





MAX PLANCK INSTITUTE  
FOR DEMOGRAPHIC  
RESEARCH

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

Tim Riffe, Neil Mehta, Daniel Schneider, Mikko Myrskylä

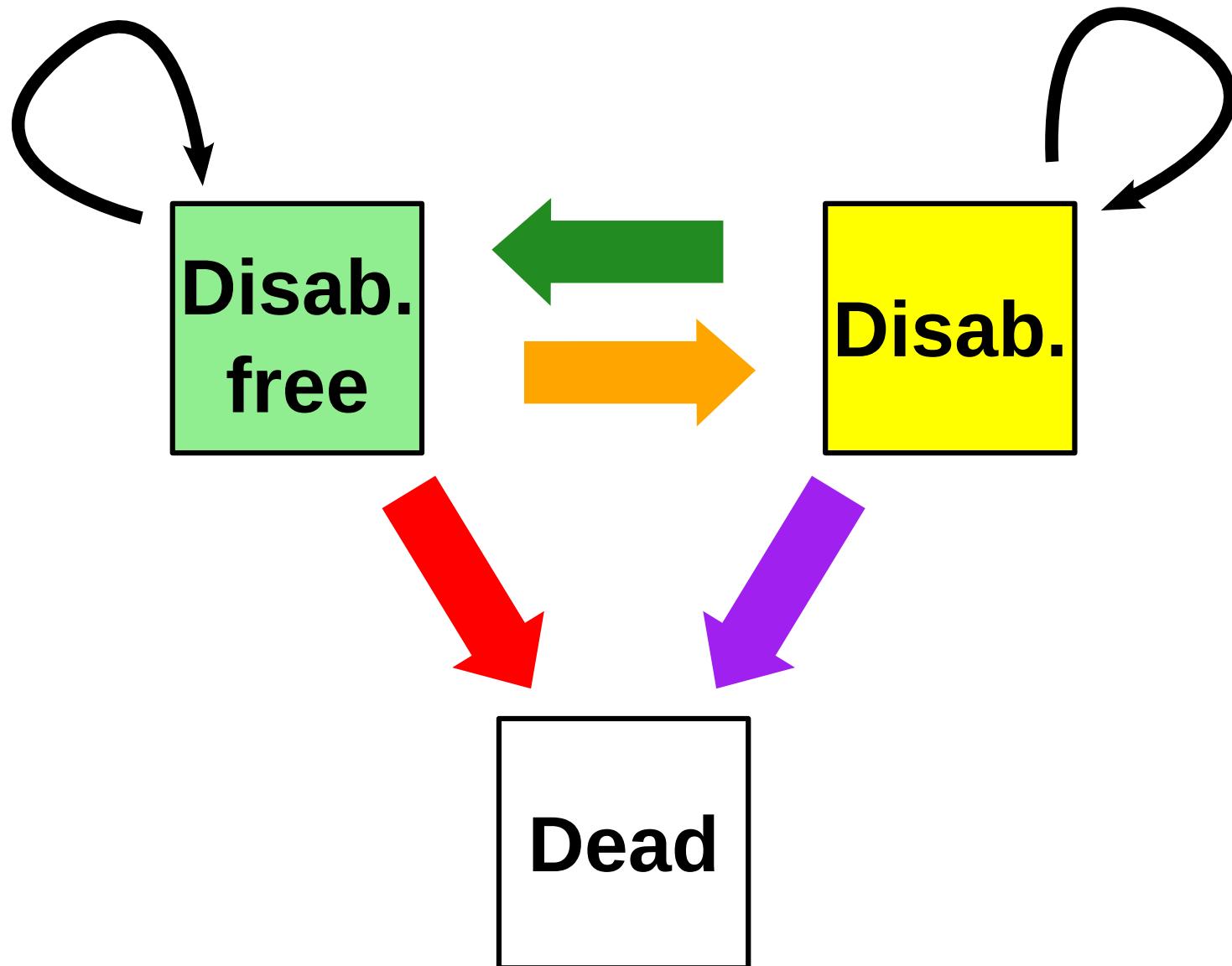
## Objective

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

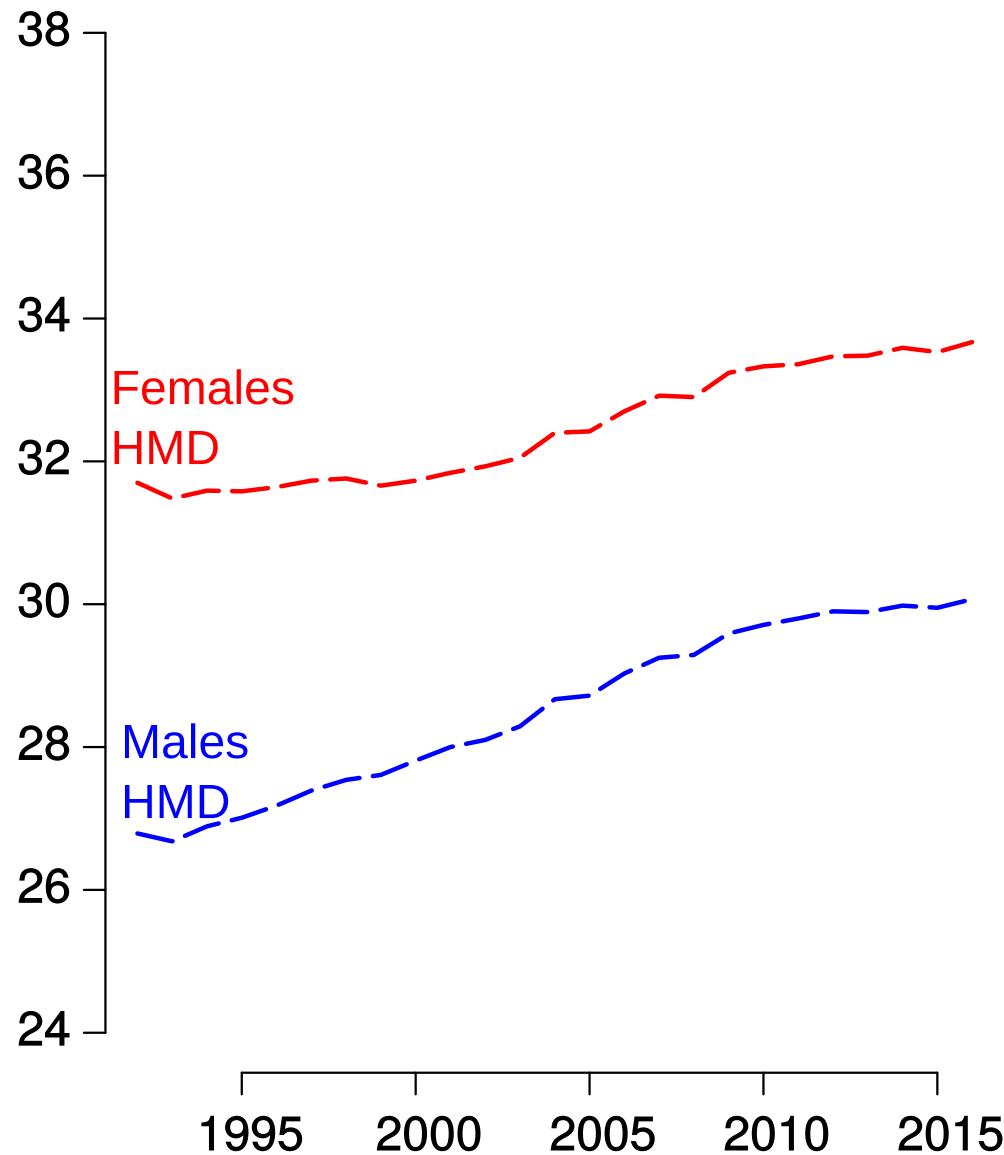
## Data & Methods

- HRS RAND version P.
- Transition probabilities: mlogit with age and time splines (3 knots).
- Controls for race/eth (4) and education (3).
- 3-state Markov matrix models centered on years 1996, 2006, and 2014.
- Trend decomposition using Horiuchi et. al. (2007) method.

