





MAX PLANCK INSTITUTE  
FOR DEMOGRAPHIC  
RESEARCH

# Healthy lives: Delayed onset, improved recovery, or mortality change?

Tim Riffe, Neil Mehta, Daniel Schneider, Mikko Myrskylä

## Objective

How much of the change in life expectancy at age 50  $e(50)$  is due to changes in mortality versus changes in disability transitions?

## Data & Methods

- HRS RAND version P.
- 3-state Markov matrix models centered on years 1996, 2006, and 2014.
- Trend decomposition using Horiuchi et. al. (2007) method.

More details:

- States for 0 ADLs, 1 ADL, and 2+ ADLs,
- Collapsed to 0 and 1+ for this presentation.

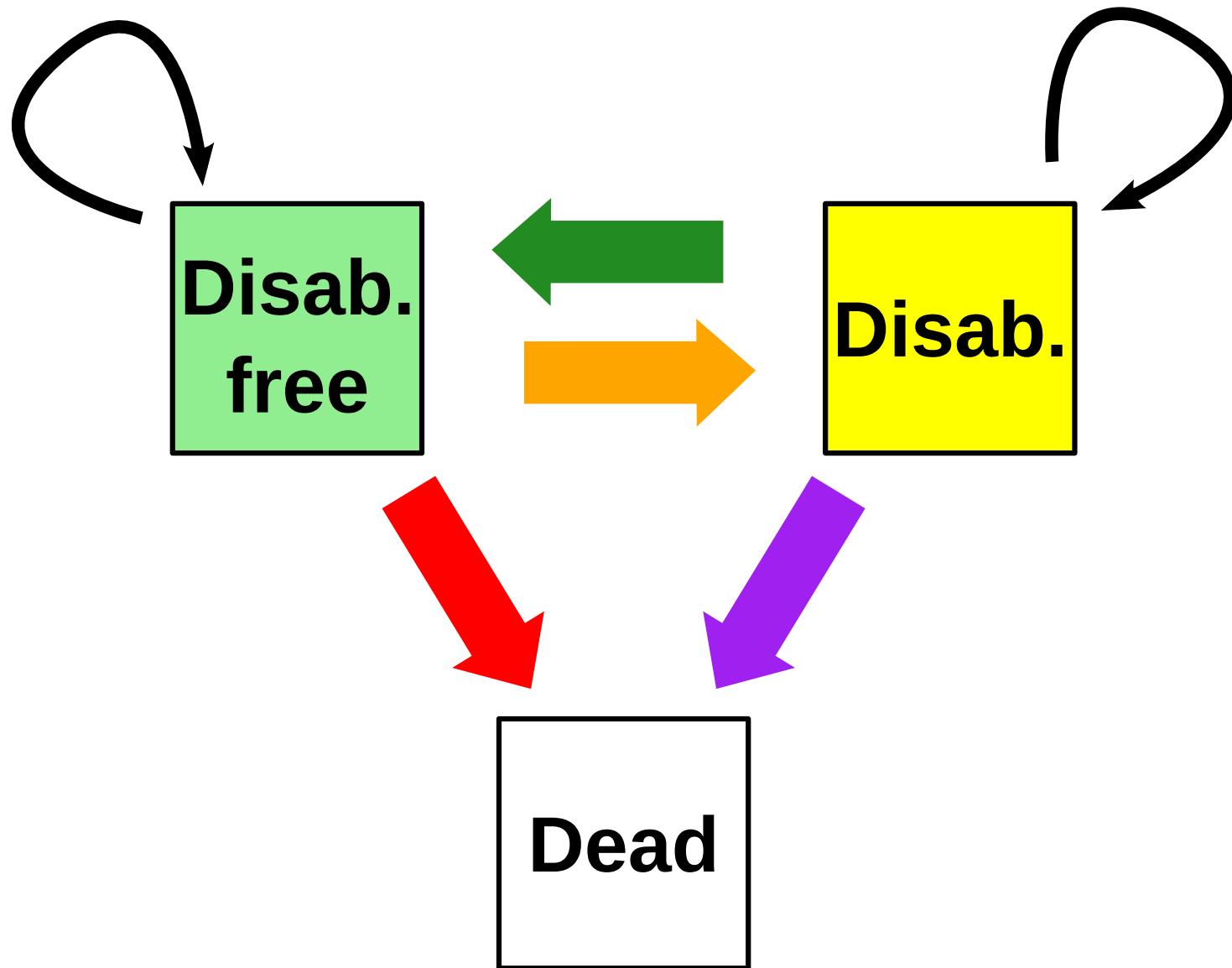
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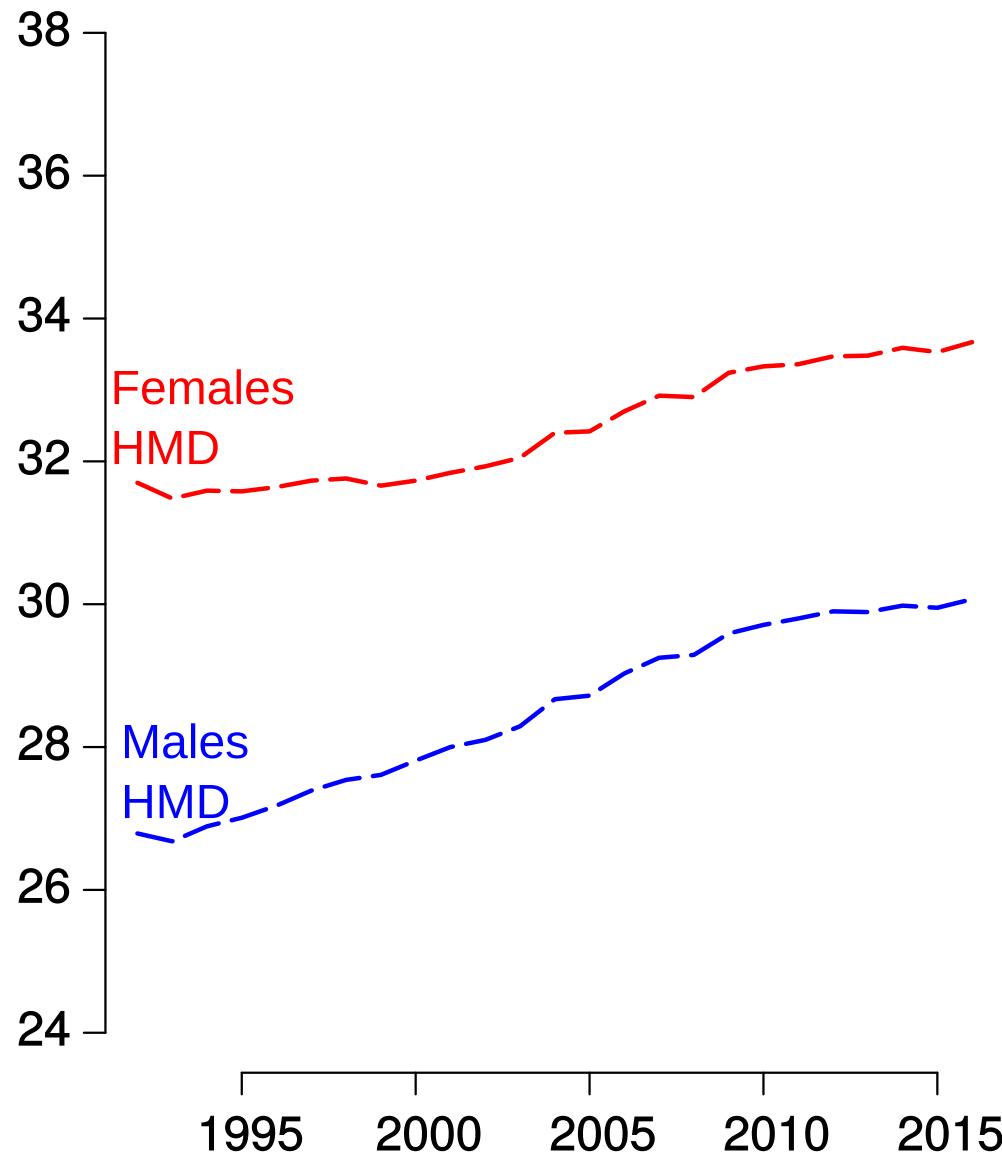
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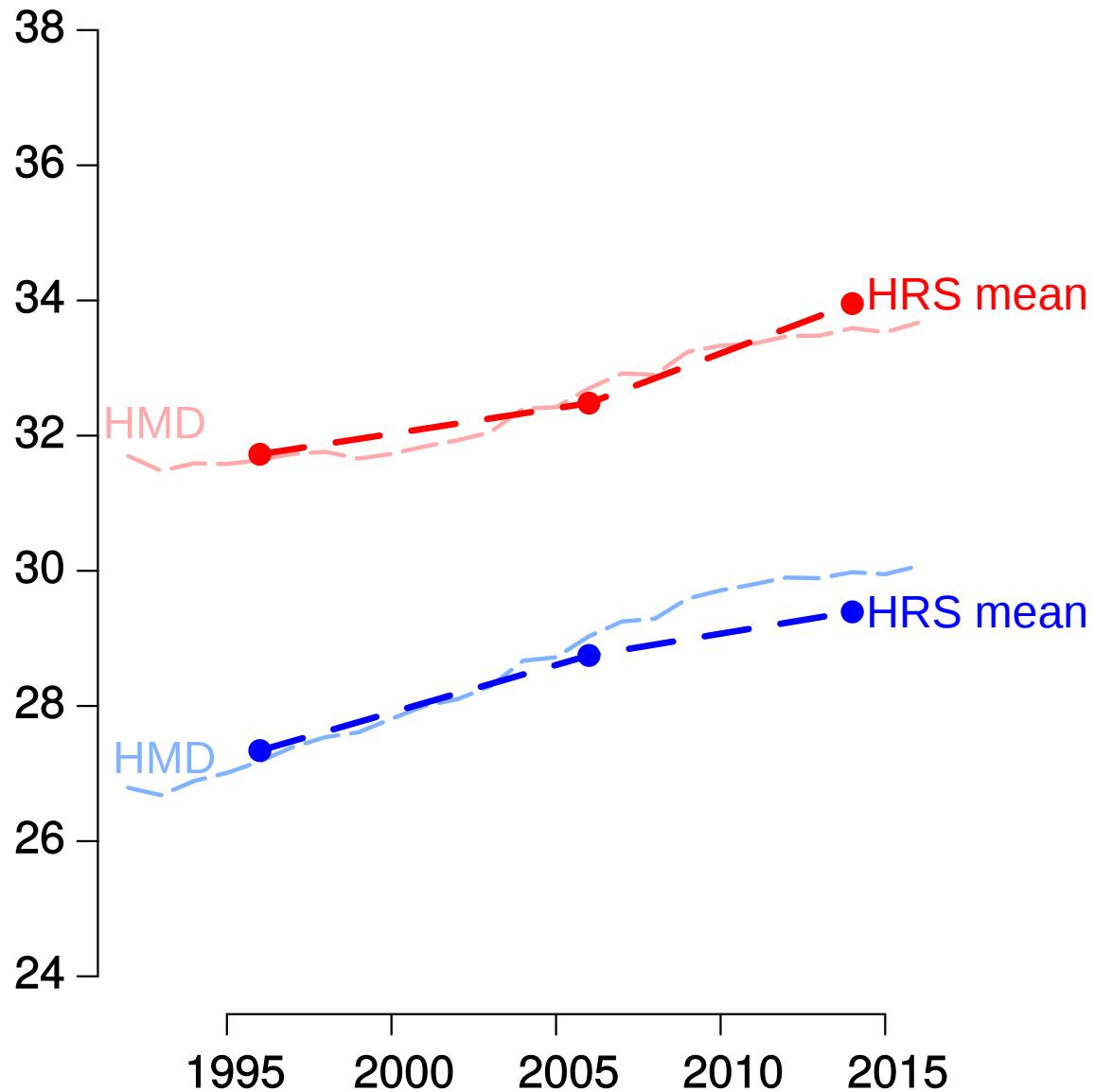
# State space



