

Explaining Systematic Bias and Nontransparency in US Social Security Administration Forecasts

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(Talk at the Social Security Technical Advisory Panel, Washington D.C., 5/7/2015)

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References (all forthcoming)

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- Systematic Bias and Nontransparency in US Social Security Administration Forecasts
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 - Straightforward **solutions** exist for all problems discovered

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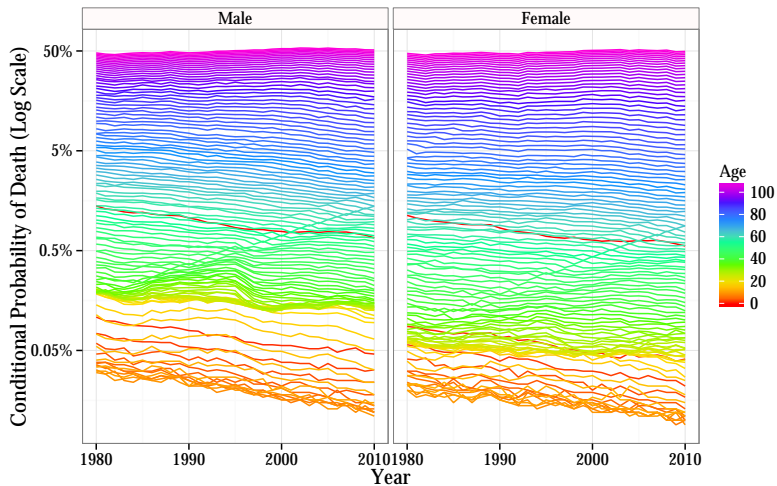
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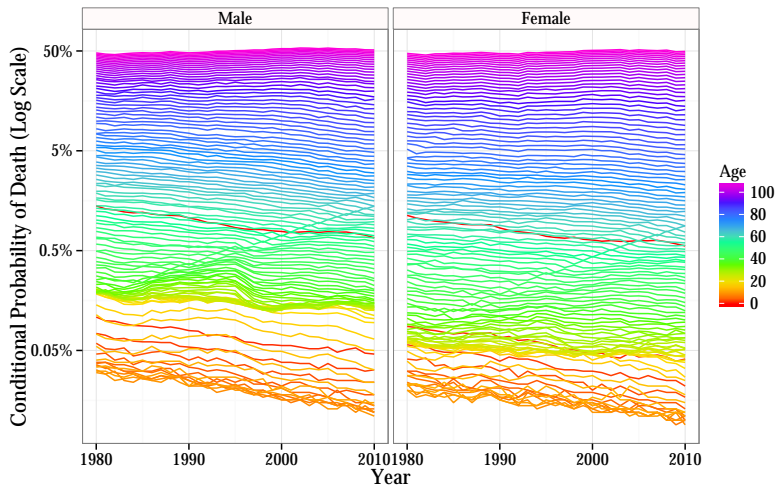
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Actual Mortality Time Profiles are Complex

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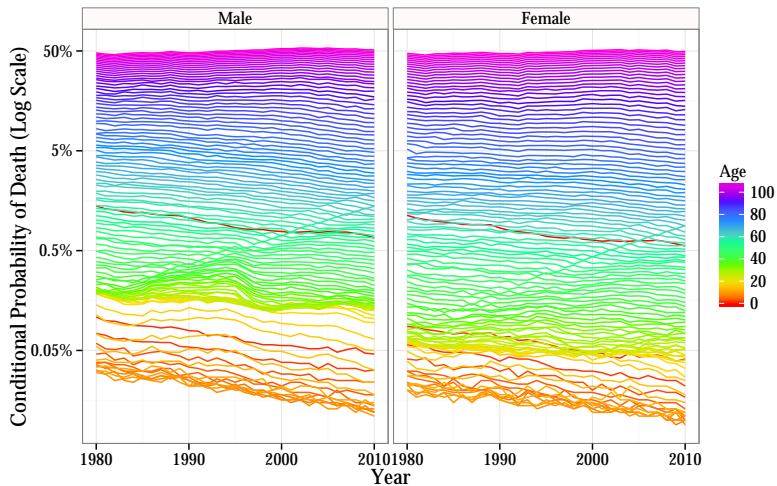


Actual Mortality Time Profiles are Complex



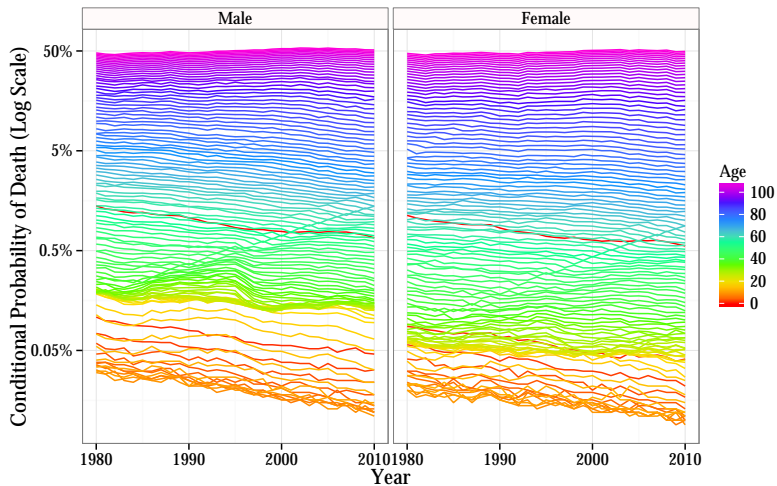
Patterns:

