



Causes and Consequences of Demographic Change



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2. Symposium des Hamburger Zentrums für Versicherungswissenschaft
Der demografische Wandel – eine Herausforderung für die Versicherungswirtschaft
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Causes of Demographic Change

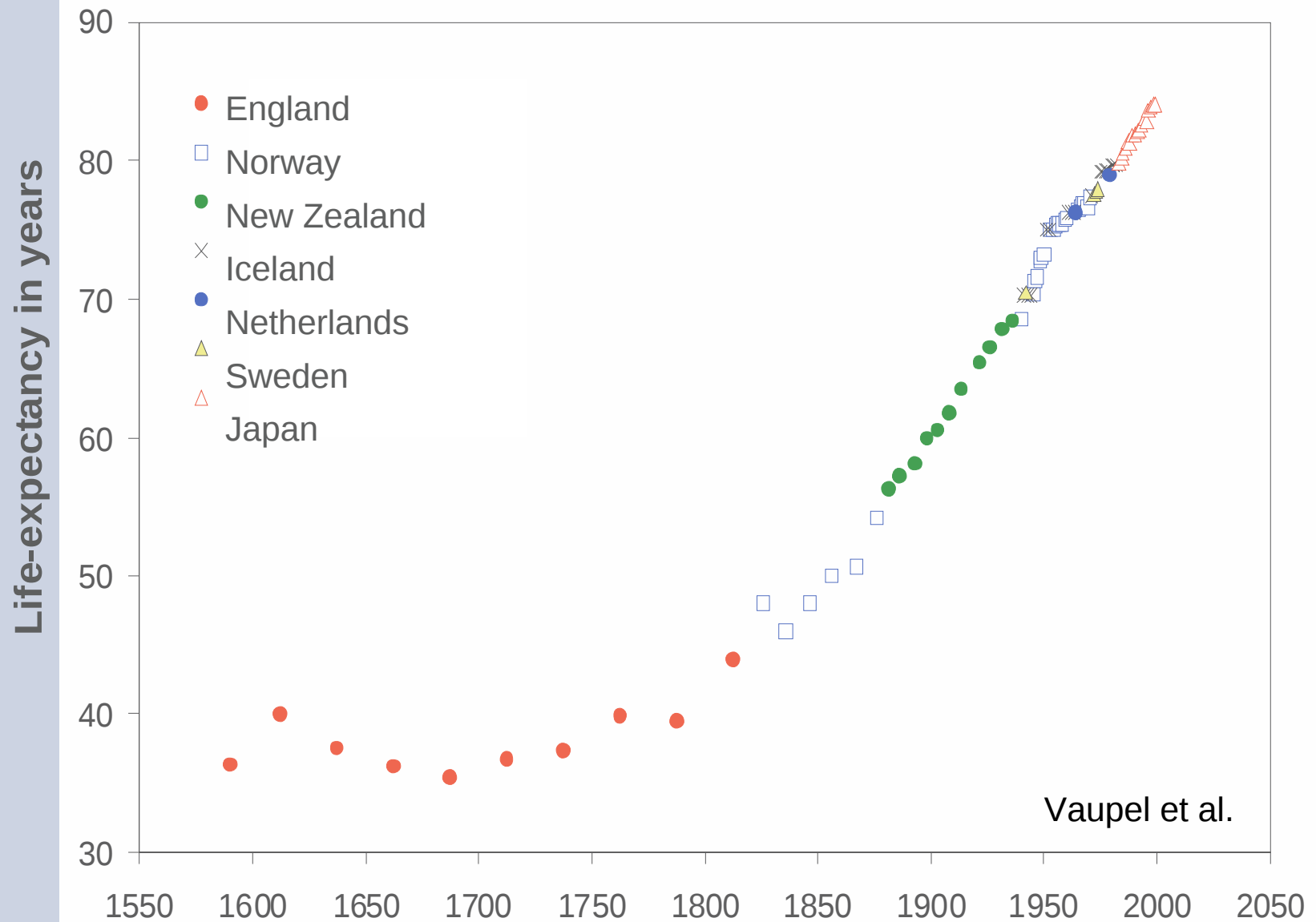
Longevity

Fertility & Family Formation

Migration

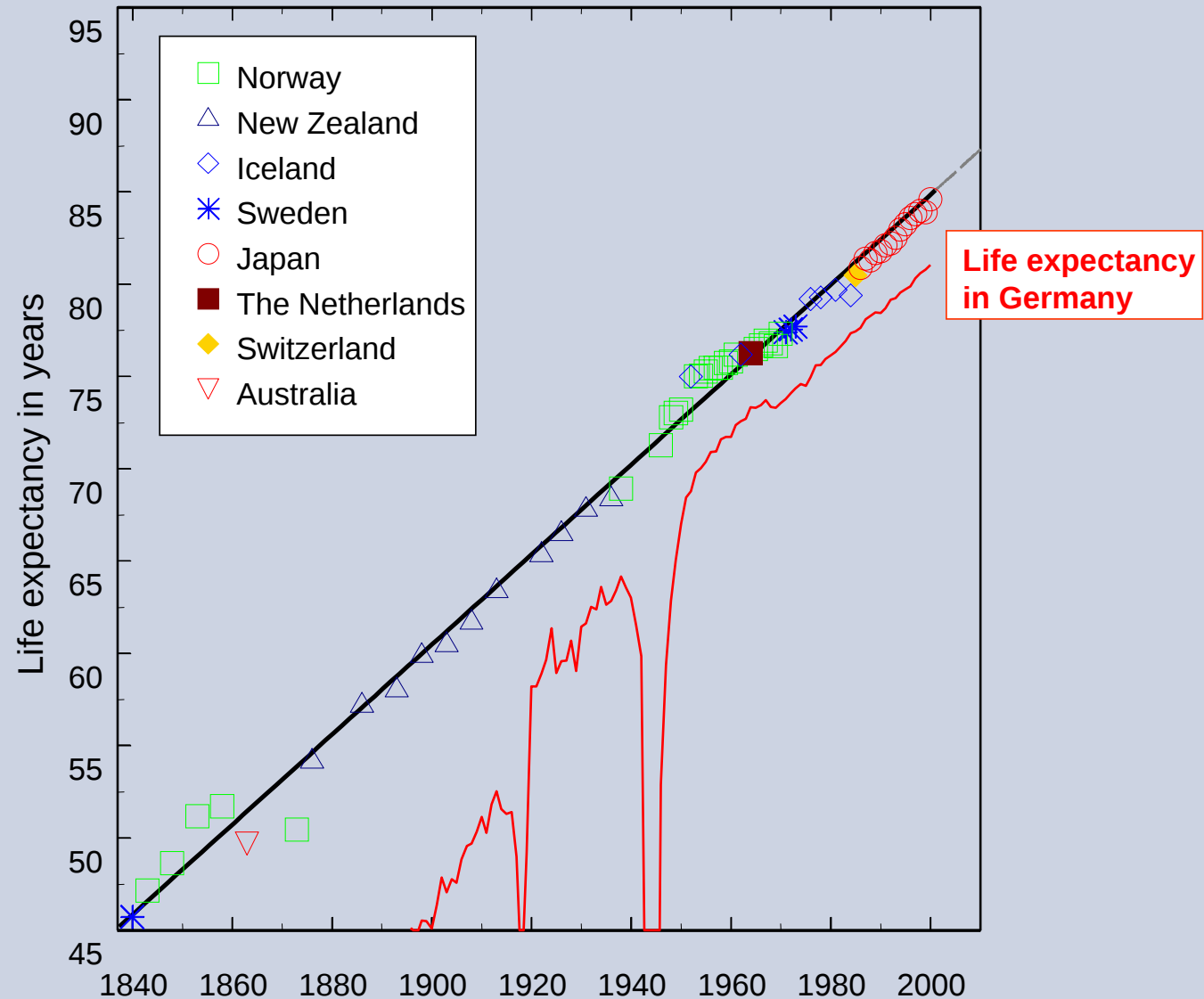


Record Life Expectancy 1550-2000

