On the Effective Communication of the Results of Empirical Studies

Lee Epstein Andrew D. Martin Matthew Schneider

The "Ugly" Table

Senate Voting on Supreme Court Nominees

	Supreme Court Nominees	
Variable	Coefficient	(Std. Err.)
Lack of Qualifications	-4.35*	(.23)
Ideological Distance	-4.11*	(.26)
Strong President	1.46*	(.14)
Same Party	1.40*	(.15)
Constant	3.28*	(.16)
N	3709	
Log-likelihood	-842.20	
$\chi^2_{(4)}$	548.92	

General Principles
Overview

1. Communicate Substance, Not Statistics
2. When Performing Inference, Convey Uncertainty
3. Graph Data and Results

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General Principle 1

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The coefficient on the variable `Lack of Qualifications` (-4.35) is "statistically significant."

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Substance

Other things being equal, when a nominee is perceived as highly unqualified the likelihood of a senator casting a yea vote is only about 0.21. That probability increases to 0.93 when the nominee is highly qualified.

General Principle 2

When Performing Inference, Convey Uncertainty

Statistical Uncertainty

The coefficient on the variable `Lack of Qualifications` (-4.35 [-4.81, -.3.89] with a standard error of .23) is statistically significant at the .01 level.

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Substantive Uncertainty

Other things being equal, when a nominee is perceived as highly unqualified the likelihood of a senator casting a yea vote is only about 0.21 [$\pm$.05]. That probability increases to a near-sure bet yea vote (0.93, [$\pm$.02]) when the nominee is highly qualified.

General Principle 3

Graph Data and Results

Ideological Distance from Senator Kennedy (D-Mass.)

Ginsburg	.0891
Breyer	.2375
Kennedy	.3465
Souter	.3912
Thomas	.6187
Roberts	.6613
Rehnquist	.7802
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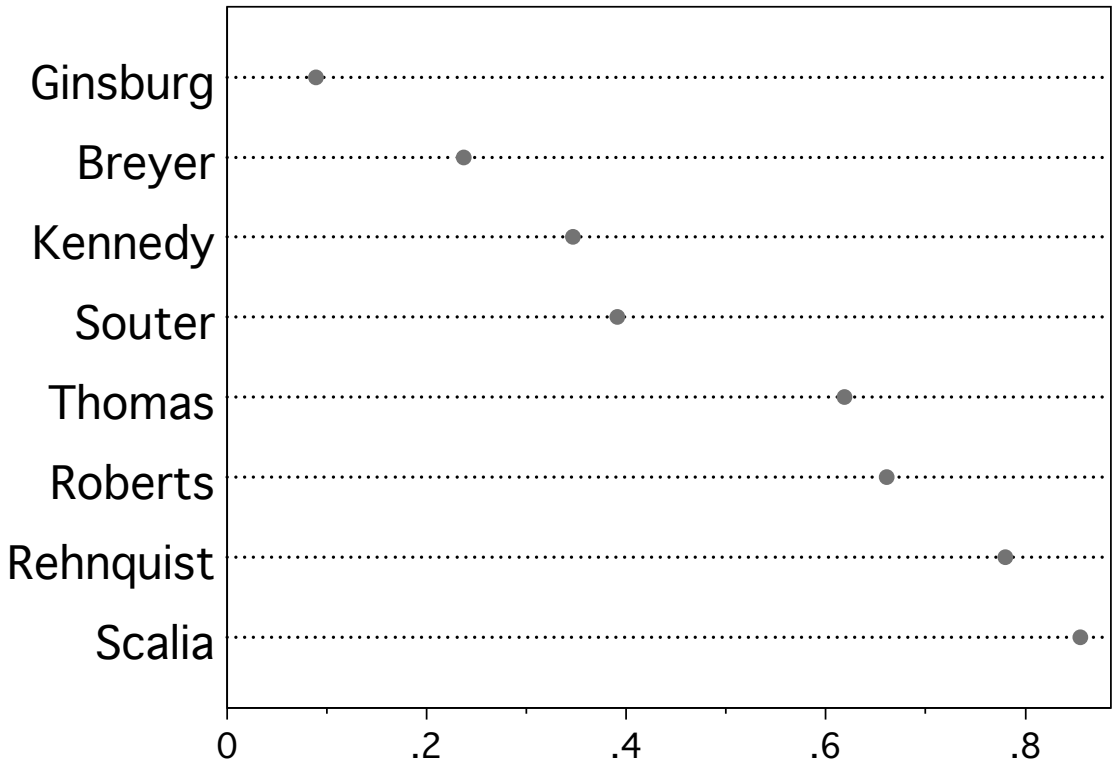