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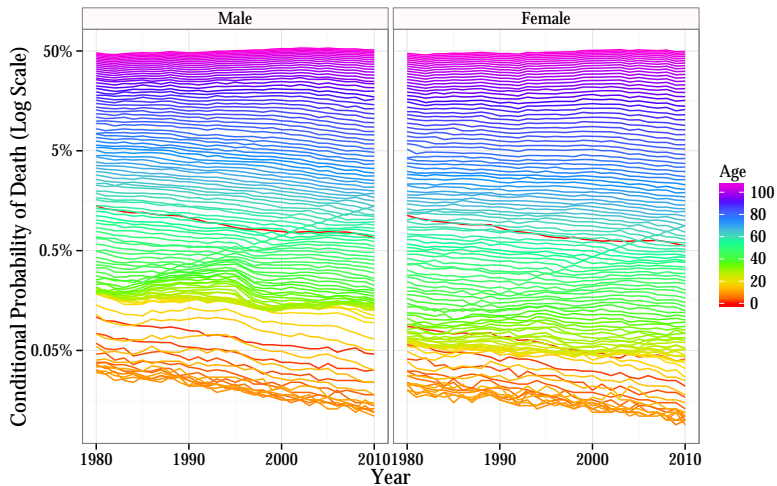
Patterns: \approx linear,

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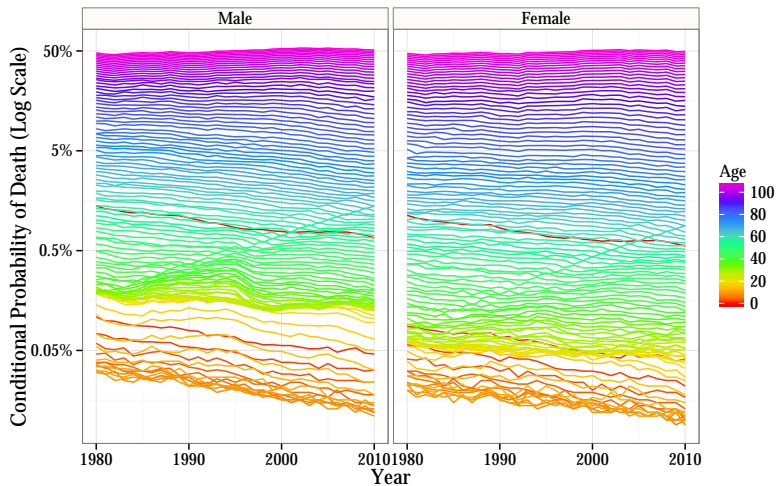
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Patterns: \approx linear, different slopes, different variances,

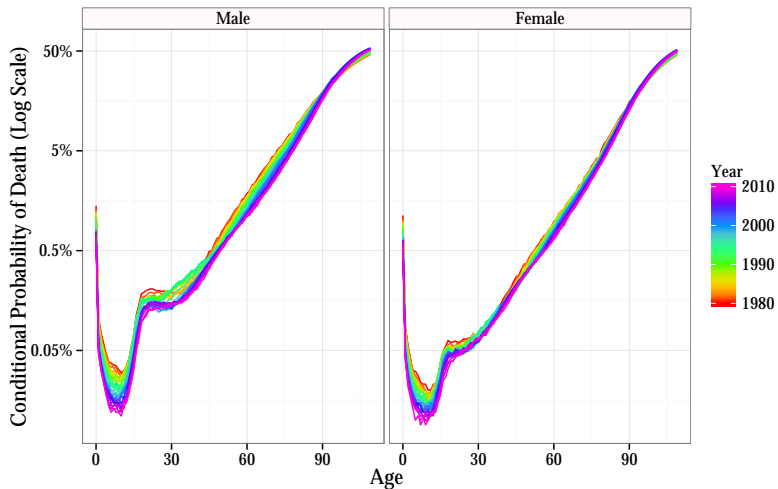
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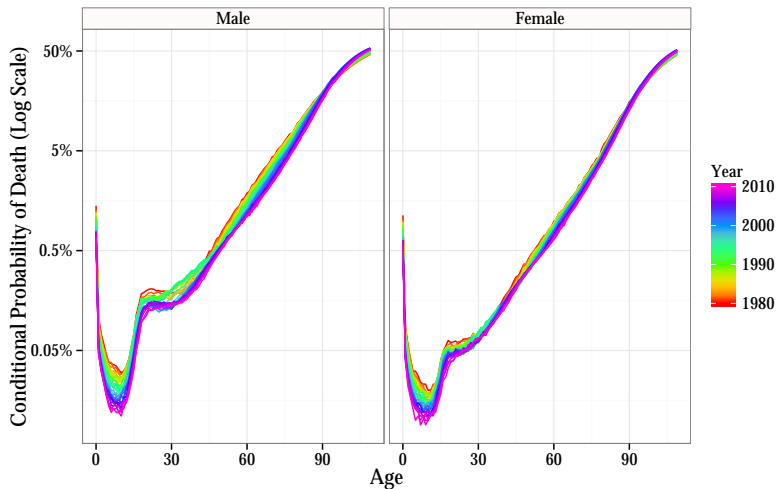
Patterns: \approx linear, different slopes, different variances, diagonal ripples

Actual Mortality Age Profiles are also Complex

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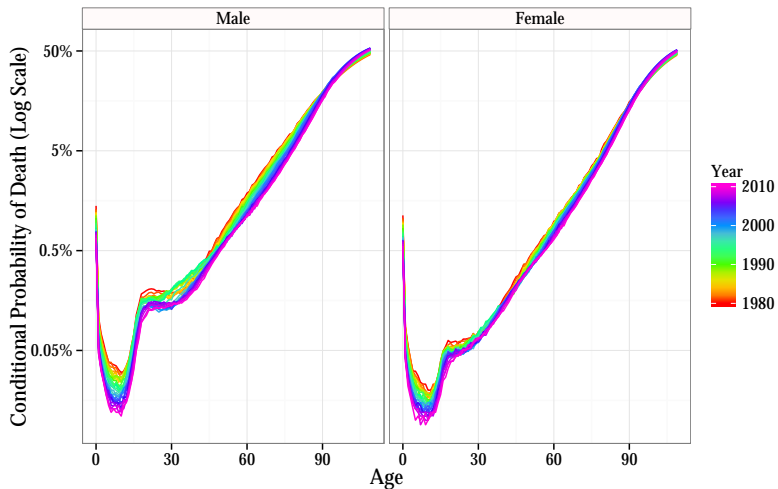


