CSSS 569 Visualizing Data and Models

Lab 5: Intro to `tile`

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Introduction

- Overview of `tile`

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- Preview of three examples

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- Installing `tile` and `simcf`

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  - Scatterplot: HW1 example
  - Expected probabilities and first differences: Voting example
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- Installing `tile` and `simcf`
- Walking through examples

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     - Complex traces: `lineplot()`, `scatter()`, `ropeladder()`, and `rugTile()`

Overview of `tile`

- Primitive trace functions:
  - `linesTile()`: Plot a set of connected line segments
  - `pointsTile()`: Plot a set of points
  - `polygonTile()`: Plot a shaded region
  - `polylinesTile()`: Plot a set of unconnected line segments
  - `textTile()`: Plot text labels
- Complex traces for model or data exploration:
  - `lineplot()`: Plot lines with confidence intervals, extrapolation warnings
  - `ropeladder()`: Plot dotplots with confidence intervals, extrapolation warnings, and shaded ranges
  - `rugTile()`: Plot marginal data rugs to axes of plots
  - `scatter()`: Plot scatterplots with text and symbol markers, fit lines, and confidence intervals

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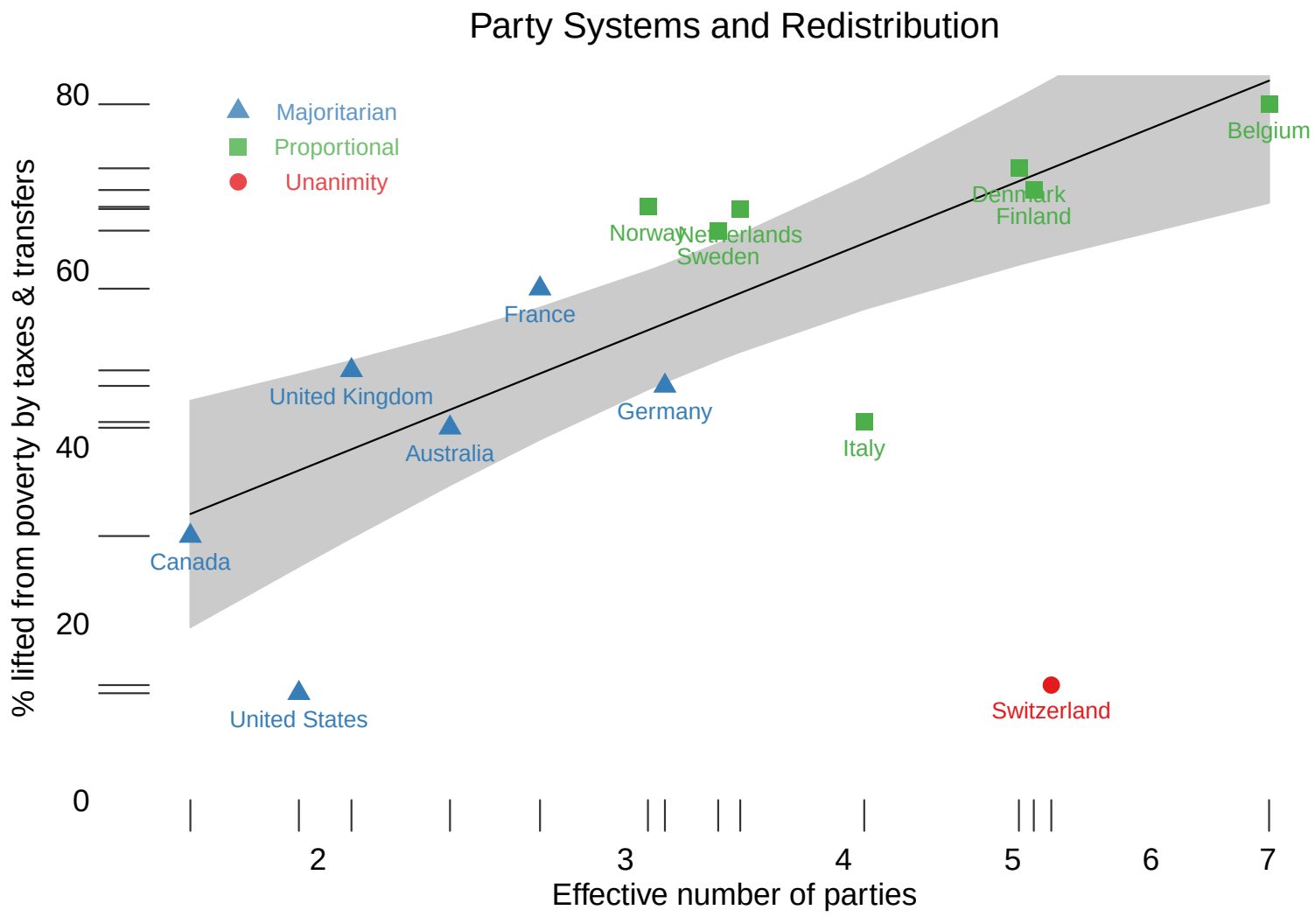
  3. **Examine output and revise**: Look at the graph made in step 2, and tweak the input parameters for steps 1 and 2 to make a better graph