Graphs for Presenting Results

- Other things being equal, when a nominee is perceived as highly unqualified the likelihood of a senator casting a yea vote is 0.21 [±.05].
- Other things being equal, when a nominee is perceived as about average on the qualifications scale, the likelihood of a senator casting a yea vote is 0.83 [±.03].
- Other things being equal, when a nominee is perceived as highly qualified the likelihood of a senator casting a yea vote is 0.93 [±.02].

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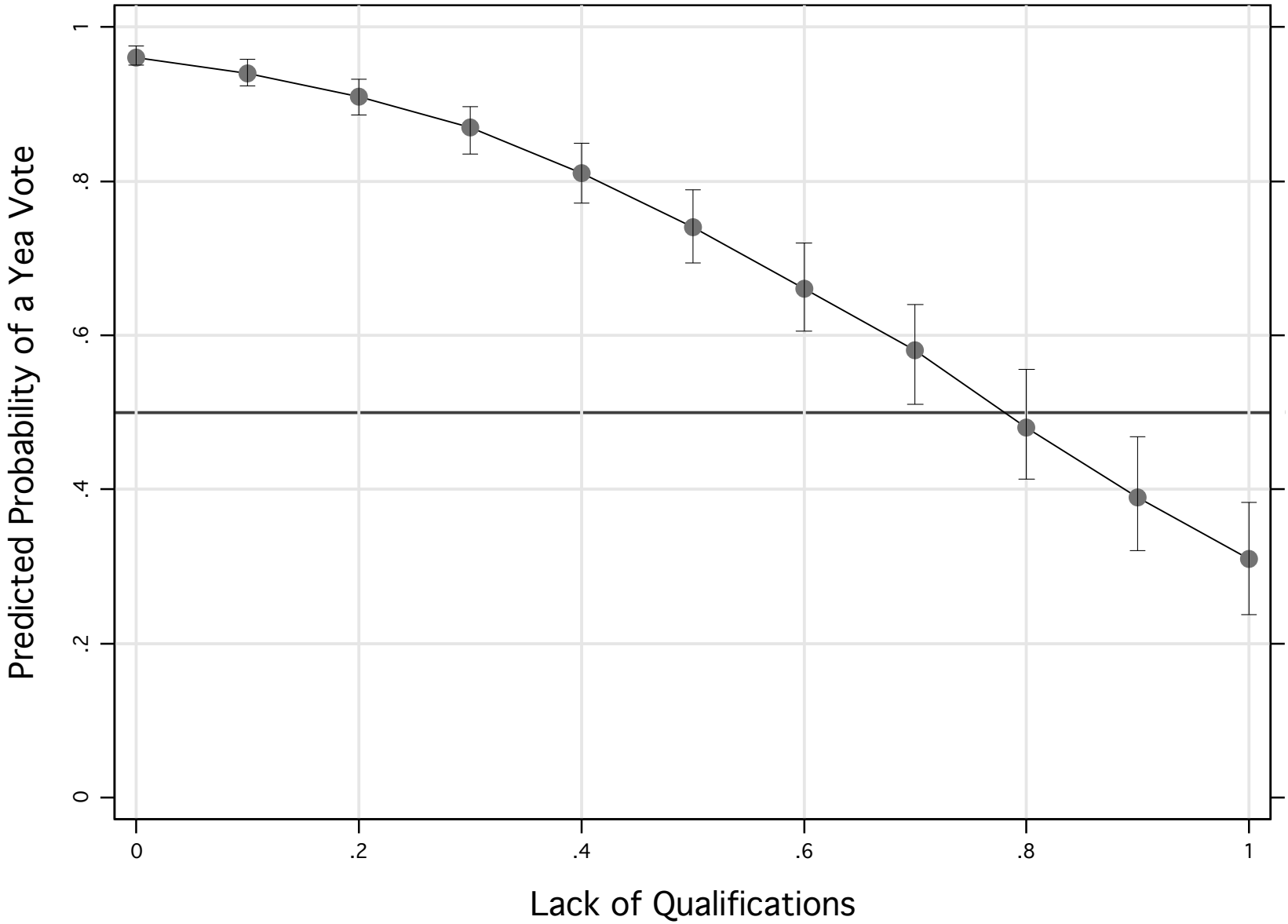
Predicted Probability of a Yea Vote
0
.2
.4
.6
.8
1
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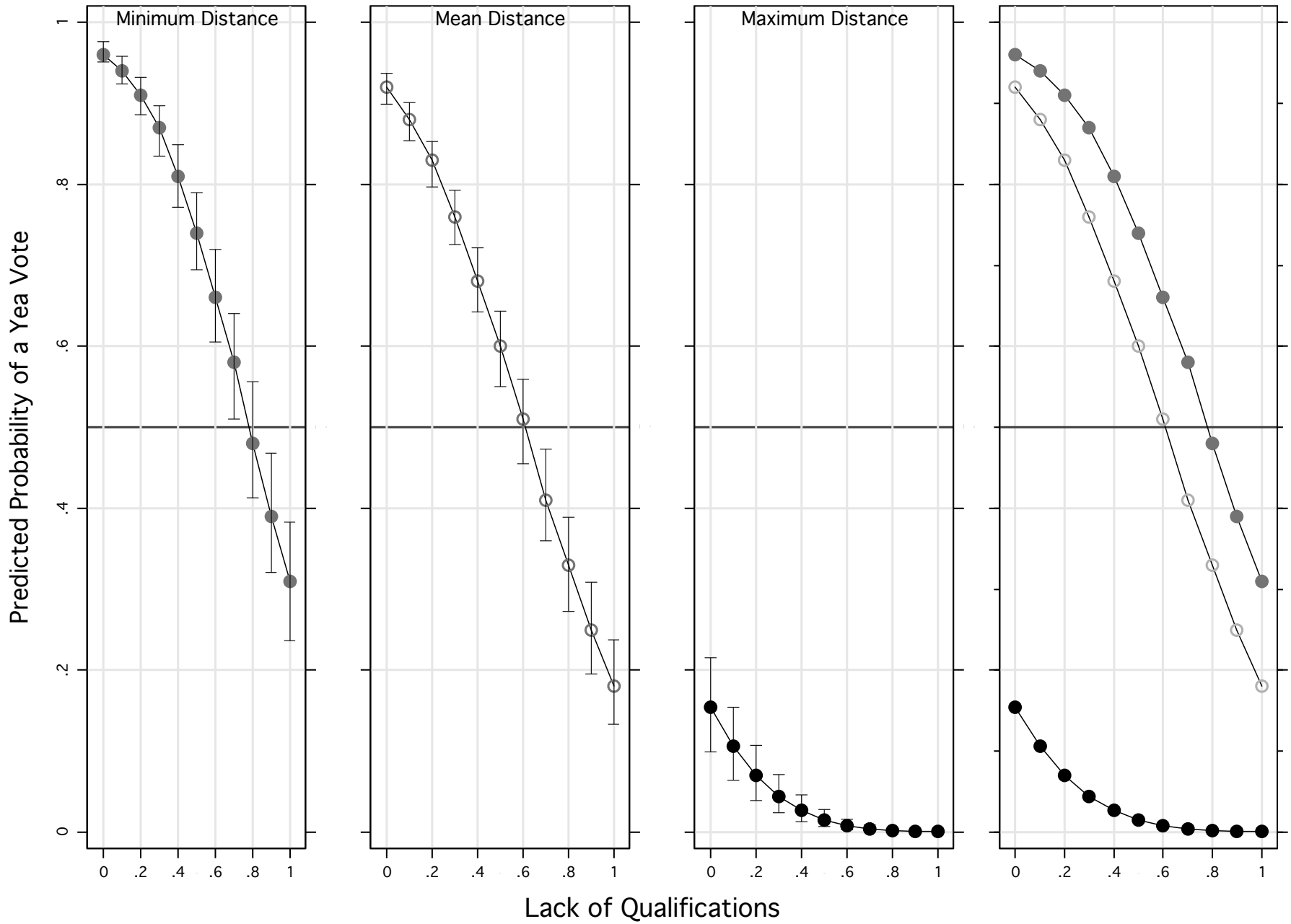
Lack of Qualifications


Minimum Distance
Mean Distance
Maximum Distance
Predicted Probability of a Yea Vote
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Lack of Qualifications

