“LAW AS DATA”

Visualizations

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Chen

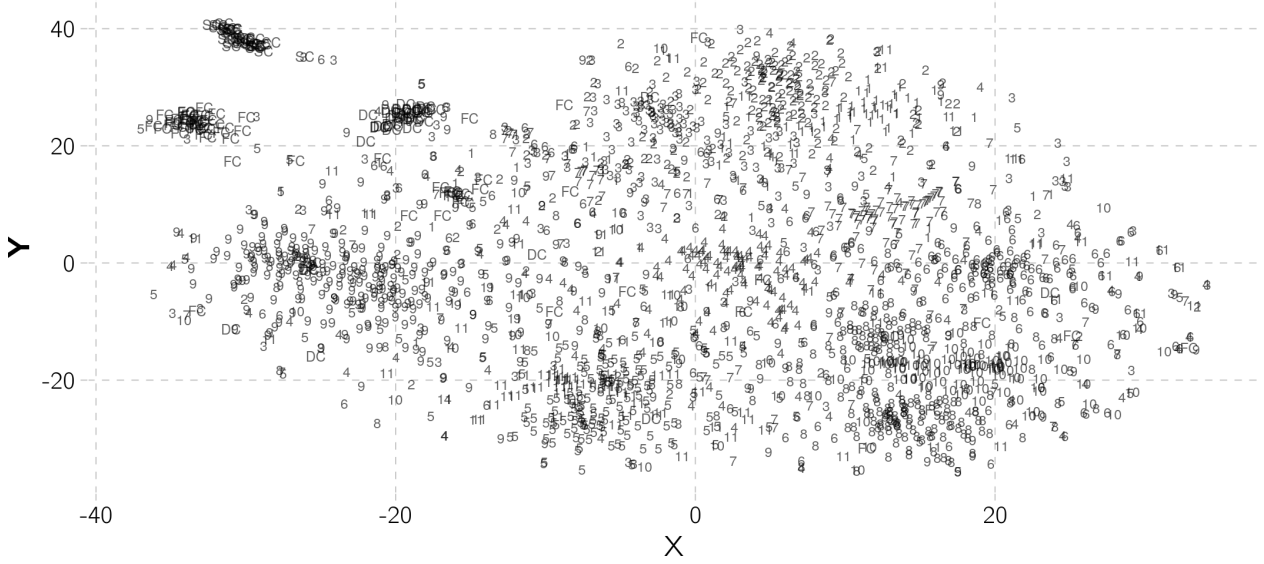
Chen

Chen Figure 1

(Chen 1)

Figure 1: Centered by Topic-Year, Averaged by Judge, Labeled by Court

Circuit, CC Judge Vector, Demeaned by Year and Big Topic



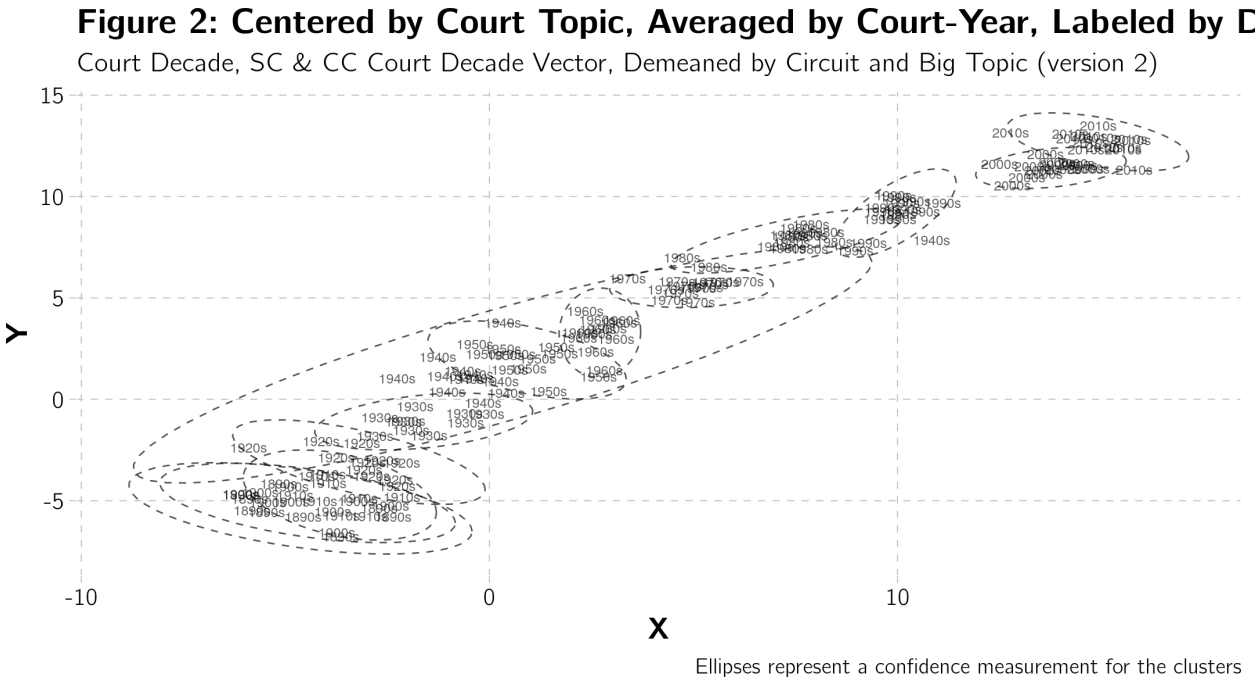
Chen Figure 2

(Chen 2)

Figure 2: Centered by Court Topic, Averaged by Court-Year, Labeled by D

Court Decade, SC & CC Court Decade Vector, Demeaned by Circuit and Big Topic

(Chen 2)

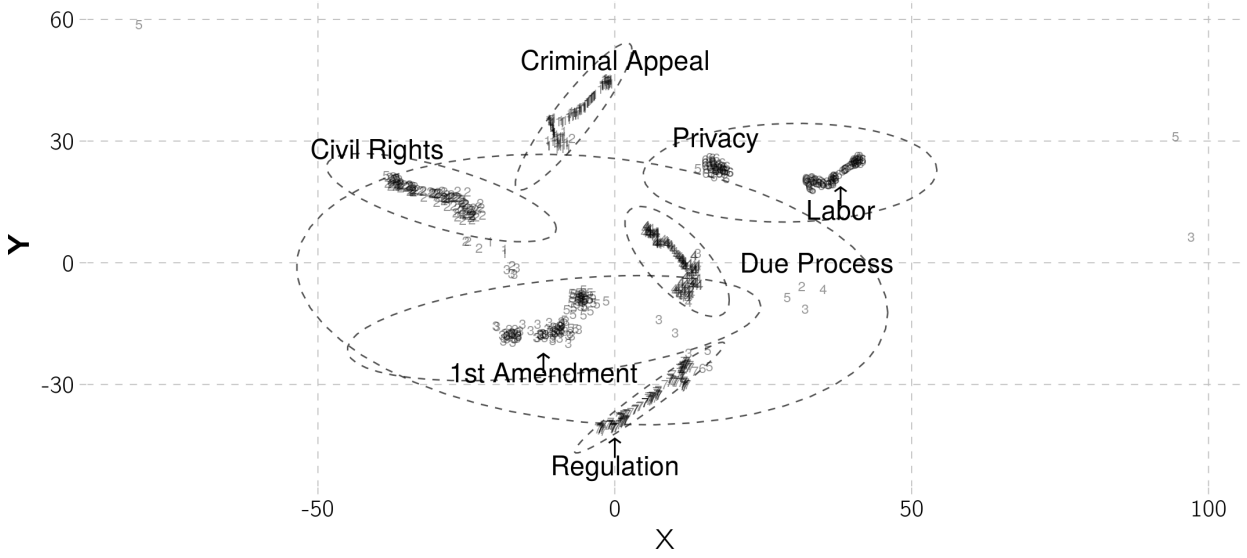


Chen Figure 3

(Chen 3)

Figure 3: Centered by Judge-Year, Averaged by Topic-Year, Labeled by T

Big Topics and Year, SC and CC Topic Year Vector, Demeaned by Judge & Year

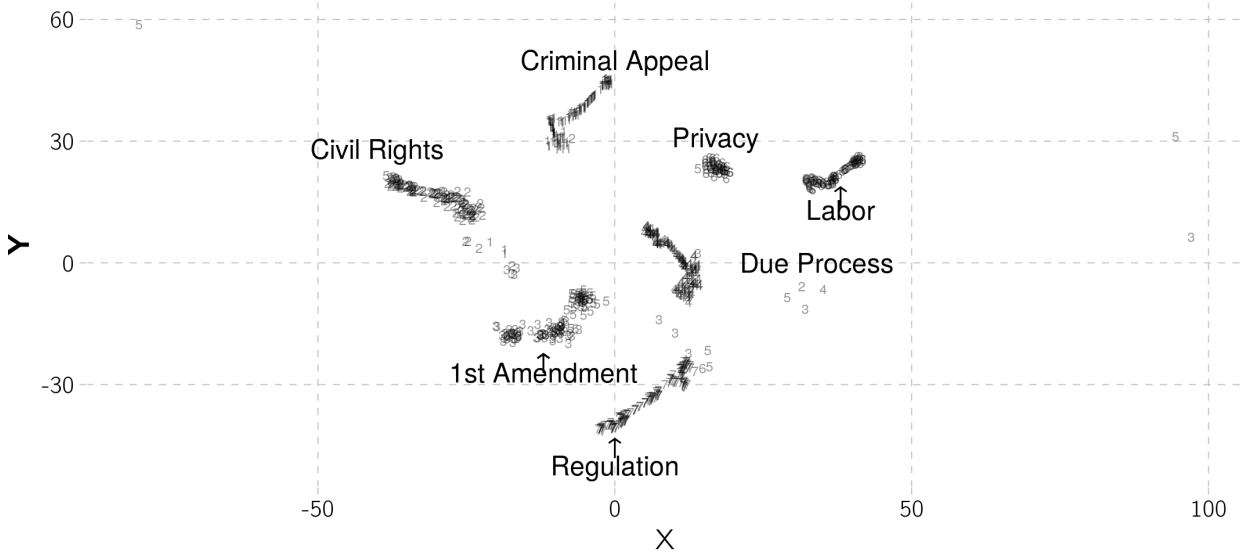


Ellipses represent a confidence measurement for the clusters (Version 1)

(Chen 3)

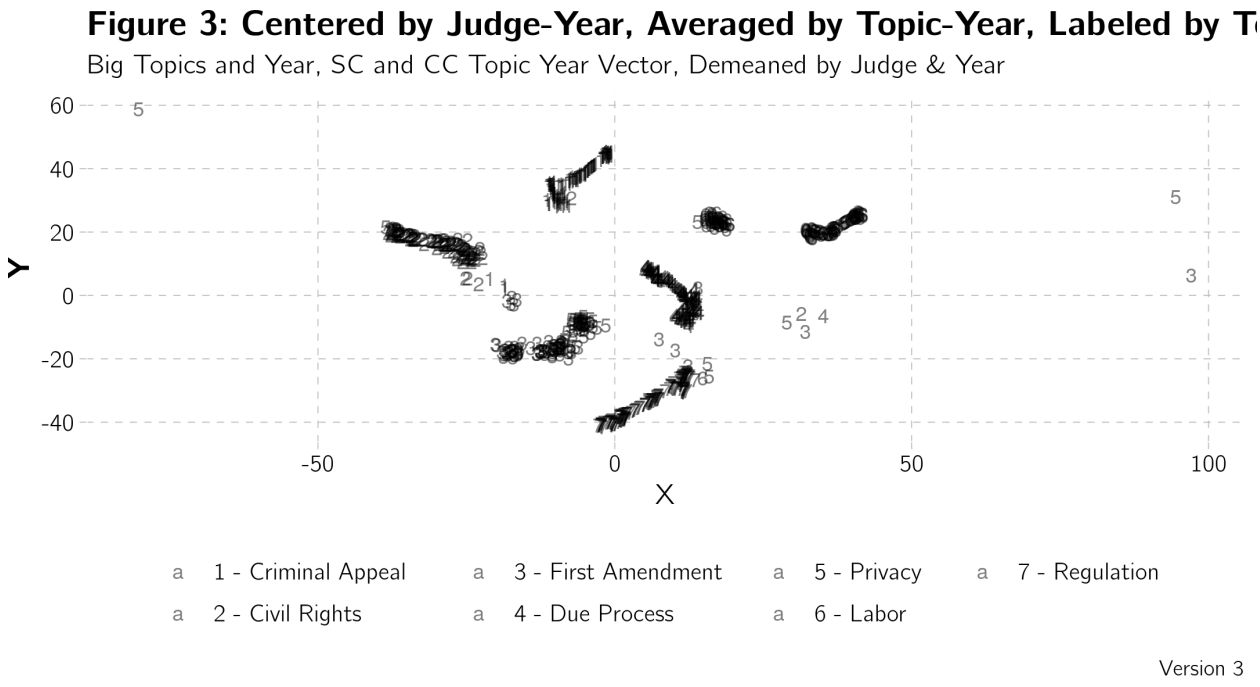
Figure 3: Centered by Judge-Year, Averaged by Topic-Year, Labeled by T

Big Topics and Year, SC and CC Topic Year Vector, Demeaned by Judge & Year



Version 2

(Chen 3)

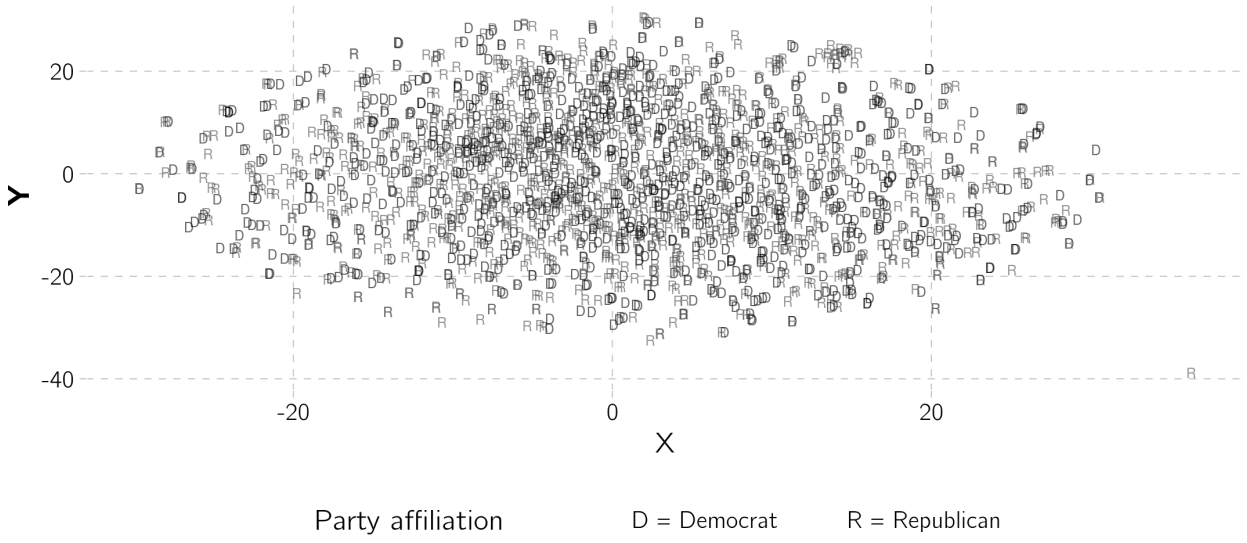


Chen Figure 4

(Chen 4)

Figure 4: Centered by Court-Topic-Year, Averaged by Judge, Labeled by I

Party affiliation, SC & CC Judge Vector, Demeaned by Circuit, Big Topics, and year

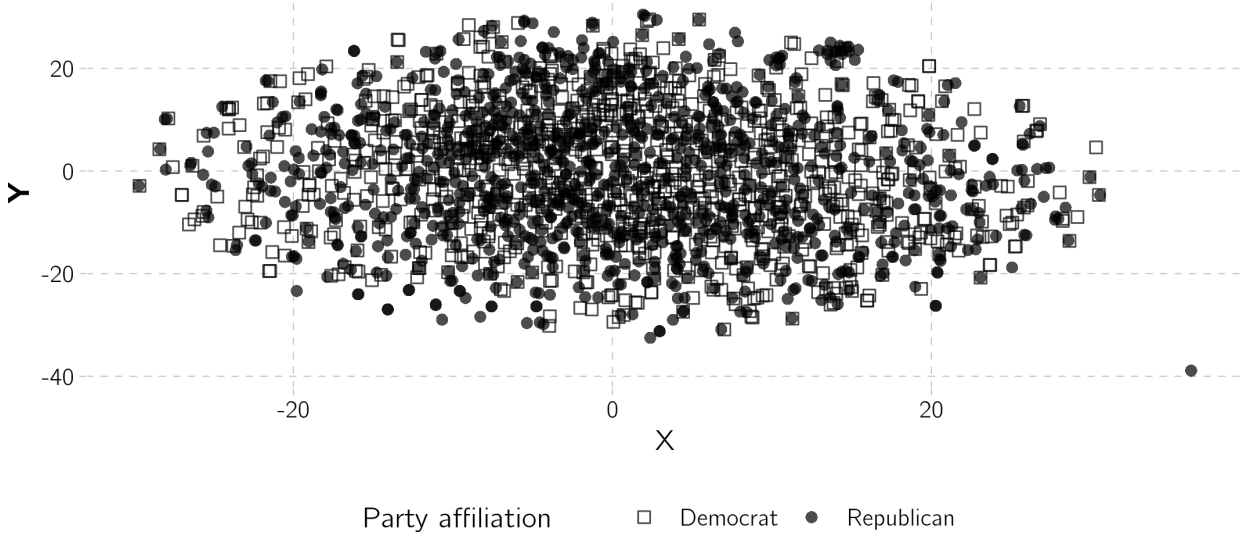


Version 1

(Chen 4)

Figure 4: Centered by Court-Topic-Year, Averaged by Judge, Labeled by I

Party affiliation, SC & CC Judge Vector, Demeaned by Circuit, Big Topics, and year



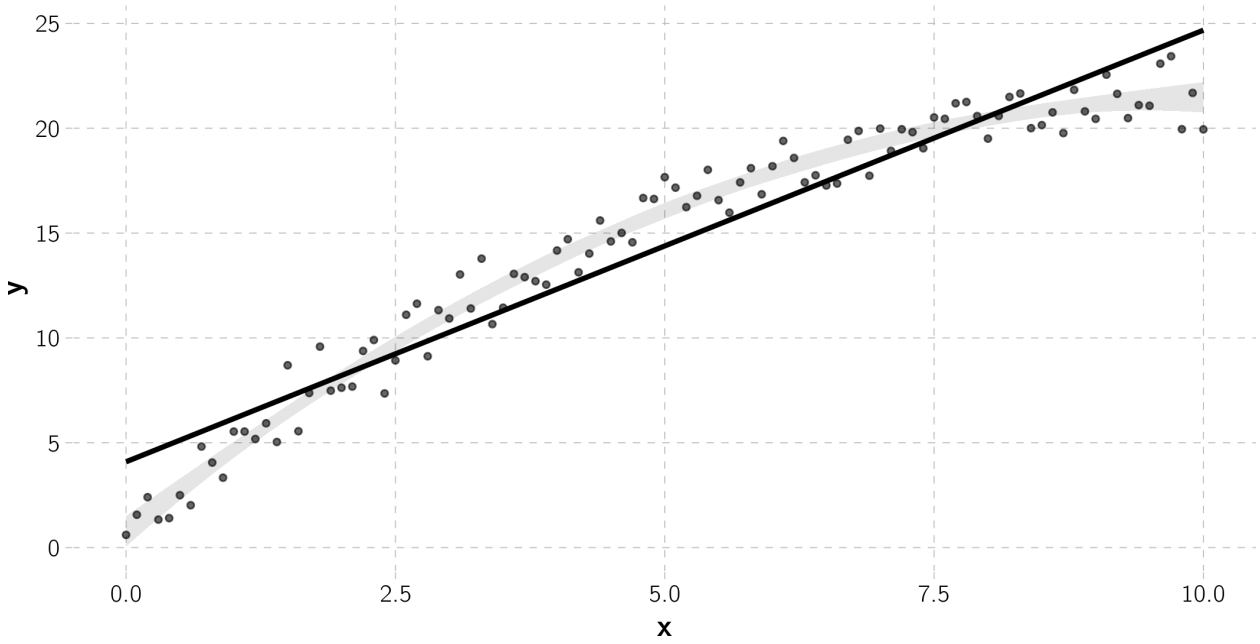
Copus

Copus

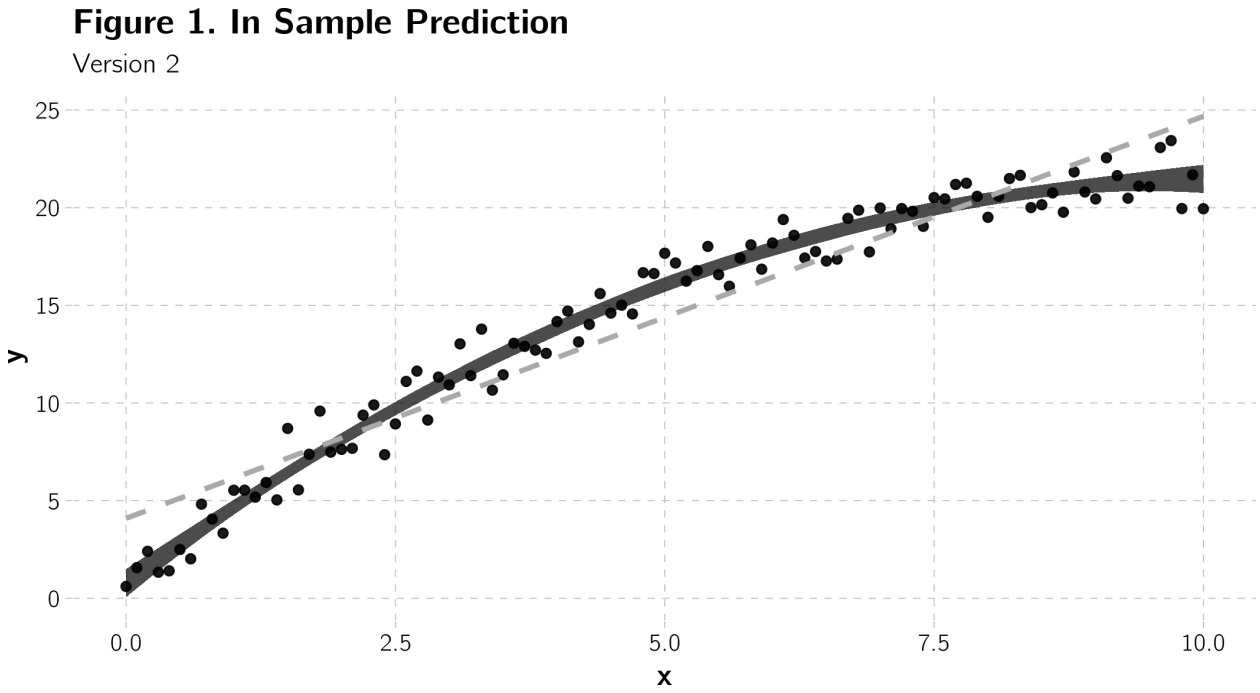
Copus Figure 1

(Copus 1)