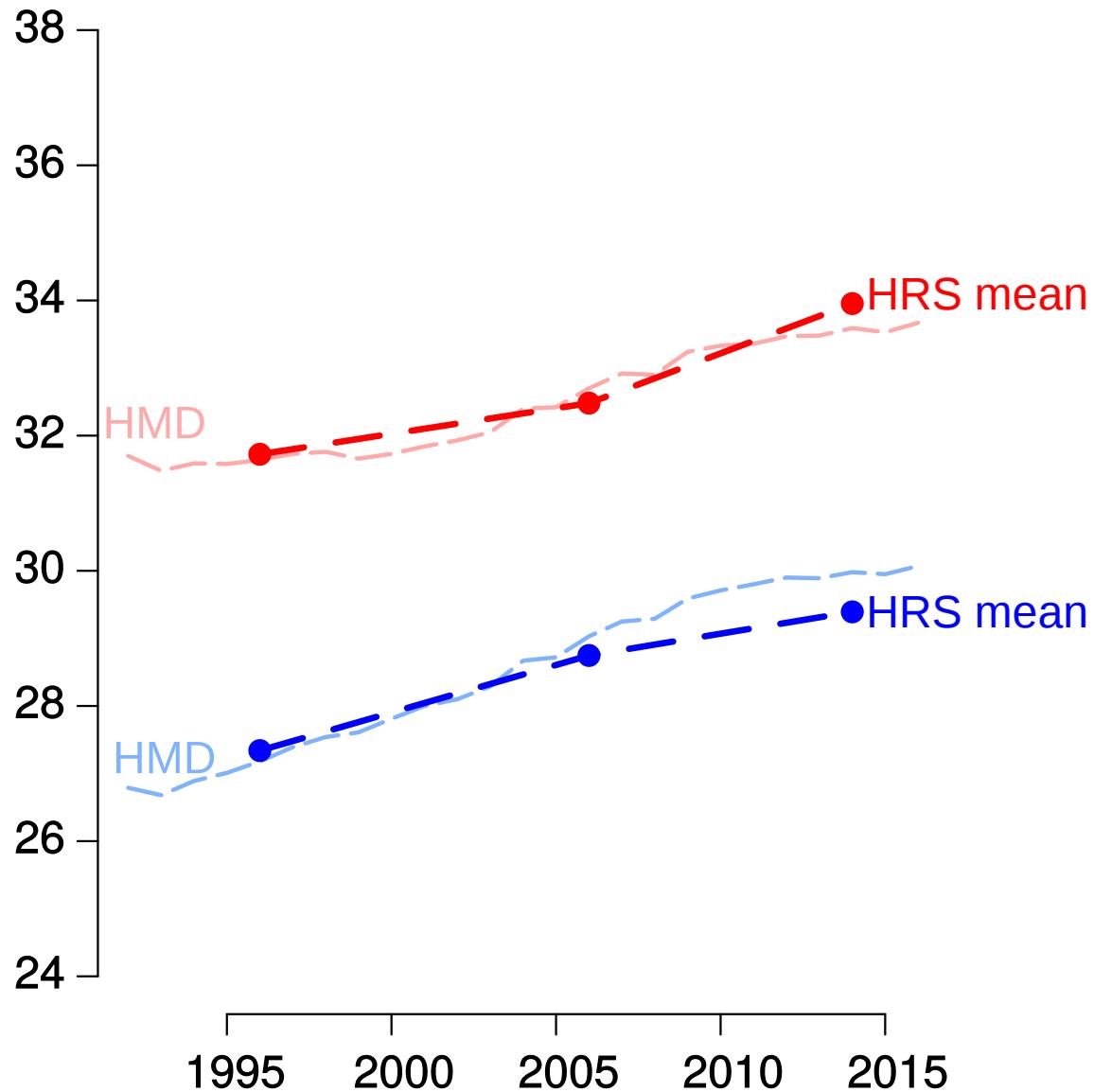
# State space



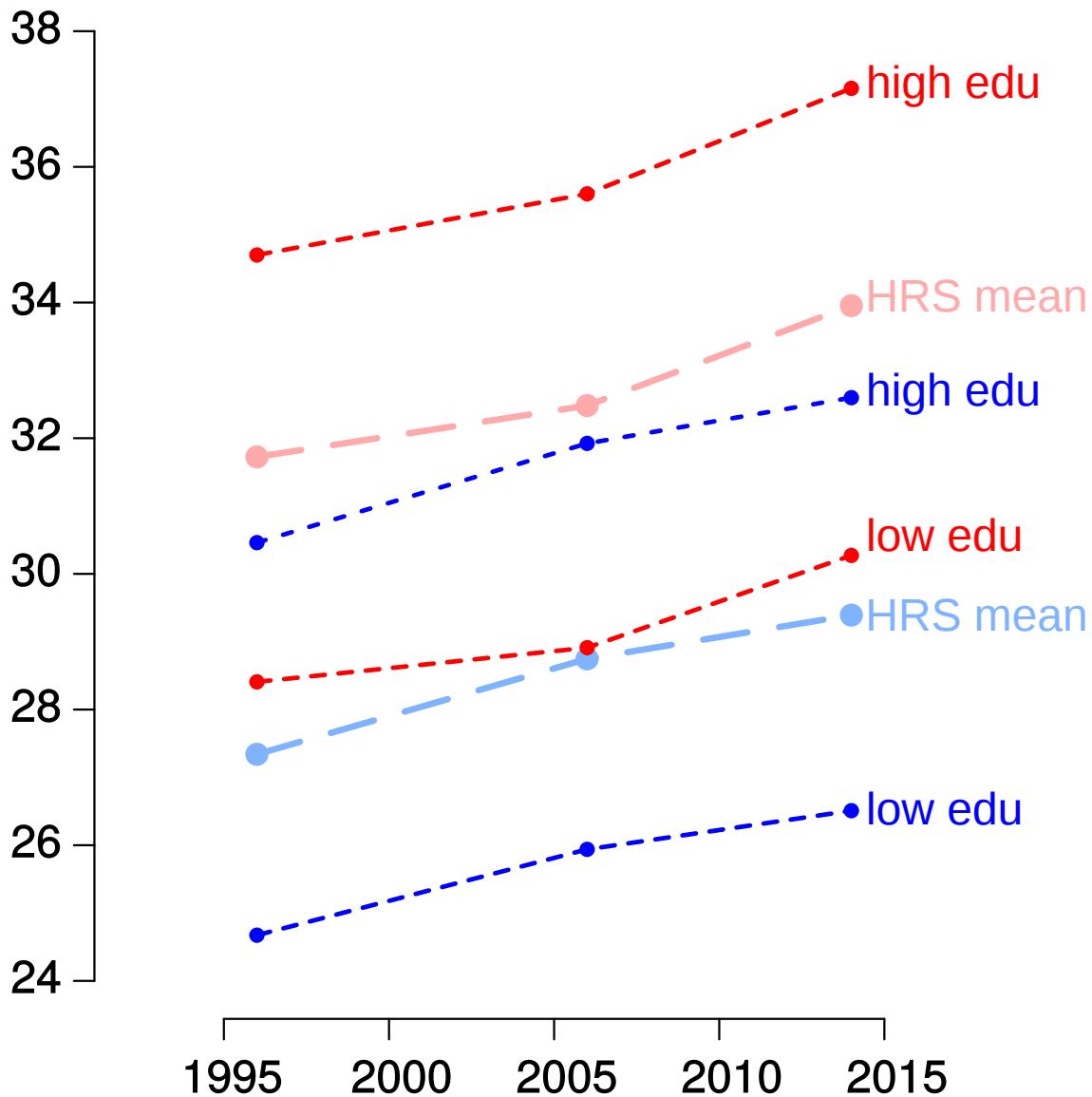
$e(50)$



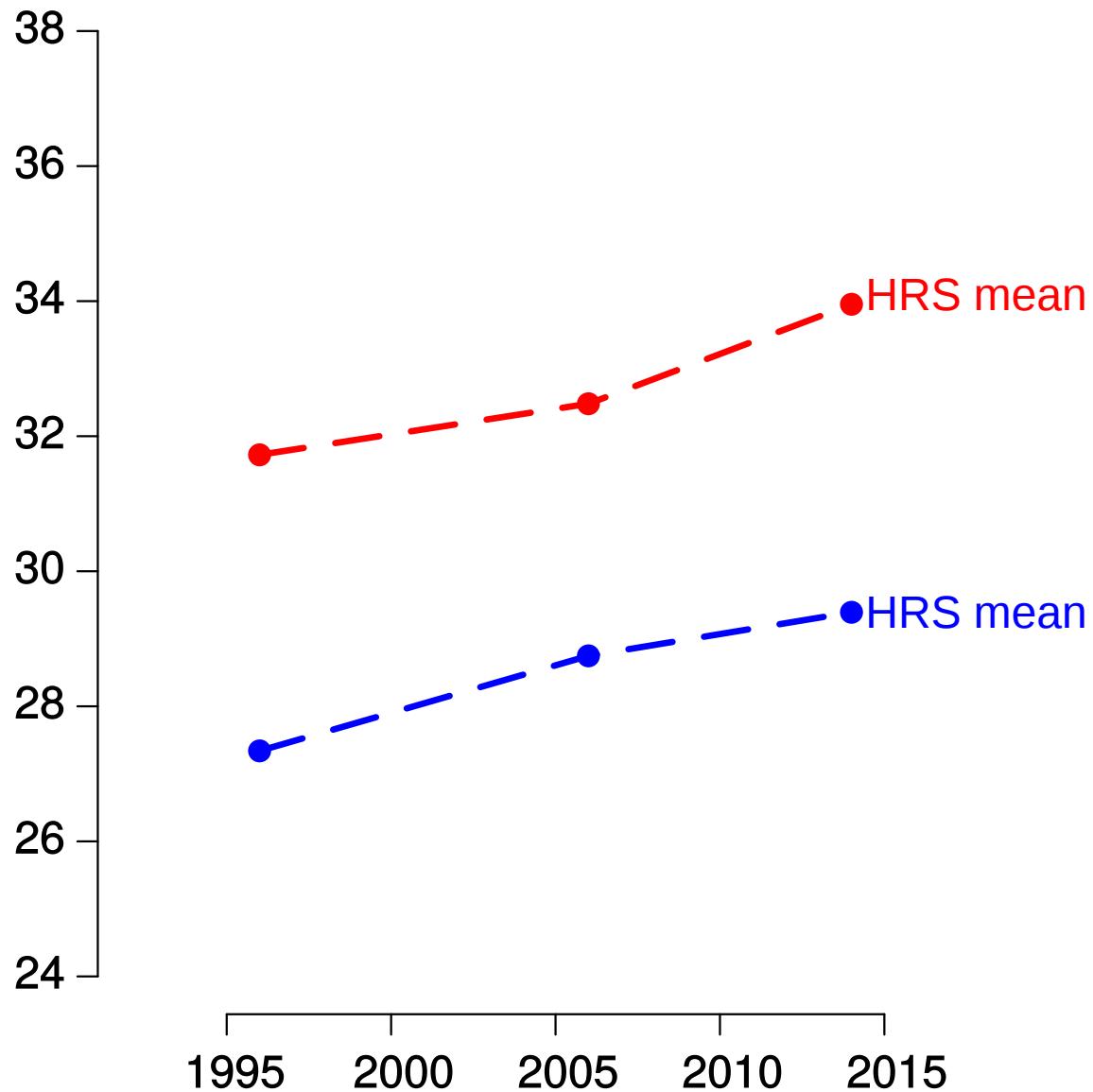