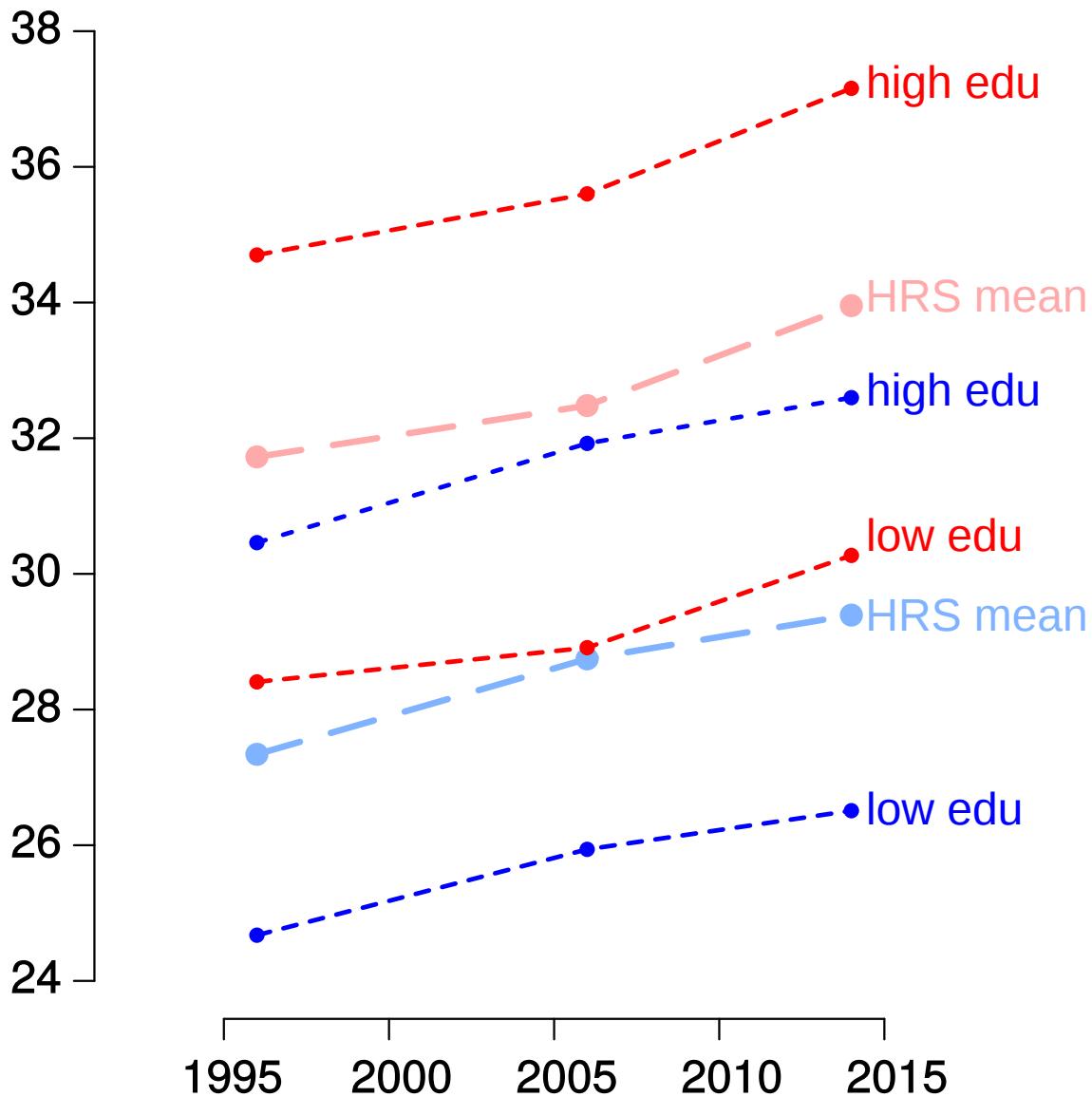
$e(50)$



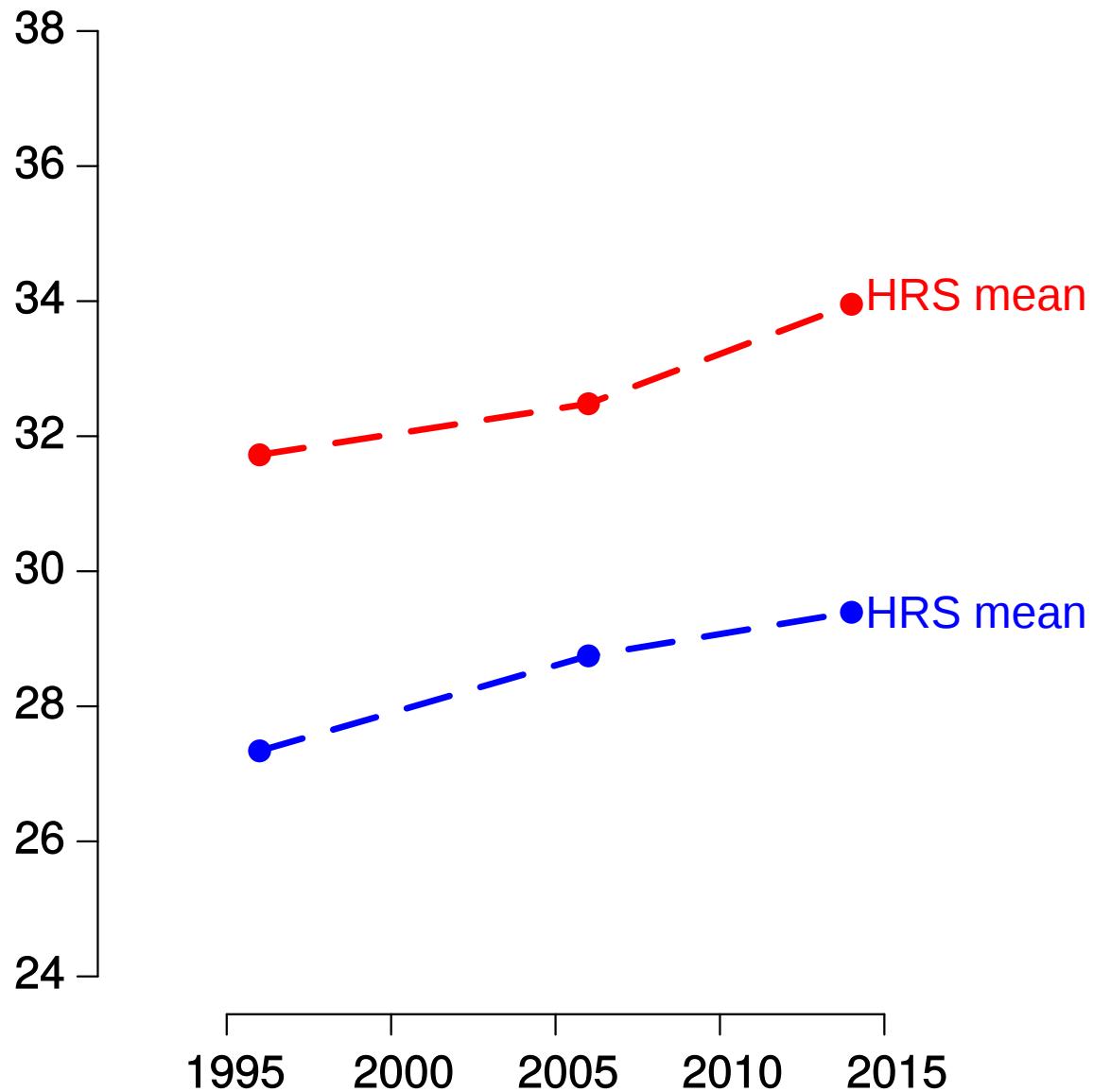
