)	-0.03***(-0.04, -0.01)
Neg. Emotion (empath)	-1.9***(-2.1, -1.7)	0.7***(0.3, 1)	-0.03***(-0.03, -0.02)	0.03***(0.02, 0.04)
Pos. Emotion (empath)	0.5**(0.1, 0.8)	0.5*(0.004, 1.1)	-0(-0.007, 0.007)	-0.01(-0.02, 0.004)

Table 14: RDD parameters for aggregation on verbosity quartiles, 2nd most verbose quartile of politicians.

	α_0	α	β_0	β
Positive Emotions	0.4(-0.4, 1.1)	0.4(-0.8, 1.6)	0.008(-0.008, 0.02)	-0.04*(-0.07, -0.007)
Negative Emotions	-4.4***(-4.7, -4.1)	1***(0.5, 1.5)	-0.04***(-0.04, -0.03)	0.05***(0.03, 0.06)
Anxiety	-2.8***(-3.4, -2.2)	0.6(-0.3, 1.4)	-0.02**(-0.03, -0.007)	0.06***(0.04, 0.08)
Anger	-3.6***(-3.9, -3.3)	0.6*(0.1, 1)	-0.01***(-0.02, -0.007)	0.02**(0.006, 0.03)
Sadness	-3.2***(-3.9, -2.4)	0.3(-0.9, 1.5)	-0.03***(-0.05, -0.01)	0.06***(0.03, 0.1)
Swearing Terms	-1.6***(-1.9, -1.3)	0.4(-0.06, 0.9)	-0.02***(-0.02, -0.01)	0.01*(0, 0.03)
Tentativeness	0.8*(0.2, 1.5)	0.2(-0.9, 1.3)	-0.02**(-0.04, -0.009)	-0.02(-0.05, 0.006)
Certainty	-0.2(-1, 0.6)	-0.9(-2.2, 0.3)	0.007(-0.01, 0.02)	0.03(-0.002, 0.07)
Swearing (empath)	-1.6***(-2, -1.2)	0.4(-0.2, 1.1)	-0.02***(-0.03, -0.01)	0.02**(0.006, 0.04)
science	1.9***(1.4, 2.4)	0.4(-0.4, 1.2)	0.01*(0.001, 0.02)	-0.04***(-0.06, -0.01)
Neg. Emotion (empath)	-2.4***(-2.7, -2)	0.8**(0.3, 1.4)	-0.03***(-0.04, -0.03)	0.03***(0.02, 0.05)
Pos. Emotion (empath)	0.2(-0.3, 0.7)	0.9*(0.1, 1.7)	-0.002(-0.01, 0.008)	-0.01(-0.03, 0.01)

Table 15: RDD parameters for aggregation on verbosity quartiles, excluding outliers, 2nd most verbose quartile of politicians.

	α_0	α	β_0	β
Positive Emotions	1.3***(0.7, 1.8)	-0.6(-1.4, 0.2)	0.02***(0.01, 0.03)	-0.02(-0.04, 0.002)
Negative Emotions	-4.1***(-4.4, -3.8)	0.8**(0.3, 1.2)	-0.03***(-0.04, -0.02)	0.04***(0.03, 0.05)
Anxiety	-2.6***(-3, -2.2)	0.9**(0.2, 1.5)	-0.02***(-0.03, -0.009)	0.03***(0.01, 0.05)
Anger	-3.6***(-3.8, -3.3)	0.5*(0.06, 1)	-0.01***(-0.02, -0.005)	0.02**(0.005, 0.03)
Sadness	-2.5***(-3, -2)	0.9(-0.06, 1.9)	-0.02***(-0.03, -0.01)	0.03*(0.004, 0.05)
Swearing Terms	-1.5***(-1.7, -1.2)	0.3(-0.1, 0.7)	-0.01***(-0.02, -0.005)	0.007(-0.004, 0.02)
Tentativeness	0.5(-0.006, 1)	-0.3(-1.1, 0.5)	-0.01(-0.02, 0.001)	0.005(-0.02, 0.03)
Certainty	-0.3(-0.8, 0.2)	0.1(-0.7, 1)	-0.001(-0.01, 0.01)	0.006(-0.02, 0.03)
Swearing (empath)	-1.3***(-1.7, -1)	0.2(-0.4, 0.7)	-0.01***(-0.02, -0.006)	0.01(-0.002, 0.03)
science	2***(1.6, 2.4)	-0.1(-0.8, 0.6)	0.01*(0.001, 0.02)	-0.02*(-0.04, -0.001)
Neg. Emotion (empath)	-2.2***(-2.5, -1.8)	0.6*(0.1, 1.2)	-0.03***(-0.03, -0.02)	0.03***(0.01, 0.04)
Pos. Emotion (empath)	0.7**(0.3, 1.2)	0.3(-0.4, 1)	0.004(-0.006, 0.01)	-0.01(-0.03, 0.006)

Table 16: RDD parameters for aggregation on verbosity quartiles, 3rd most verbose quartile of politicians.