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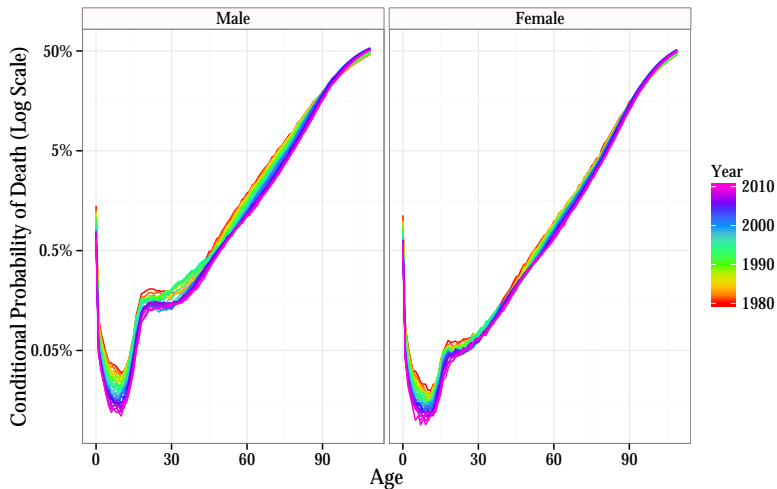
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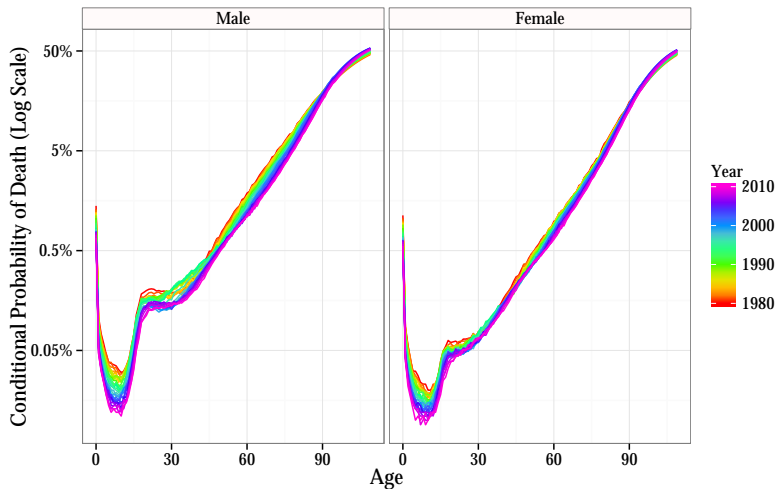
Patterns: Characteristic shape,

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Patterns: Characteristic shape, partly linear,

Actual Mortality Age Profiles are also Complex

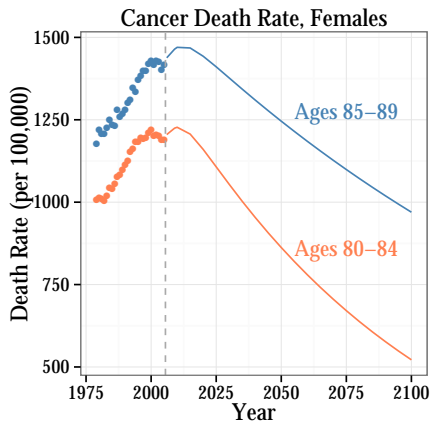
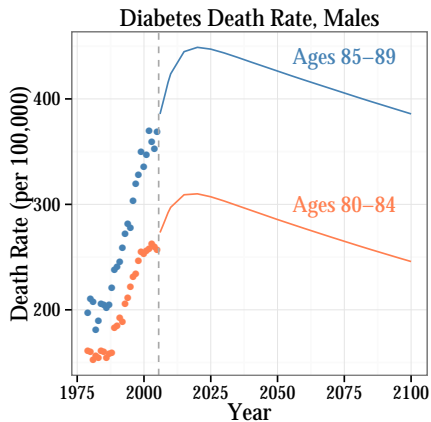


Patterns: Characteristic shape, partly linear, different time \times age trends

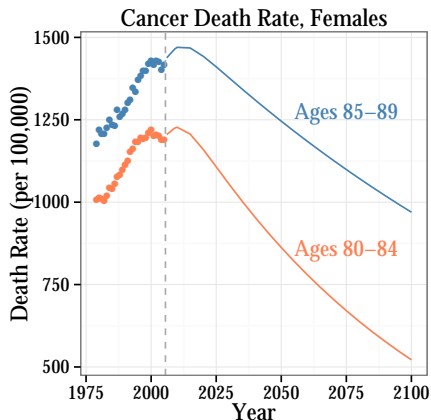
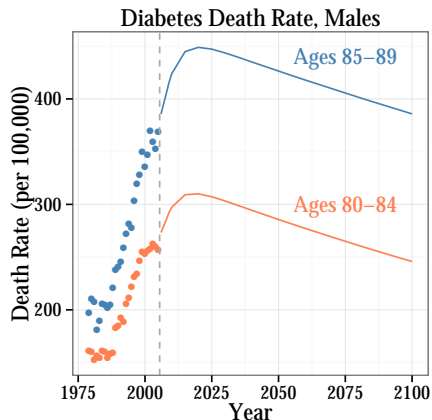
OCACT Qualitative Choices