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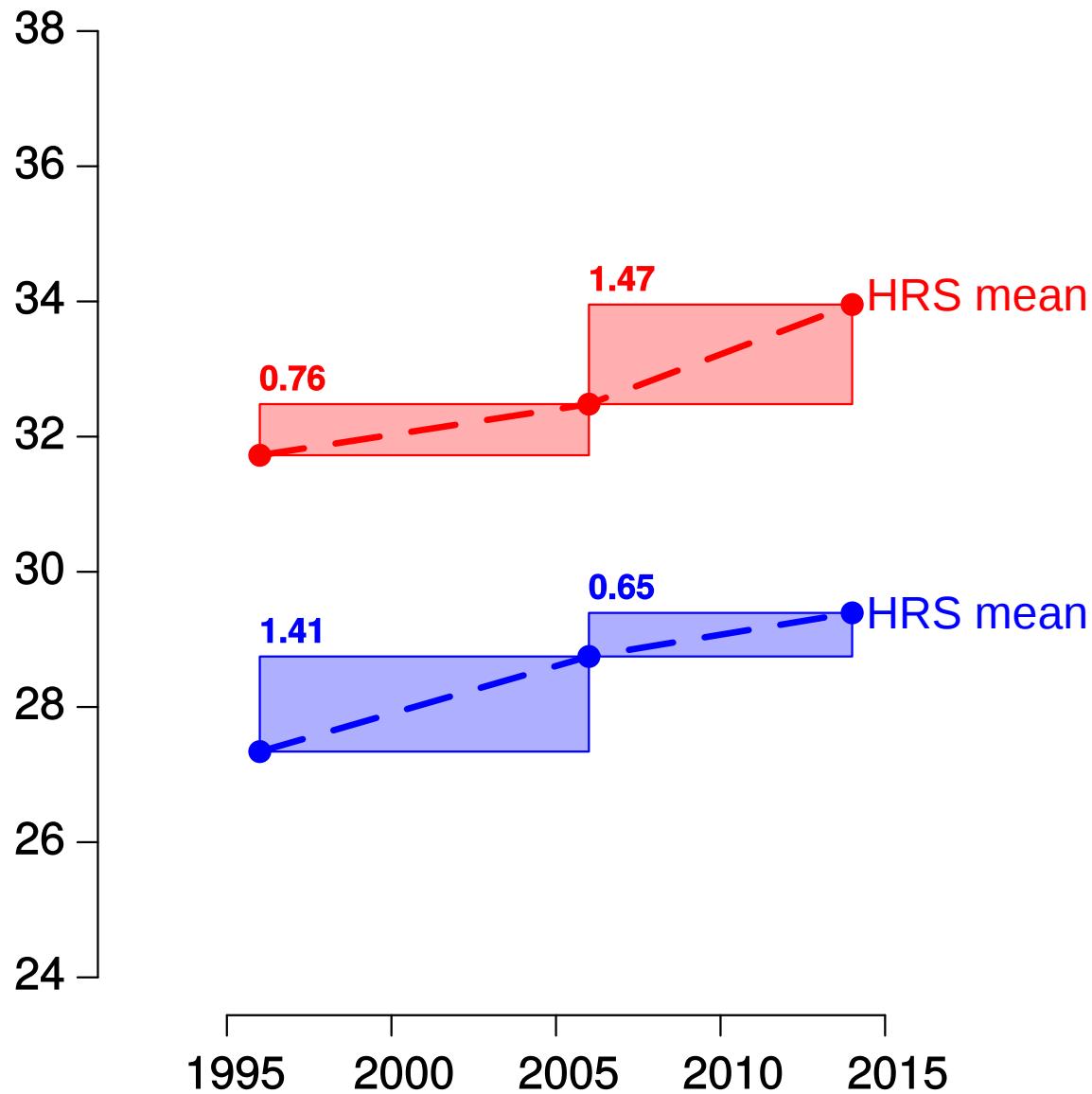