Figure 1. In Sample Prediction



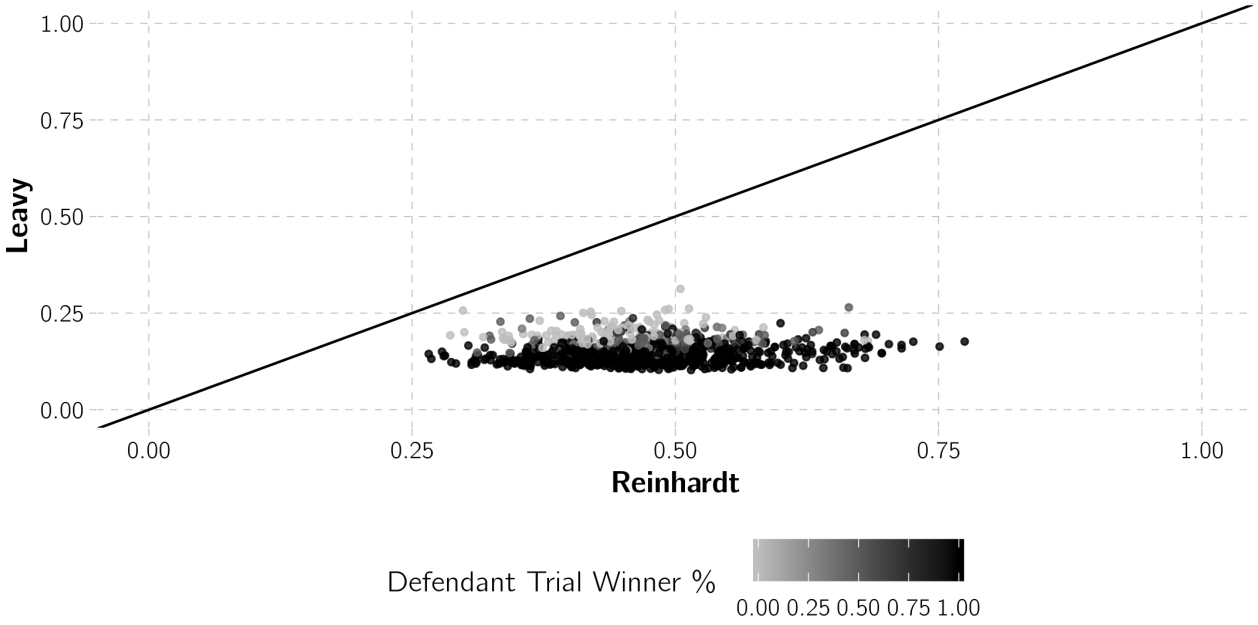
(Copus 1)



Copus Figure 2

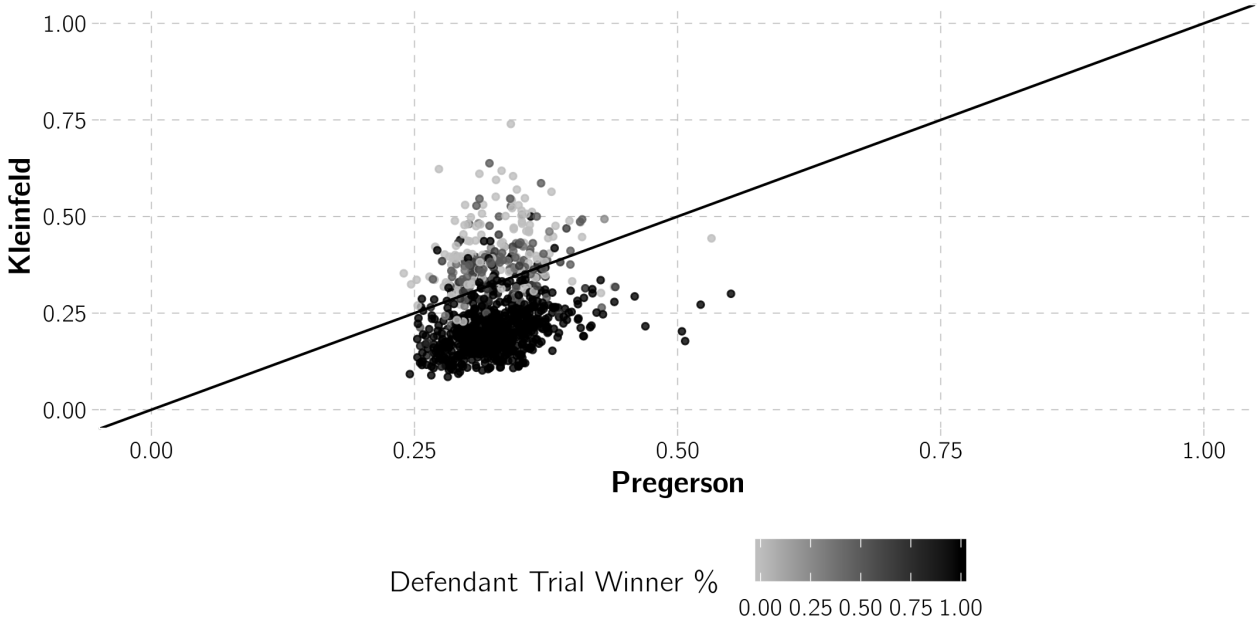
(Copus 2)

Figure 2. Predicting the Votes of Ninth Circuit Judges



(Copus 2)

Figure 2. Predicting the Votes of Ninth Circuit Judges

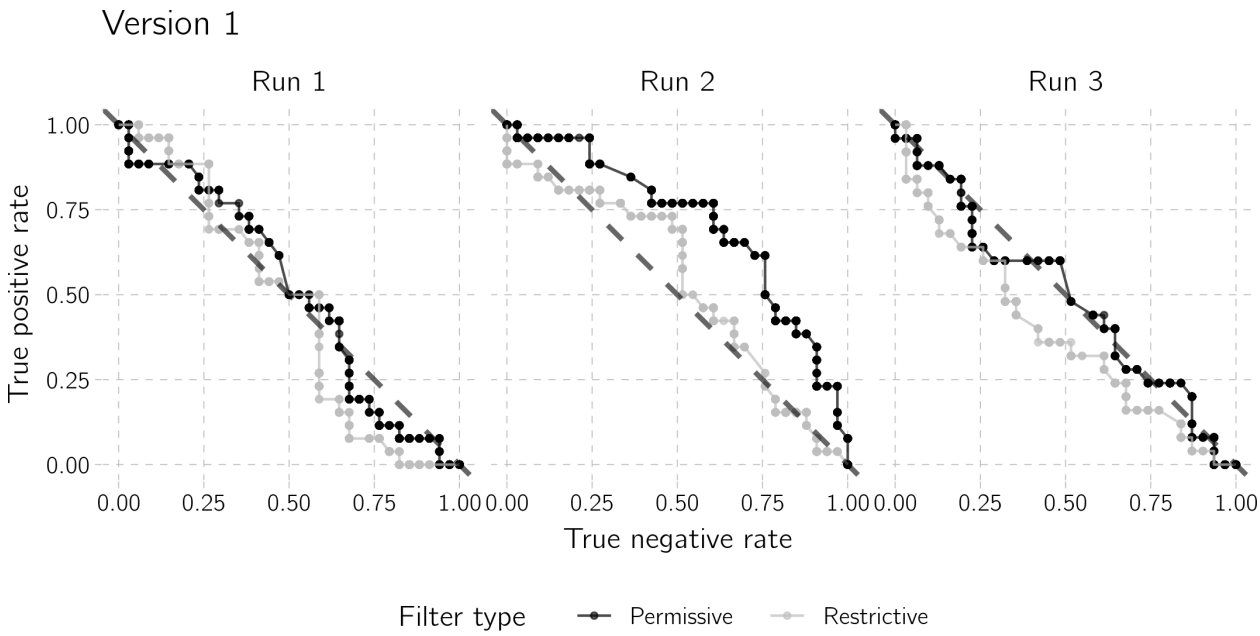


Dumas

Dumas

Dumas Figure 1

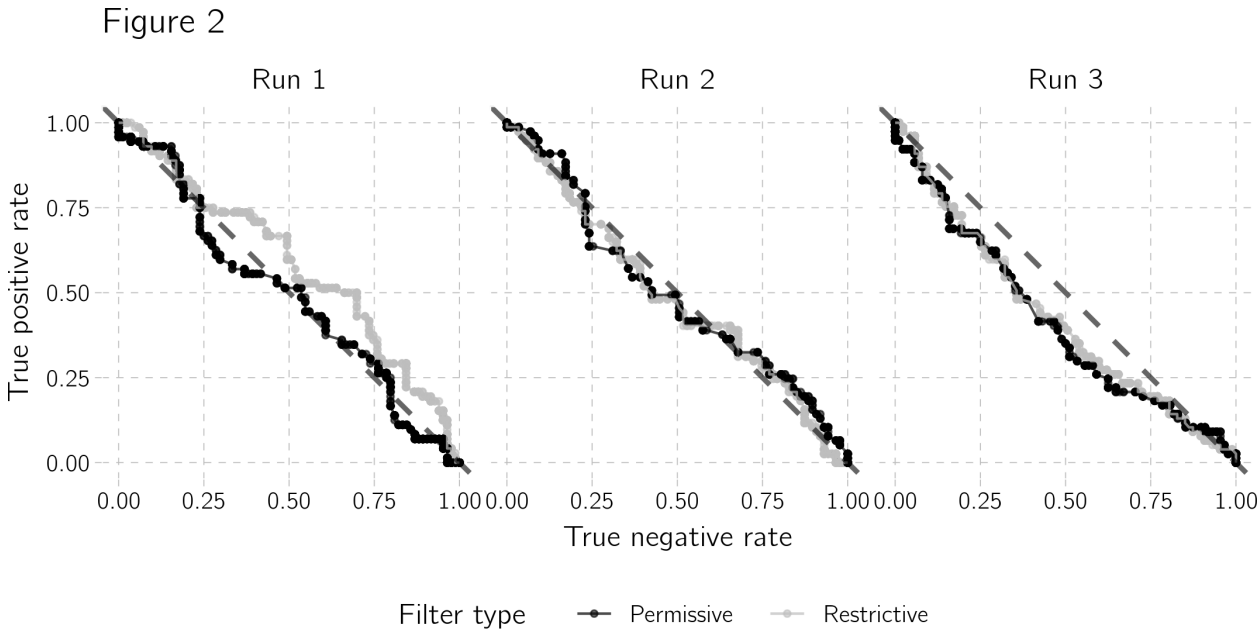
(Dumas 1)



The ROC curves of the language model

Dumas Figure 2

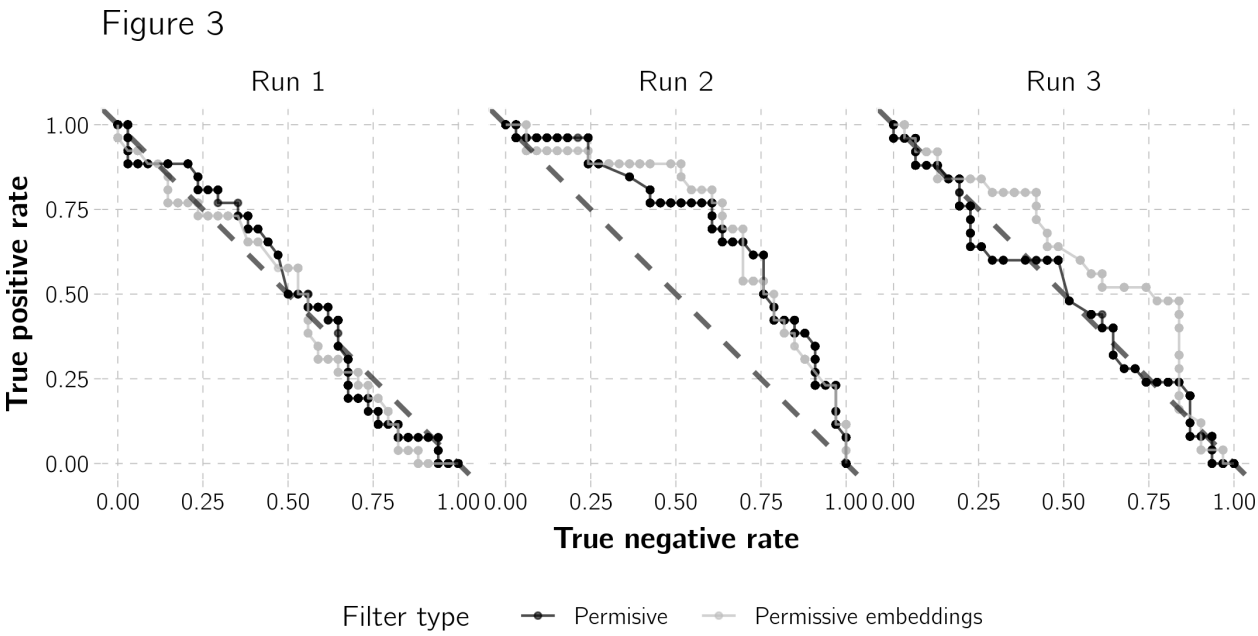
(Dumas 2)



The ROC curves of the language model

Dumas Figure 3

(Dumas 3)

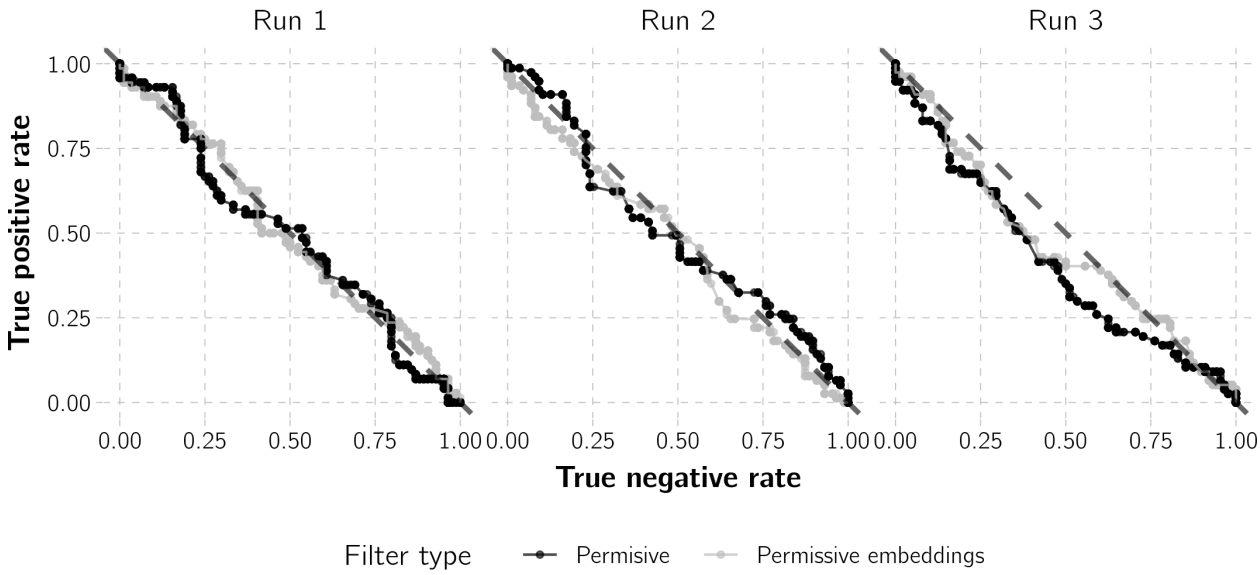


The ROC curves of the language model

Dumas Figure 4

(Dumas 4)

Figure 4



The ROC curves of the language model

Eidelman

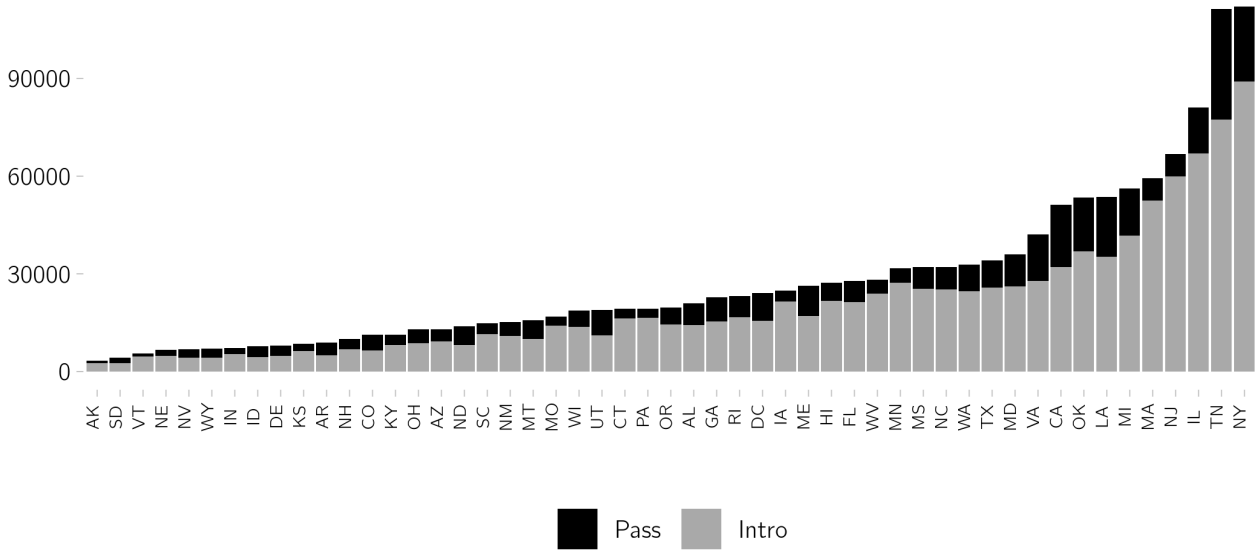
Eidelman

Eidelman Figure 1

(Eidelman 1)

Figure 1

Number of bills introduced and receiving floor action for each state

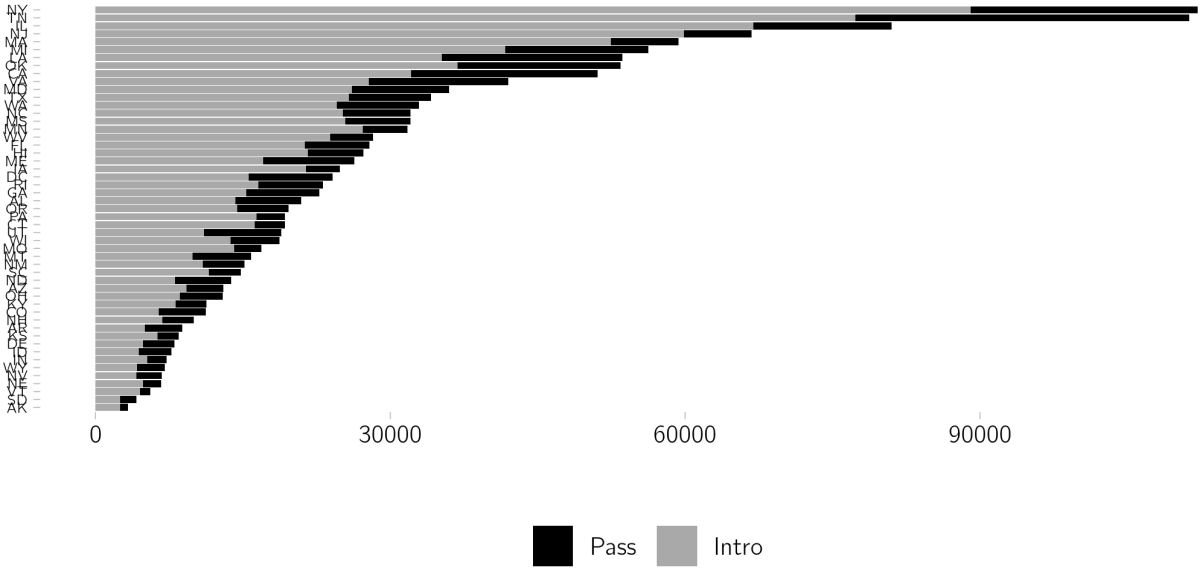


Version 1

(Eidelman 1)

Figure 1

Number of bills introduced and receiving floor action for each state

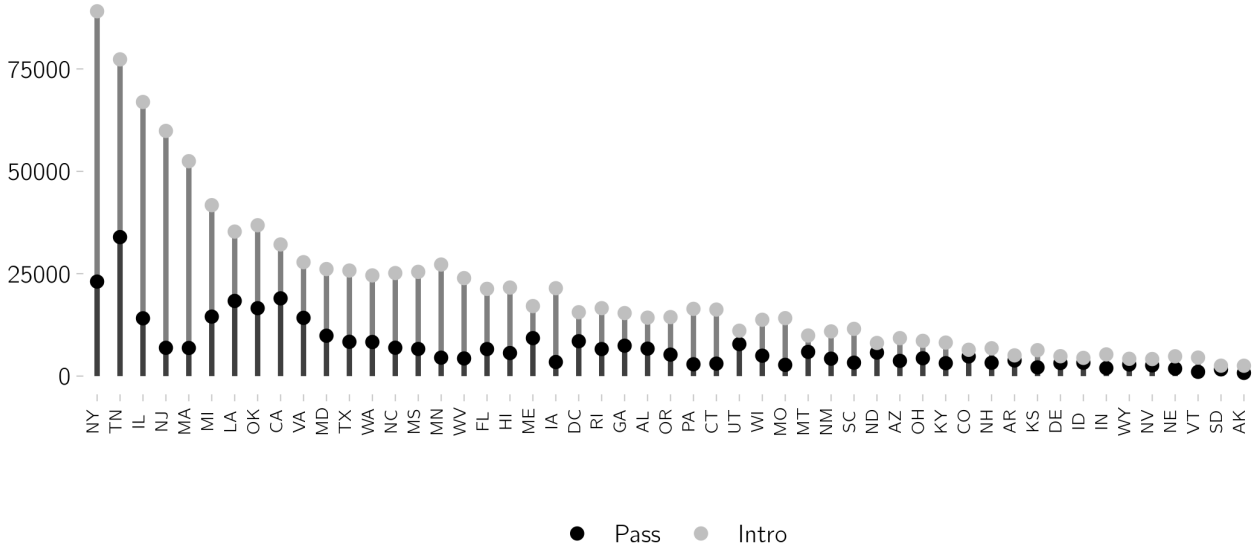


Version 2

(Eidelman 1)