OCACT Qualitative Choices: Violate Known Information

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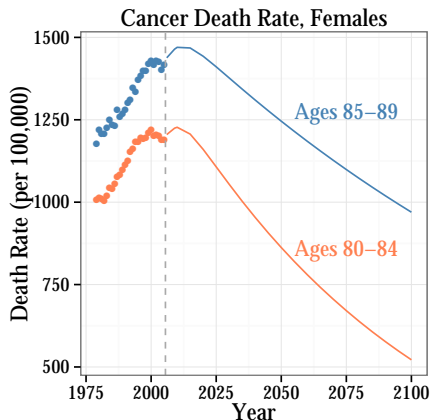
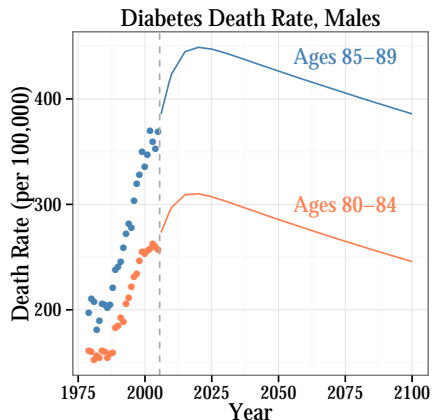


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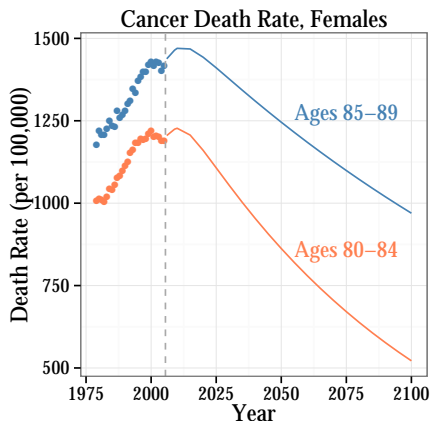
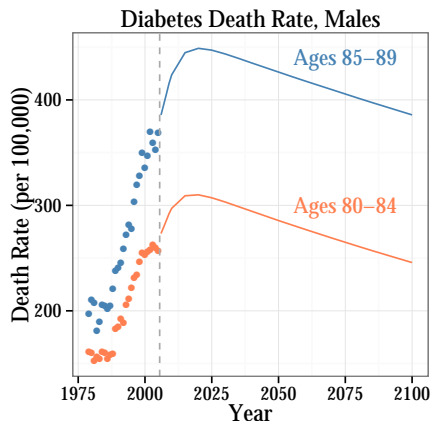
Unrealistic patterns:

OCACT Qualitative Choices: Violate Known Information



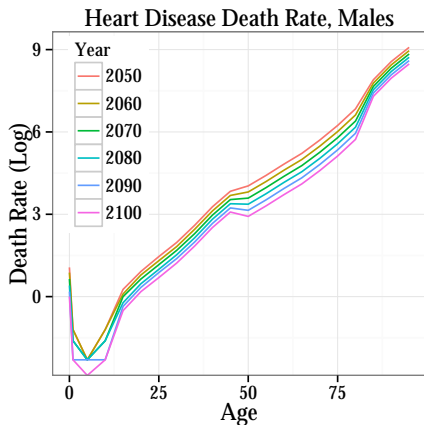
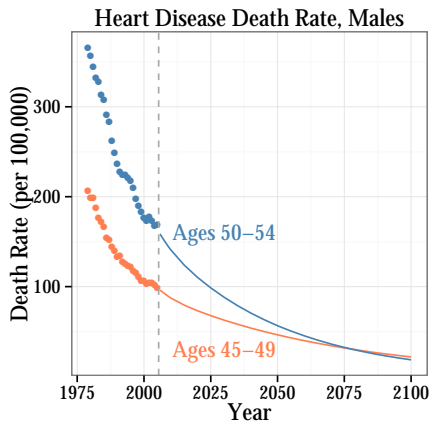
Unrealistic patterns: change of directions,

OCACT Qualitative Choices: Violate Known Information

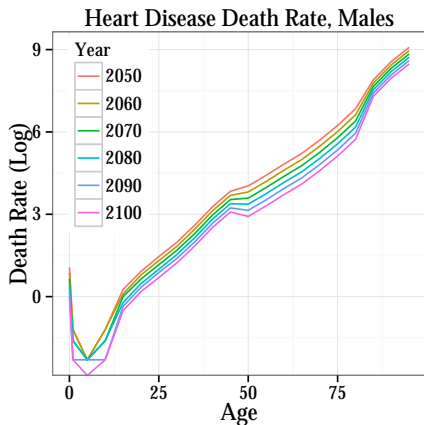
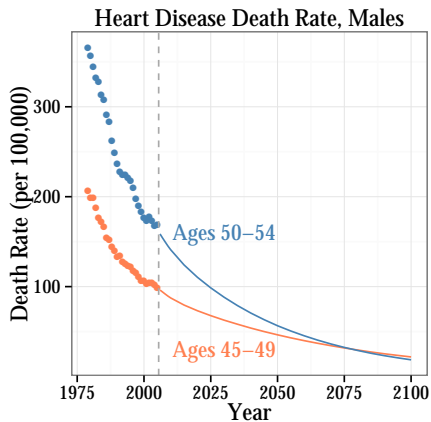