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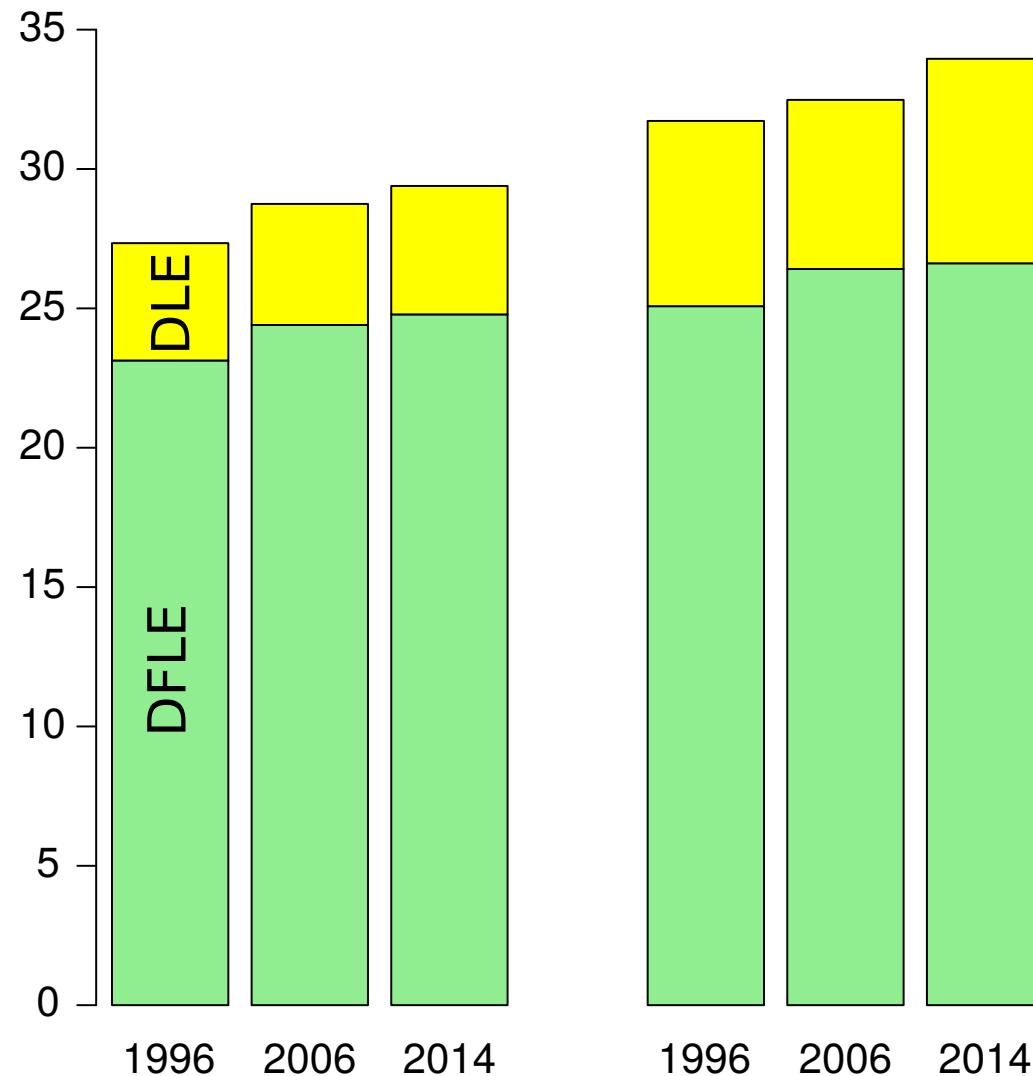
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