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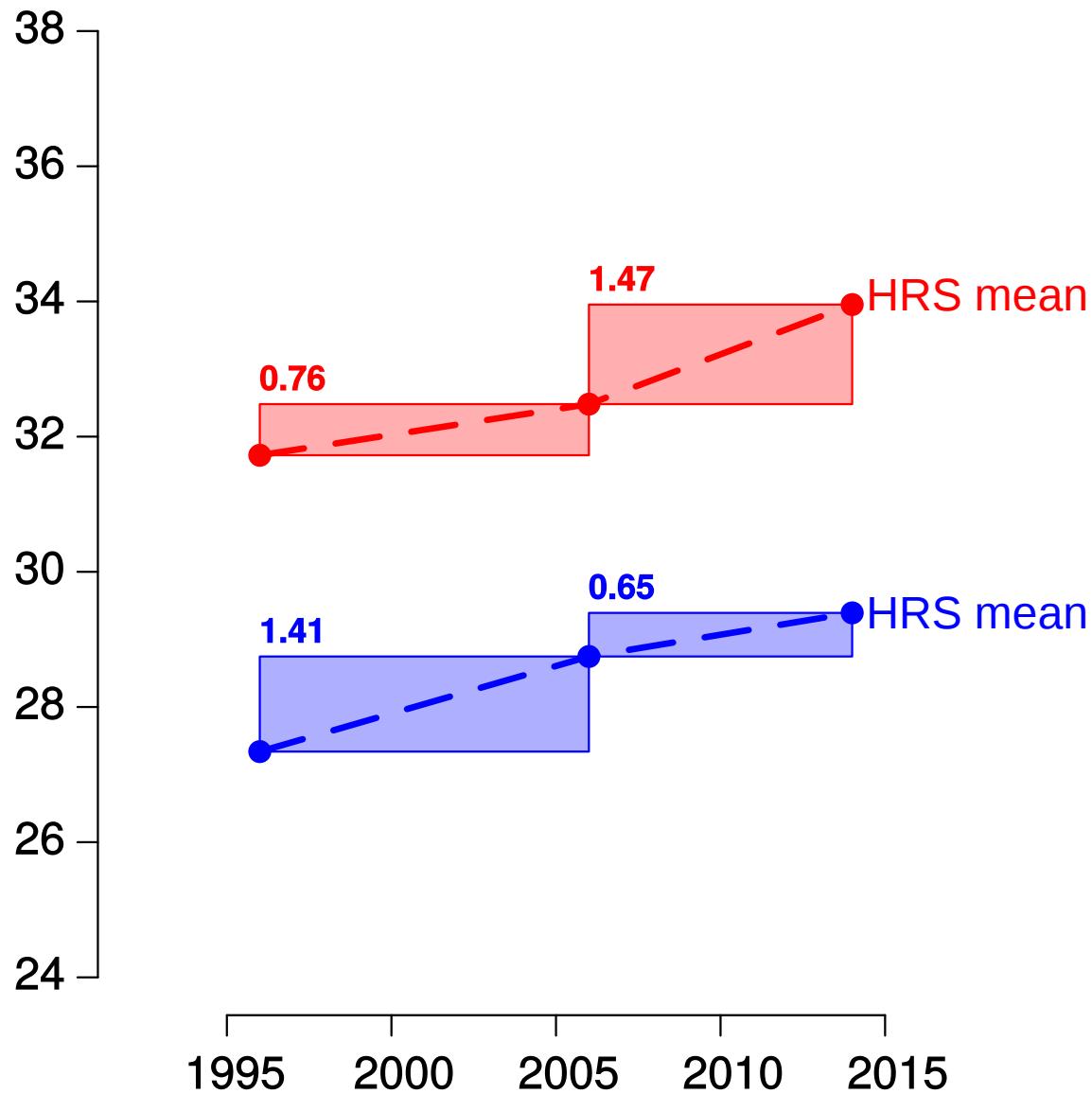
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