Unrealistic patterns: change of directions, change of differences

OCACT Qualitative Choices: Violate Known Information

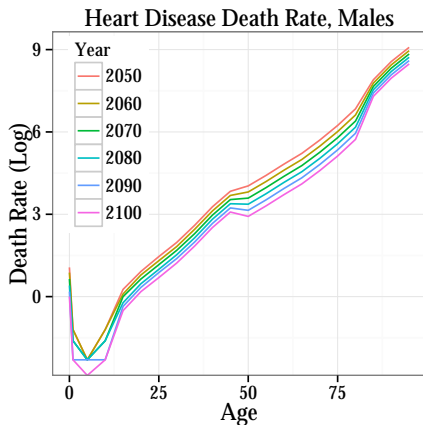
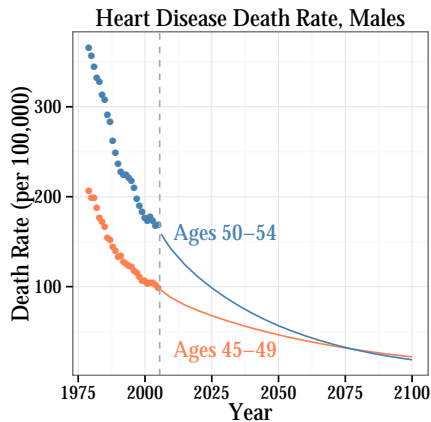


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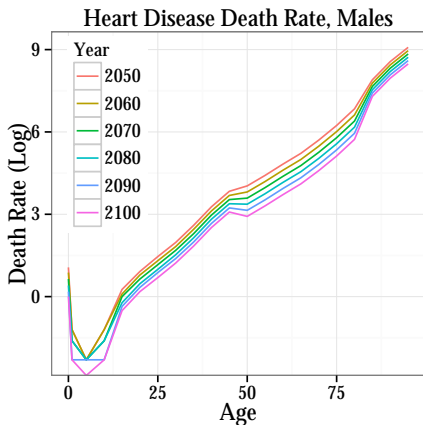
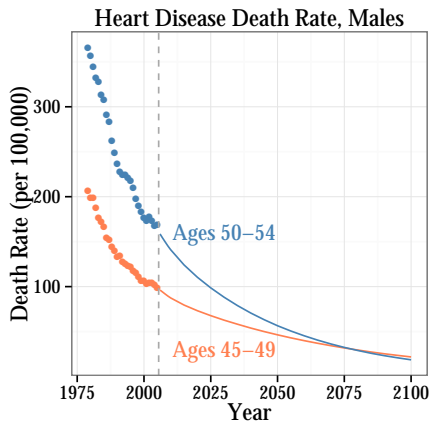
Unrealistic patterns:

OCACT Qualitative Choices: Violate Known Information



Unrealistic patterns: Crossing age plots,

OCACT Qualitative Choices: Violate Known Information



Unrealistic patterns: Crossing age plots, notch for 50-75 year olds

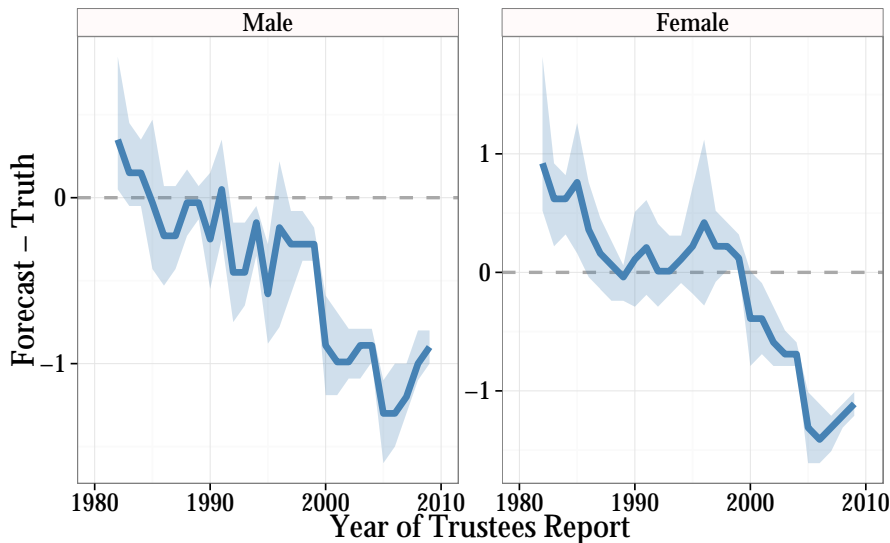
SSA Life Expectancy Forecasts: Increasing Bias Since 2000

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(LE at 65; 1-5 year SSA forecasts)

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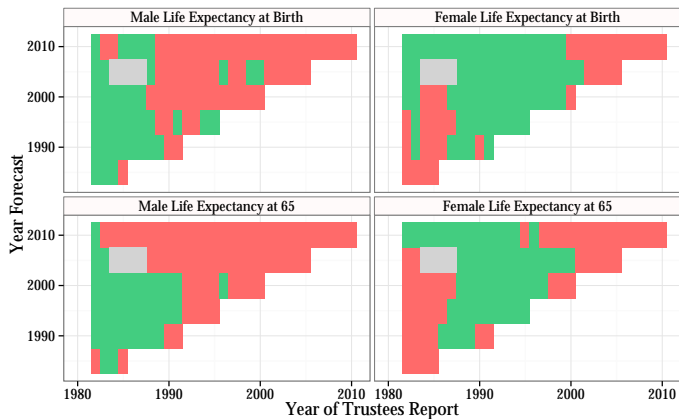
Life Expectancy “Uncertainty Interval” Coverage

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Systematic overconfidence since at least 2000