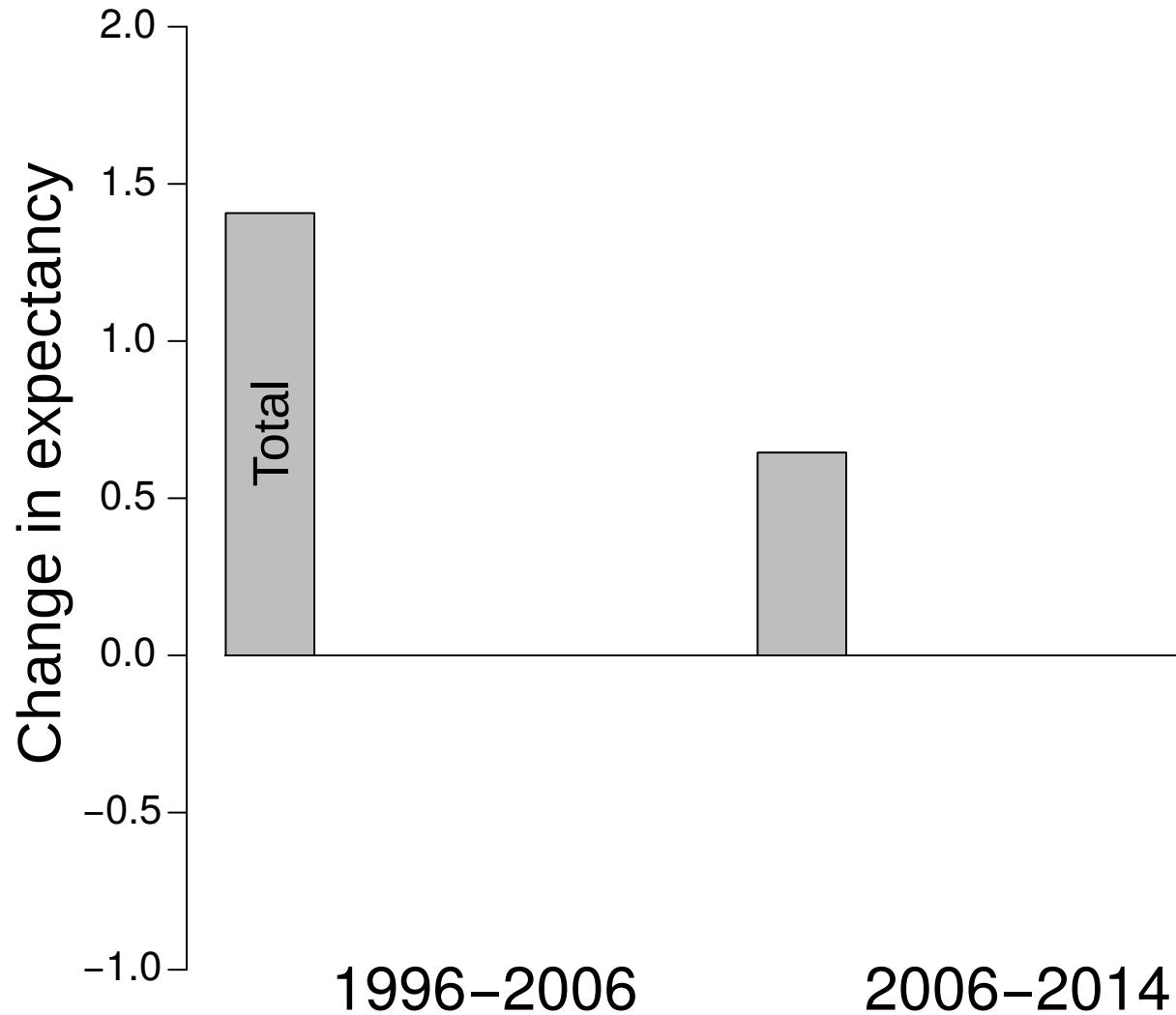
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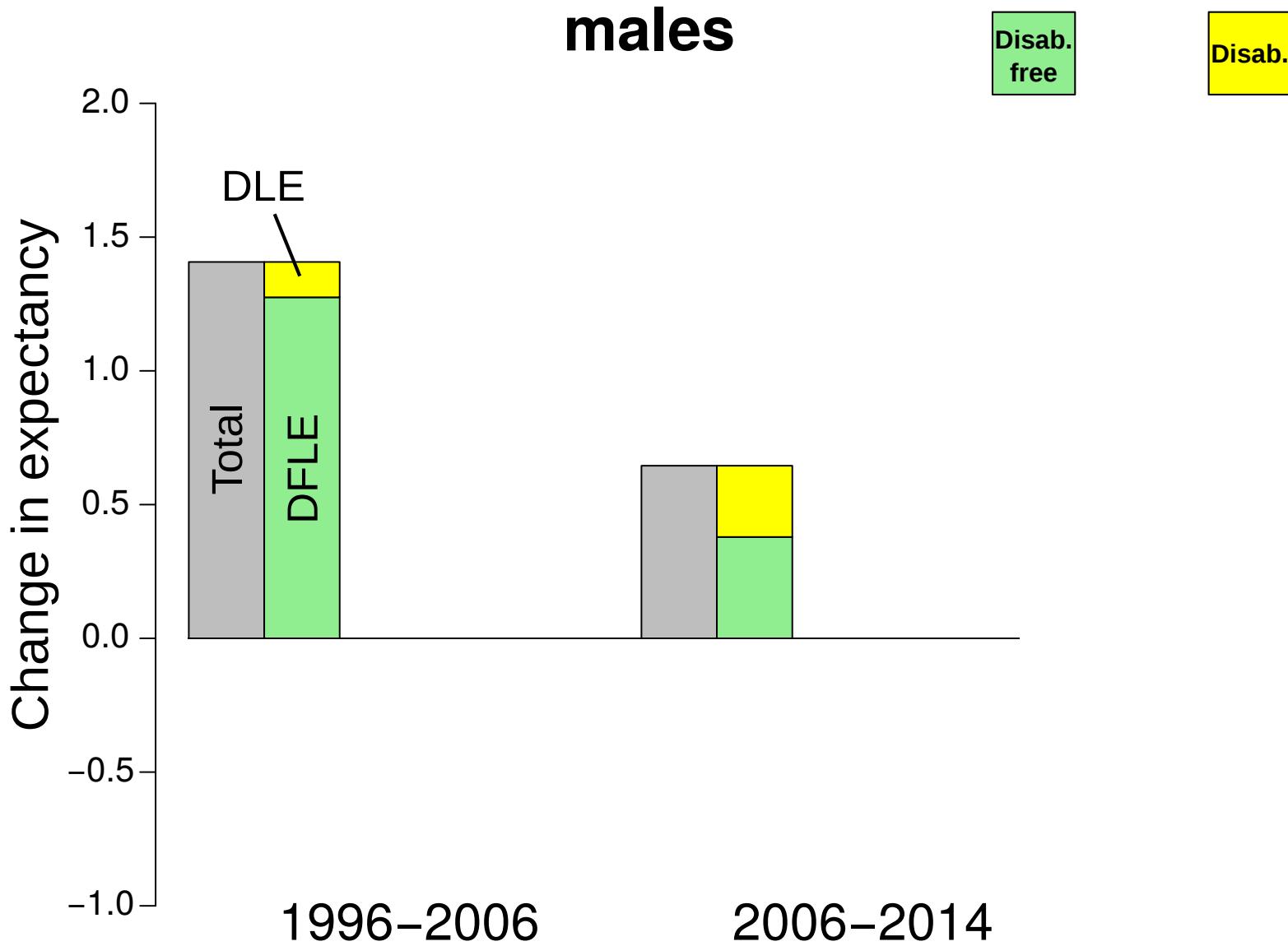


