

MAX PLANCK INSTITUTE
FOR DEMOGRAPHIC
RESEARCH

Healthy lives: Health dynamics, mortality change, or structural change?

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Objective

How much of the change in life expectancy with and without disability at age 50 is due to changes in mortality, disability transitions, or population structure?

Data & Methods

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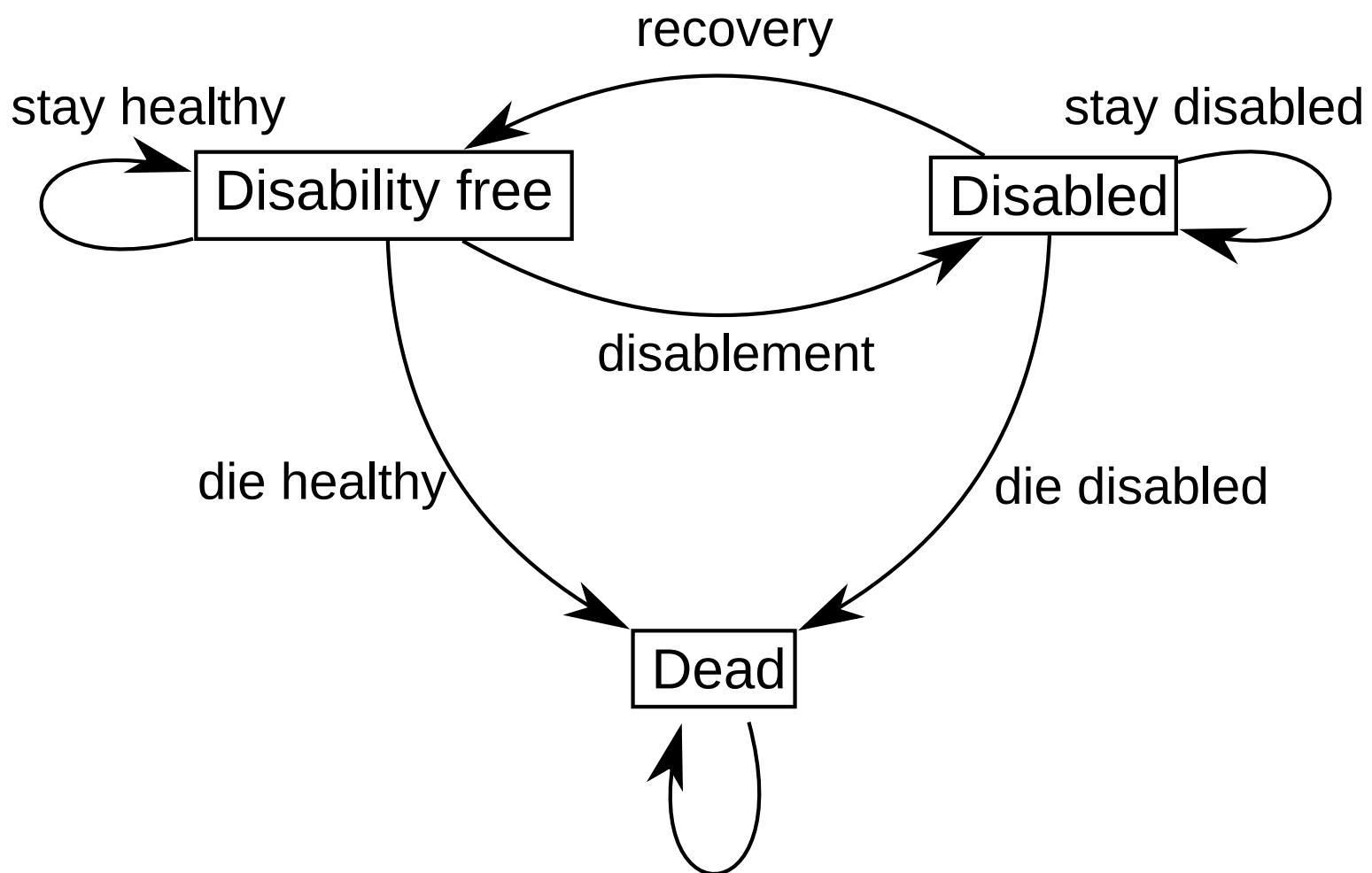
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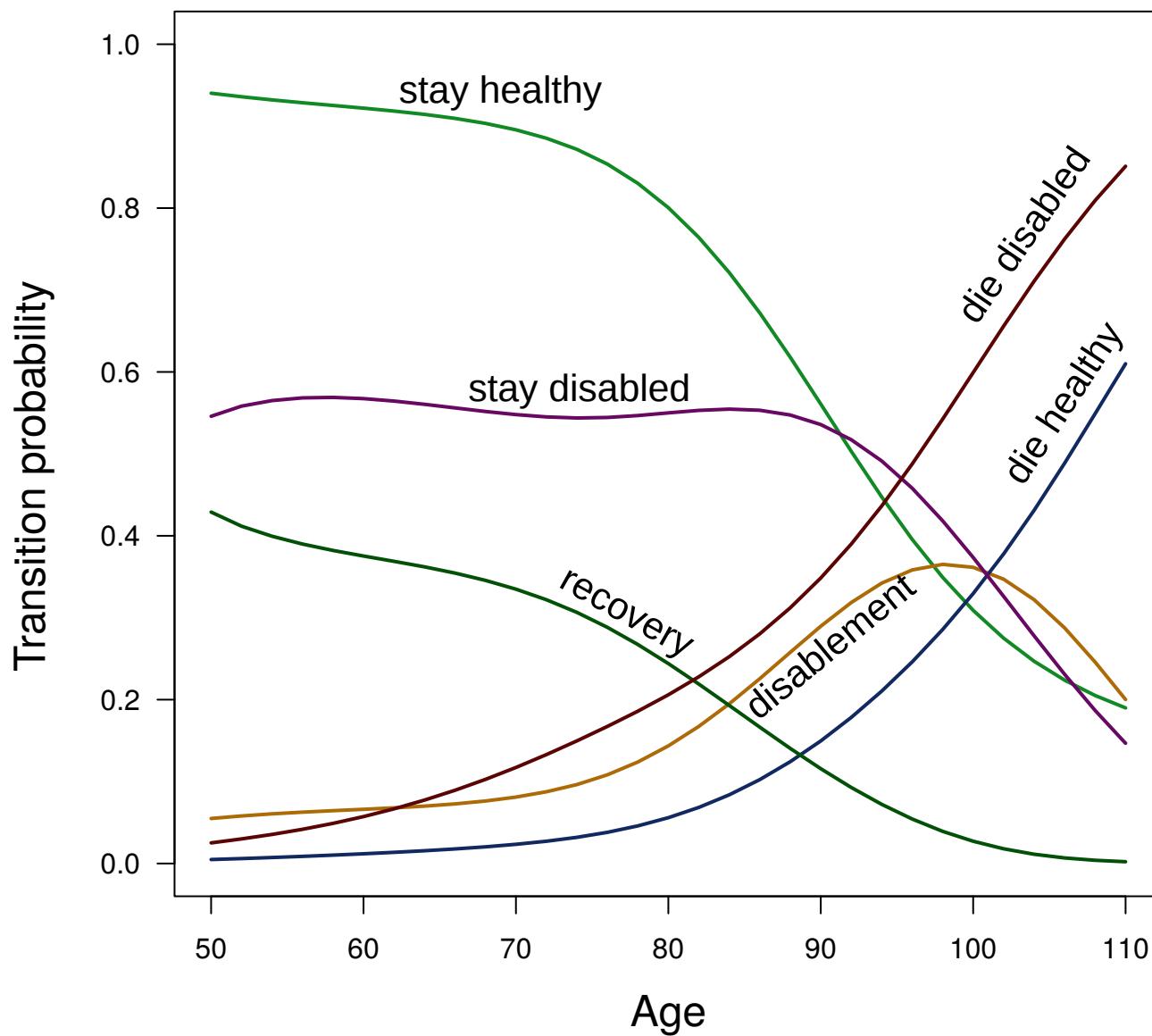
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- ▶ Trend decomposition using Horiuchi et. al. (2007) method.