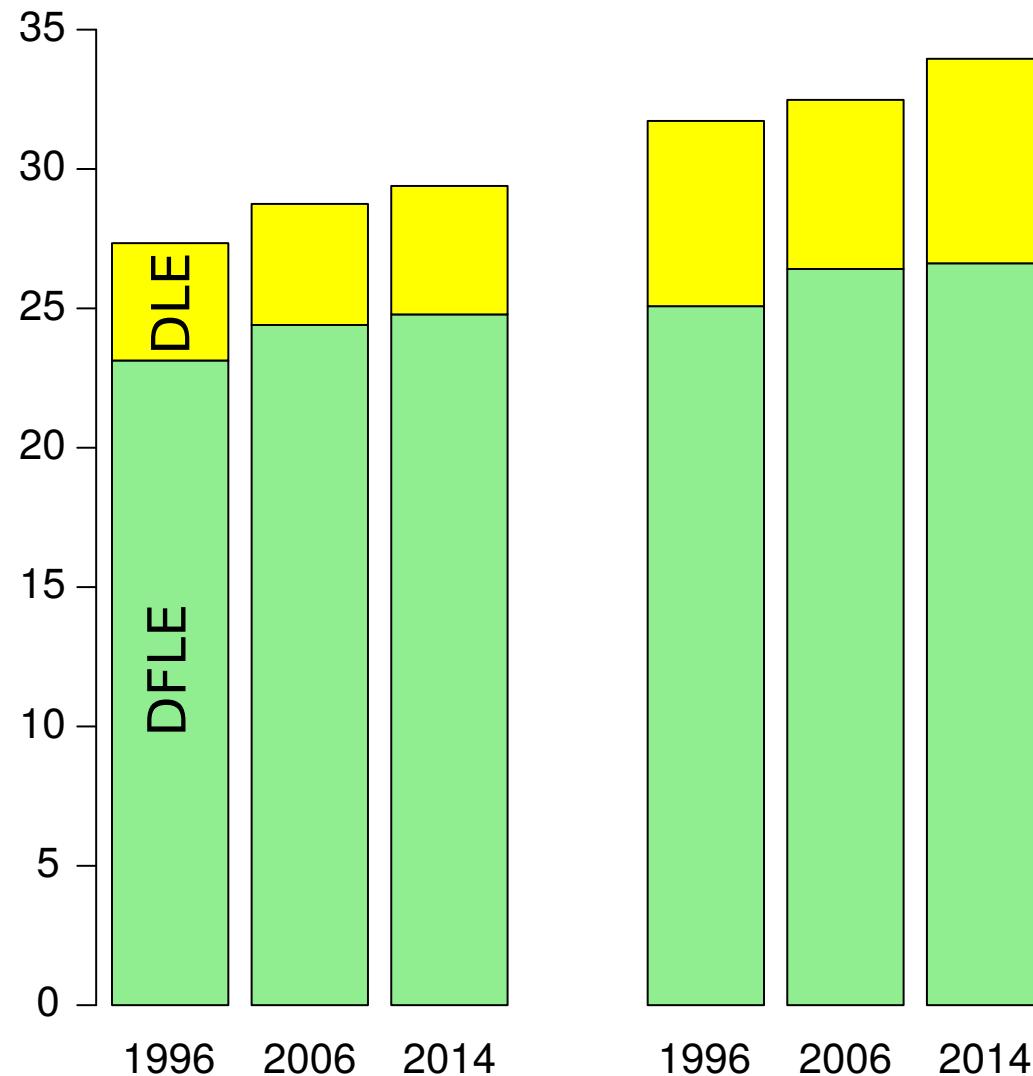
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