Conceptual Overview

- Estimate a Quantity of Interest. E.g., likelihood of a senator casting a yea vote is only 0.21.
- Estimate Uncertainty around the Quantity of Interest. E.g., the likelihood of a senator casting a yea vote is only about 0.21 [±.05].
- Visualize Results Across All Values. E.g.,

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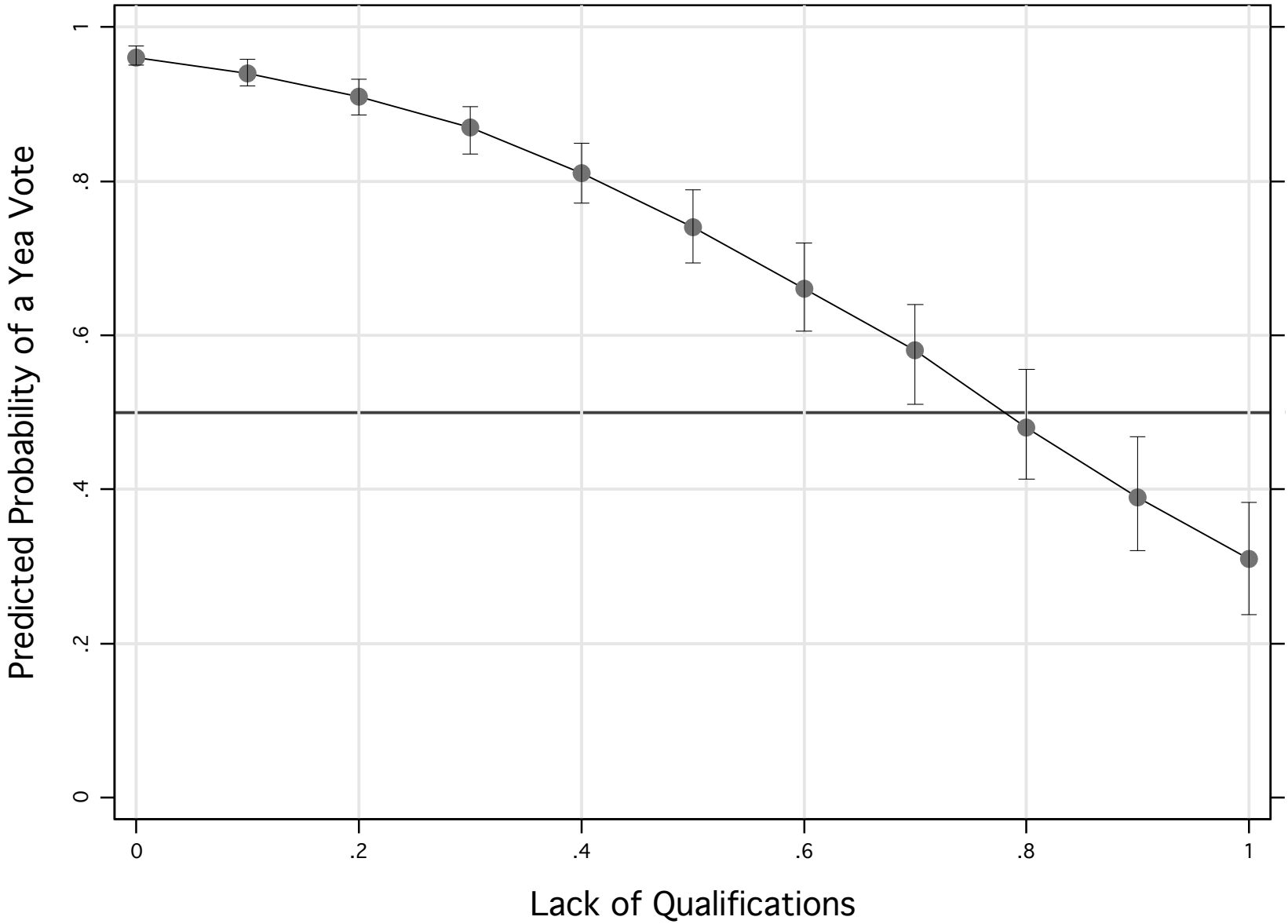
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The Details

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- Uncertainty
- Translating Uncertainty Using the Monte Carlo Method

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A Demonstration

Clarify

Developed by Michael Tomz, Jason Wittenberg, and Gary King

`http://gking.harvard.edu/clarify/docs/clarify.html`