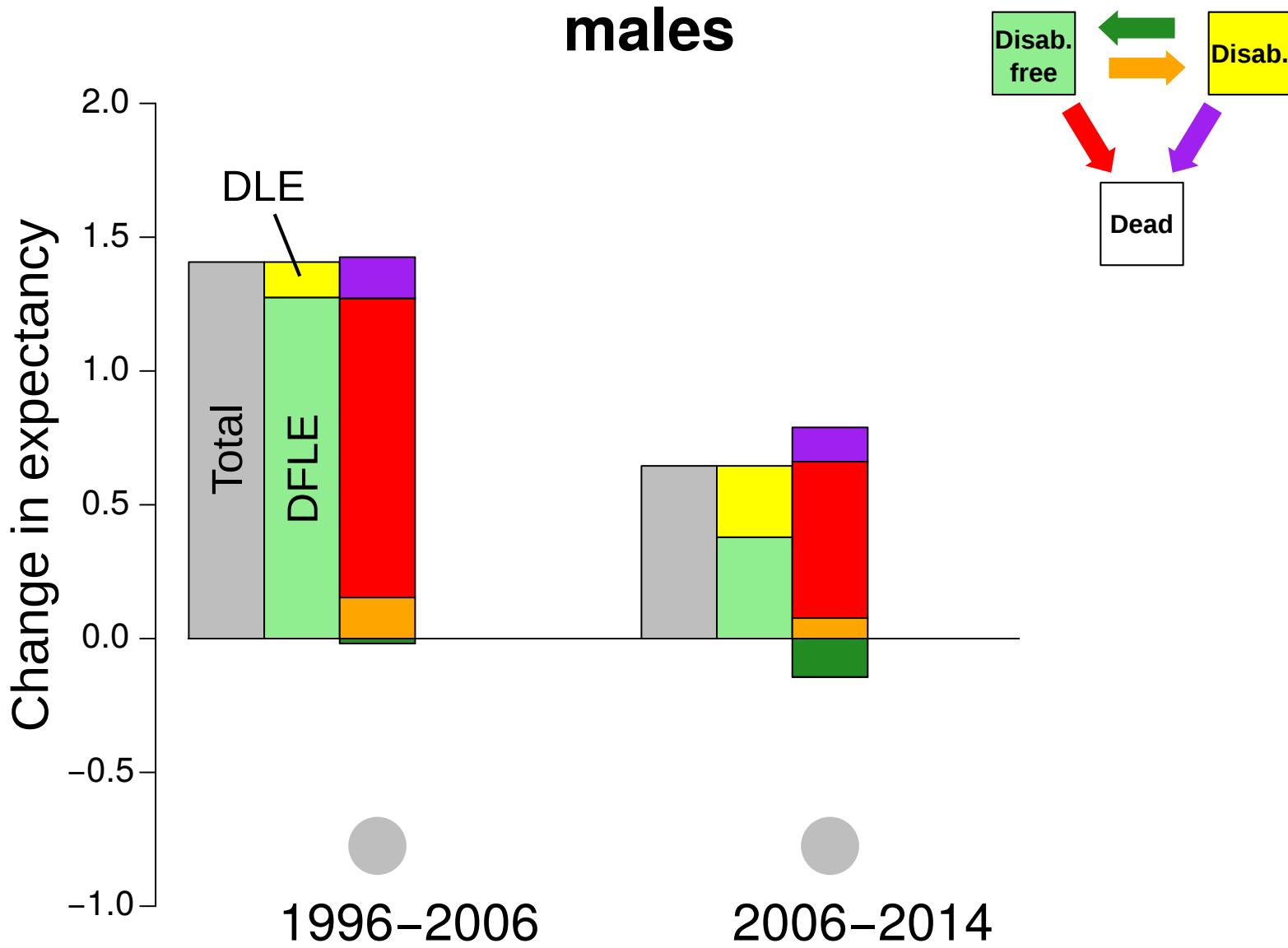
e(50) Males Females

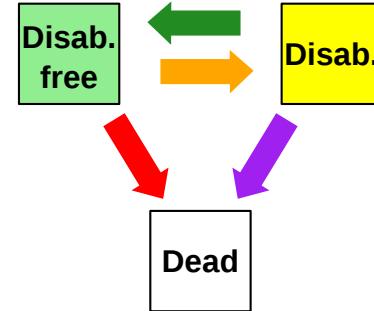
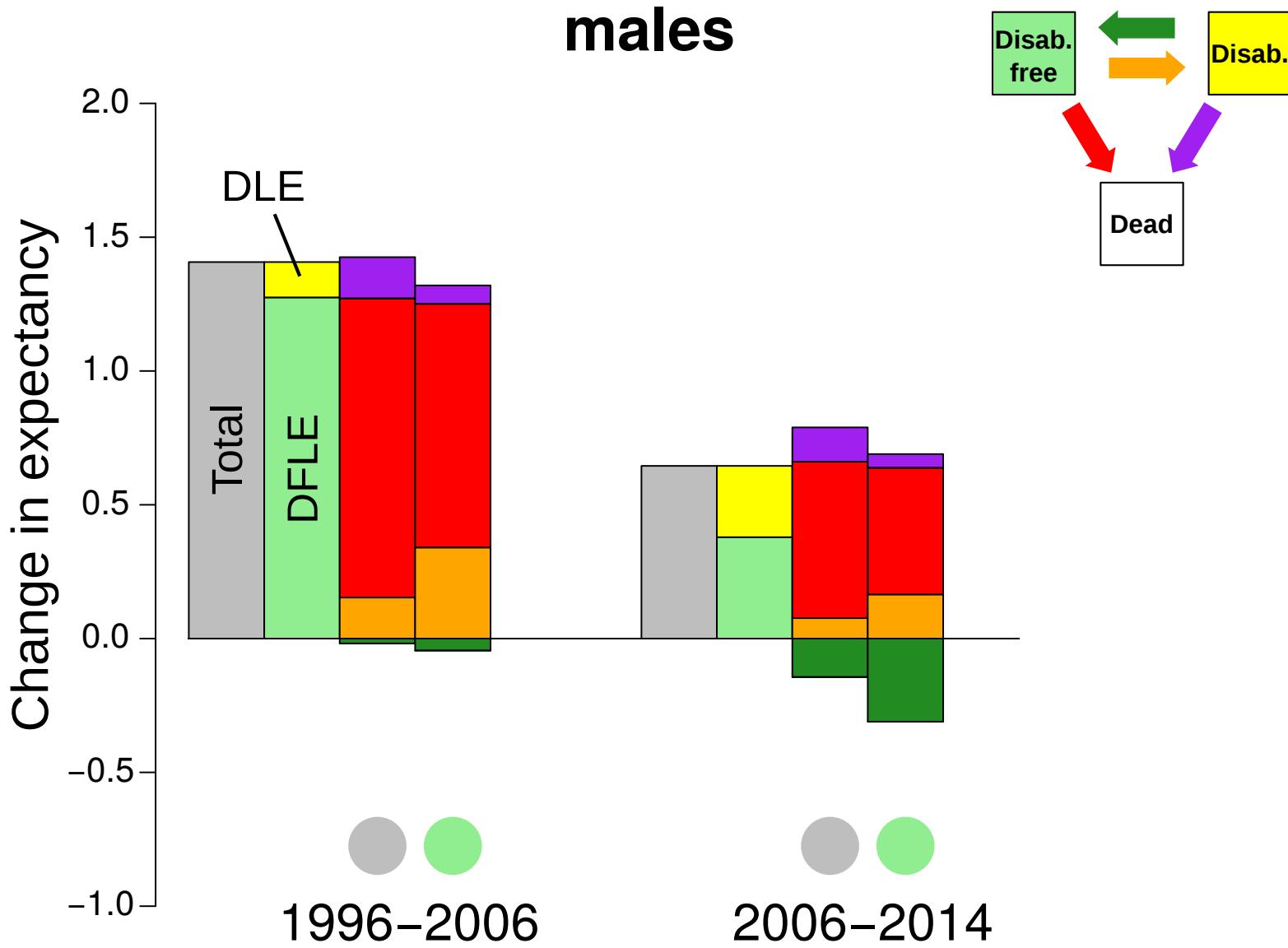