Figure 1

Number of bills introduced and receiving floor action for each state

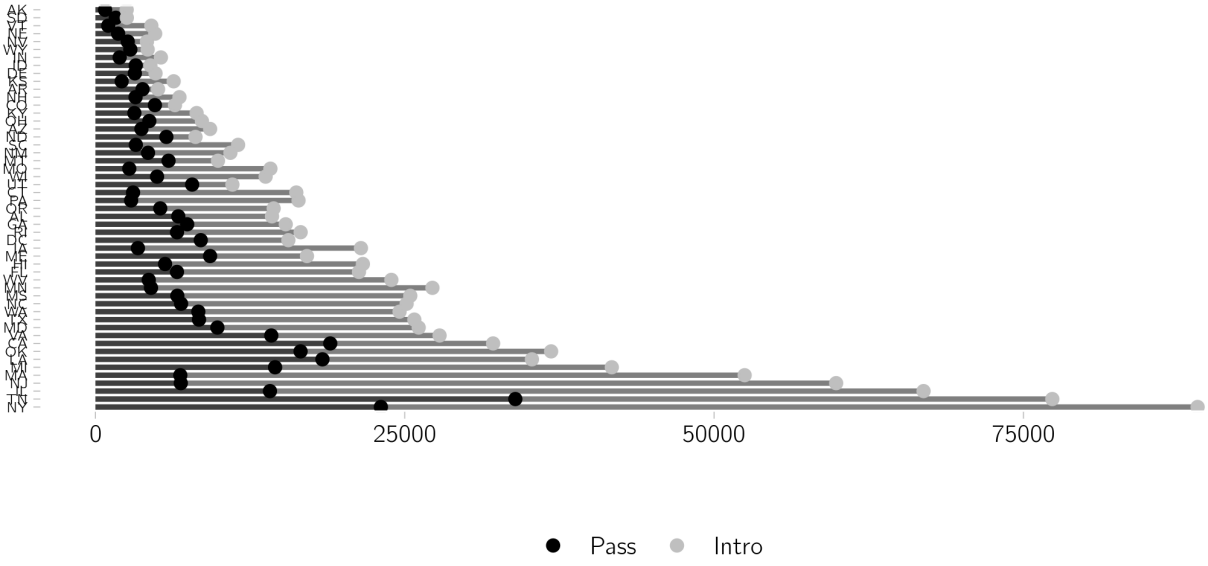


Version 3

(Eidelman 1)

Figure 1

Number of bills introduced and receiving floor action for each state



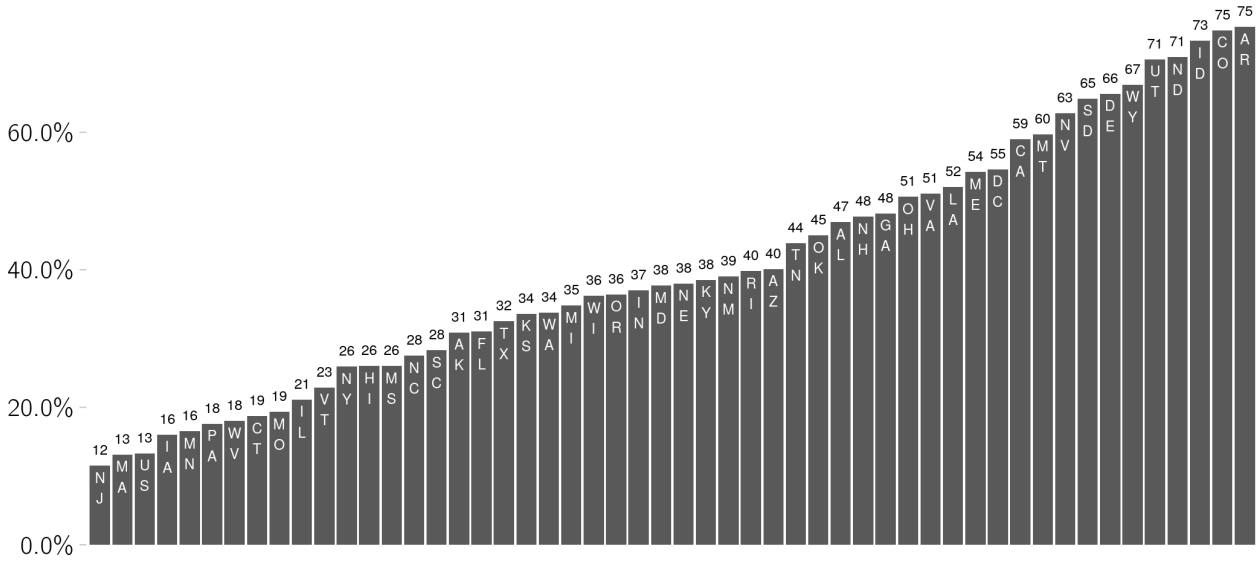
Version 3

Eidelman Figure 2

(Eidelman 2)

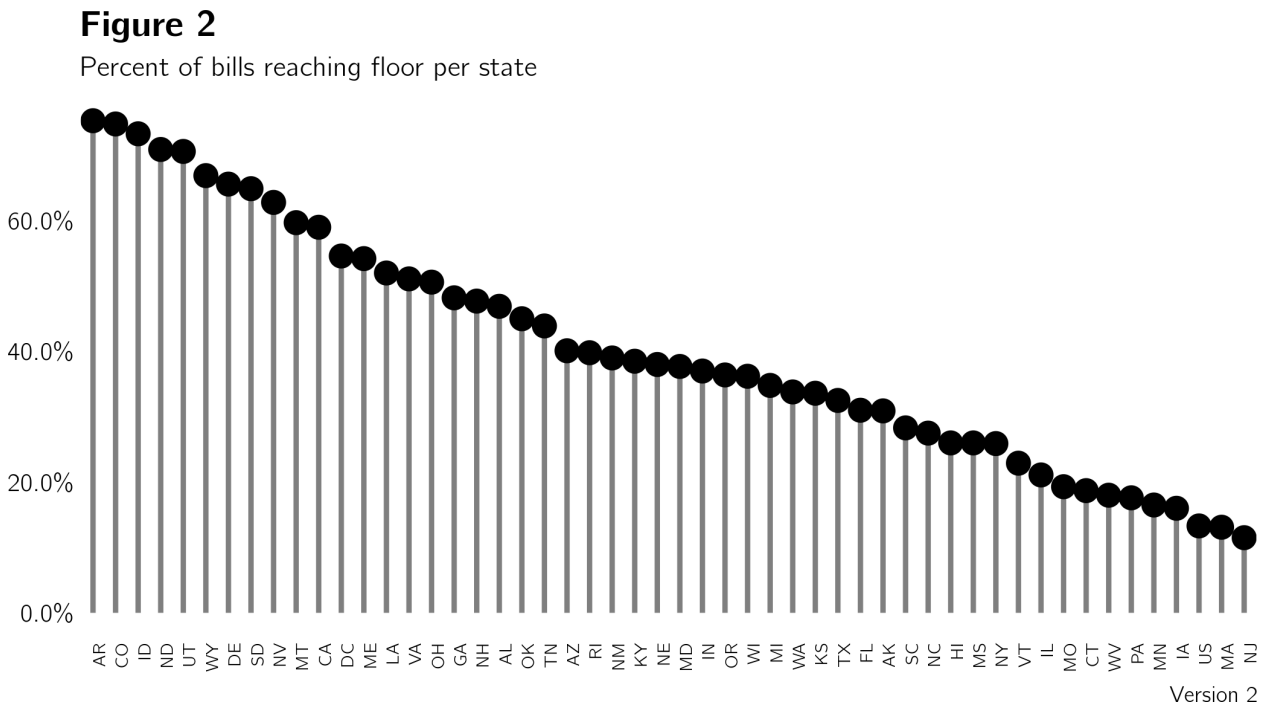
Figure 2

Percent of bills reaching floor per state



Version 1

(Eidelman 2)

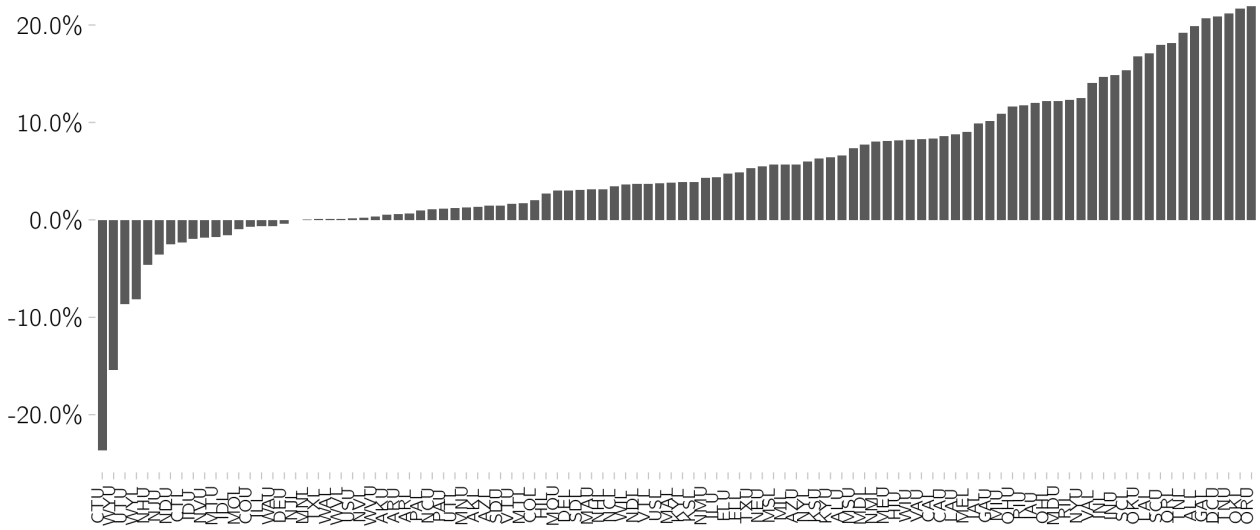


Eidelman Figure 3

(Eidelman 3)

Figure 3

Change from baseline with text only features

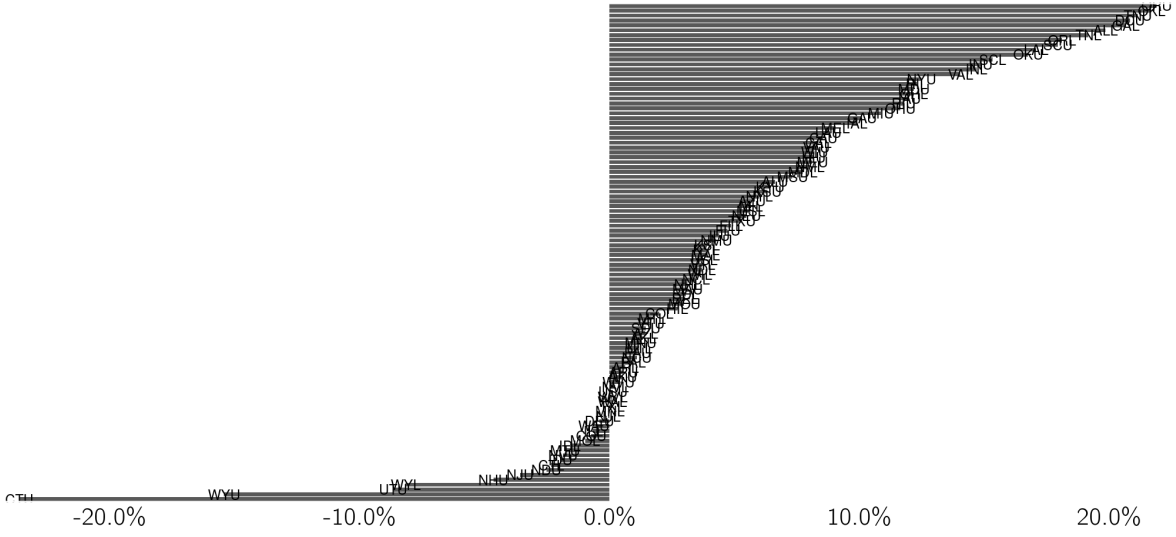


Version 1

(Eidelman 3)

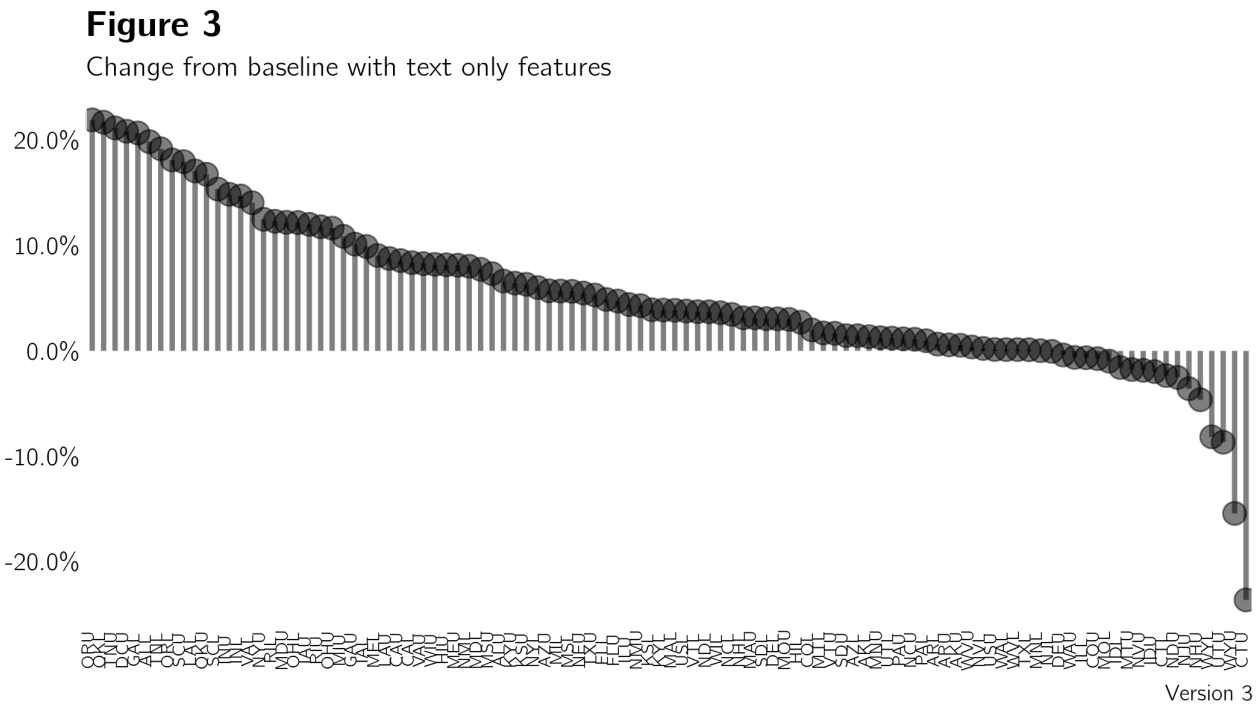
Figure 3

Change from baseline with text only features



Version 2

(Eidelman 3)

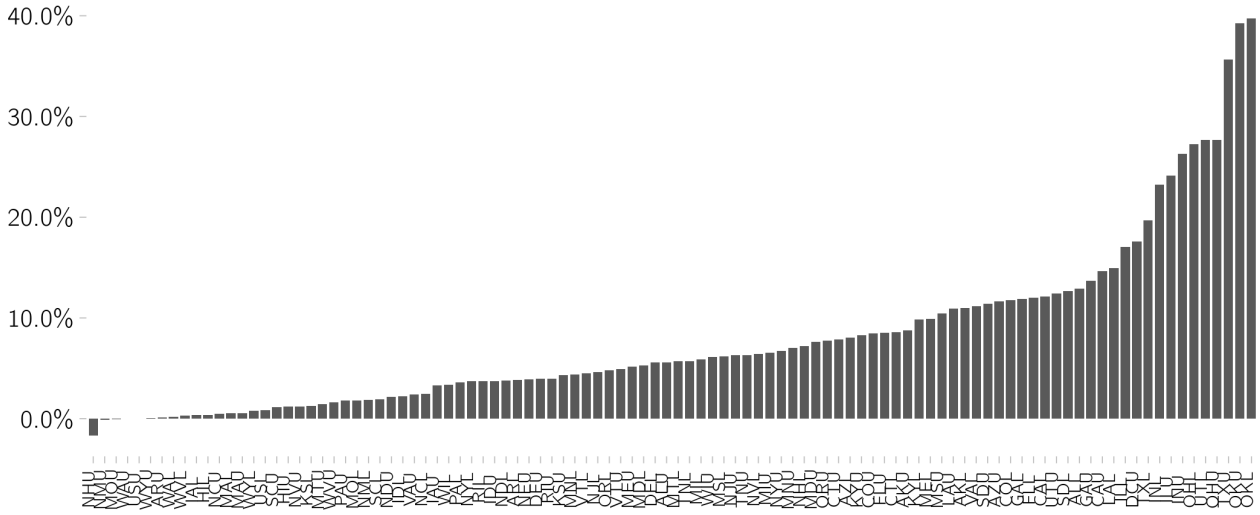


Eidelman Figure 4

(Eidelman 4)

Figure 4

Change from baseline with sponsor only features
Just sponsor improvement per state/chamber

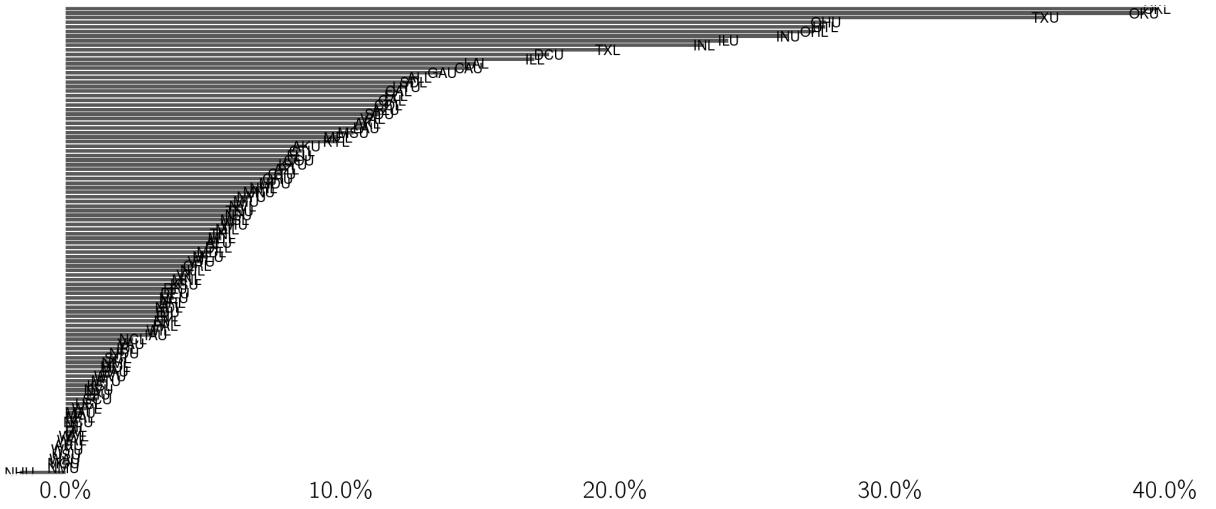


Version 1

(Eidelman 4)

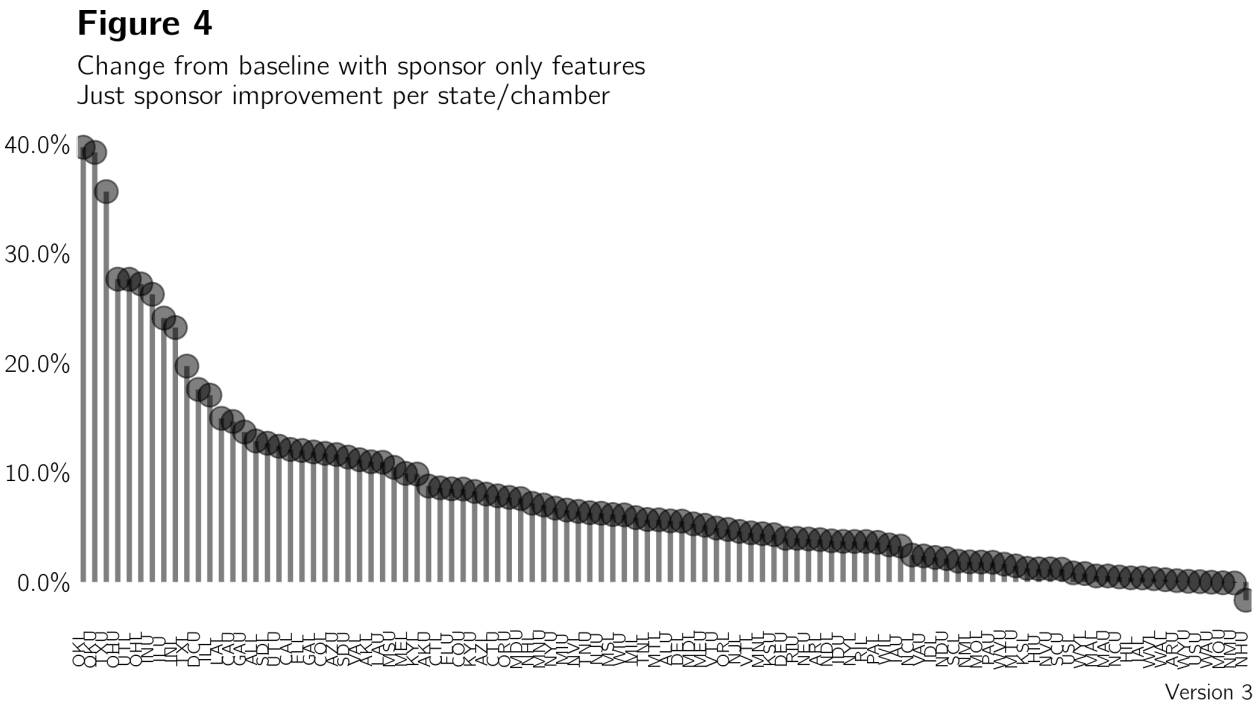
Figure 4

Change from baseline with sponsor only features
Just sponsor improvement per state/chamber