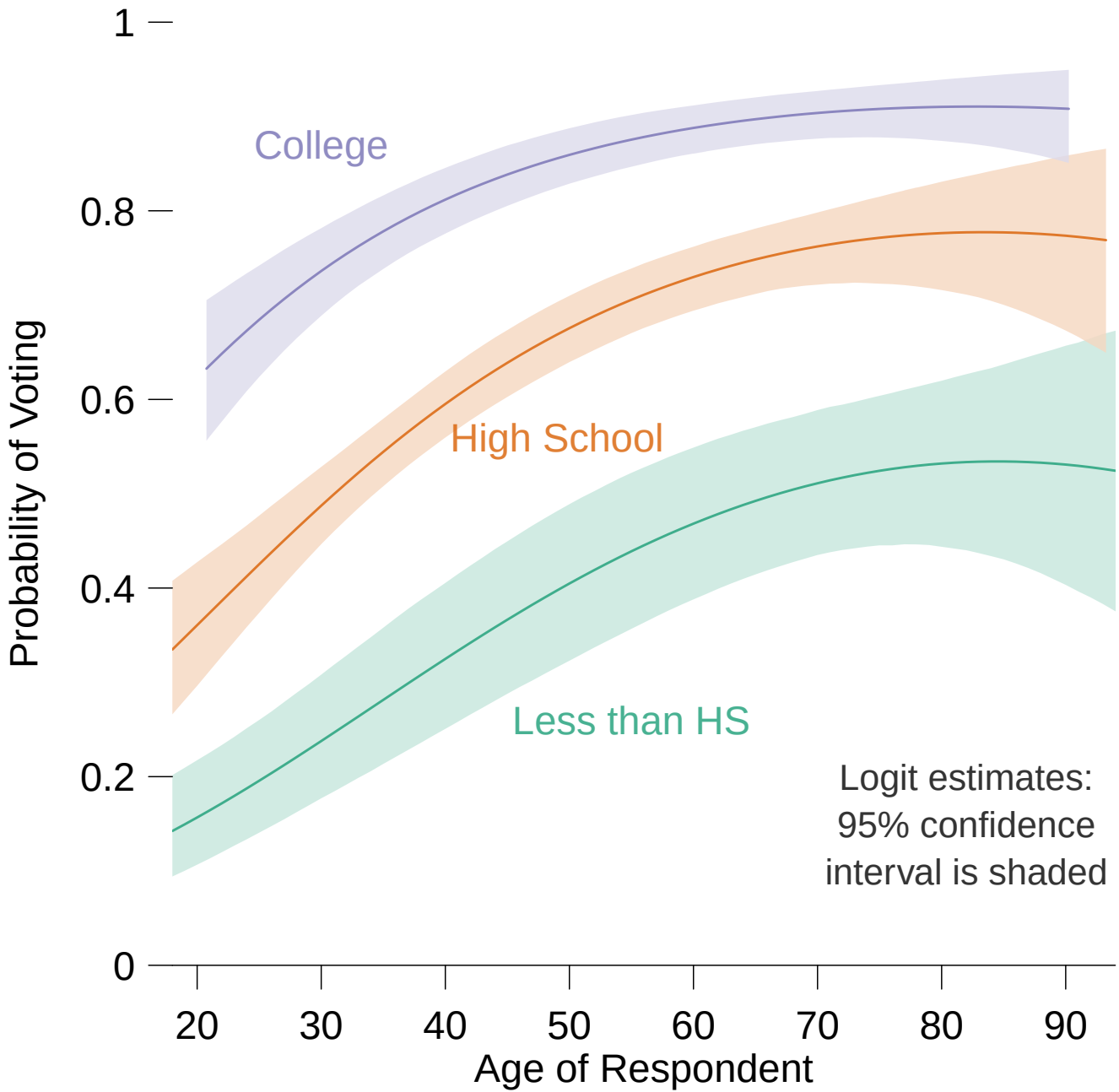
Three examples

- Scatterplot: HW1 example
- Expected probabilities and first differences: Voting example
- Ropeladder: Crime examples (if time permits)

Scatterplot: HW 1 example