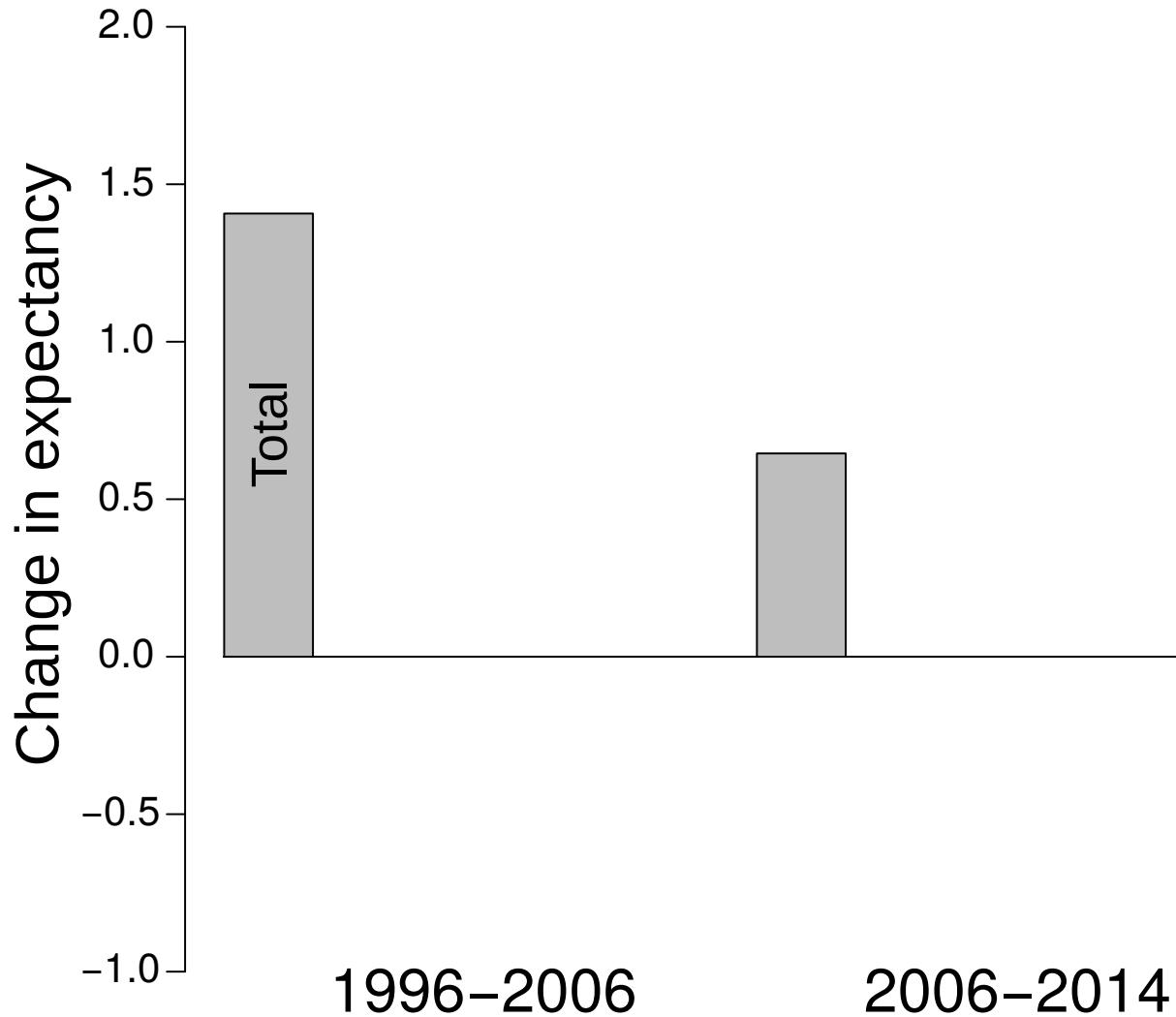
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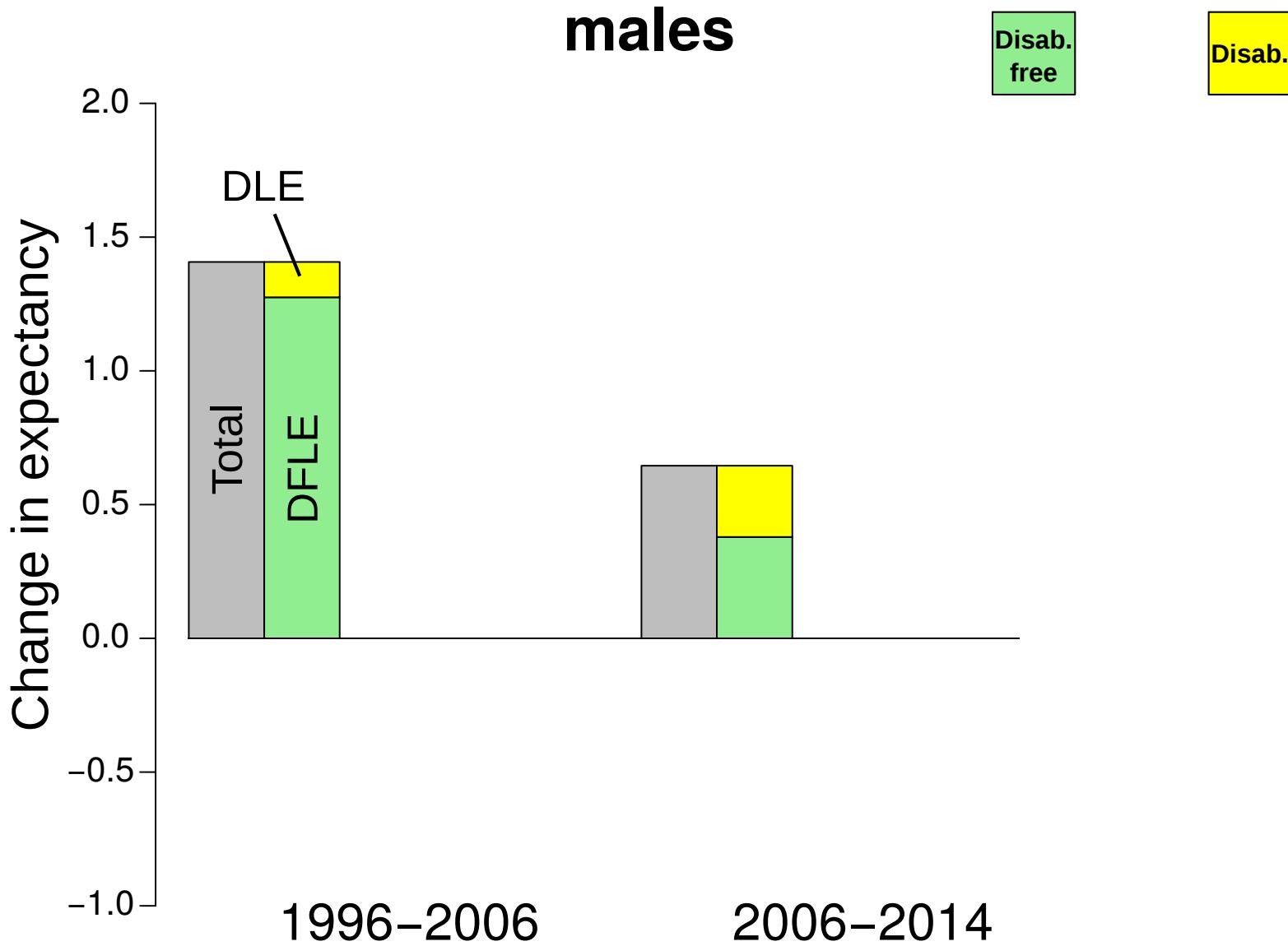