Version 2

(Eidelman 4)

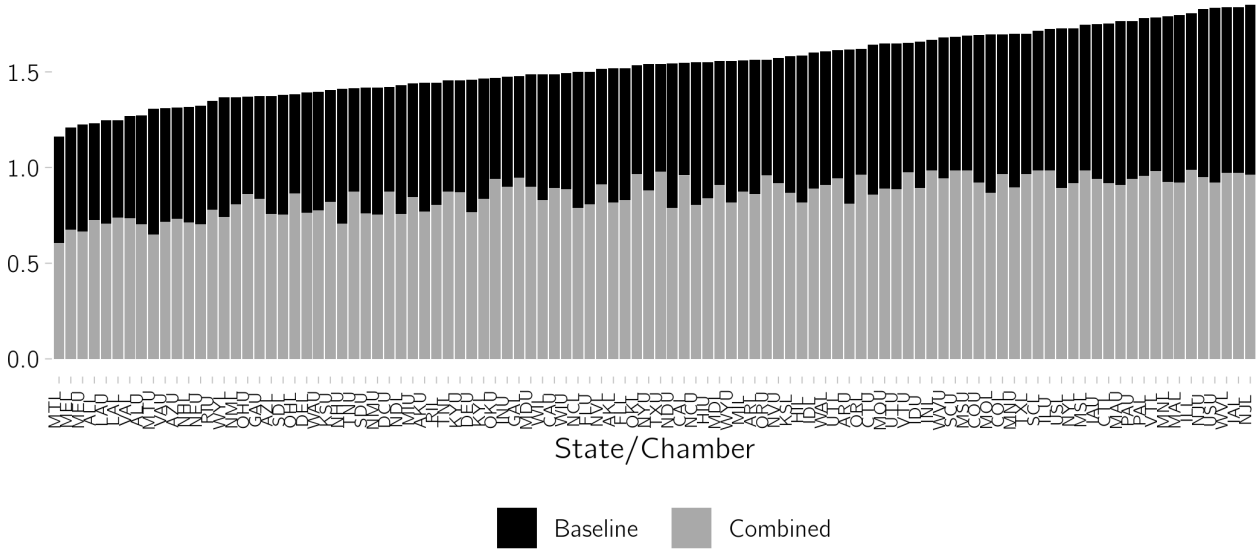


Eidelman Figure 5

(Eidelman 5)

Figure 5

Prediction accuracy on bills with combined models

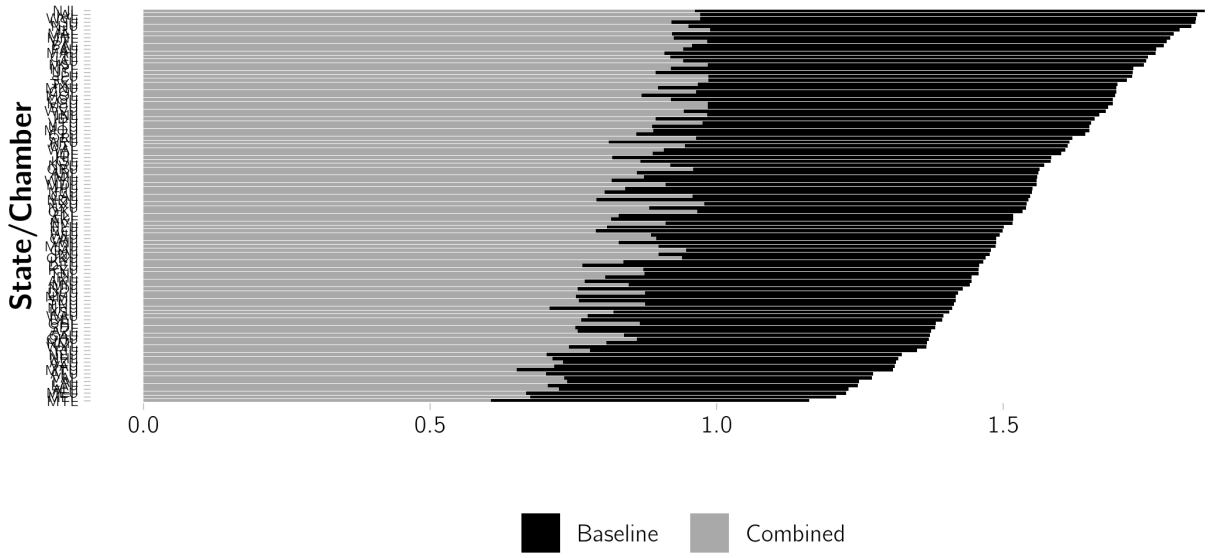


Version 1

(Eidelman 5)

Figure 5

Prediction accuracy on bills with combined models

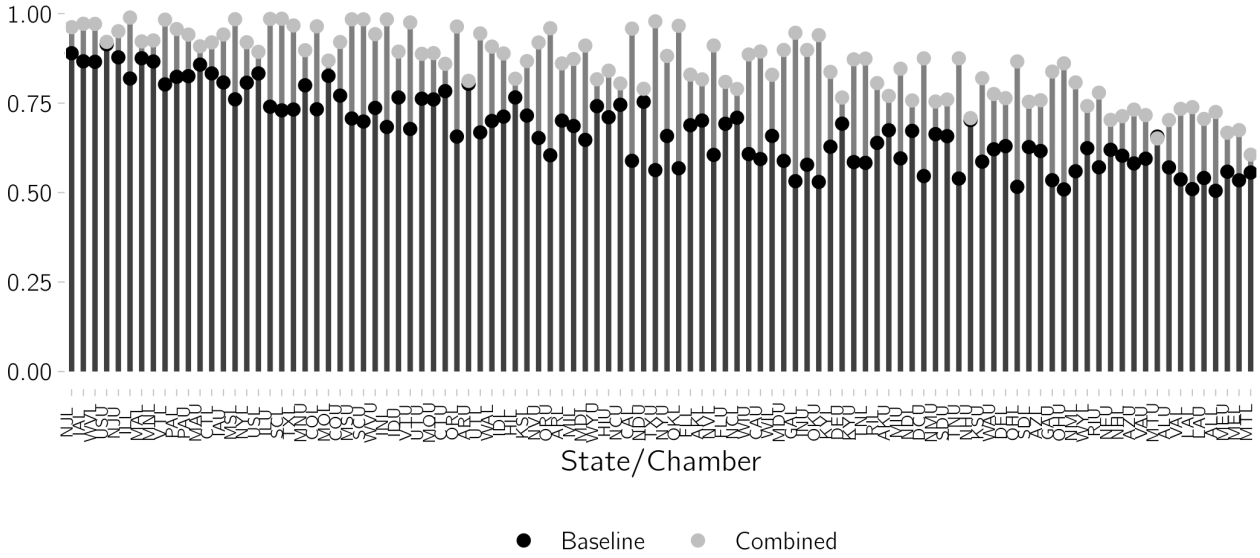


Version 2

(Eidelman 5)

Figure 5

Prediction accuracy on bills with combined models

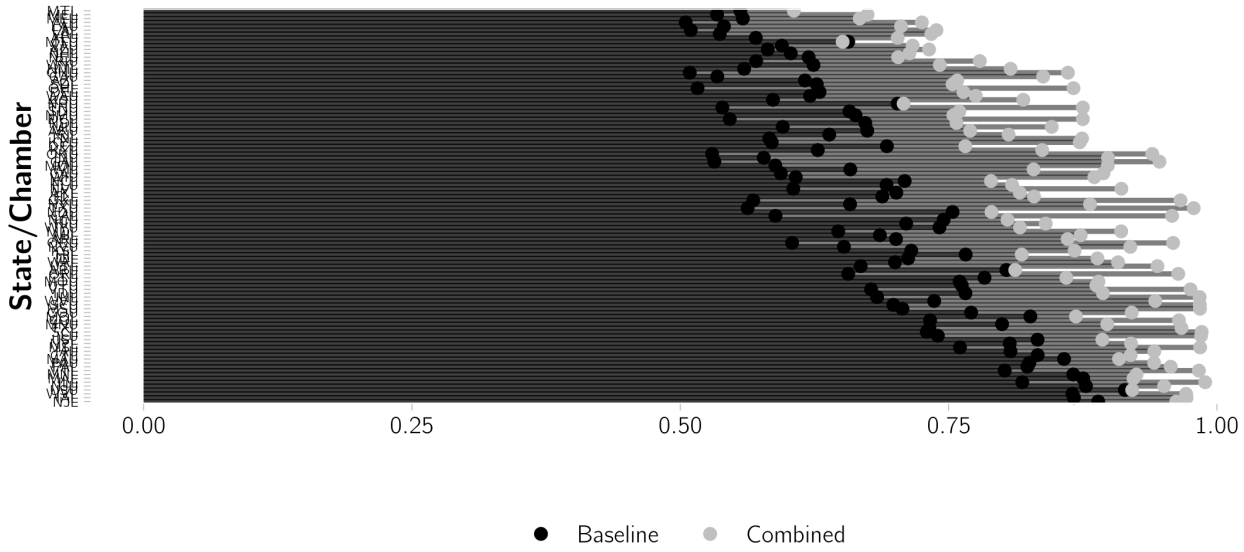


Version 3

(Eidelman 5)

Figure 5

Prediction accuracy on bills with combined models



Version 1

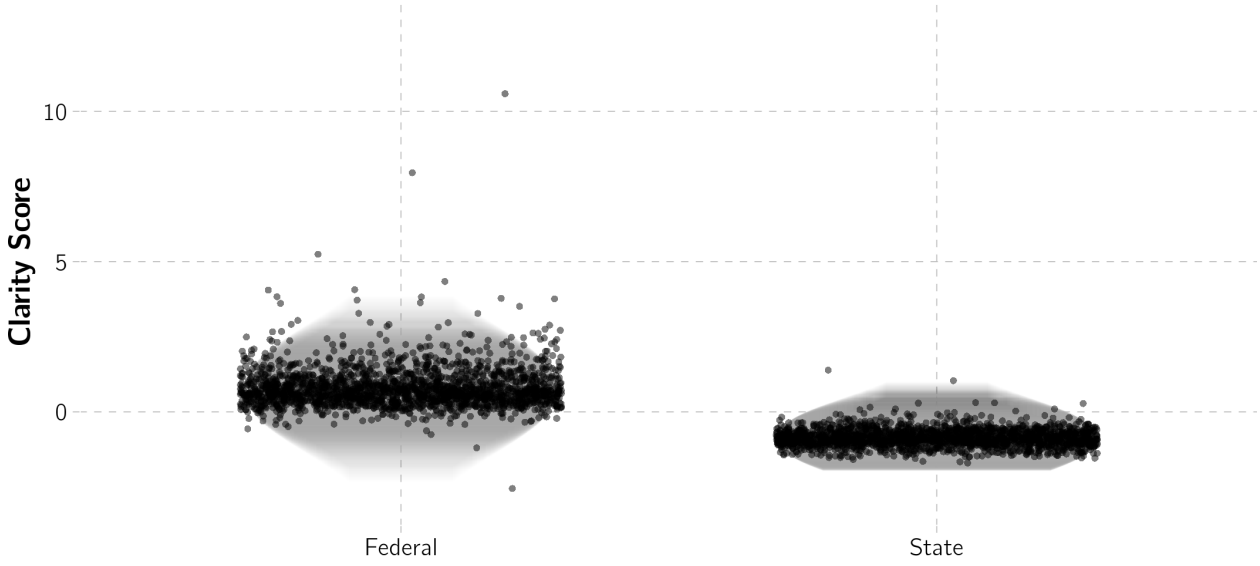
Feldman

Feldman

Feldman Figure 1

(Feldman 1)

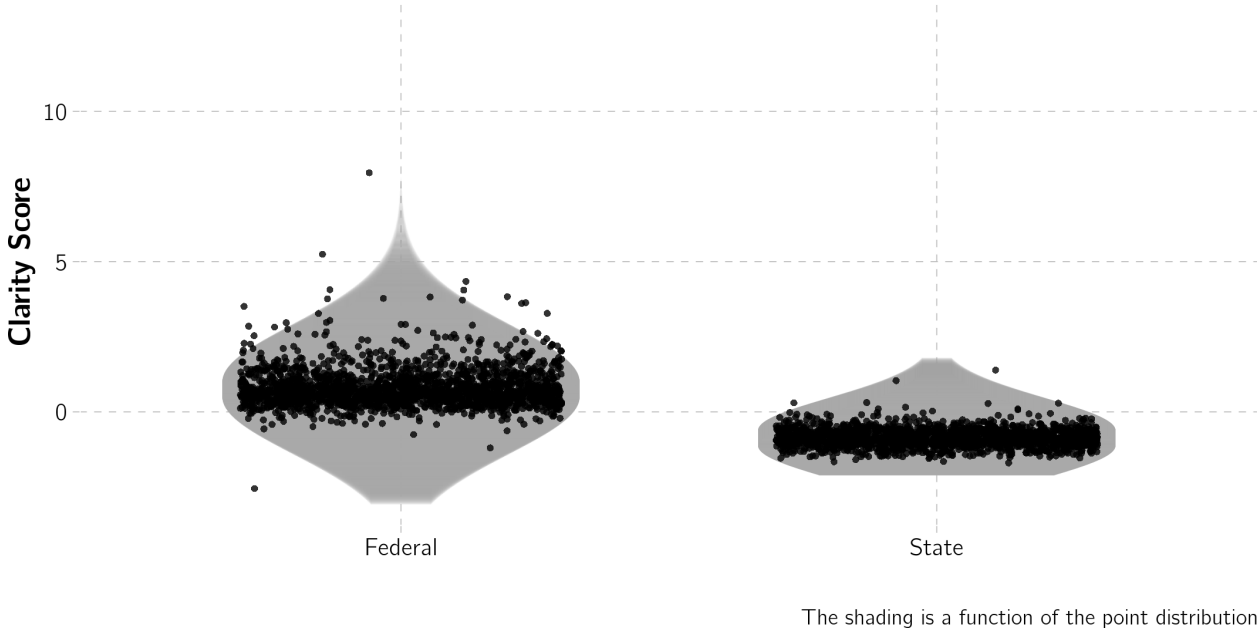
Figure 1. Federal and State Clarity Score Distribution (Version 1)



The shading is a function of the point distribution

(Feldman 1)

Figure 1. Federal and State Clarity Score Distribution (Version 2)



Feldman Figure 2

Figure 2. Distribution of Federal and State Court Opinion Word Length

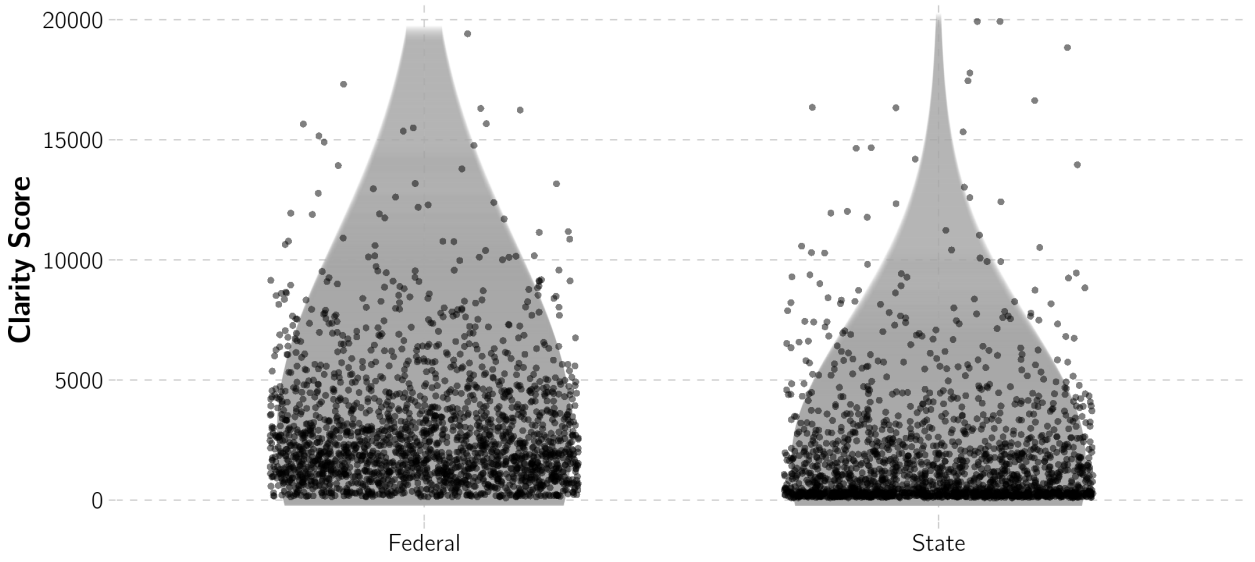
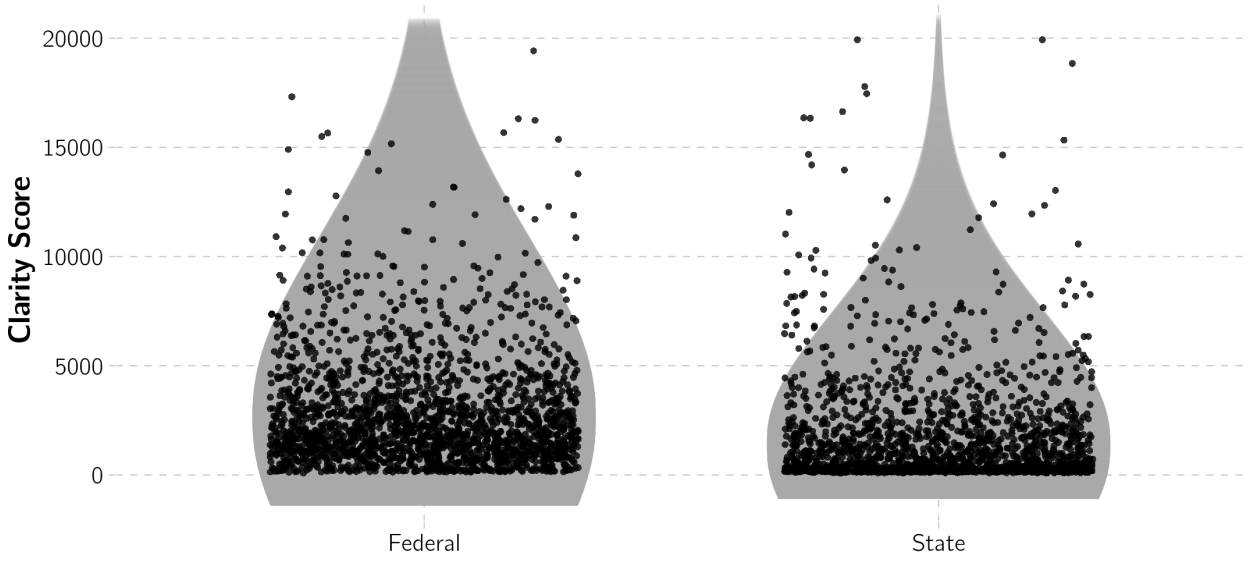


Figure 2. Distribution of Federal and State Court Opinion Word Length



The shading is a function of the point distribution

Frankenreiter

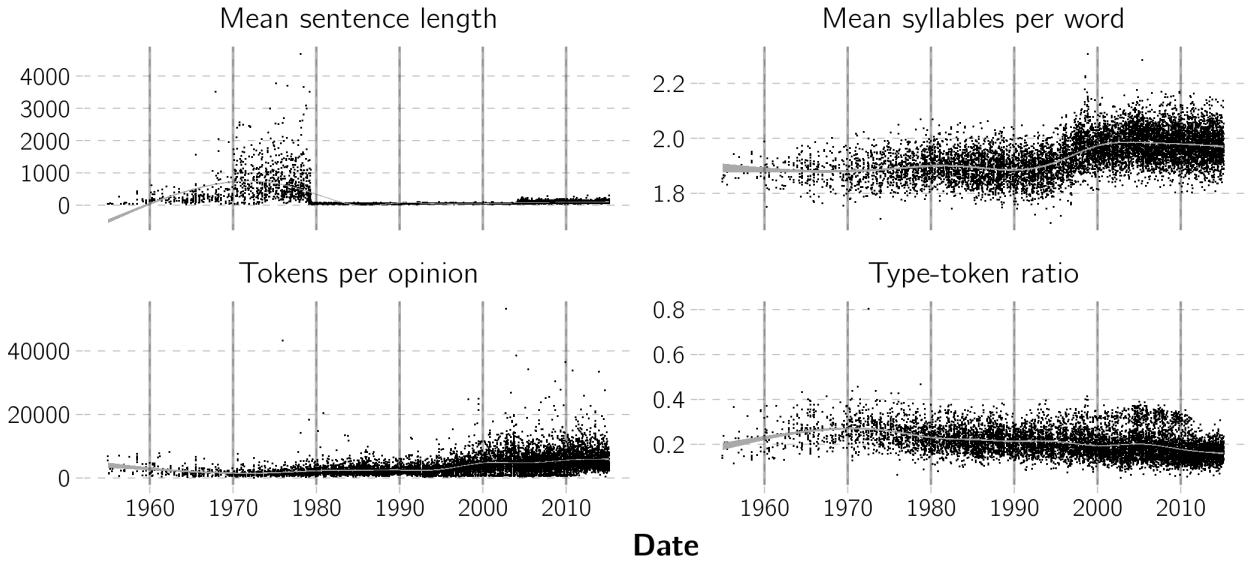
Frankenreiter

Frankenreiter Figure 2

(Frankenreiter 2)

Figure 1

Development over time of four measures of style over time. Each opinion is represented by one point