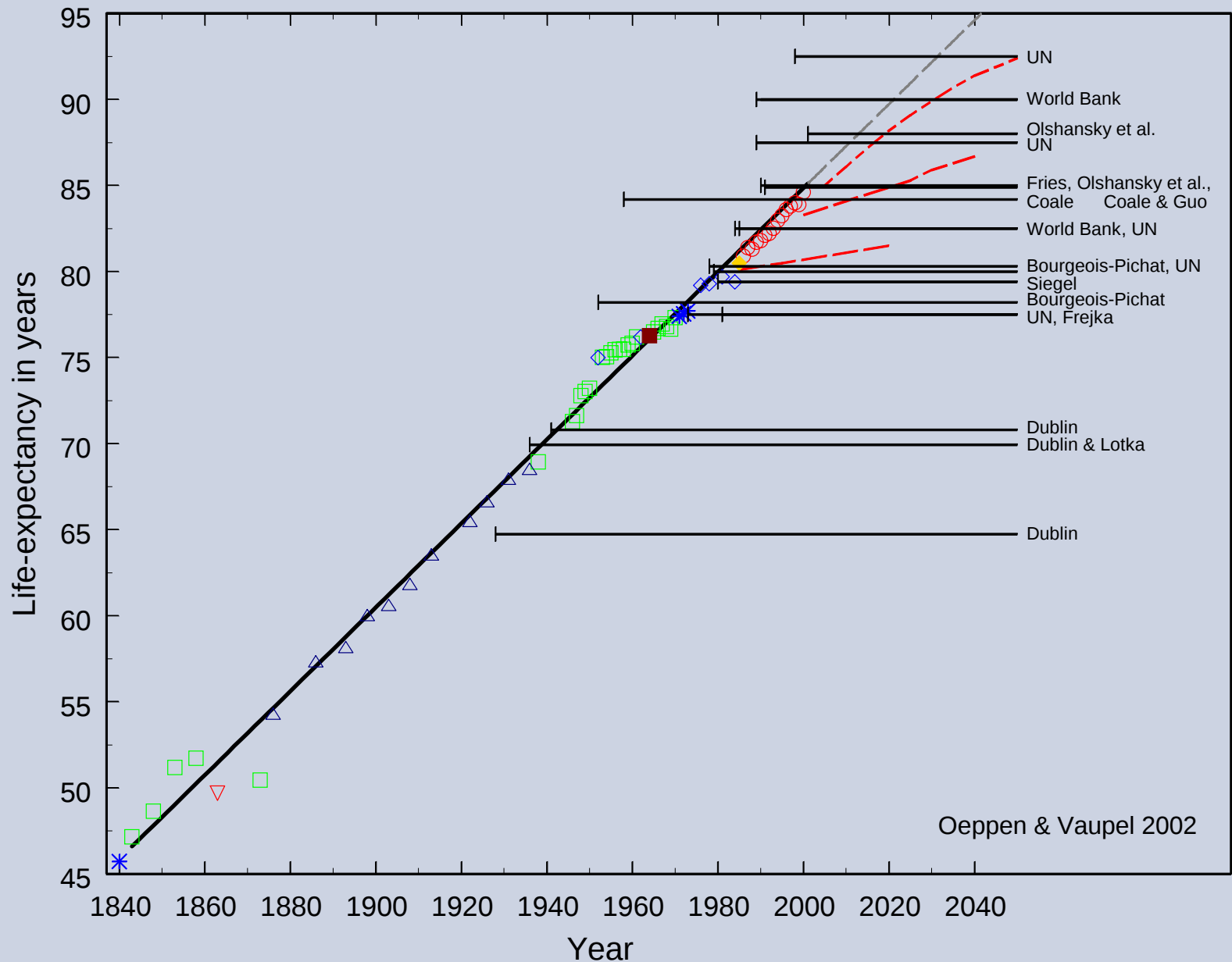




Record Life Expectancy Linear Trend



Record female e_0 and asserted ceilings of life expectancy





Projections Life Expectancy Females Germany 2050

record - gap

90.2

94.0

97.8