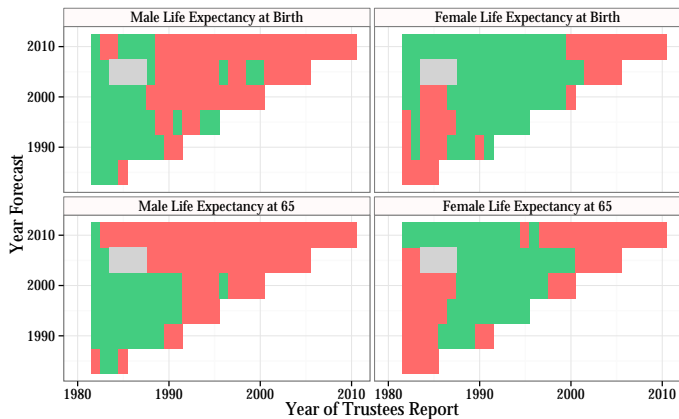
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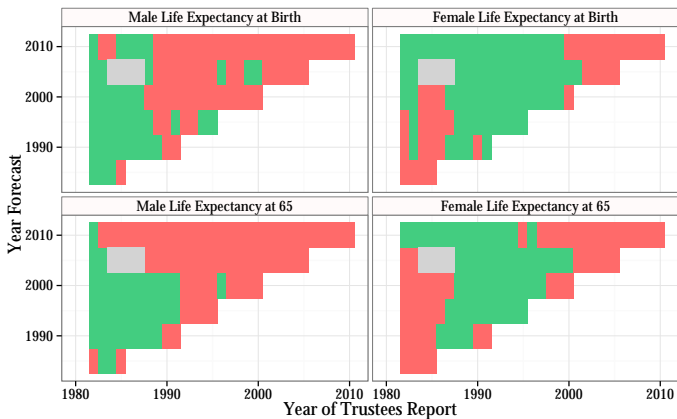
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Patterns:

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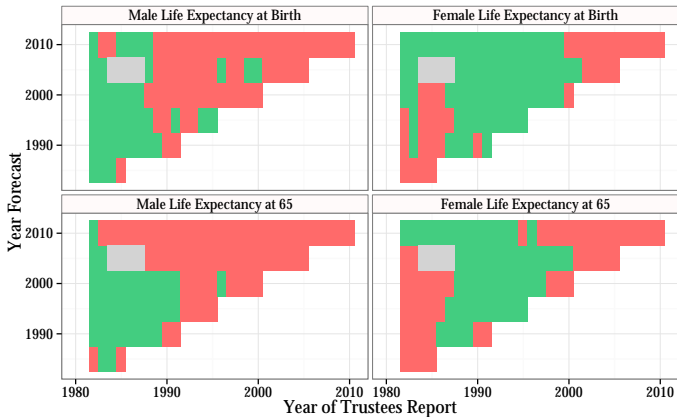


Patterns:

- Vertical: Later Trustees Reports are overconfident

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Systematic overconfidence since at least 2000

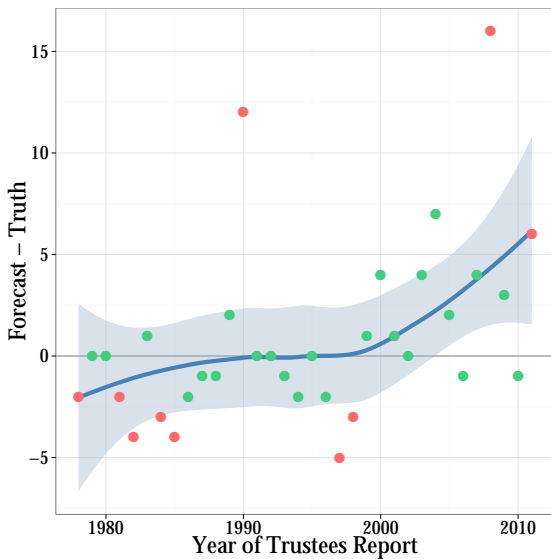


Patterns:

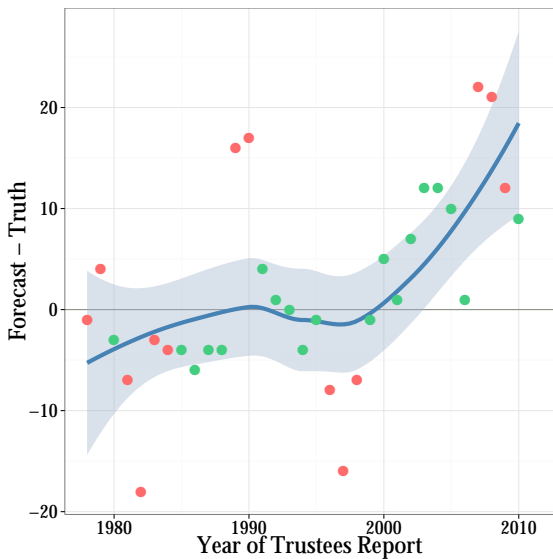
- Vertical: Later Trustees Reports are overconfident
- Not horizontal: Shorter term forecasts should be better, but aren't

Trust Fund Ratio Forecasting Errors

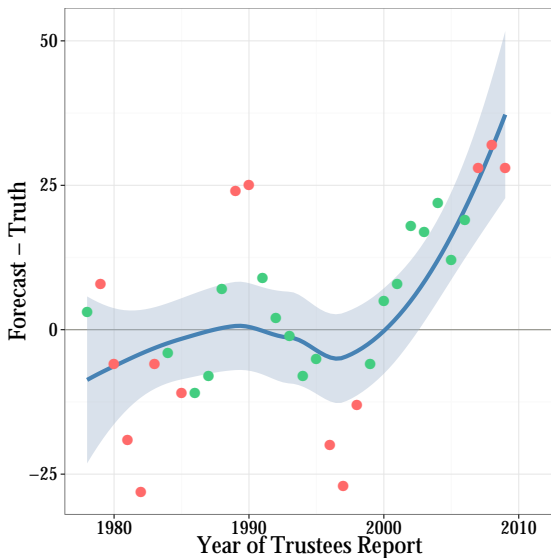
Trust Fund Ratio Forecasting Errors: 1 Year Ahead