Expected probabilities and first differences: Voting example



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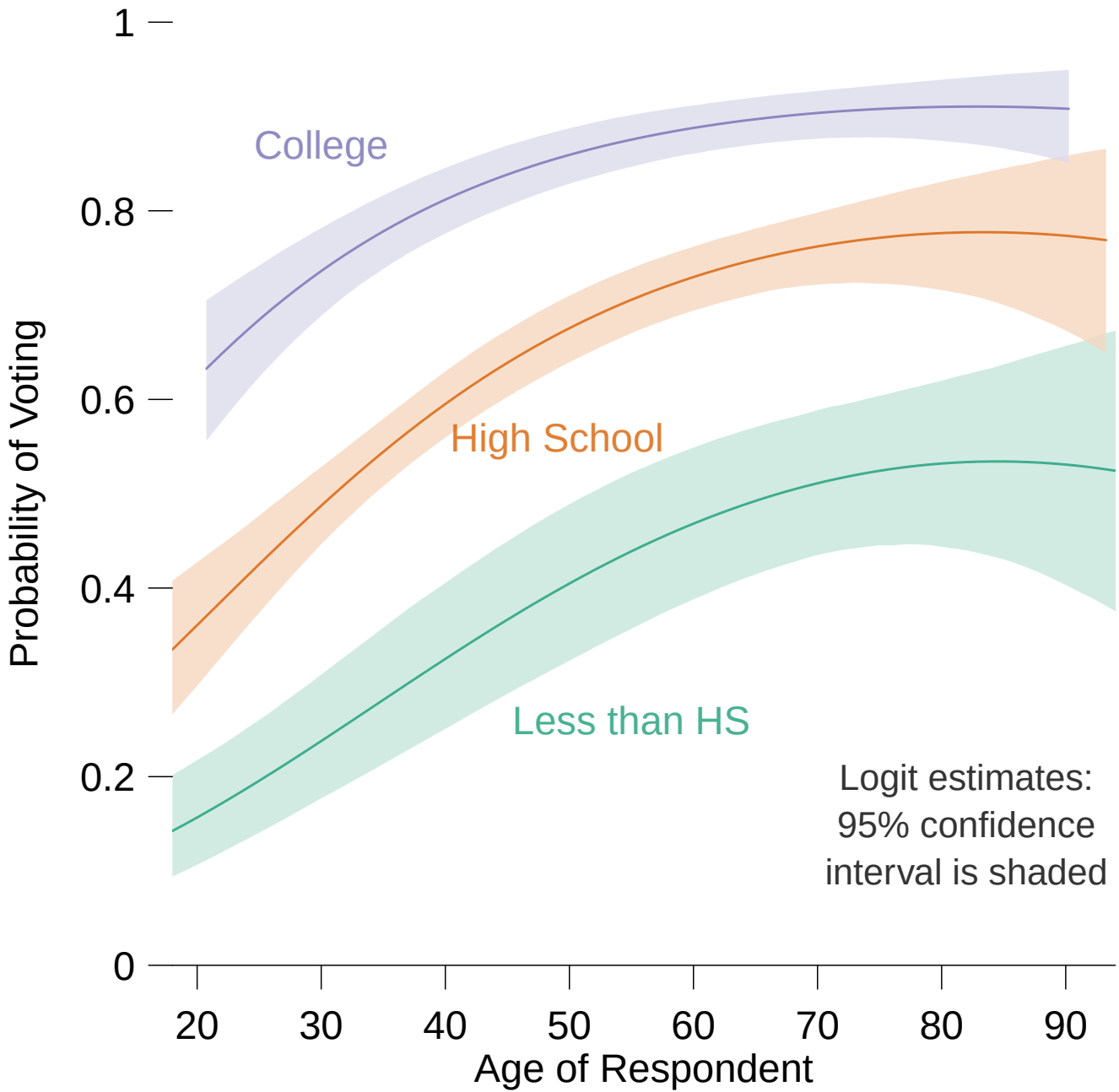
     - `logitsimrr` for relative risks