	α_0	α	β_0	β
Positive Emotions	1.1(-0.04, 2.3)	1.2(-0.7, 3.1)	0.01(-0.01, 0.04)	-0.06*(-0.1, -0.01)
Negative Emotions	-4.8***(-5.3, -4.3)	1*(0.2, 1.8)	-0.04***(-0.06, -0.03)	0.06***(0.04, 0.08)
Anxiety	-2.9***(-3.8, -2)	0.6(-0.9, 2)	-0.03**(-0.04, -0.007)	0.07***(0.03, 0.1)
Anger	-3.7***(-4.1, -3.2)	0.3(-0.4, 1)	-0.01**(-0.02, -0.004)	0.03**(0.008, 0.05)
Sadness	-3.1***(-4.5, -1.8)	0.5(-1.7, 2.7)	-0.04**(-0.07, -0.01)	0.07*(0.009, 0.1)
Swearing Terms	-1.4***(-1.8, -1.1)	0.1(-0.5, 0.7)	-0.01***(-0.02, -0.007)	0.009(-0.006, 0.03)
Tentativeness	1.2**(0.3, 2.1)	1(-0.4, 2.4)	-0.01(-0.03, 0.005)	-0.04*(-0.08, -0.006)
Certainty	0.04(-1.4, 1.5)	-0.7(-3, 1.6)	0.01(-0.02, 0.04)	-0.02(-0.08, 0.04)
Swearing (empath)	-1.4***(-1.9, -0.9)	-0.007(-0.9, 0.9)	-0.02***(-0.03, -0.009)	0.02(-0.001, 0.04)
science	2.1***(1.3, 3)	-0.9(-2.2, 0.5)	0.02(-0.002, 0.04)	-0.01(-0.05, 0.02)
Neg. Emotion (empath)	-2.1***(-2.7, -1.6)	0.2(-0.7, 1.1)	-0.03***(-0.04, -0.02)	0.05***(0.03, 0.07)
Pos. Emotion (empath)	1.3**(0.5, 2.1)	1.1(-0.1, 2.4)	0.01(-0.007, 0.03)	-0.04*(-0.07, -0.007)

Table 17: RDD parameters for aggregation on verbosity quartiles, excluding outliers, 3rd most verbose quartile of politicians.

	α_0	α	β_0	β
Positive Emotions	1**(0.2, 1.7)	0.6(-0.5, 1.7)	0.004(-0.01, 0.02)	-0.02(-0.05, 0.006)
Negative Emotions	-4***(-4.4, -3.5)	0.7(-0.02, 1.4)	-0.02***(-0.04, -0.01)	0.03**(0.008, 0.04)
Anxiety	-2.1***(-2.6, -1.6)	0.05(-0.8, 0.9)	-0.01(-0.02, 0)	0.03*(0.006, 0.05)
Anger	-3.2***(-3.6, -2.7)	-0.02(-0.7, 0.7)	-0.005(-0.01, 0.003)	0.01(-0.006, 0.03)
Sadness	-1*(-1.8, -0.2)	-1.7**(-2.9, -0.4)	0.008(-0.009, 0.03)	0.02(-0.01, 0.05)
Swearing Terms	-1.3***(-1.7, -0.9)	-0.04(-0.6, 0.5)	-0.01**(-0.02, -0.003)	0.006(-0.009, 0.02)
Tentativeness	0.7**(0.2, 1.3)	0.1(-0.8, 1)	-0.009(-0.02, 0.003)	-0.005(-0.03, 0.02)
Certainty	0.2(-0.5, 1)	-0.4(-1.7, 1)	0.004(-0.01, 0.02)	-0.01(-0.04, 0.02)
Swearing (empath)	-1.6***(-2.1, -1.2)	0.09(-0.6, 0.8)	-0.02***(-0.03, -0.009)	0.03**(0.008, 0.05)
science	2***(1.5, 2.5)	-0.7(-1.6, 0.2)	0.01*(0.003, 0.03)	-0.01(-0.04, 0.01)
Neg. Emotion (empath)	-1.6***(-2, -1.1)	-0.04(-0.8, 0.7)	-0.01*(-0.02, -0.002)	0.02*(0.001, 0.04)
Pos. Emotion (empath)	1.3***(0.7, 1.8)	-0.6(-1.6, 0.3)	0.009(-0.003, 0.02)	-0.003(-0.03, 0.02)