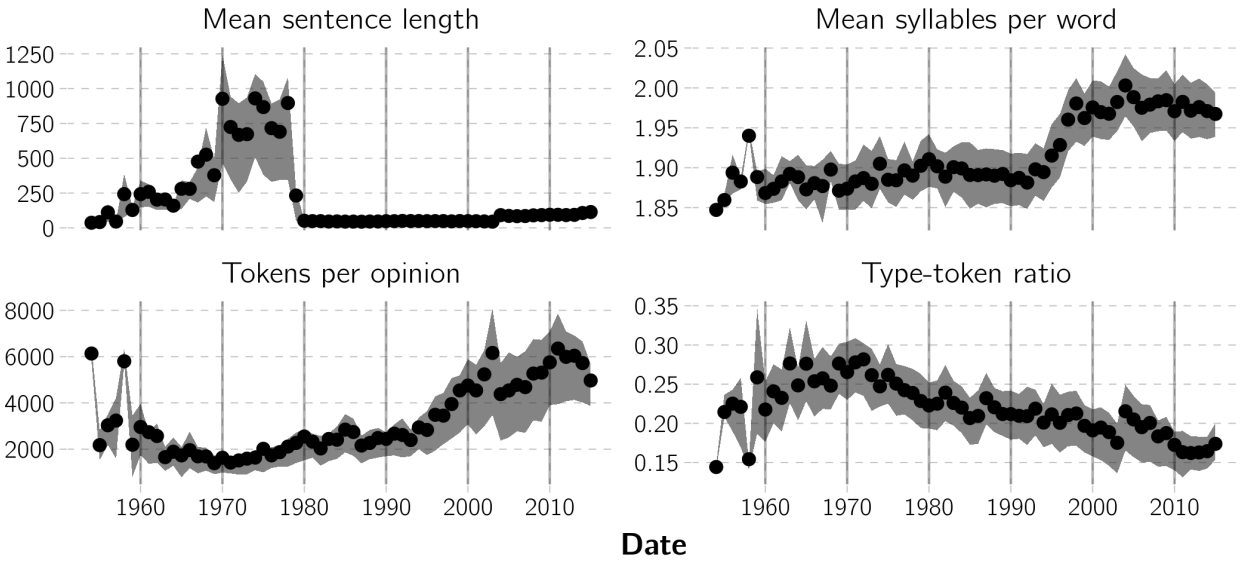


*Lines smoothed using local regression

(Frankenreiter 2)

Figure 1 (Version 2)

Development over time of four measures of style over time. Each opinion is represented by one point p

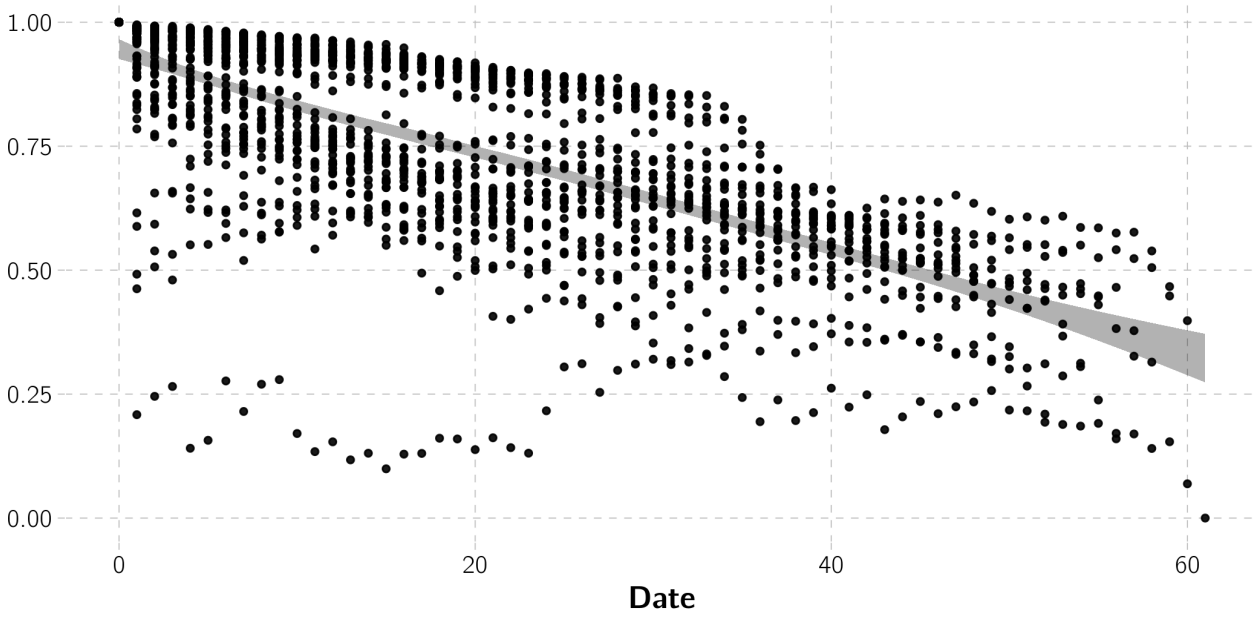


*Std error smoothed using local regression. Showing only mean points.

Frankenreiter Figure 3

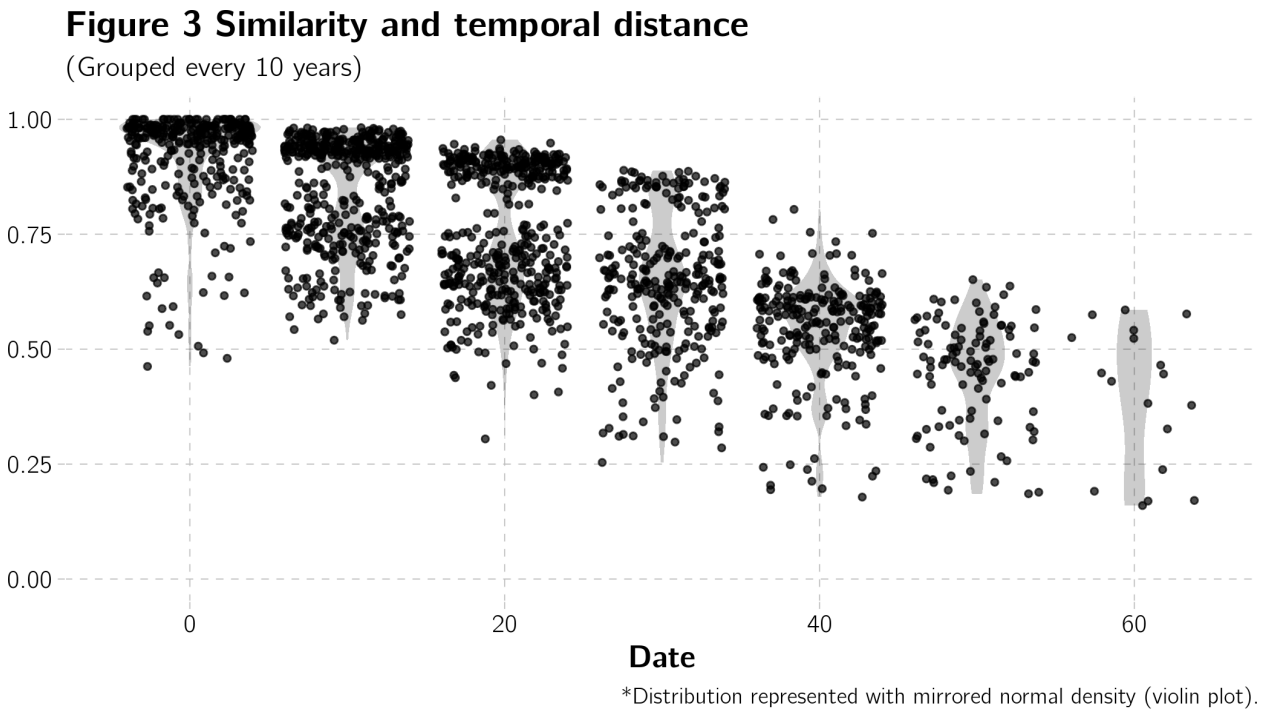
(Frankenreiter 3)

Figure 3 Similarity and temporal distance



*Std error from local regression.

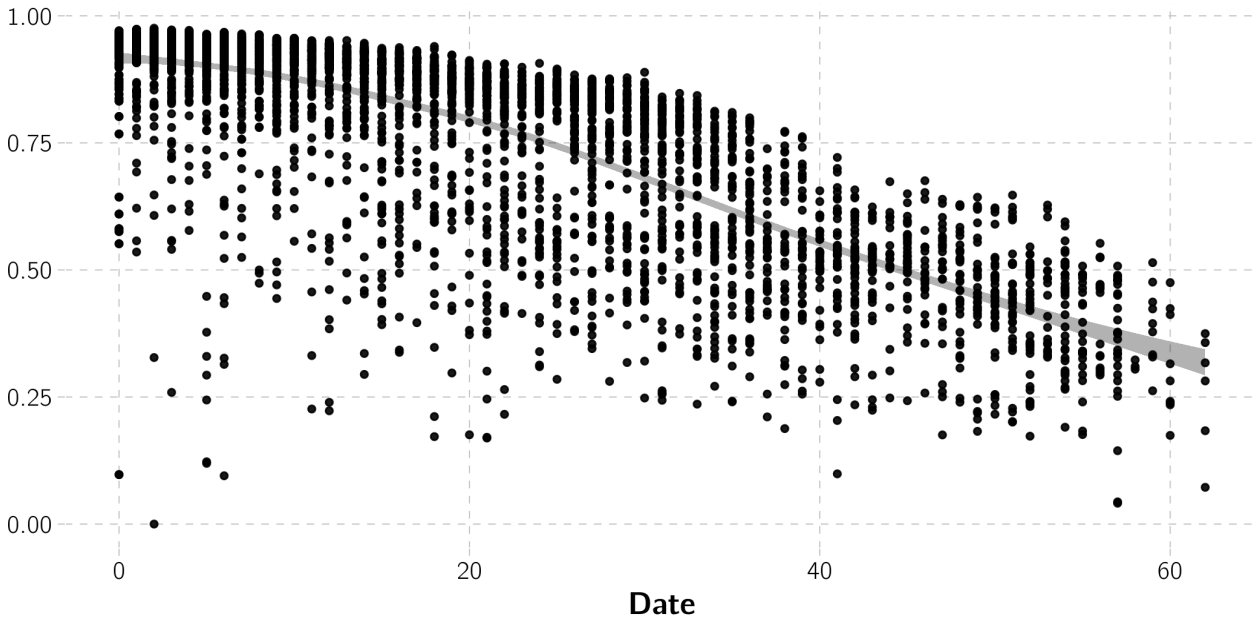
(Frankenreiter 3)



Frankenreiter Figure 4

(Frankenreiter 4)

Figure 4 Similarity between different judges as a function of time

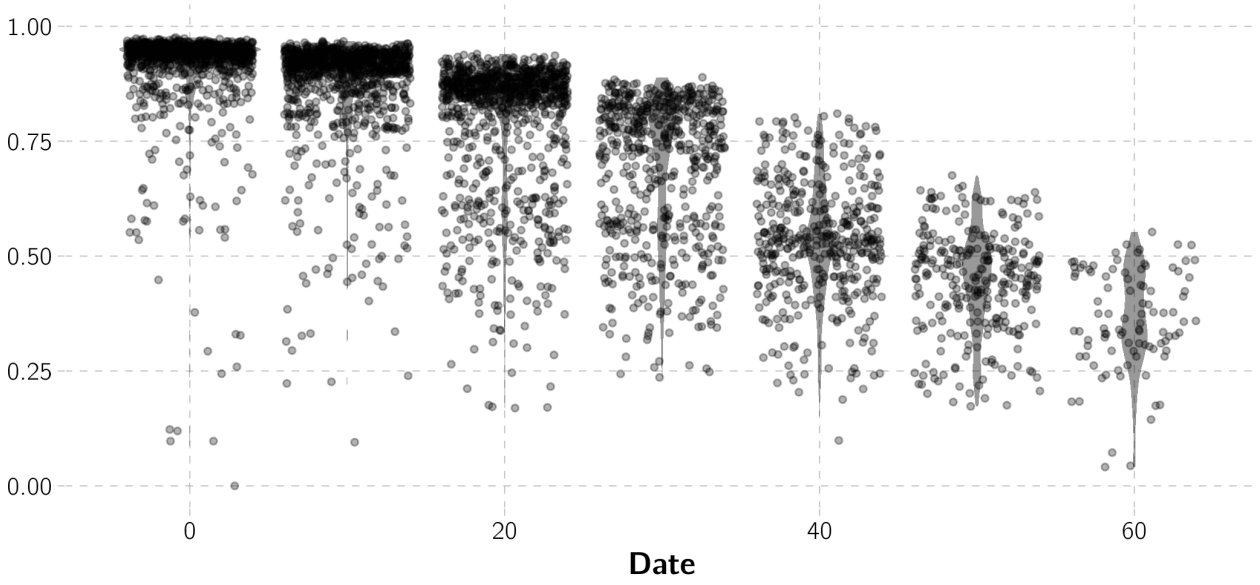


*Std error from local regression.

(Frankenreiter 4)

Figure 4 Similarity between different judges as a function of time

(Grouped every 10 years)



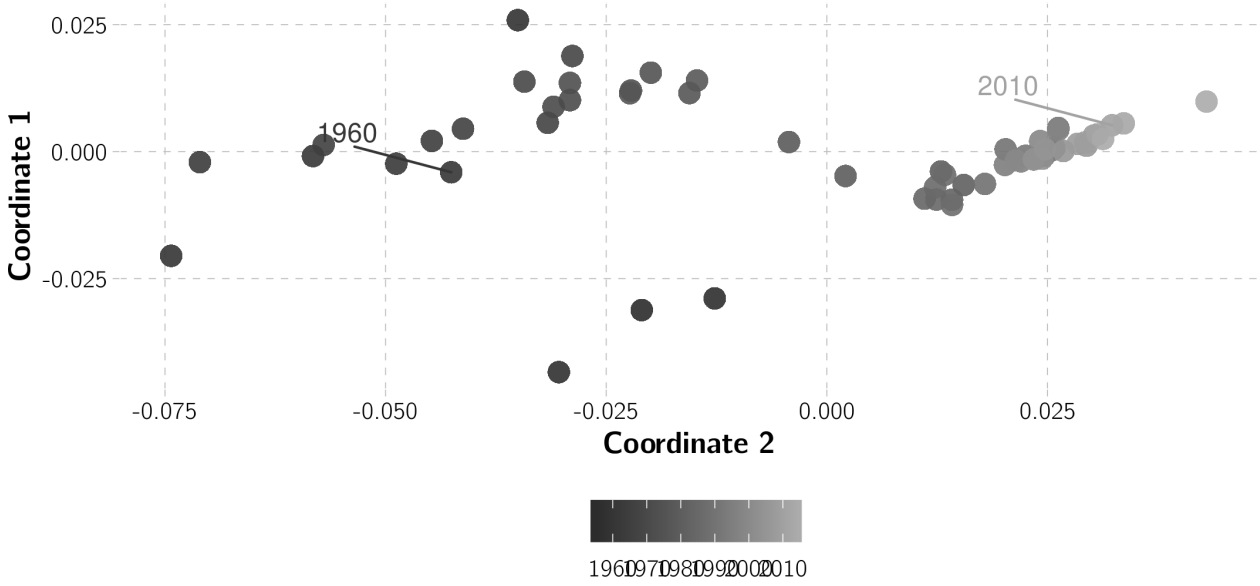
*Std error from local regression.

Frankenreiter Figure 5

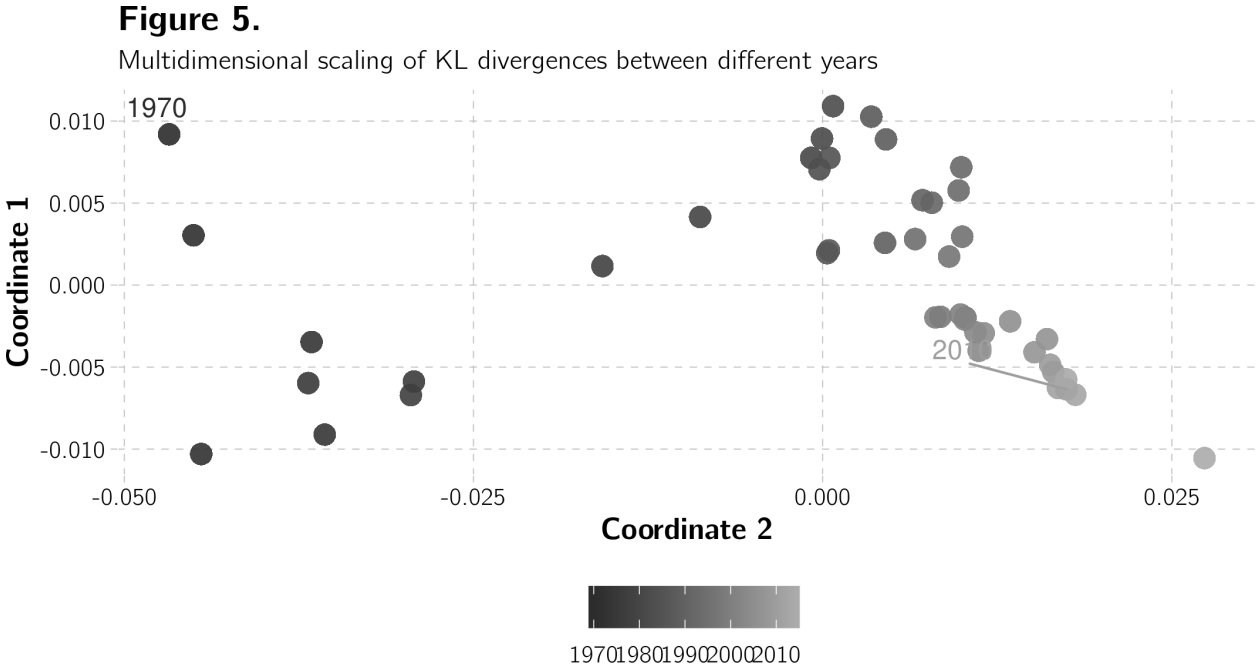
(Frankenreiter 5)

Figure 5.

Multidimensional scaling of KL divergences between different years



(Frankenreiter 5)

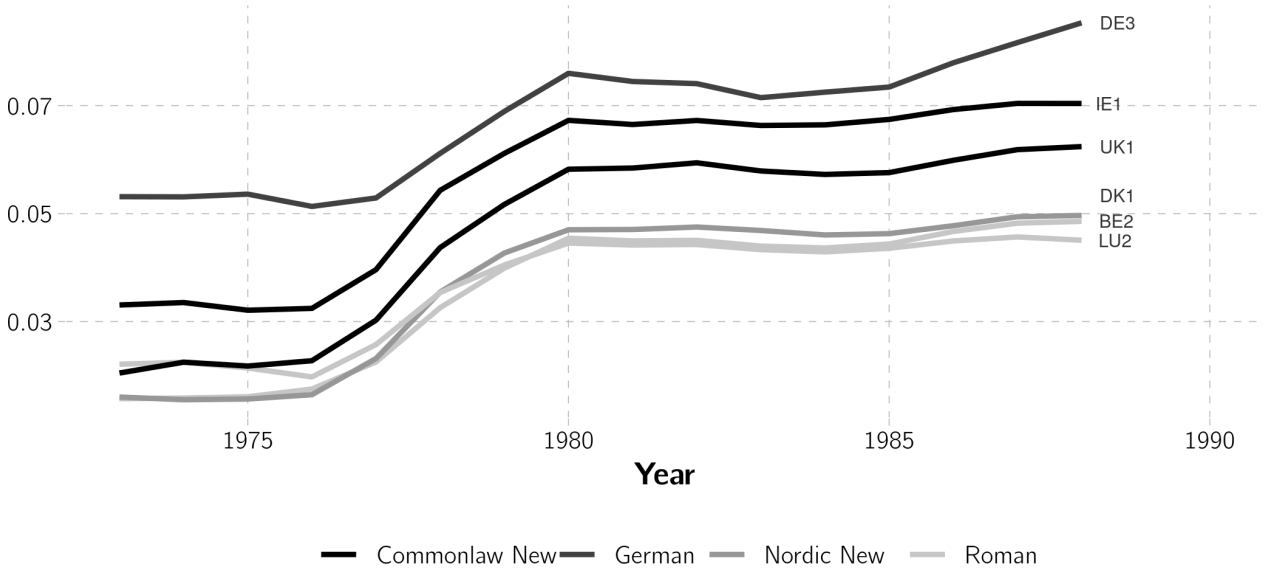


Frankenreiter Figure 6

(Frankenreiter 6)

Figure 6 (1973 Enlargement)

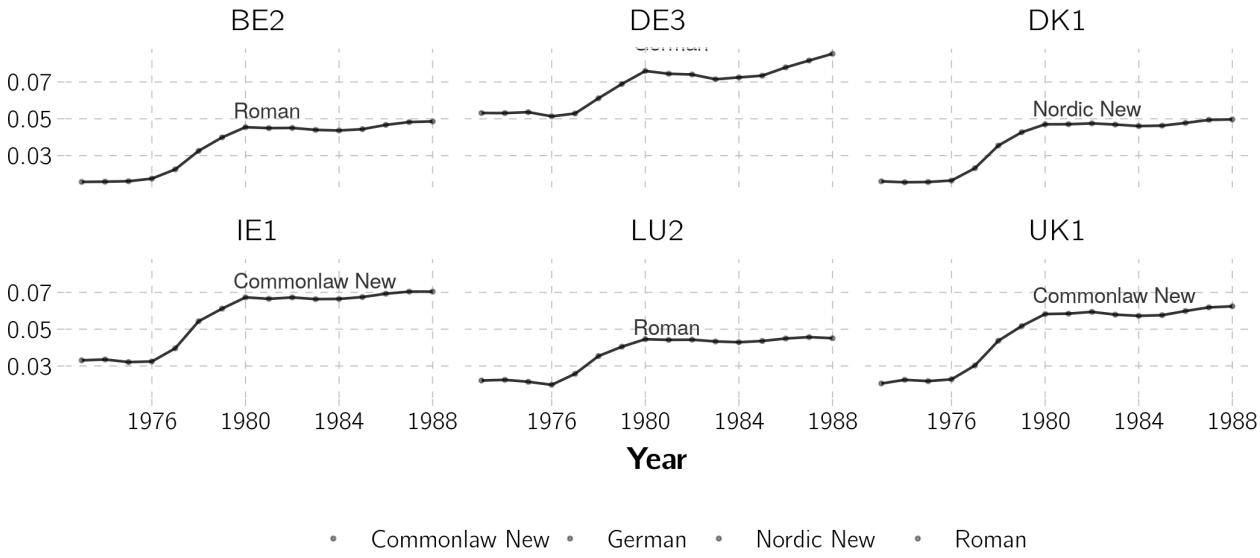
Development of writing style of ECJ in comparison to the writing of judges between 1973 and 1975