Expected probabilities and first differences: Voting example



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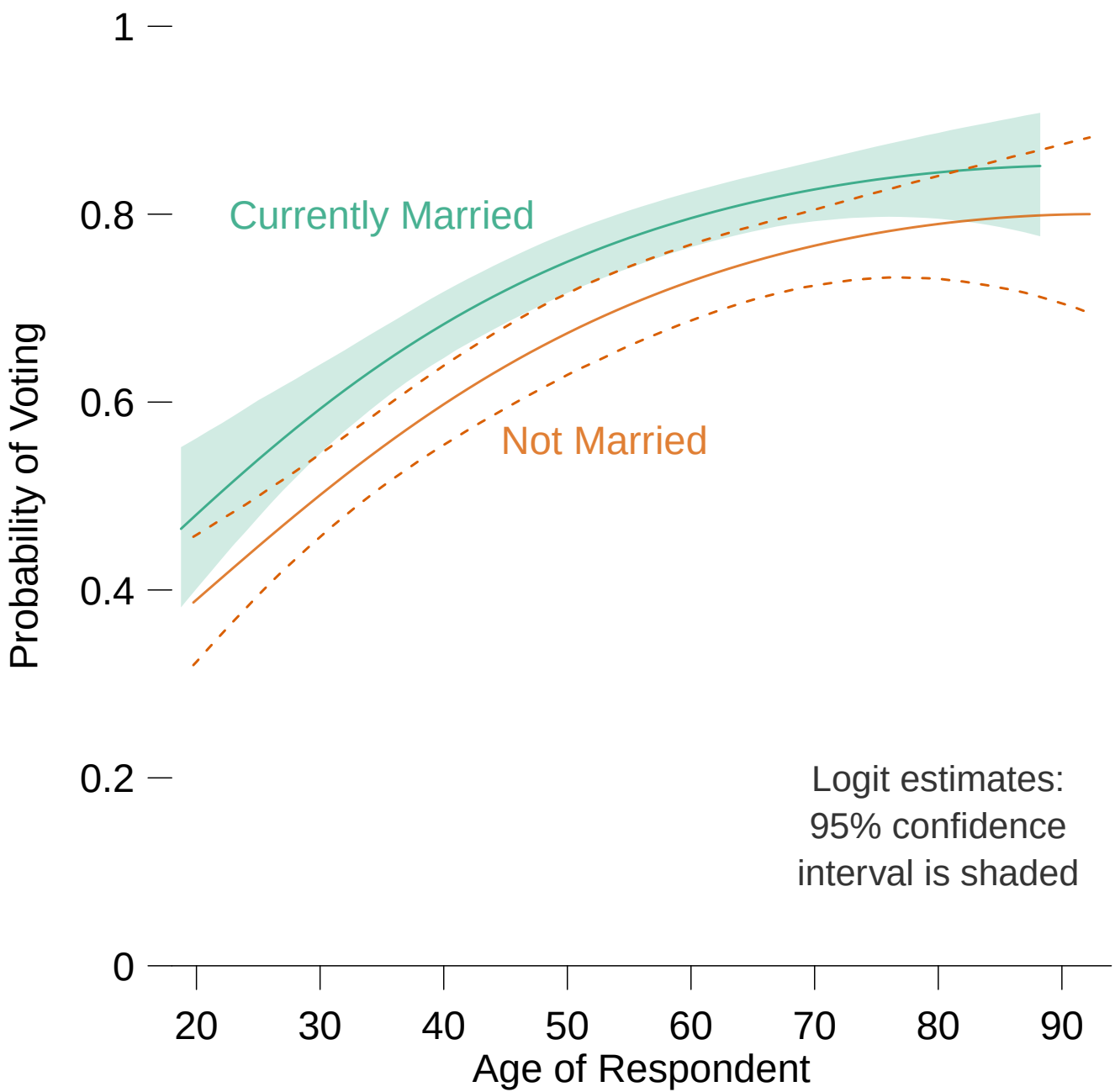