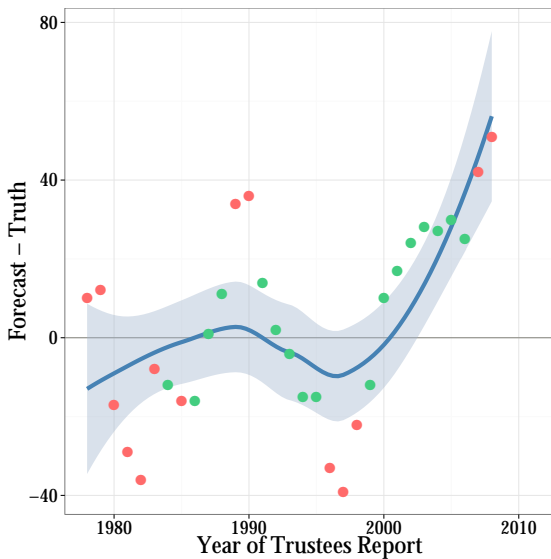
Trust Fund Ratio Forecasting Errors: 2 Years Ahead



Trust Fund Ratio Forecasting Errors: 3 Years Ahead



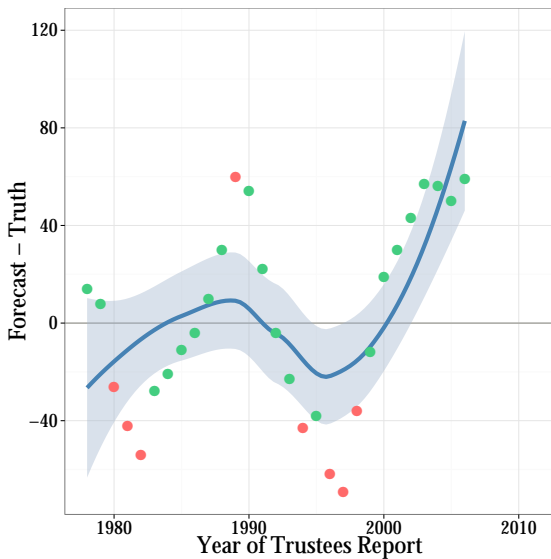
Trust Fund Ratio Forecasting Errors: 4 Years Ahead



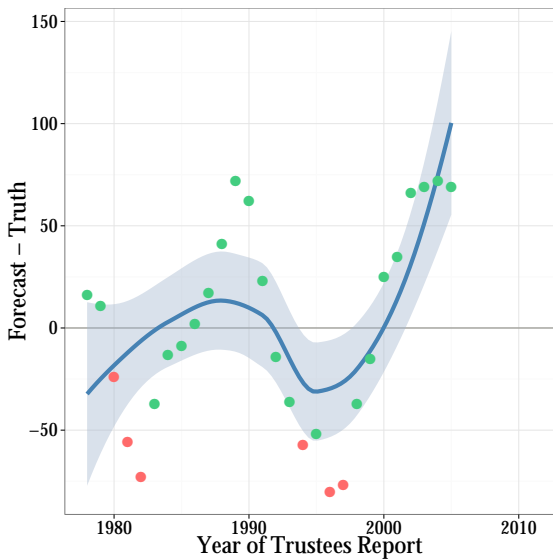
Trust Fund Ratio Forecasting Errors: 5 Years Ahead



Trust Fund Ratio Forecasting Errors: 6 Years Ahead



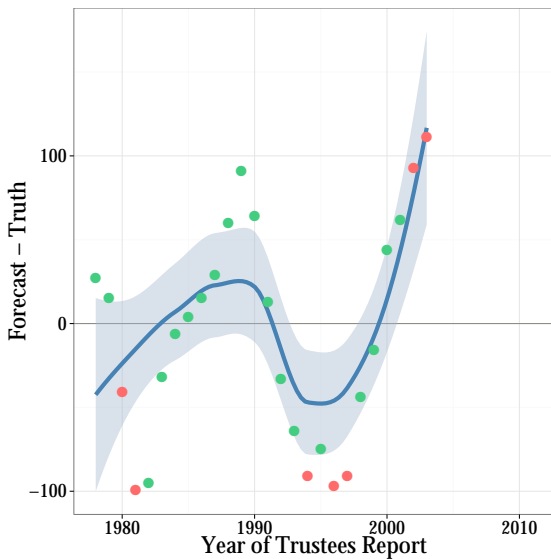
Trust Fund Ratio Forecasting Errors: 7 Years Ahead



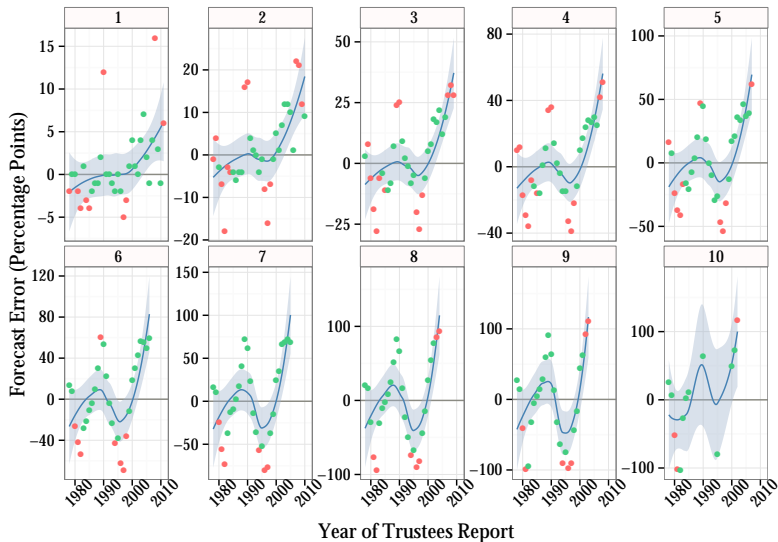
Trust Fund Ratio Forecasting Errors: 8 Years Ahead