Table 18: RDD parameters for aggregation on verbosity quartiles, least verbose quartile of politicians.

	α_0	α	β_0	β
Positive Emotions	2.9**(0.9, 4.9)	-0.1(-3.3, 3.1)	0.04*(0.001, 0.09)	-0.1**(-0.2, -0.03)
Negative Emotions	-3.6***(-4.8, -2.3)	-0.1(-2.1, 1.8)	-0.02(-0.04, 0.01)	0.02(-0.03, 0.07)
Anxiety	-2.4*(-4.3, -0.5)	-0.3(-3.4, 2.7)	-0.02(-0.06, 0.02)	0.05(-0.03, 0.1)
Anger	-3.5***(-4.7, -2.3)	0.4(-1.5, 2.4)	-0.02(-0.04, 0.008)	0.03(-0.02, 0.08)
Sadness	-1.2(-4.5, 2.2)	-1.3(-6.7, 4.1)	-0.008(-0.08, 0.06)	0.04(-0.1, 0.2)
Swearing Terms	-1.1(-2.5, 0.4)	0.7(-1.7, 3)	-0.02(-0.05, 0.01)	0.02(-0.04, 0.08)
Tentativeness	0.7(-1.5, 2.9)	-0.2(-3.7, 3.3)	-0.02(-0.06, 0.03)	-0.002(-0.09, 0.09)
Certainty	1.2(-2.1, 4.6)	2.5(-2.9, 7.8)	-0.002(-0.07, 0.07)	-0.08(-0.2, 0.06)
Swearing (empath)	-1.9*(-3.7, -0.07)	1.5(-1.4, 4.4)	-0.02(-0.06, 0.02)	0.001(-0.07, 0.08)
science	4**(1.6, 6.4)	-3.3(-7.2, 0.6)	0.04(-0.008, 0.1)	-0.05(-0.1, 0.05)
Neg. Emotion (empath)	-2.3**(-3.6, -0.9)	1(-1.1, 3.2)	-0.02(-0.05, 0.005)	0.02(-0.04, 0.08)
Pos. Emotion (empath)	2.5**(0.7, 4.3)	0.5(-2.4, 3.4)	0.02(-0.02, 0.06)	-0.06(-0.1, 0.01)

Table 19: RDD parameters for aggregation on verbosity quartiles, excluding outliers, least verbose quartile of politicians.

	α_0	α	β_0	β
Positive Emotions	0.8(-0.1, 1.7)	-0.6(-2.1, 1)	0.003(-0.02, 0.02)	-0.003(-0.05, 0.04)
Negative Emotions	-2.8***(-3.5, -2.2)	-0.9(-2.3, 0.4)	-0.003(-0.02, 0.01)	0.03(-0.006, 0.06)
Anxiety	-1.7**(-2.7, -0.7)	0.2(-1.3, 1.6)	0.002(-0.02, 0.02)	-0.003(-0.04, 0.03)
Anger	-2.6***(-3.5, -1.7)	0.06(-1.3, 1.4)	0.004(-0.01, 0.02)	-0.001(-0.03, 0.03)
Sadness	-1.7***(-2.5, -0.9)	1.1(-0.09, 2.3)	-0.01(-0.03, 0.008)	-0.02(-0.05, 0.02)
Swearing Terms	-1.4***(-2, -0.8)	0.2(-0.9, 1.3)	-0.003(-0.02, 0.01)	-0.004(-0.03, 0.02)
Tentativeness	0.3(-0.5, 1)	1.1(-0.1, 2.4)	-0.005(-0.02, 0.01)	-0.02(-0.05, 0.02)
Certainty	0.3(-1.1, 1.6)	-0.8(-2.7, 1)	0.001(-0.03, 0.03)	-0(-0.05, 0.05)
Swearing (empath)	-1.3**(-2.2, -0.5)	-0.2(-1.7, 1.4)	-0.006(-0.02, 0.01)	0.005(-0.03, 0.04)
science	2.3***(1.3, 3.2)	-0.4(-2, 1.2)	0.02(-0.002, 0.04)	-0.01(-0.06, 0.03)
Neg. Emotion (empath)	-1.1**(-1.7, -0.4)	-0.5(-1.5, 0.5)	0.004(-0.01, 0.02)	-0.008(-0.04, 0.02)
Pos. Emotion (empath)	1.4**(0.6, 2.3)	-0.04(-1.8, 1.8)	0.009(-0.008, 0.03)	-0.03(-0.08, 0.02)