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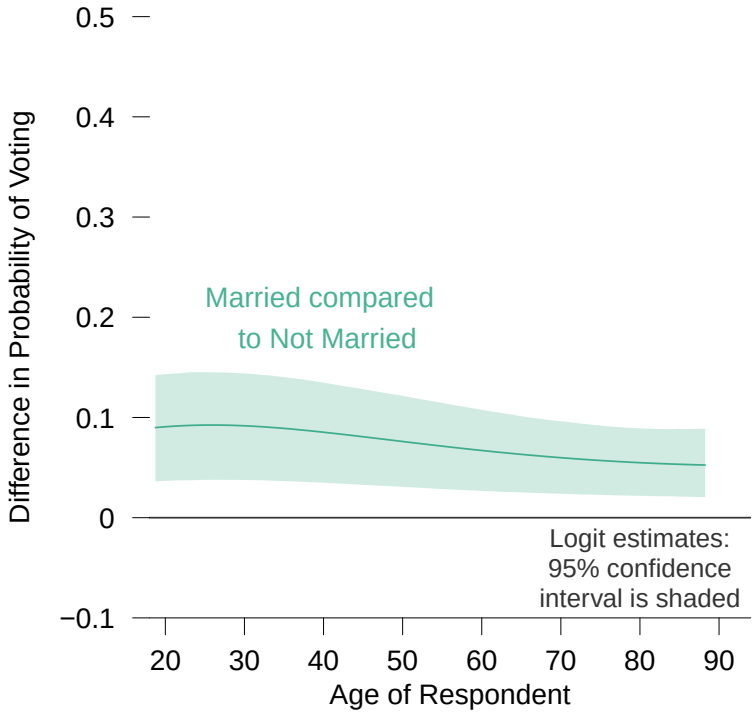