e(50) Males Females

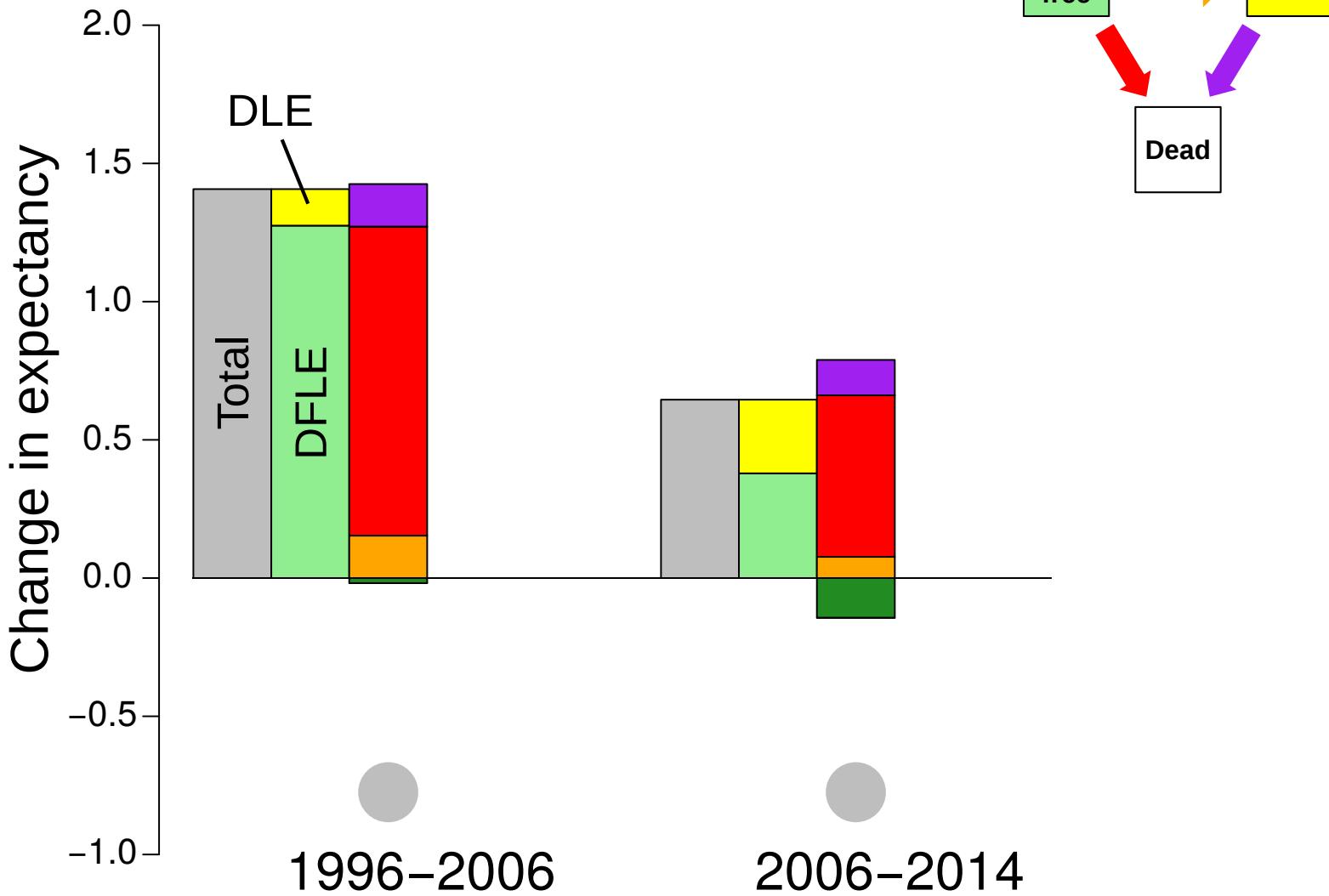


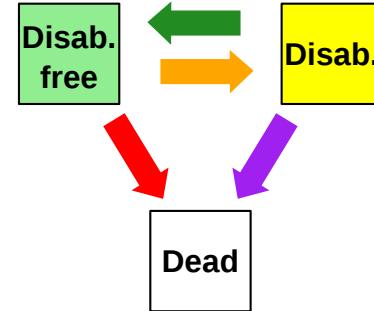
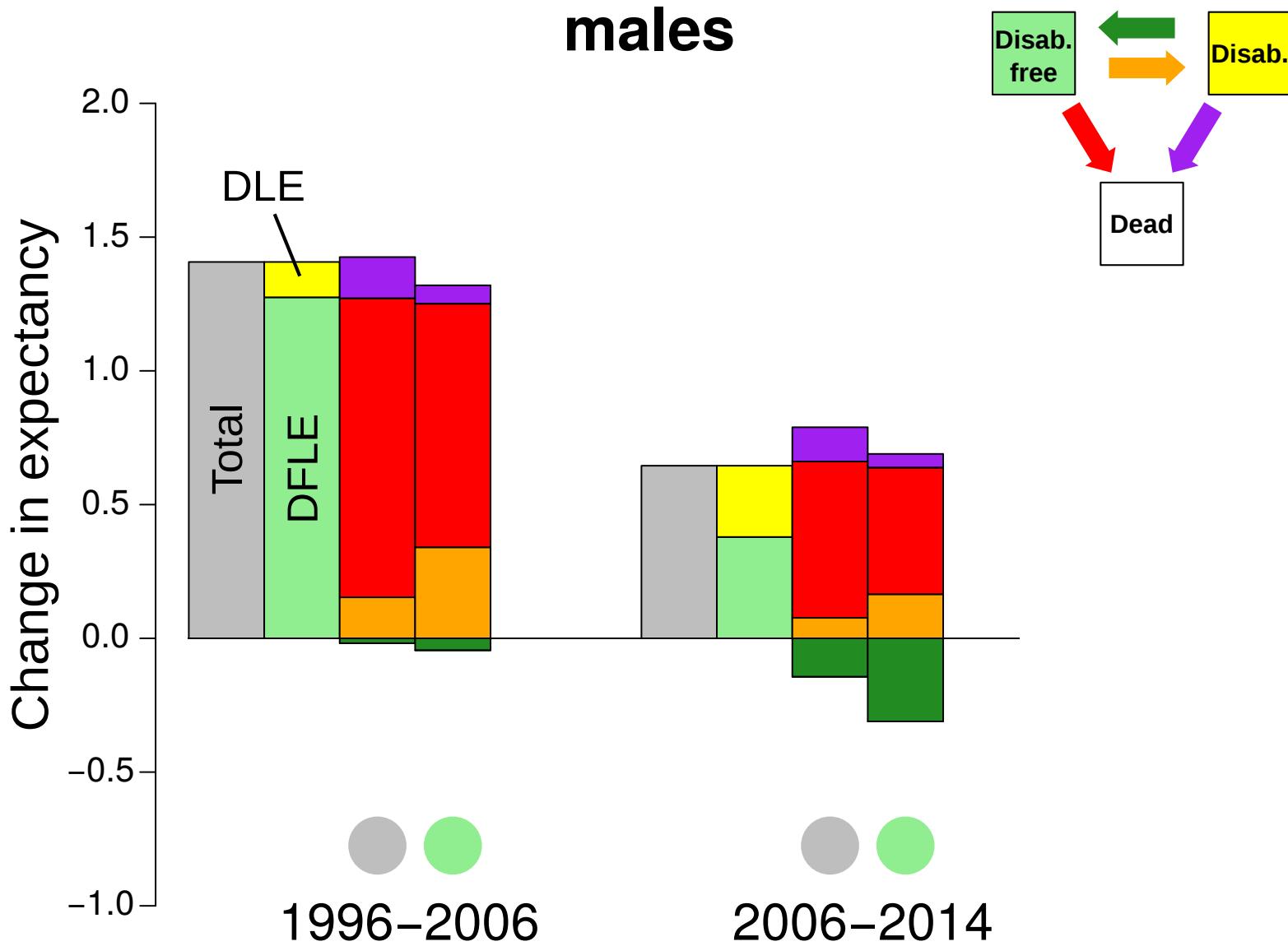
# **males**