(Frankenreiter 6)

Figure 6 (1973 Enlargement)

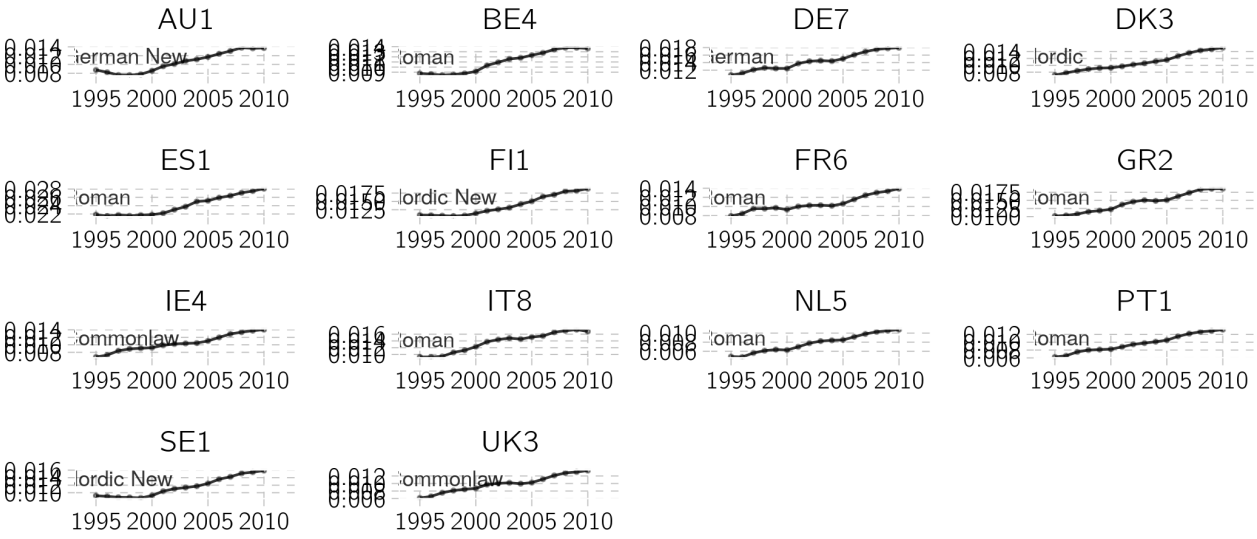
Development of writing style of ECJ in comparison to the writing of judges between 1973 and 1975



(Frankenreiter 6)

Figure 6 (1995 Enlargement)

Development of writing style of ECJ in comparison to the writing of judges between 1973 and 1975

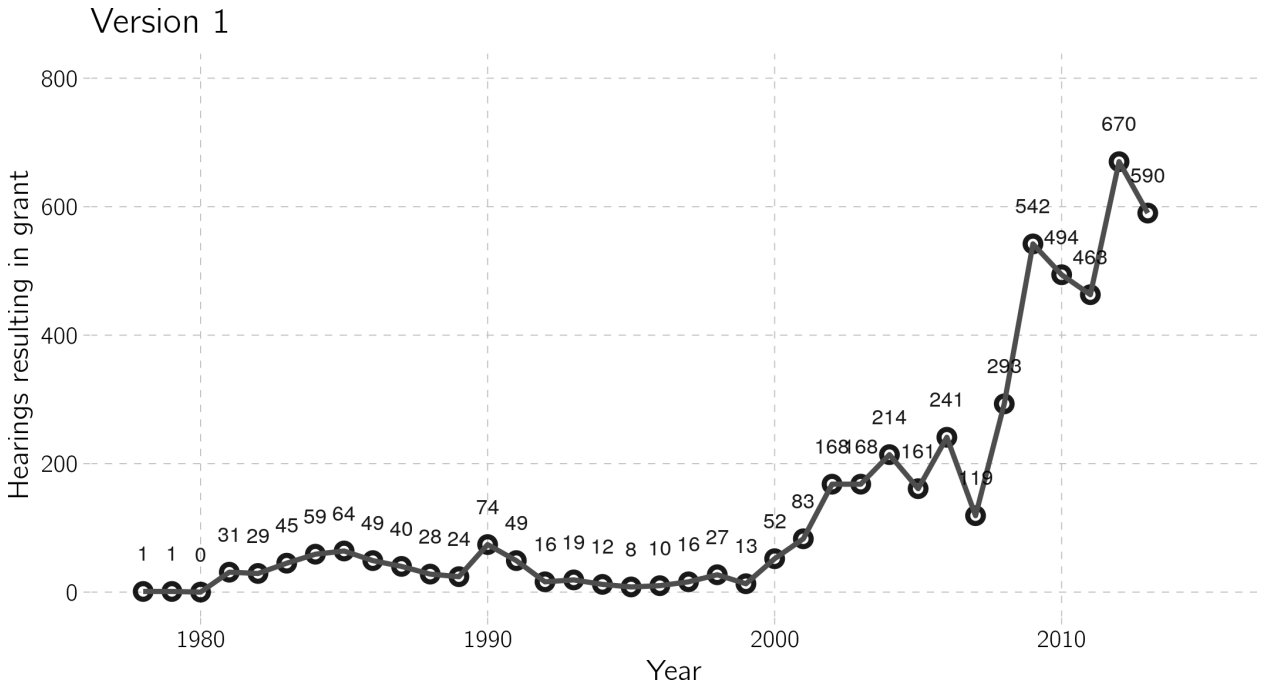


Laqueur

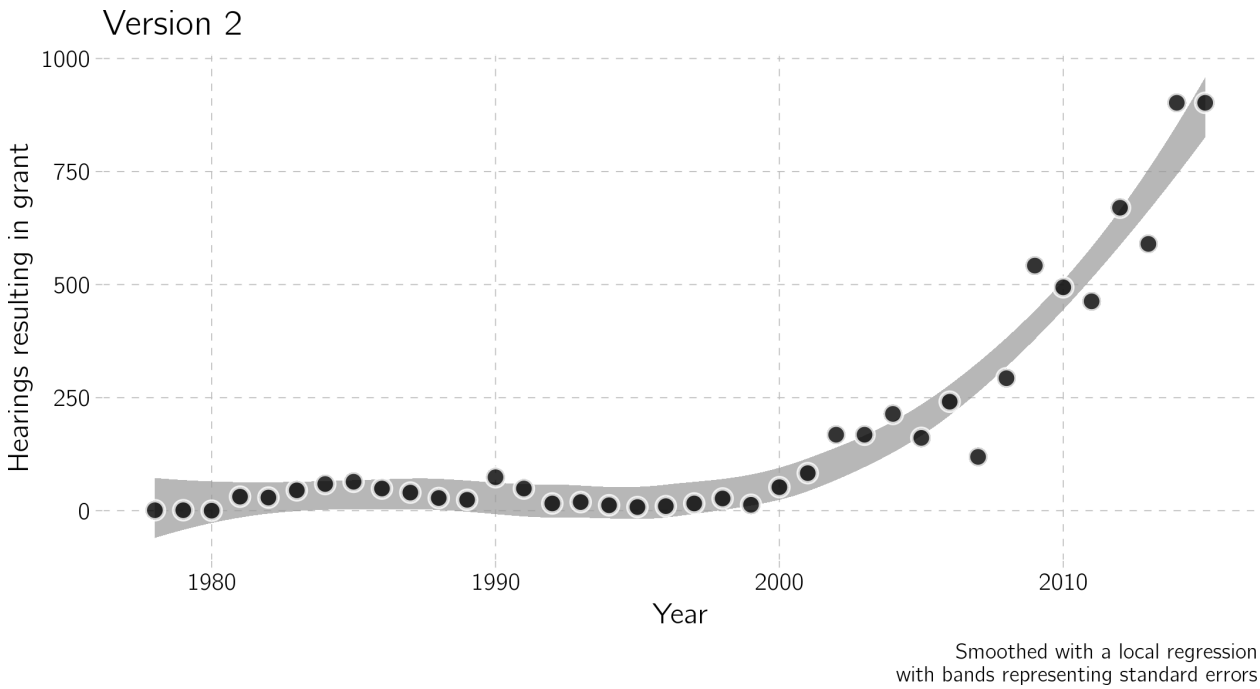
Laqueur

Laqueur Figure 1

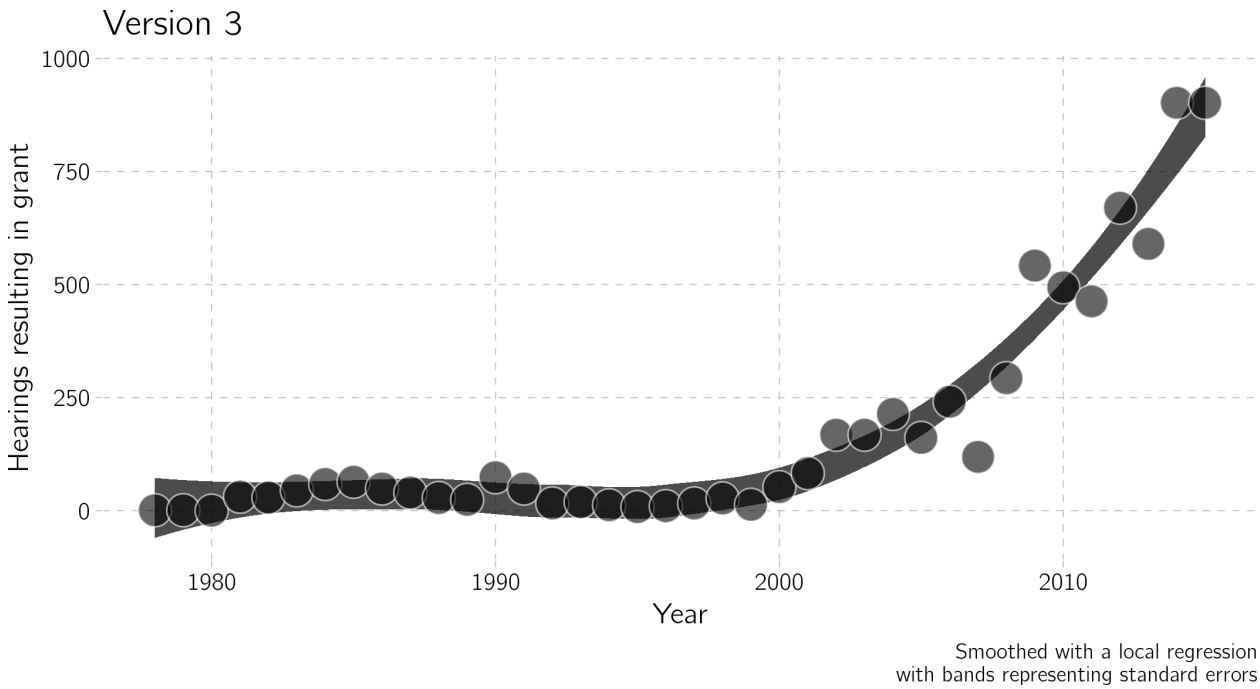
(Laqueur 1)


Version 1
Hearings resulting in grant
800
600
400
200
0
1980
1990
2000
2010
Year
1 1 0 31 29 45 59 64 49 40 28 24 74 49 16 19 12 8 10 16 27 13 52 83 168 168 214 161 241 119 293 542 494 468 670 590

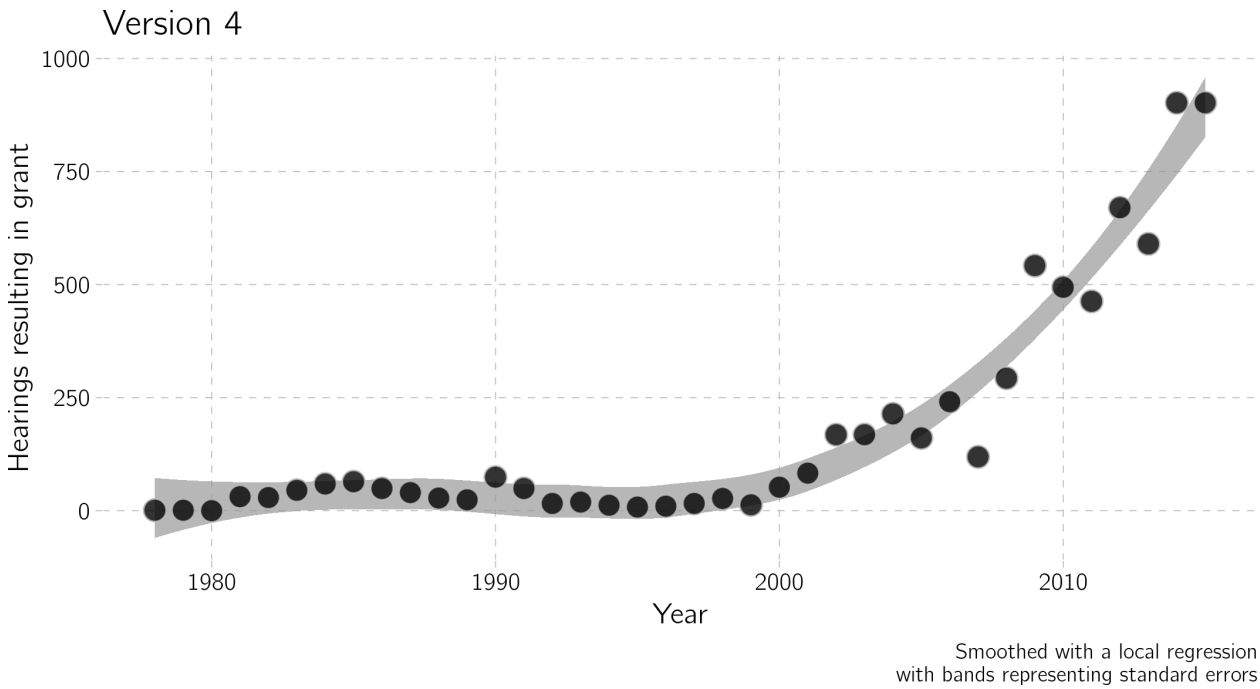
(Laqueur 1)


Version 2
1000
750
500
250
0
Hearings resulting in grant
1980
1990
2000
2010
Year
Smoothed with a local regression
with bands representing standard errors

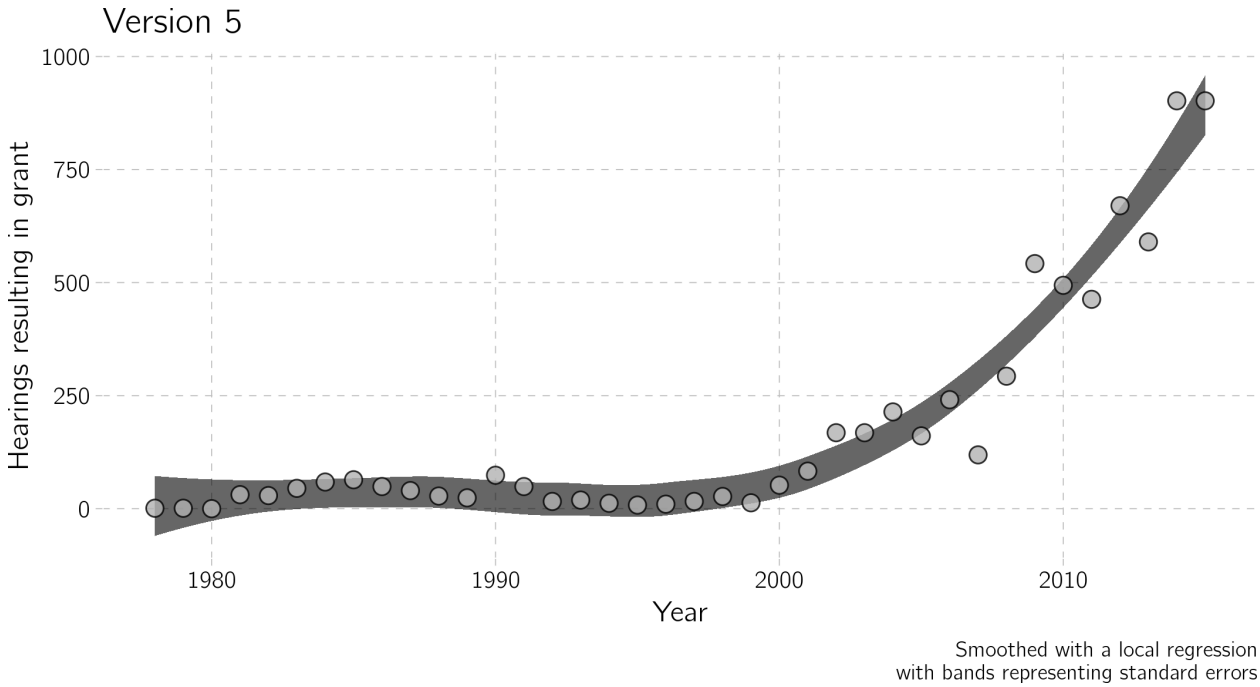
(Laqueur 1)


Version 3
1000
750
500
250
0
Hearings resulting in grant
1980
1990
2000
2010
Year
Smoothed with a local regression
with bands representing standard errors

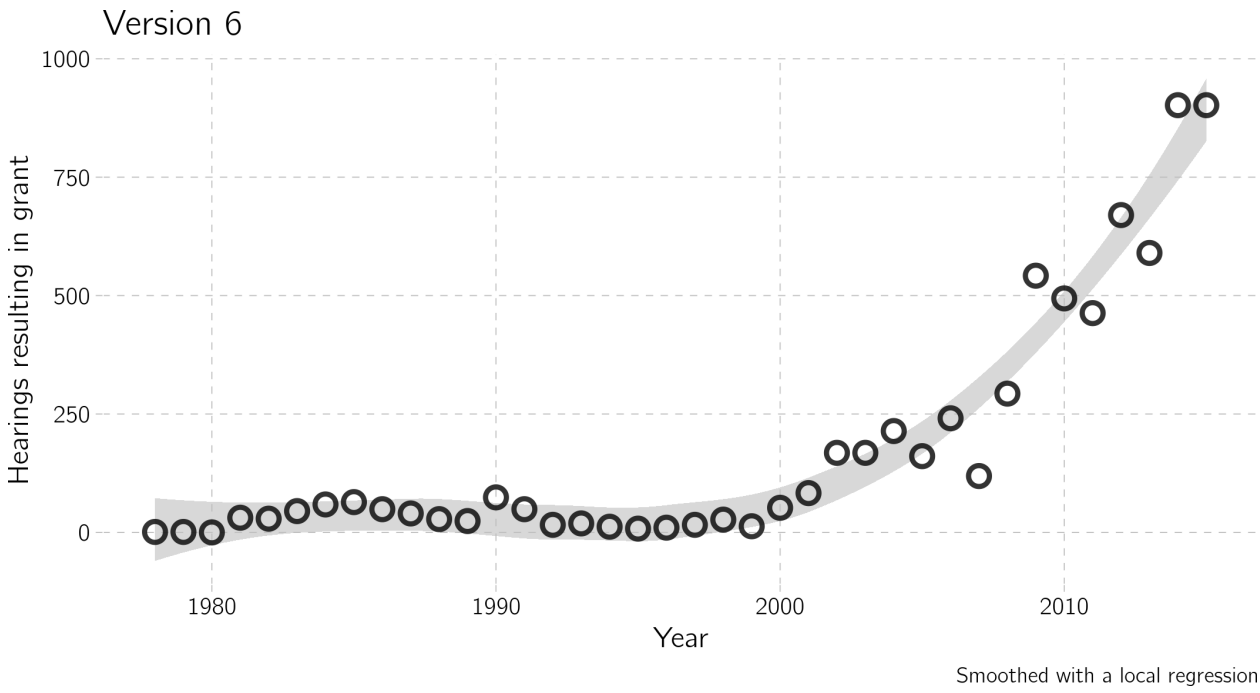
(Laqueur 1)


Version 4
1000
750
500
250
0
Hearings resulting in grant
1980
1990
2000
2010
Year
Smoothed with a local regression
with bands representing standard errors

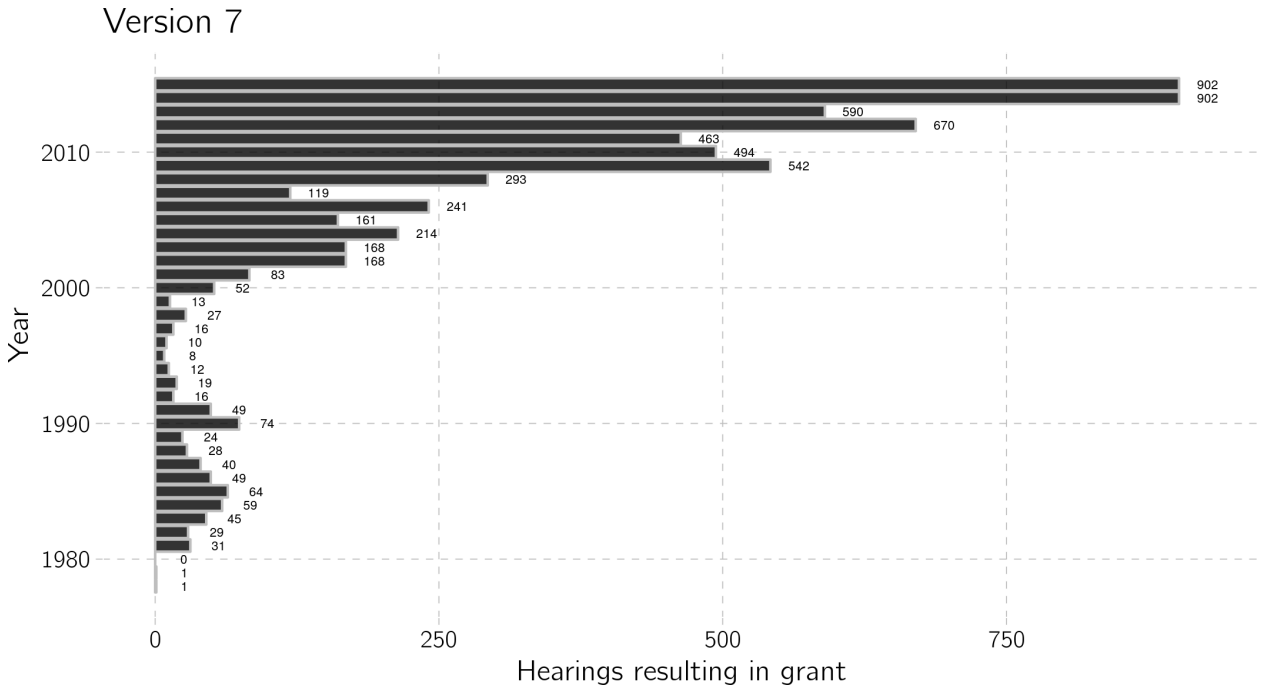
(Laqueur 1)