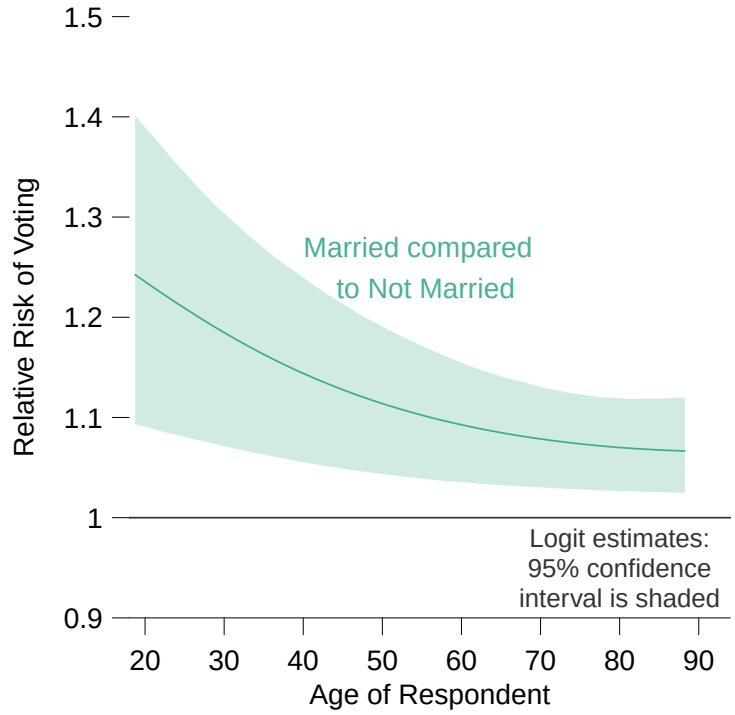
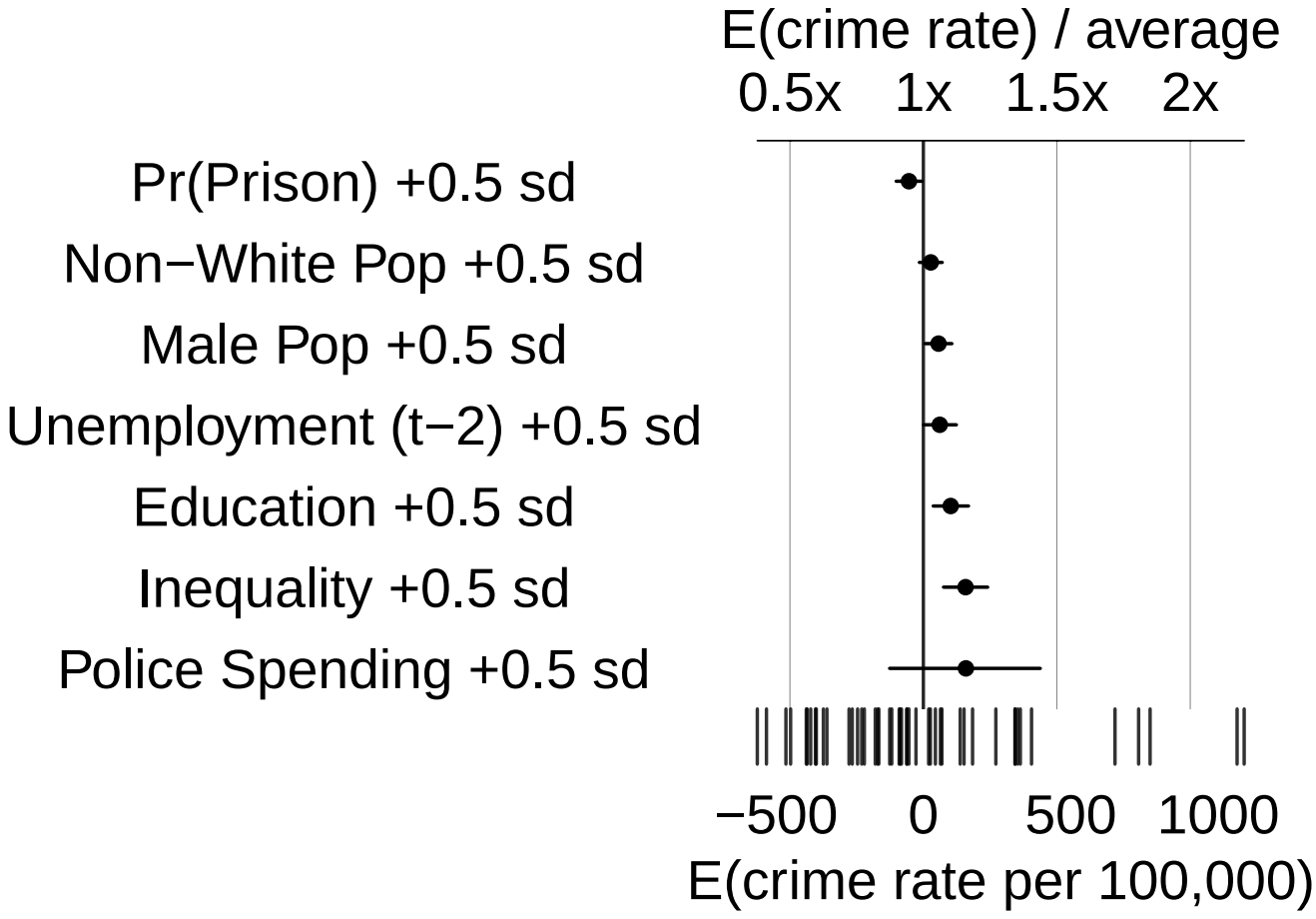