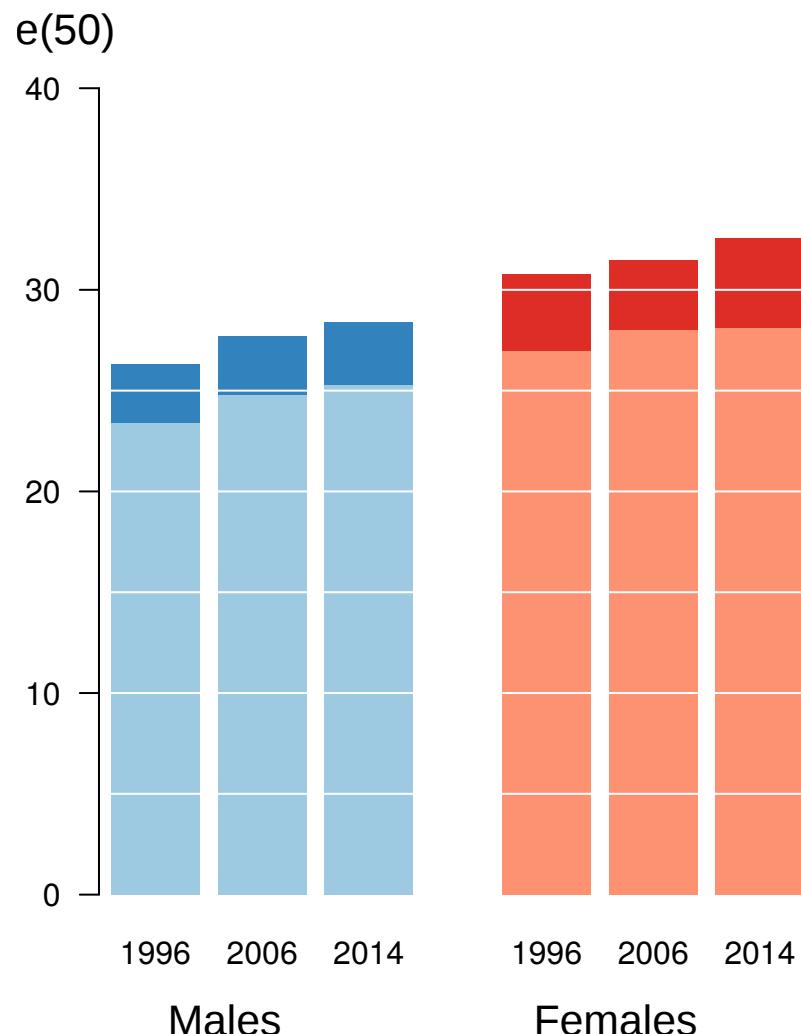
State space



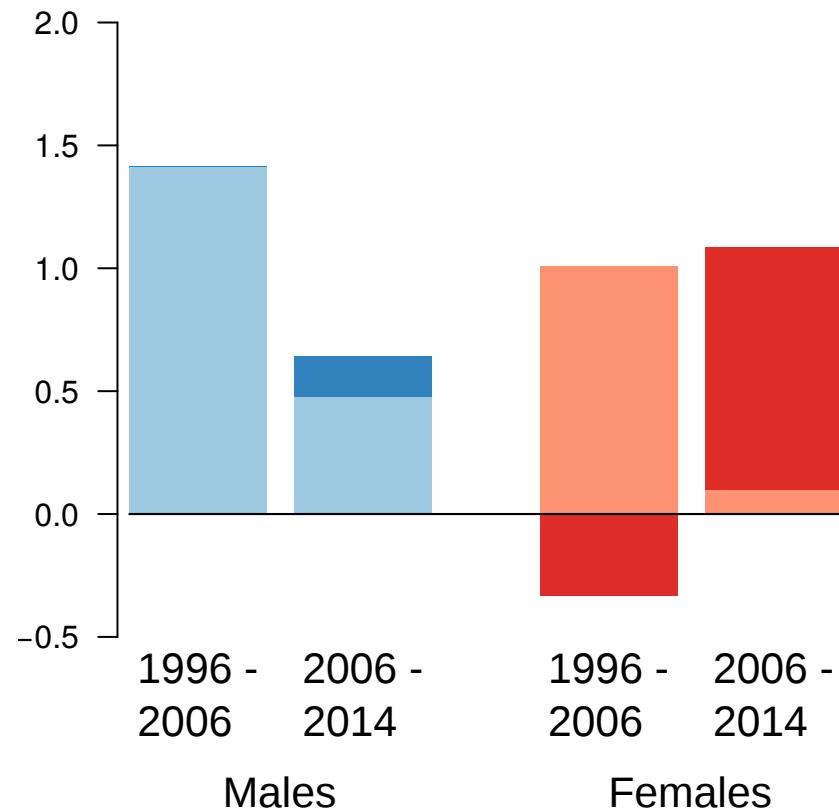
Example transition probabilities



Modelled expectancies at age 50



Changes in expectancies



Males 1996 to 2006

	DFLE	DLE	LE
Disablement	0.31	-0.18	0.13
DF Mortality	1.00	0.12	1.12
Recovery	-0.04	0.03	-0.01
Dis. Mortality	0.12	0.03	0.14
Age 50 Disab.	-0.03	0.01	-0.02
Age 50 Educ.	0.13	-0.03	0.09
Total	1.49	-0.03	1.46

Males 2006 to 2014

	DFLE	DLE	LE
Disablement	0.15	-0.09	0.06
DF Mortality	0.52	0.06	0.58
Recovery	-0.26	0.13	-0.13
Dis. Mortality	0.09	0.03	0.12
Age 50 Disab.	-0.05	0.02	-0.04
Age 50 Educ.	0.09	-0.02	0.07
Total	0.54	0.12	0.67

Females 1996 to 2006

	DFLE	DLE	LE
Disablement	0.59	-0.34	0.26
DF Mortality	0.76	0.09	0.85
Recovery	0.07	-0.01	0.06
Dis. Mortality	-0.39	-0.08	-0.47
Age 50 Disab.	-0.14	0.05	-0.09
Age 50 Educ.	0.09	-0.01	0.08
Total	0.99	-0.30	0.69

Females 2006 to 2014

	DFLE	DLE	LE
Disablement	-0.00	-0.01	-0.02
DF Mortality	1.21	0.15	1.36
Recovery	-1.04	0.62	-0.42
Dis. Mortality	0.38	0.08	0.45
Age 50 Disab.	-0.29	0.10	-0.19
Age 50 Educ.	-0.14	0.05	-0.09
Total	0.12	0.98	1.10

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- ▶ Maybe tweak the decomposition method

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Thanks!

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