Version 5
Hearings resulting in grant
1000
750
500
250
0
1980
1990
2000
2010
Year
Smoothed with a local regression
with bands representing standard errors

(Laqueur 1)

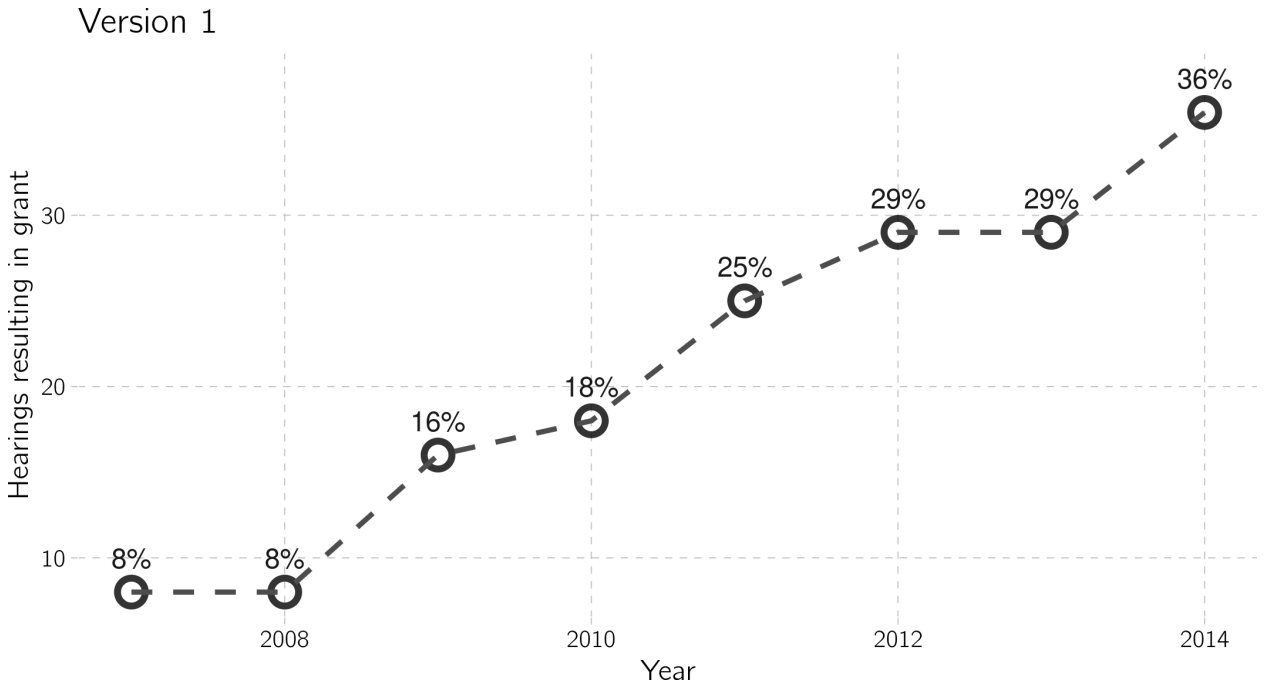

Version 6
1000
750
500
250
0
Hearings resulting in grant
1980
1990
2000
2010
Year
Smoothed with a local regression

(Laqueur 1)

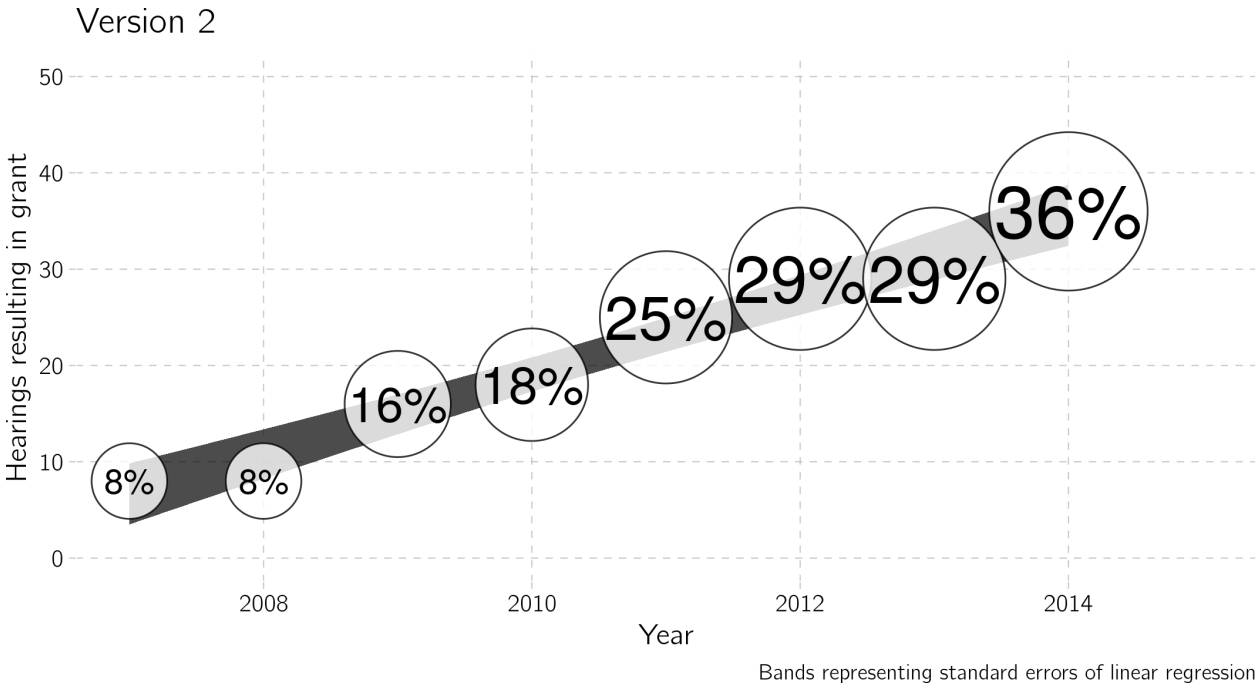


Laqueur Figure 2

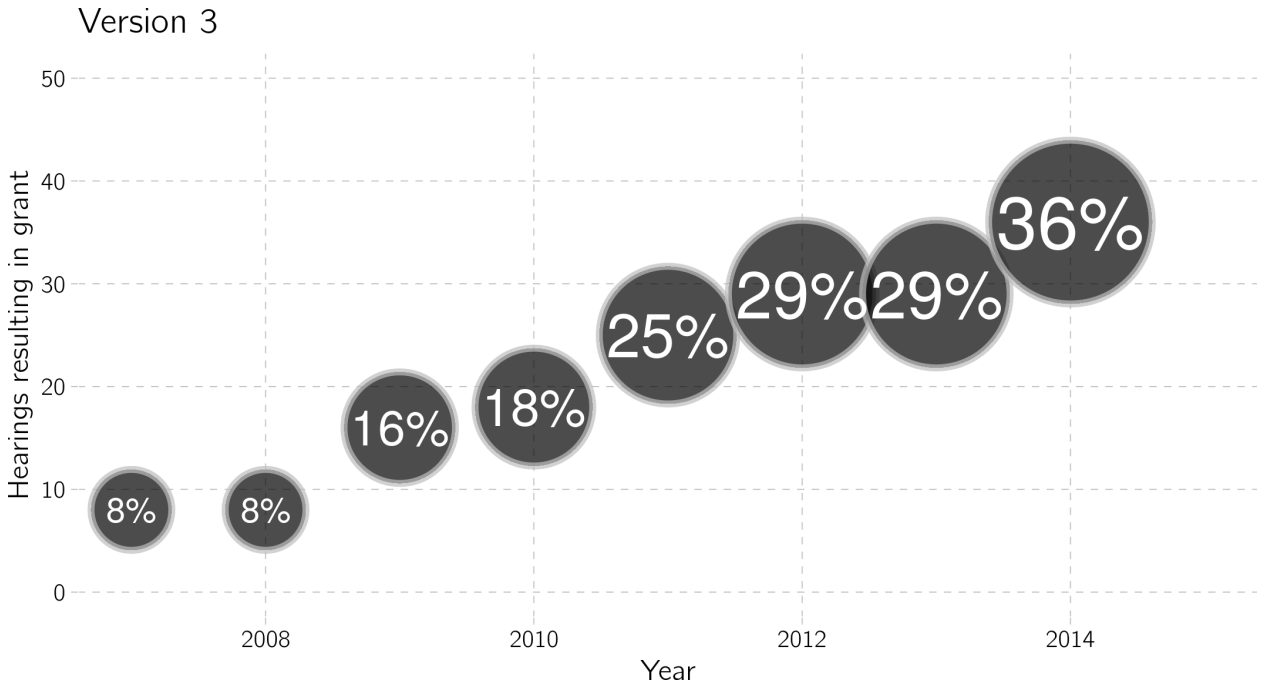
(Laqueur 2)


Version 1
Hearings resulting in grant
30
20
10
8%
8%
16%
18%
25%
29%
29%
36%
2008
2010
2012
2014
Year

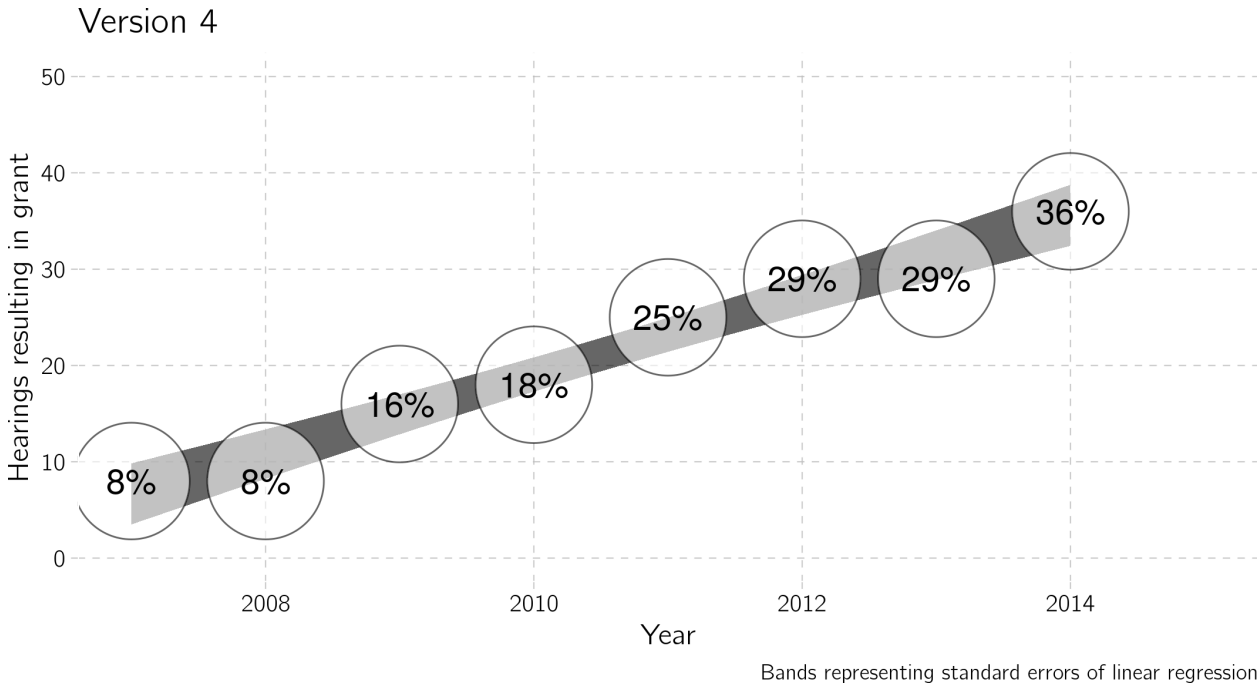
(Laqueur 2)


Version 2
Hearings resulting in grant
50
40
30
20
10
0
2008
2010
2012
2014
Year
8%
8%
16%
18%
25%
29%
29%
36%
Bands representing standard errors of linear regression

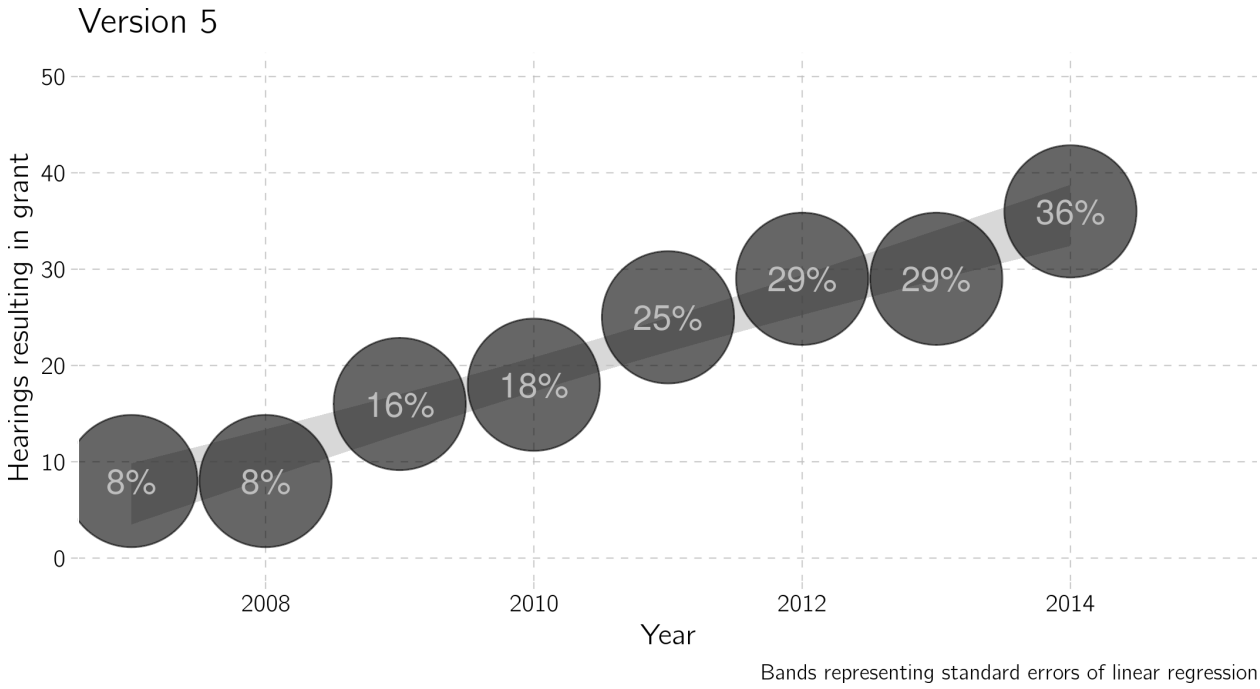
(Laqueur 2)


Version 3
Hearings resulting in grant
50
40
30
20
10
0
8%
8%
16%
18%
25%
29%
29%
36%
2008
2010
2012
2014
Year

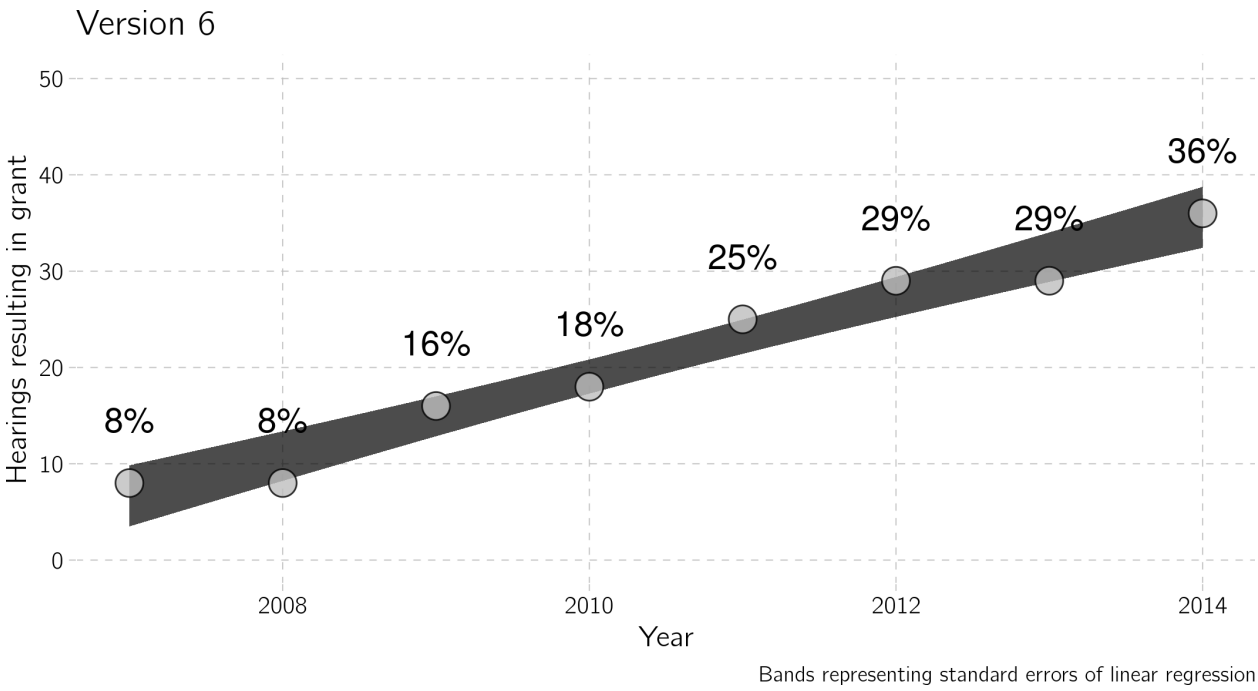
(Laqueur 2)


Version 4
Hearings resulting in grant
50
40
30
20
10
0
2008
2010
2012
2014
Year
8%
8%
16%
18%
25%
29%
29%
36%
Bands representing standard errors of linear regression

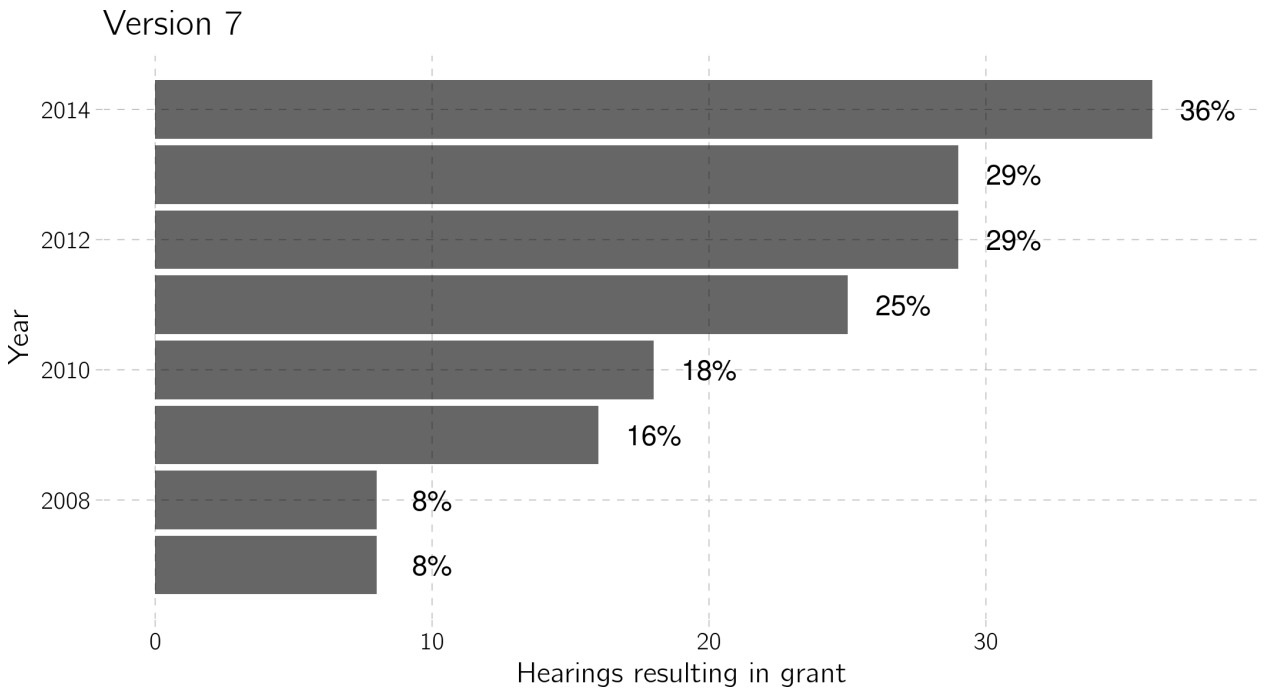
(Laqueur 2)


Version 5
Hearings resulting in grant
50
40
30
20
10
0
8%
8%
16%
18%
25%
29%
29%
36%
2008
2010
2012
2014
Year
Bands representing standard errors of linear regression

(Laqueur 2)


Version 6
Hearings resulting in grant
50
40
30
20
10
0
8%
8%
16%
18%
25%
29%
29%
36%
2008
2010
2012
2014
Year
Bands representing standard errors of linear regression

(Laqueur 2)


Version 7
2014
2012
2010
2008
Year
36%
29%
29%
25%
18%
16%
8%
8%
0
10
20
30
Hearings resulting in grant

Livermore

Livermore

Livermore Figure 1

(Livermore 1)