Ropeladder: Crime example (if time permits)



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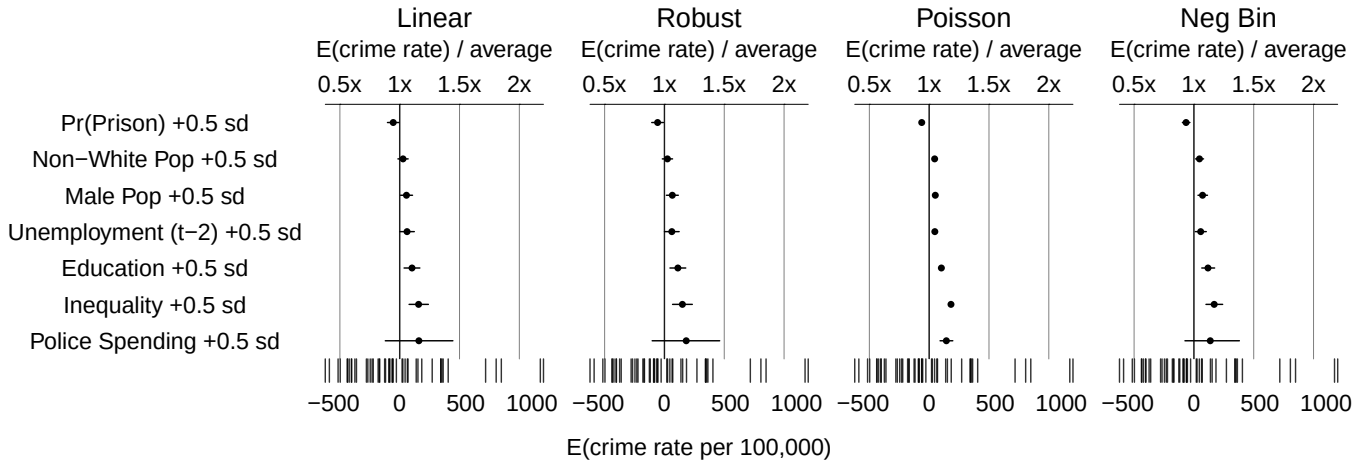