Eurostat

81.5

84.0

86.0

10. Pop Projection
Statistics Germany

85.7

86.6

88.1

88

89.8

11. Pop Projection
Statistics Germany

extrapolation

89.8

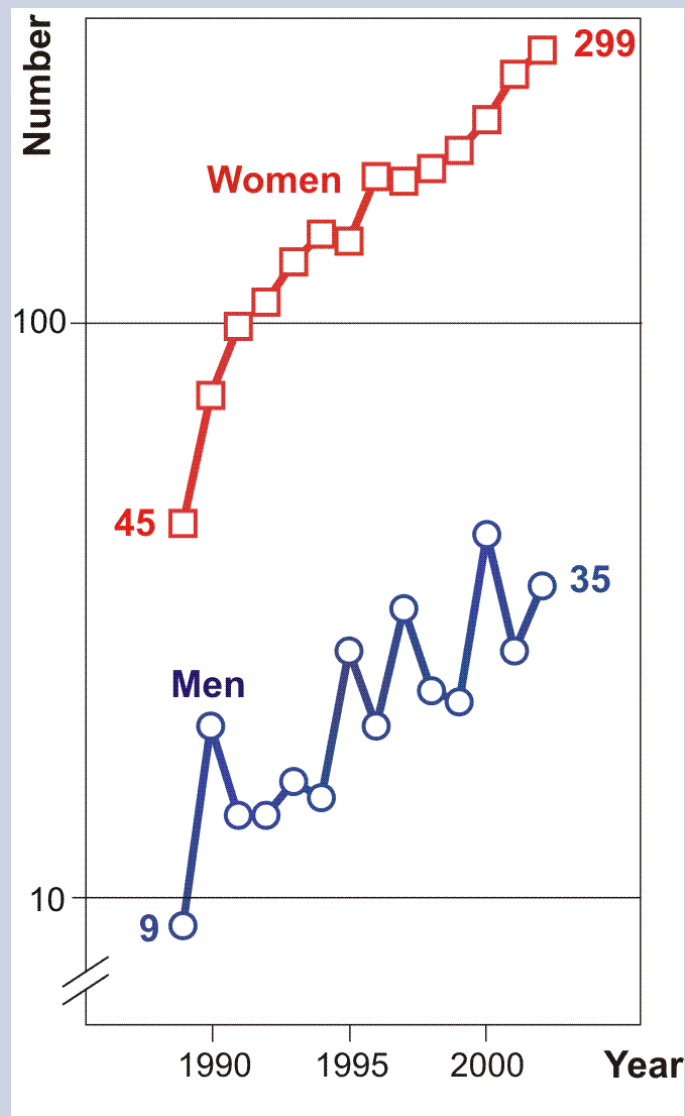
92.6

95.4



Number of Persons Attaining Age 105+