Table 20: The most common 15 words for each sentiment category, before 15 June 2015. Bold values deviate from the other period by more than one percentage point.

Top N words	Anger	Anxiety	Certainty	Negative Emotions	Positive Emotions	Sadness	Swearing Terms	Tentativeness
1	**fight.*?: 7.75%**	risk.*?: 10.84%	all: 23.51%	problem.*?: 4.35%	like: 5.70%	low.*?: 10.86%	**hell: 17.18%**	or: 13.51%
2	attack.*?: 4.96%	terror.*?: 8.29%	every: 6.74%	numb.*?: 3.20%	good: 4.23%	fail.*?: 9.83%	**damn.*?: 8.85%**	if: 13.40%
3	threat.*?: 4.91%	worr.*?: 5.89%	never: 5.19%	fight.*?: 2.69%	well.*?: 2.93%	lost: 7.37%	heck: 6.73%	some: 8.67%
4	cut: 4.87%	struggl.*?: 5.22%	sure.*?: 4.93%	low.*?: 2.11%	great: 2.71%	hurt.*?: 5.22%	screw.*?: 6.63%	lot: 6.24%
5	**war: 4.83%**	pressur.*?: 5.16%	always: 4.61%	bad: 1.93%	importan.*?: 2.47%	lose: 5.11%	dumb.*?: 6.44%	any: 6.20%
6	defens.*?: 4.20%	doubt.*?: 4.44%	must: 3.43%	fail.*?: 1.91%	better: 2.22%	loss.*?: 4.24%	**dick: 6.16%**	most: 4.57%
7	kill.*?: 4.03%	avoid.*?: 4.17%	certain.*?: 3.40%	difficult.*?: 1.87%	support: 2.08%	disappoint.*?: 4.13%	ass: 4.93%	something.*?: 4.13%
8	critical: 3.71%	fear: 3.51%	commit.*?: 3.07%	tough.*?: 1.79%	care: 2.06%	damag.*?: 3.88%	**shit.*?: 4.82%**	may: 2.83%
9	danger.*?: 3.10%	horr.*?: 2.51%	everything.*?: 2.98%	wrong.*?: 1.77%	best: 1.94%	alone: 2.88%	crap: 3.39%	kind (of): 2.35%
10	weapon.*?: 2.63%	overwhelm.*?: 2.47%	ever: 2.94%	risk.*?: 1.73%	sure.*?: 1.81%	losing: 2.61%	fuck: 3.05%	question.*?: 2.24%
11	argu.*?: 2.45%	vulnerab.*?: 2.38%	clear: 2.81%	attack.*?: 1.73%	opportun.*?: 1.78%	overwhelm.*?: 2.03%	fuckin.*?: 2.92%	anything: 2.13%
12	victim.*?: 2.22%	afraid: 2.34%	fact: 2.73%	threat.*?: 1.71%	interest.*?: 1.58%	devastat.*?: 2.02%	butt: 2.85%	hope: 2.04%
13	violat.*?: 2.20%	craz.*?: 2.34%	everybod.*?: 2.09%	cut: 1.69%	strong.*?: 1.52%	defeat.*?: 1.95%	bitch.*?: 2.74%	someone.*?: 1.75%
14	battl.*?: 2.02%	uncertain.*?: 2.18%	obvious.*?: 1.67%	war: 1.68%	safe.*?: 1.48%	miss: 1.91%	darn: 2.68%	pretty: 1.67%
15	offens.*?: 1.99%	desperat.*?: 1.98%	commitment.*?: 1.64%	serious: 1.50%	secur.*?: 1.45%	traged.*?: 1.90%	bloody: 2.28%	pretty: 1.67%
Total nr Expressions	184	91	83	499	408	101	53	156
Total Matches	2029989	929090	4987728	5836334	13579160	1132197	103306	7786065

Table 21: The most common 15 words for each sentiment category, after 15 June 2015. Bold values deviate from the other period by more than one percentage point.