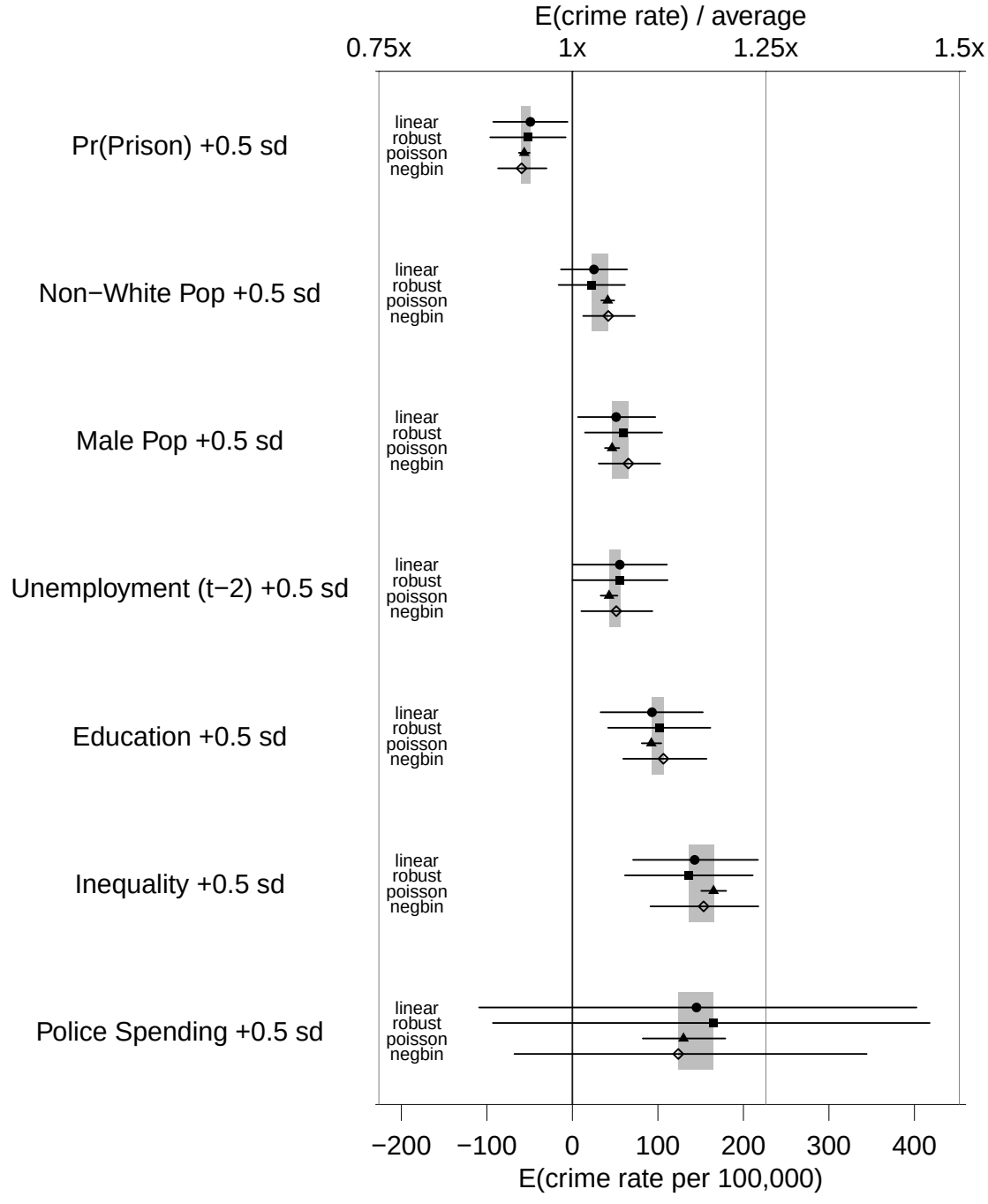
E(crime rate) / average
0.75x
1x
1.25x
1.5x
Pr(Prison) +0.5 sd
Non−White Pop +0.5 sd
Male Pop +0.5 sd
Unemployment (t−2) +0.5 sd
Education +0.5 sd
Inequality +0.5 sd
Police Spending +0.5 sd
linear
robust
poisson
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−200
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0
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200
300
400
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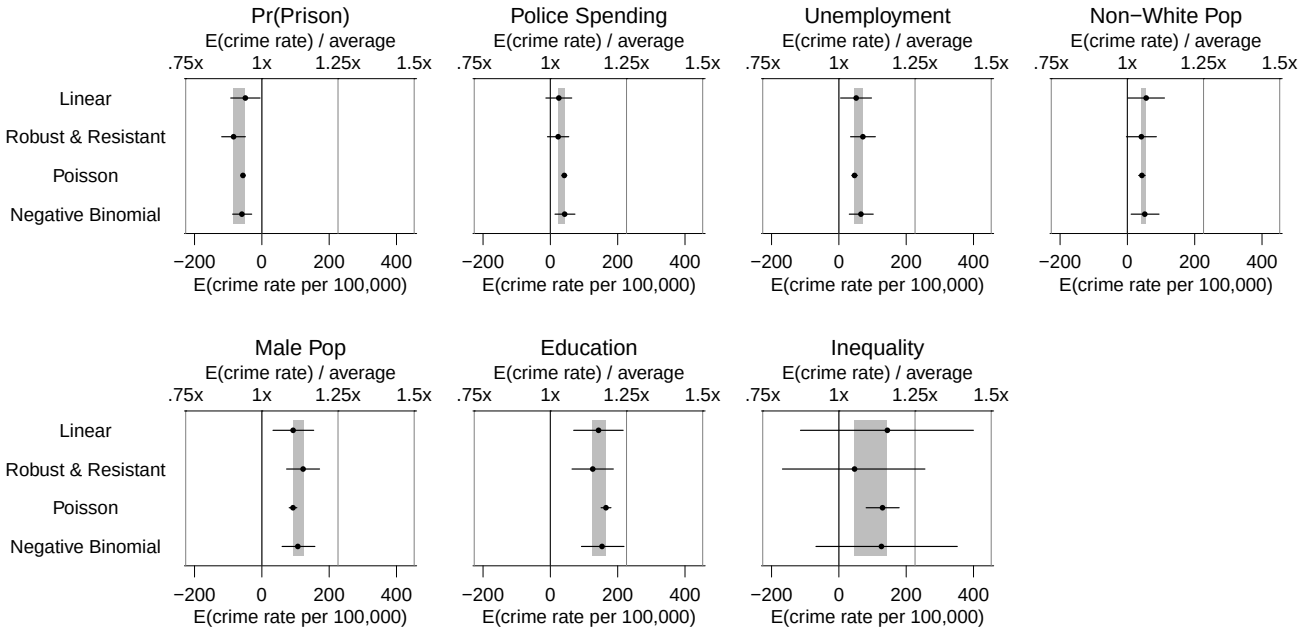

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