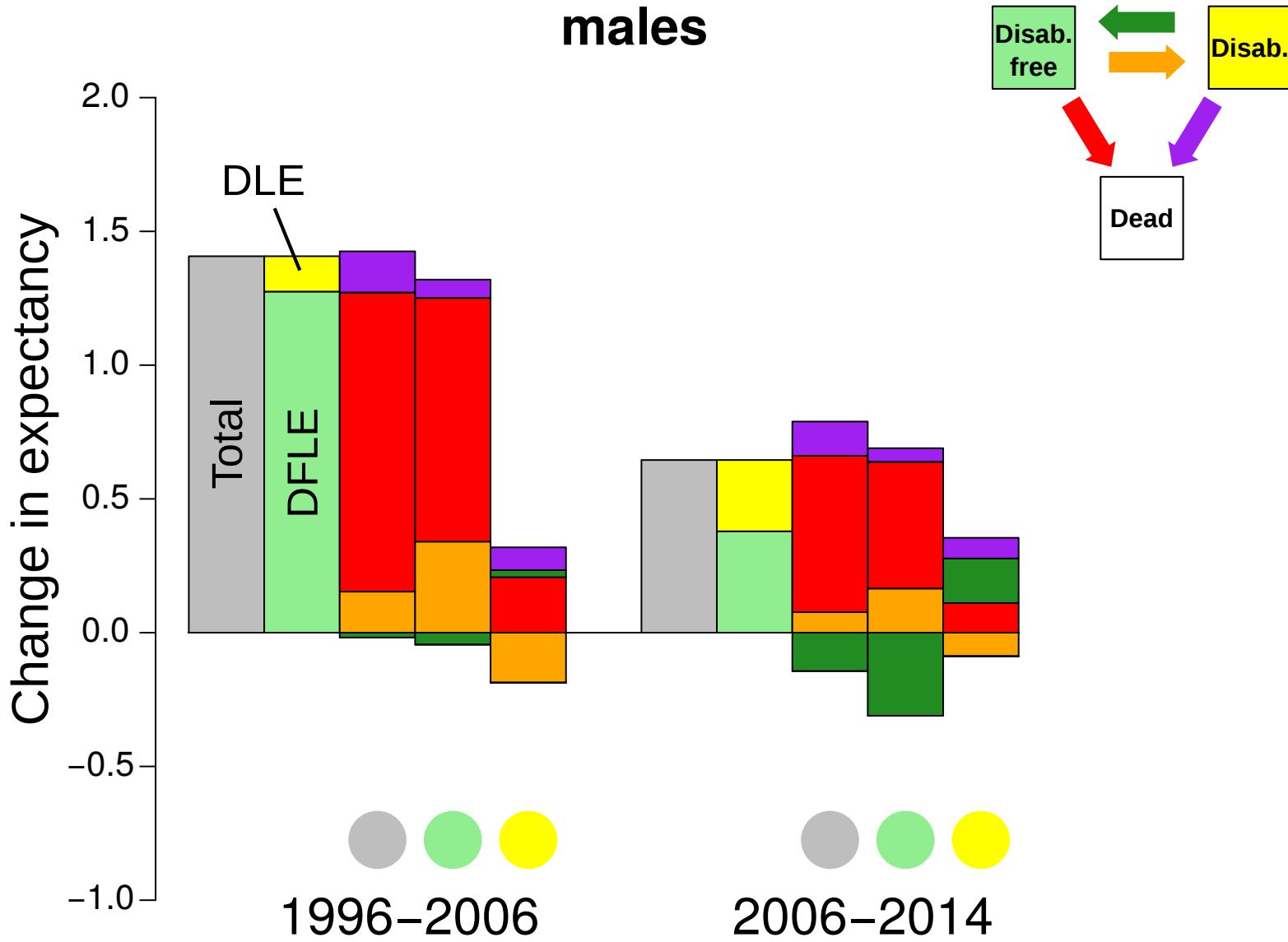
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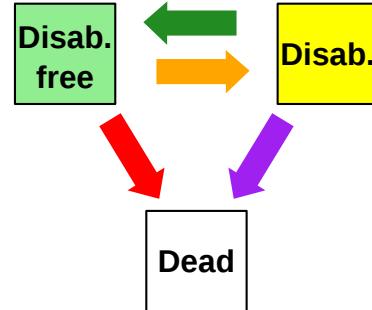
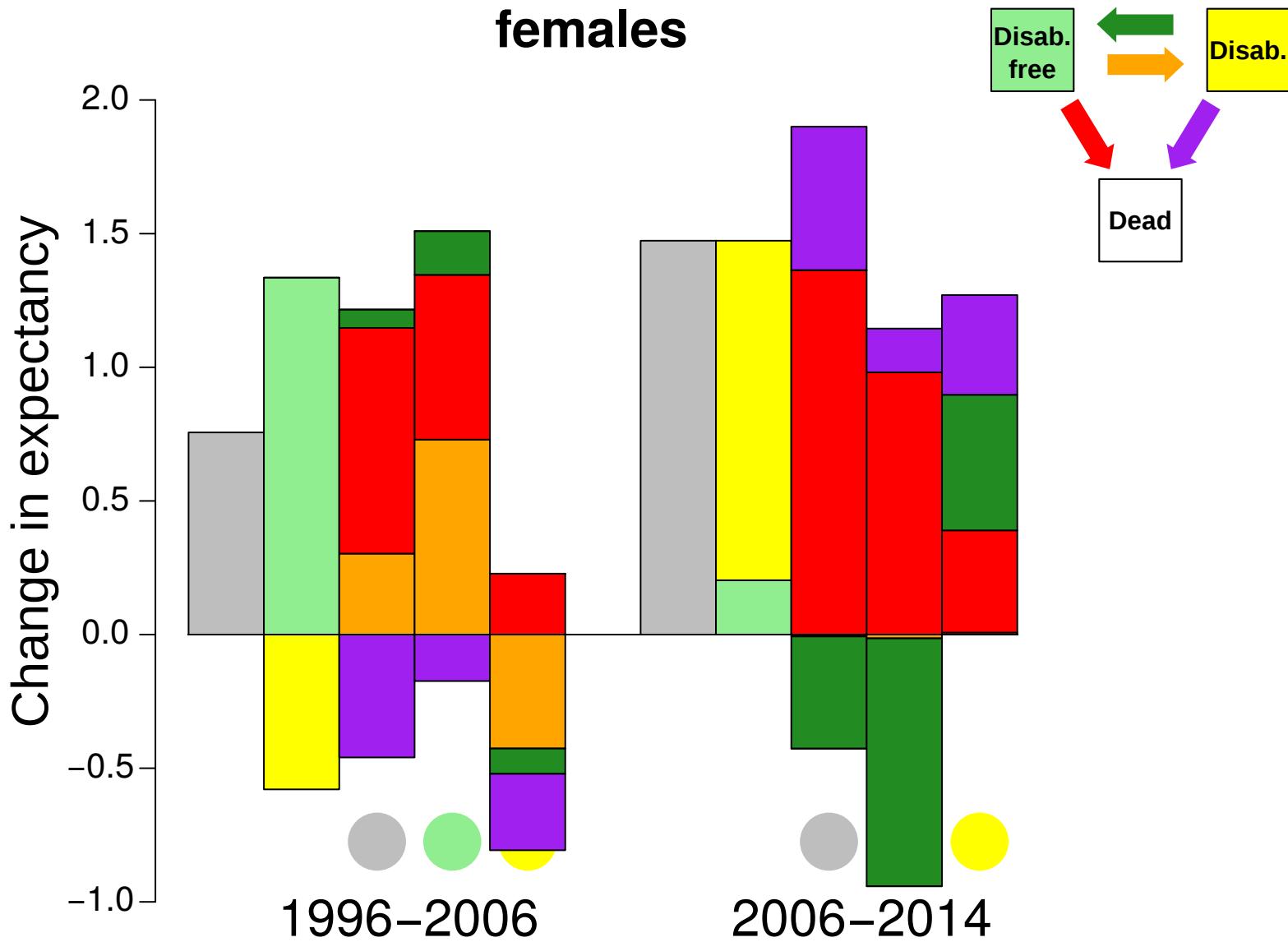












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- mortality improvement 1996-2014 added 1.5 years to DFLE.
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- Horiuchi decomposition works well with multistate models, other virtues.
- So far only time decomp, other comparisons to come.
- Mortality change major driver over time, but all transitions important.

Thanks!

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