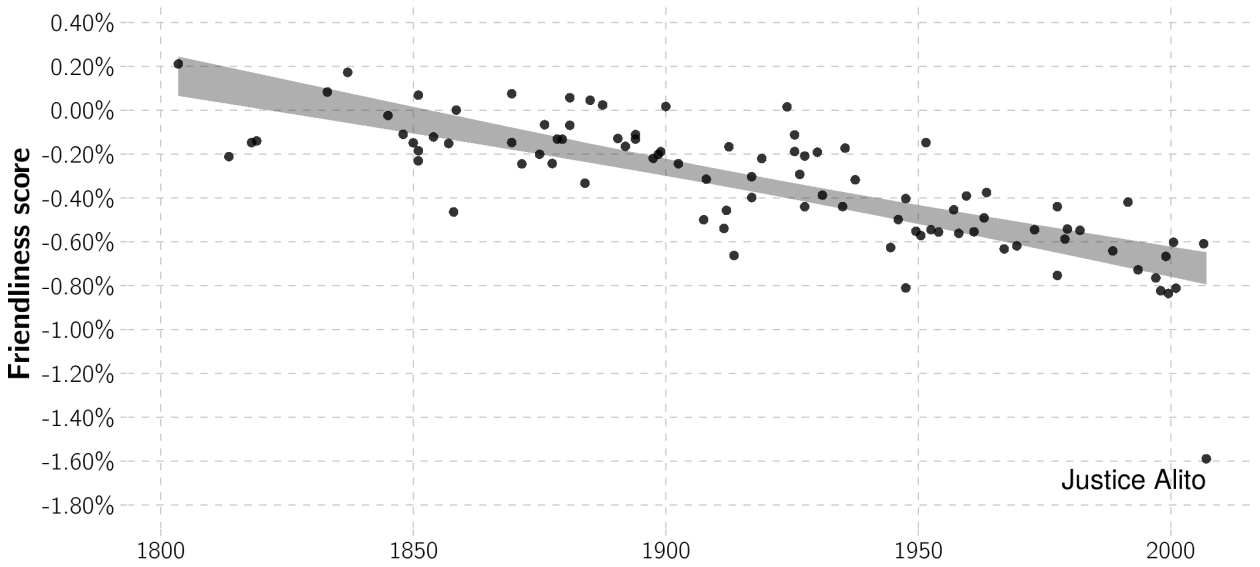
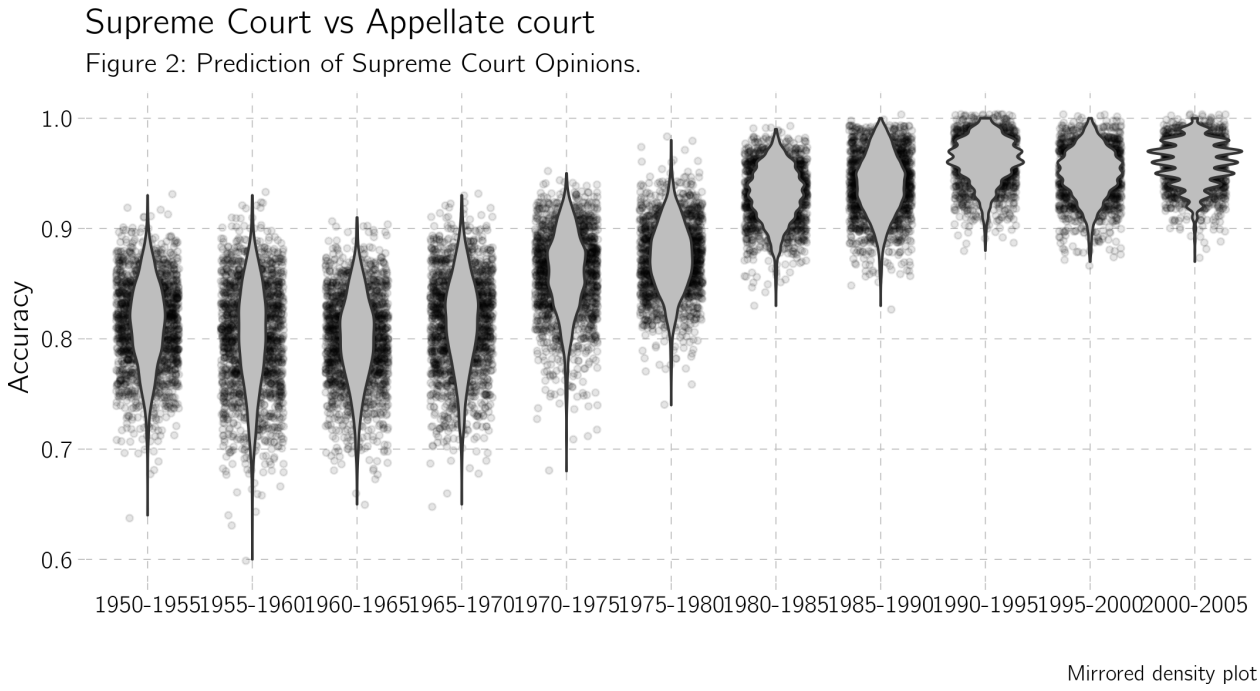


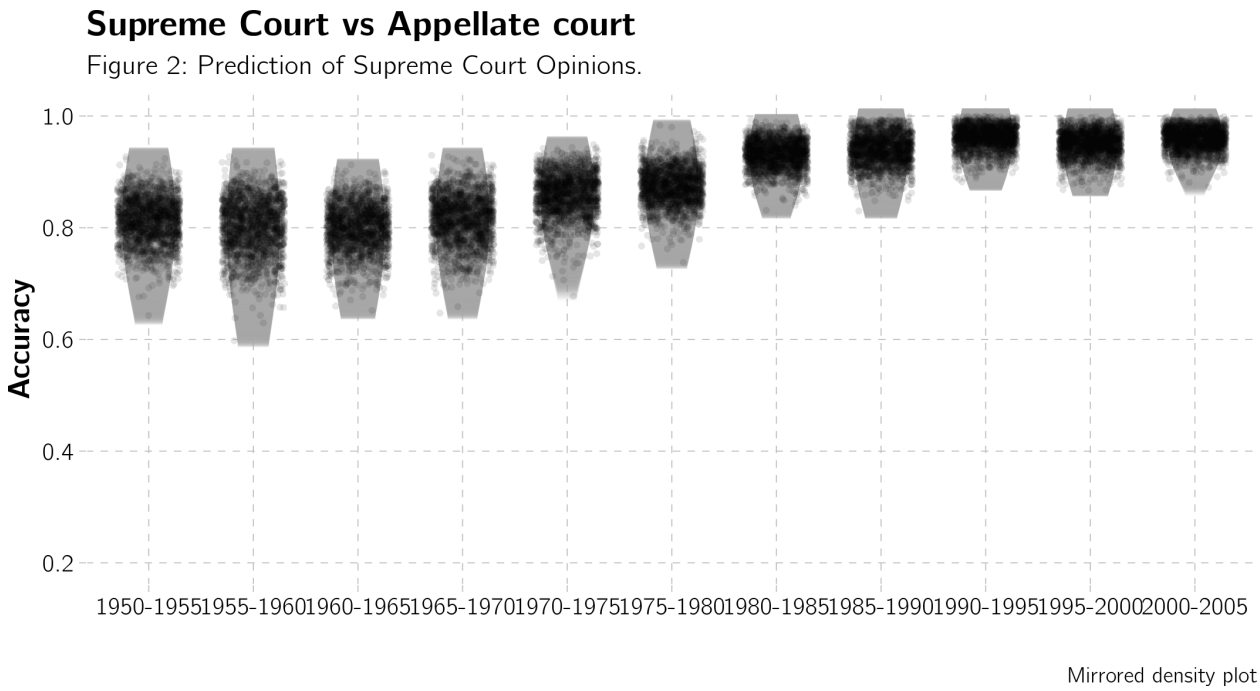
Figure 1: Sentiment Score by Authoring Justice

Livermore Figure 2

(Livermore 2)

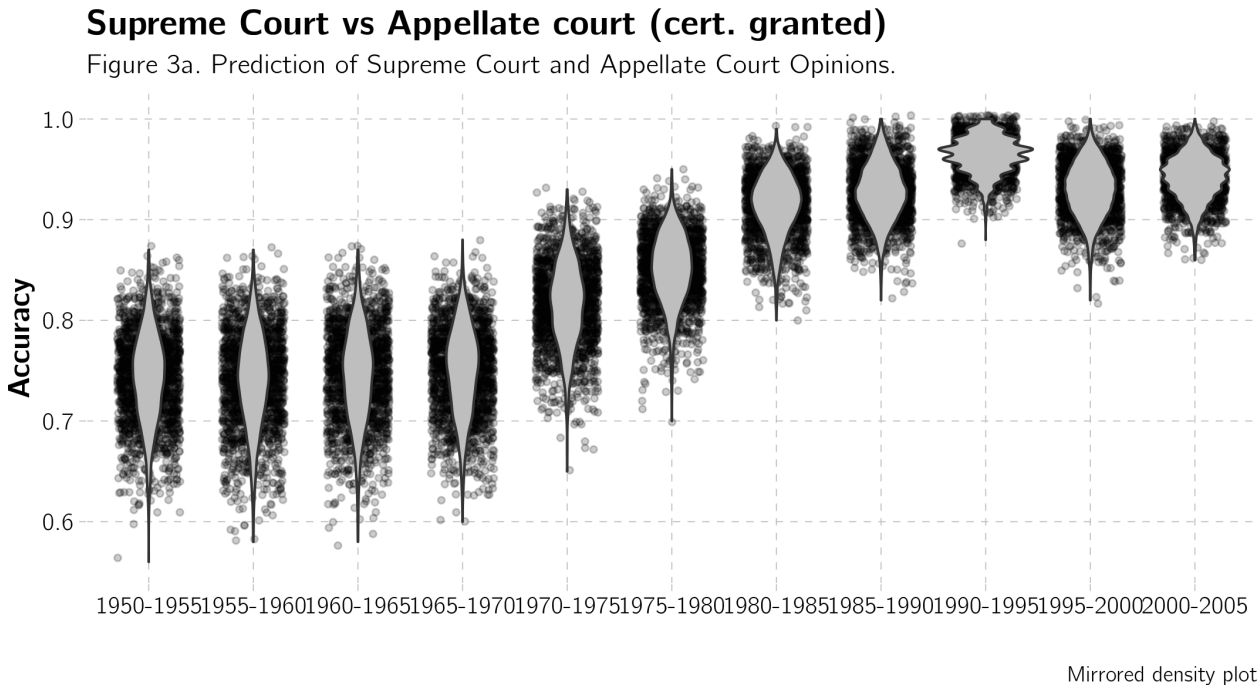

Supreme Court vs Appellate court
Figure 2: Prediction of Supreme Court Opinions.
Accuracy
1.0
0.9
0.8
0.7
0.6
1950-1955
1955-1960
1960-1965
1965-1970
1970-1975
1975-1980
1980-1985
1985-1990
1990-1995
1995-2000
2000-2005
Mirrored density plot

(Livermore 2)

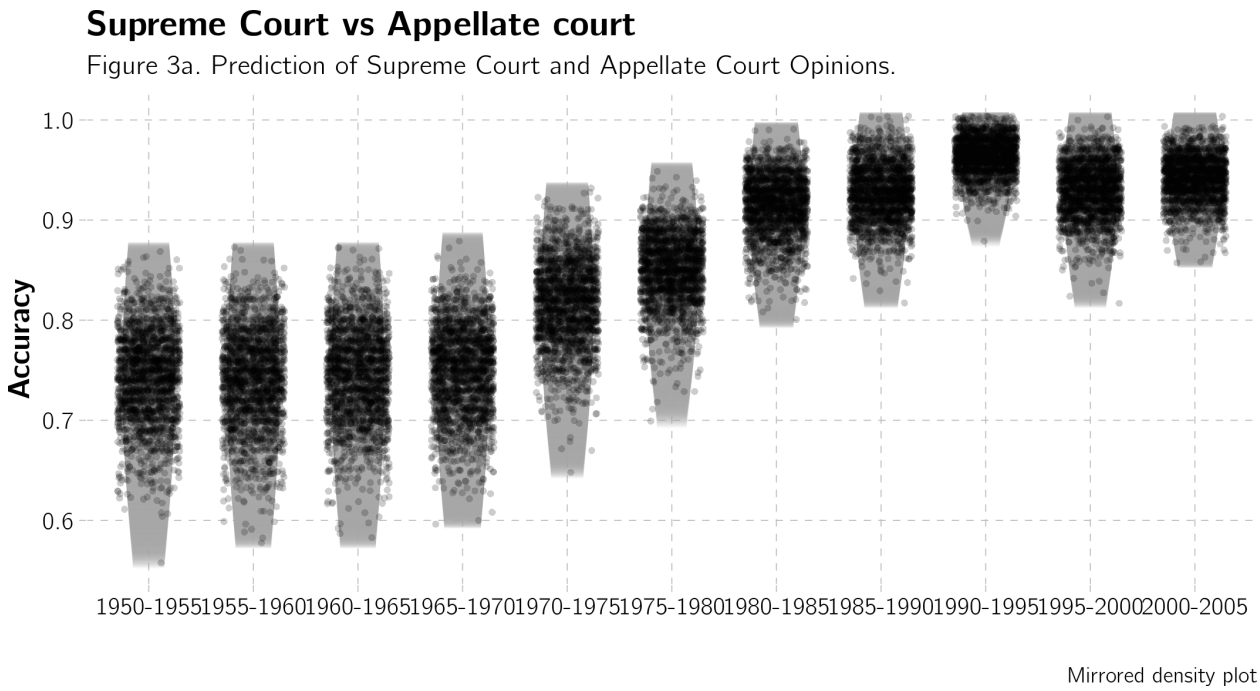


Livermore Figure 3

(Livermore 3)

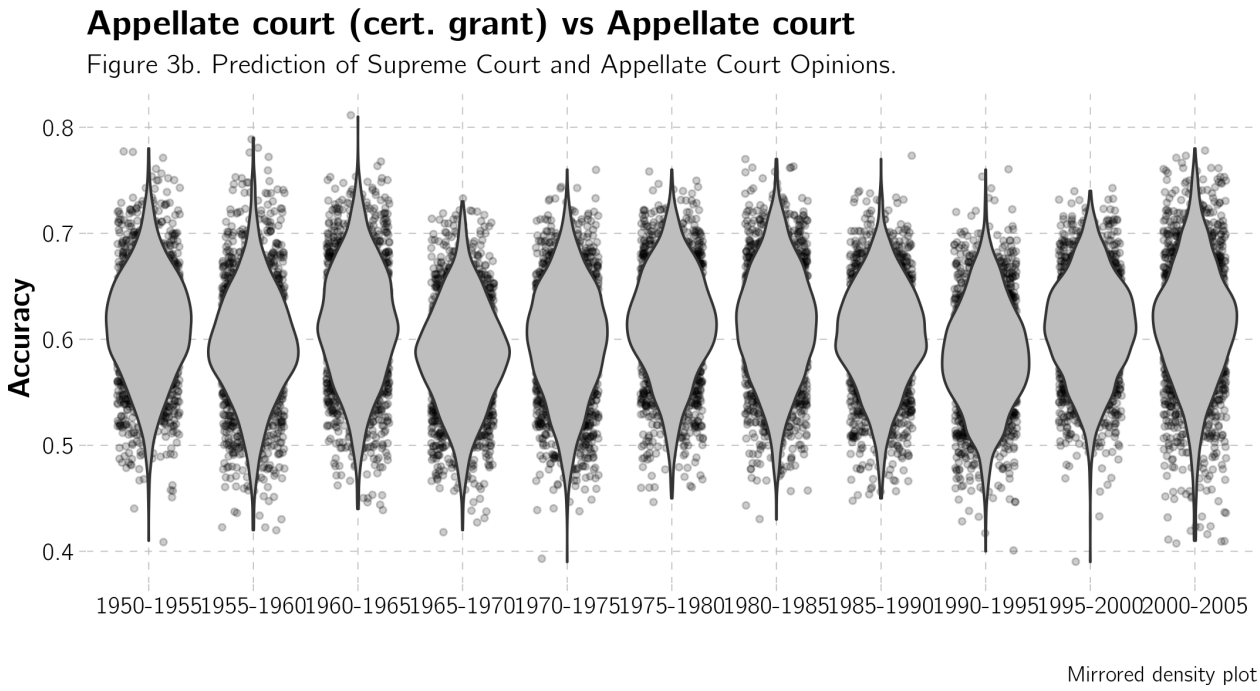

Supreme Court vs Appellate court (cert. granted)
Figure 3a. Prediction of Supreme Court and Appellate Court Opinions.
Accuracy
1.0
0.9
0.8
0.7
0.6
1950-1955
1955-1960
1960-1965
1965-1970
1970-1975
1975-1980
1980-1985
1985-1990
1990-1995
1995-2000
2000-2005
Mirrored density plot

(Livermore 3)

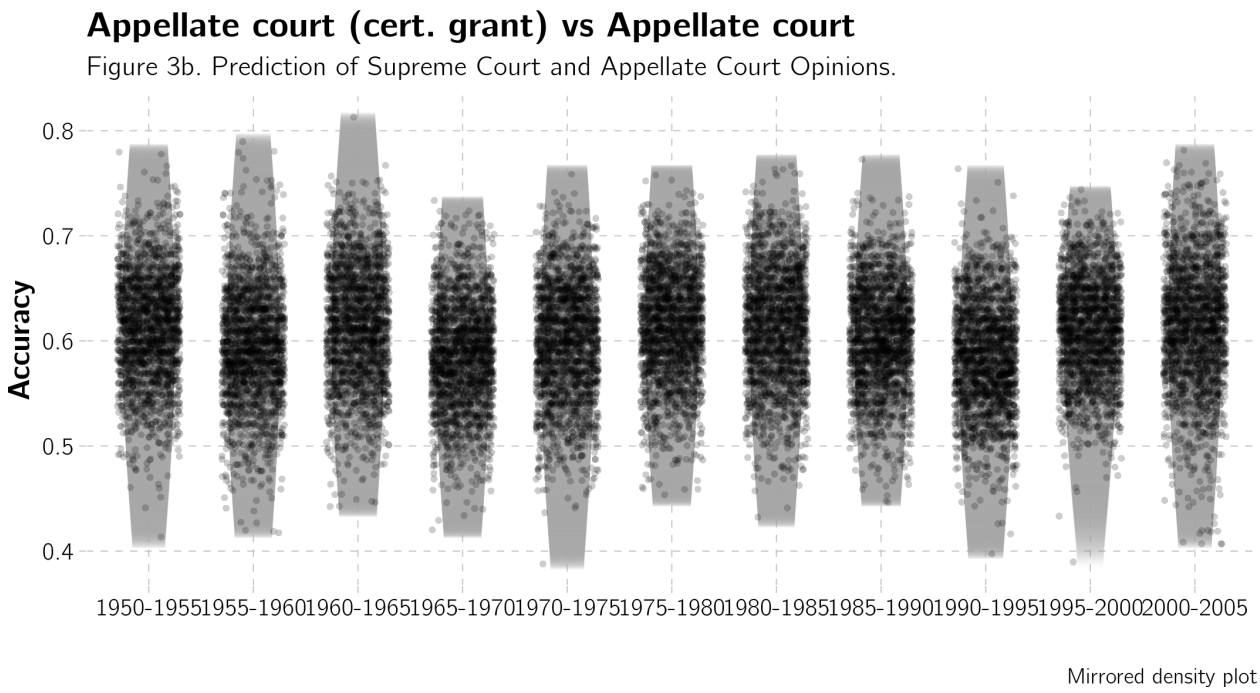


Livermore Figure 4

(Livermore 4)


Appellate court (cert. grant) vs Appellate court
Figure 3b. Prediction of Supreme Court and Appellate Court Opinions.
Accuracy
0.8
0.7
0.6
0.5
0.4
1950-1955
1955-1960
1960-1965
1965-1970
1970-1975
1975-1980
1980-1985
1985-1990
1990-1995
1995-2000
2000-2005
Mirrored density plot

(Livermore 4)

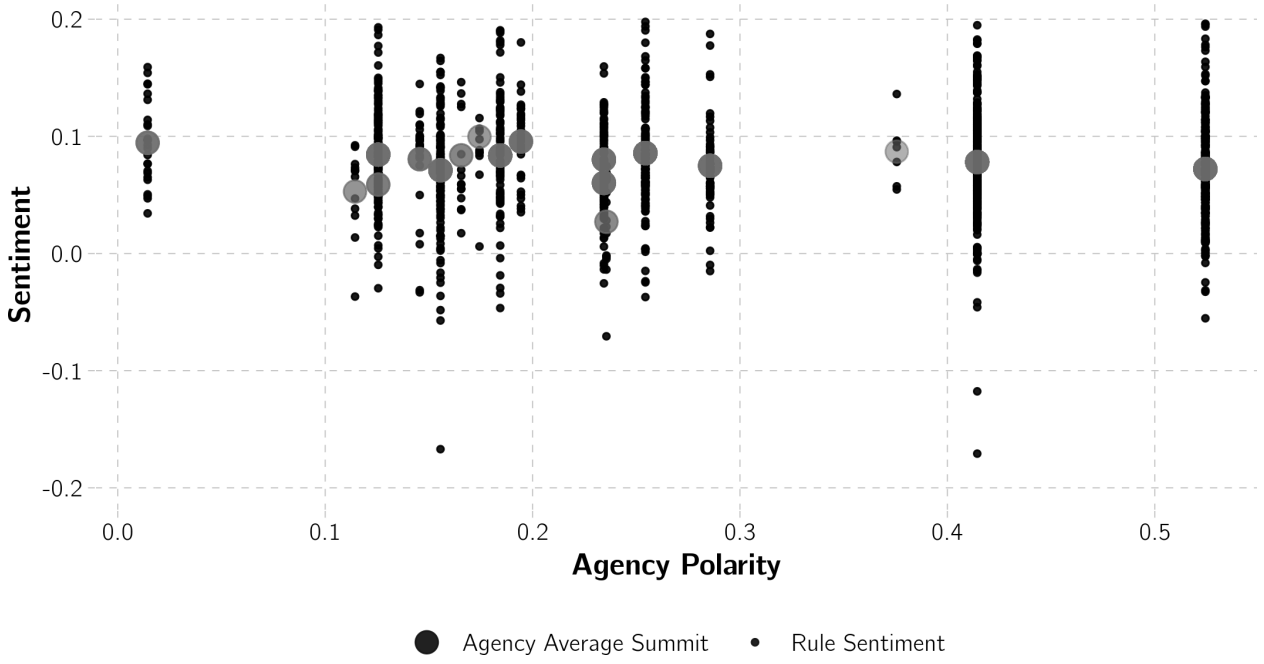

Appellate court (cert. grant) vs Appellate court
Figure 3b. Prediction of Supreme Court and Appellate Court Opinions.
Accuracy
0.8
0.7
0.6
0.5
0.4
1950-1955
1955-1960
1960-1965
1965-1970
1970-1975
1975-1980
1980-1985
1985-1990
1990-1995
1995-2000
2000-2005
Mirrored density plot

Livermoregrom

Livermoregrom

Livermoregrom Figure 1

(Livermoregrom 1)



Tables