Trust Fund Ratio Forecasting Errors: 9 Years Ahead



Trust Fund Ratio Forecasting Errors: Summary



Uncertainty Estimates for OCACT Policy Scores

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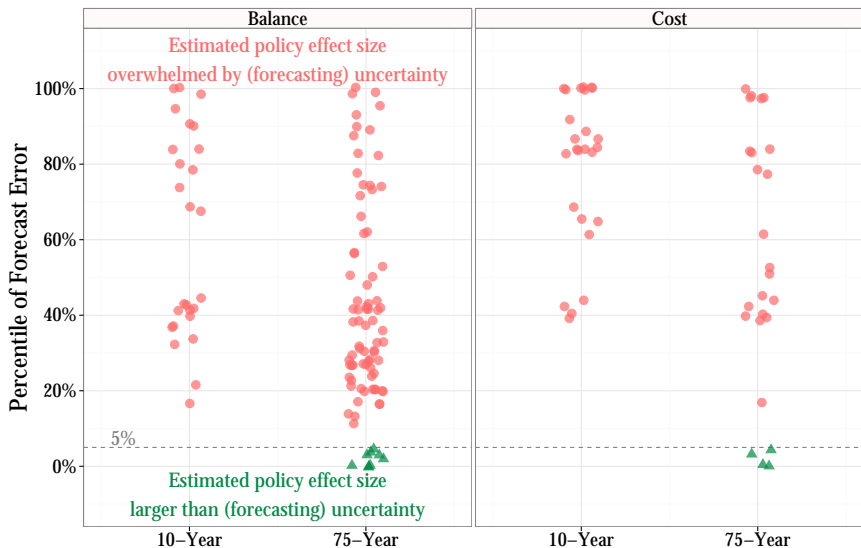
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- It can’t be learned: “Teaching psychology is mostly a waste of time” (Kahneman 2011)

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 - Many extreme statements: E.g., Steve Goss: "I'll take a bullet before I modify anything under any kind of political pressure"
 - We agree: no evidence of OCACT bending to political pressure
 - But OCACT acts as if it has a monopoly on fairness, letting no one else score proposals, make forecasts, or decide what's evaluated
 - Several said: "Goss is intellectually biased, not politically biased"
- Consistency Bias:
 - Degrading accuracy to maintain central role in policy debate
 - Intentionally biasing today's forecast towards yesterday's \rightsquigarrow much smoother over time than related forecasts
 - When the Technical Panel recommends a change in a parameter:
 - If Goss has good evidence: he engages the Panel and convinces them
 - If the Panel has good evidence: he ignores the panel
 - If the Panel has very strong evidence: he adjusts the parameter part way, and adjusts another so the forecast is unchanged
 - Many quotes; e.g. Goss: "The hard part is trying to balance the need to change on the basis of new ideas and understanding with the desire for consistency and stability over time"

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 - The Trustees and Technical Panel agree on many issues too, but the **lack of engagement or mutual understanding** is obvious

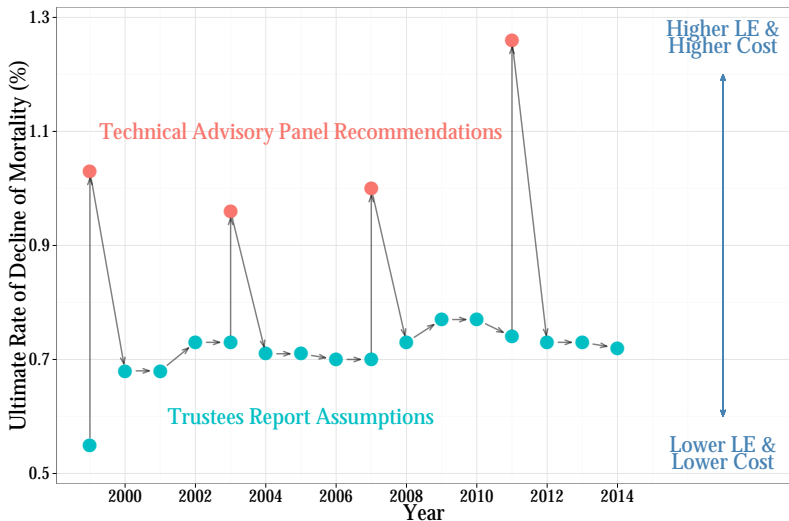
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Especially since 2000, Americans started living unexpectedly longer lives (due to statins, early cancer detection, etc.)

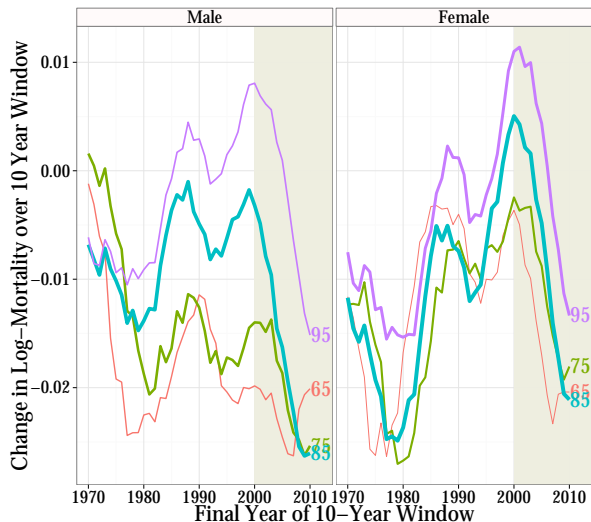
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For more information:

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