Top N words	Anger	Anxiety	Certainty	Negative Emotions	Positive Emotions	Sadness	Swearing Terms	Tentativeness
1	**fight.*?: 9.20%**	risk.*?: 10.83%	all: 23.19%	problem.*?: 3.80%	like: 5.97%	low.*?: 11.06%	**hell: 24.15%**	**or: 15.01%**
2	threat.*?: 5.71%	terror.*?: 6.80%	every: 6.80%	fight.*?: 3.38%	good: 4.05%	fail.*?: 9.02%	**damn.*?: 11.46%**	if: 9.70%
3	attack.*?: 5.41%	worr.*?: 5.50%	never: 5.45%	numb.*?: 3.03%	great: 2.96%	lost: 6.90%	dumb.*?: 7.11%	some: 8.41%
4	critical: 3.90%	pressur.*?: 4.95%	sure.*?: 5.26%	threat.*?: 2.10%	importan.*?: 2.68%	hurt.*?: 5.40%	screw.*?: 6.68%	lot: 6.99%
5	**danger.*?: 3.80%**	struggl.*?: 4.27%	always: 4.64%	low.*?: 2.05%	well.*?: 2.68%	lose: 4.96%	heck: 6.10%	any: 6.50%
6	kill.*?: 3.60%	horr.*?: 4.26%	must: 3.76%	attack.*?: 1.99%	better: 2.30%	damag.*?: 4.21%	**shit.*?: 4.70%**	something.*?: 4.86%
7	war: 3.59%	fear: 4.02%	certain.*?: 3.28%	bad: 1.95%	support: 2.25%	loss.*?: 3.79%	ass: 4.48%	most: 4.66%
8	defens.*?: 2.94%	doubt.*?: 3.91%	clear: 3.00%	risk.*?: 1.78%	sure.*?: 2.02%	disappoint.*?: 3.72%	**crap: 3.42%**	may: 2.69%
9	weapon.*?: 2.81%	vulnerab.*?: 3.42%	everything.*?: 2.91%	wrong.*?: 1.77%	safe.*?: 2.02%	alone: 2.90%	darn: 2.75%	question.*?: 2.50%
10	cut: 2.80%	avoid.*?: 3.21%	commit.*?: 2.84%	fail.*?: 1.67%	best: 1.94%	devastat.*?: 2.58%	fuckin.*?: 2.49%	kind (of): 2.47%
11	victim.*?: 2.74%	craz.*?: 2.55%	fact: 2.69%	terror.*?: 1.46%	care: 1.90%	traged.*?: 2.33%	bitch.*?: 2.46%	hope: 2.23%
12	abuse.*?: 2.41%	overwhelm.*?: 2.38%	everybod.*?: 1.83%	difficult.*?: 1.43%	opportun.*?: 1.89%	losing: 2.32%	piss.*?: 2.41%	anything: 2.20%
13	violat.*?: 2.27%	afraid: 2.34%	entire.*?: 1.71%	critical: 1.43%	strong.*?: 1.64%	defeat.*?: 2.30%	butt: 2.39%	possib.*?: 2.09%
14	hate: 1.94%	shame.*?: 1.95%	commitment.*?: 1.61%	tough.*?: 1.43%	secur.*?: 1.48%	sad: 2.19%	bloody: 2.17%	someone.*?: 1.89%
15	argu.*?: 1.87%	shy.*?: 1.87%	commitment.*?: 1.61%	danger.*?: 1.39%	interest.*?: 1.44%	overwhelm.*?: 2.11%	suck: 2.17%	probably: 1.63%
Total nr Expressions	184	91	83	499	408	101	53	156
Total Matches	1373636	615580	3187841	3740676	8275450	692956	53915	4404308

Table 22: Kullback-Leibler Divergence for the word distribution within the Categories, before and after 15 June 2015.

	KL Divergence
Anger	0.036965
Anxiety	0.025344
Certainty	0.004131
Negative Emotions	0.026467
Positive Emotions	0.013651
Sadness	0.014523
Swearing Terms	0.140172
Tentativeness	0.010683