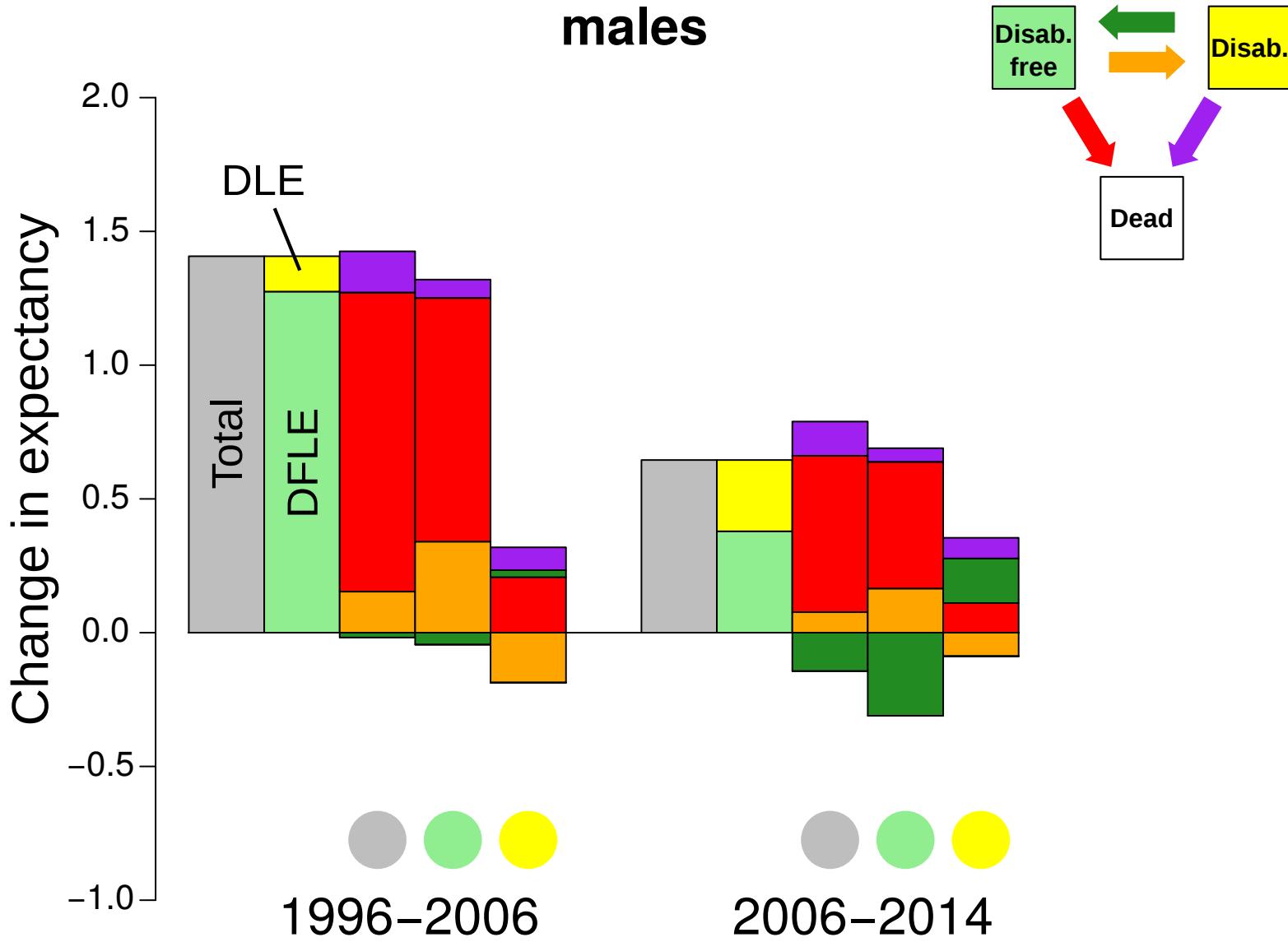


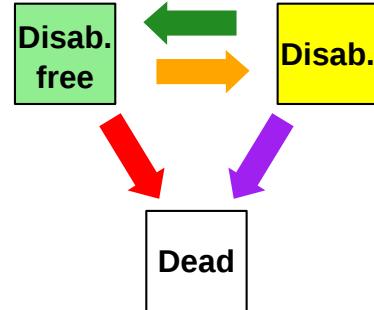
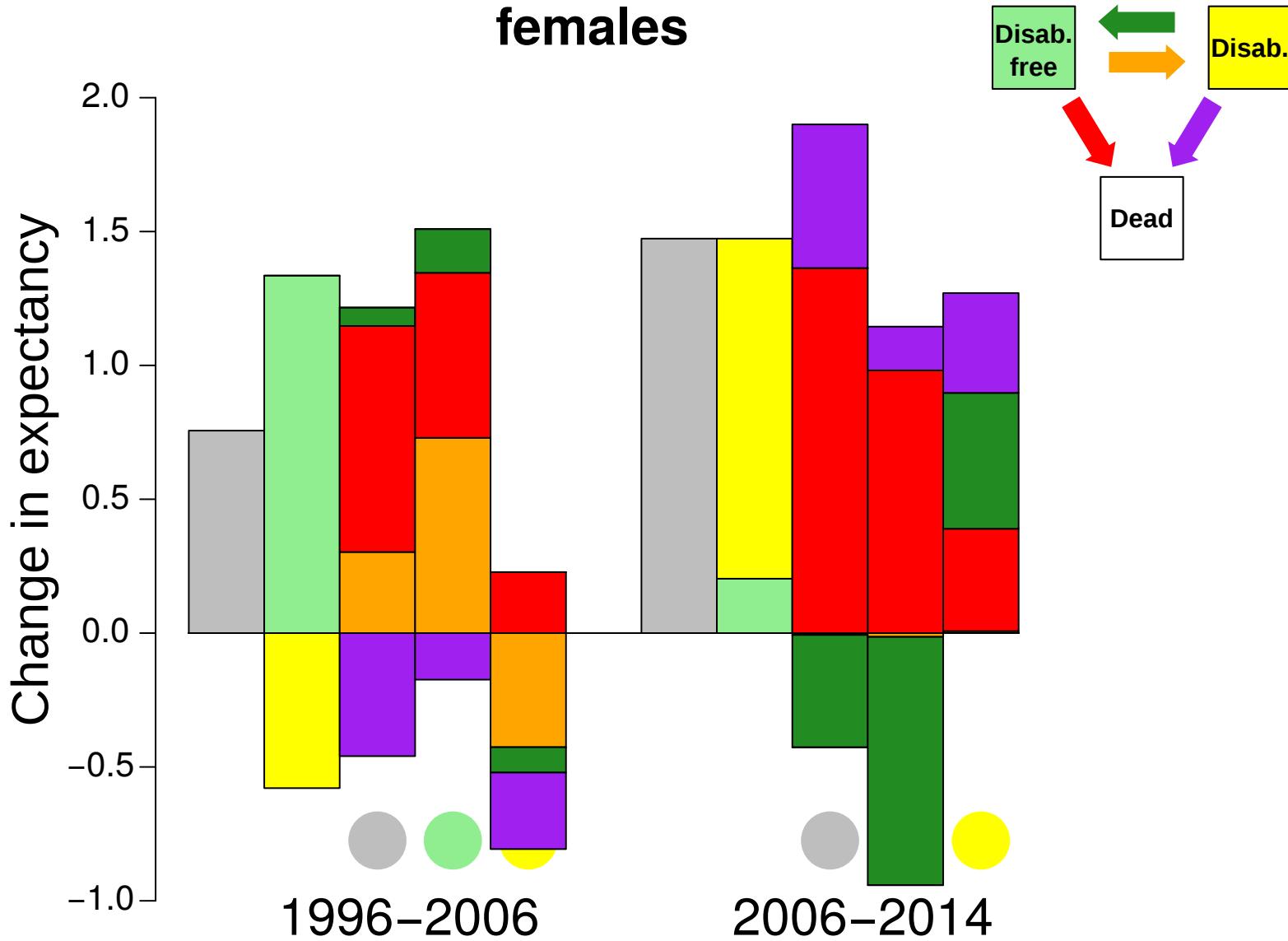


# males









## Summary males:

- most LE ↑ due to **DFLE** ↑.
- mortality improvement 1996-2014 added 1.5 years to DFLE.
- changes in transitions between disability and disability free largely **offset** one another.
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- **late LE ↑ mostly due to ↑ in DLE.**
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- Horiuchi decomposition works well with multistate models, other virtues.
- So far only time decomp, other comparisons to come.
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Thanks!

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