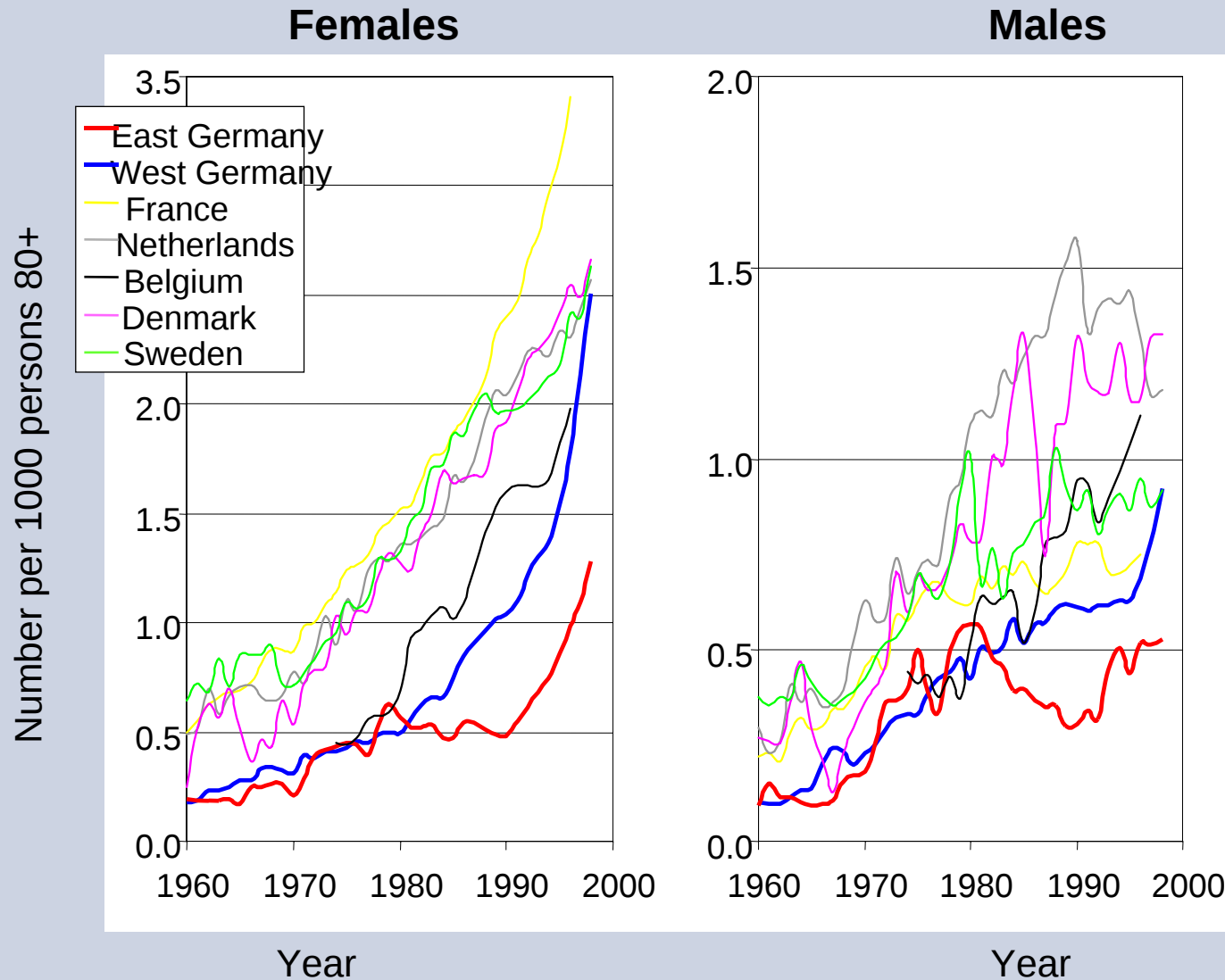
Source:
President's Office



Maier & Scholz 2004



Centenarians per 1000 Persons 80+





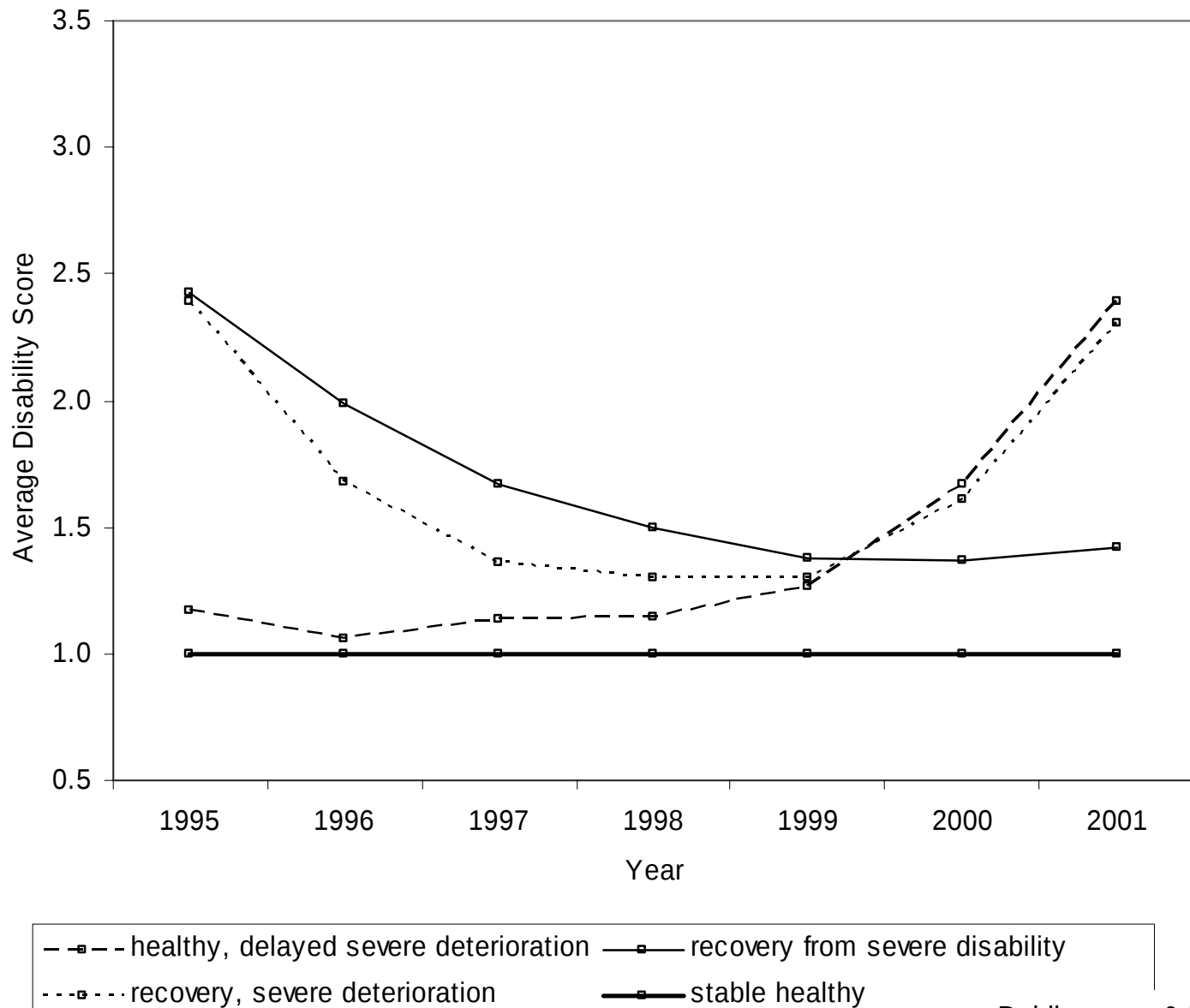
Health and Disability

Gender Gap



Survivors Aged 50+ Germany 1995-2001

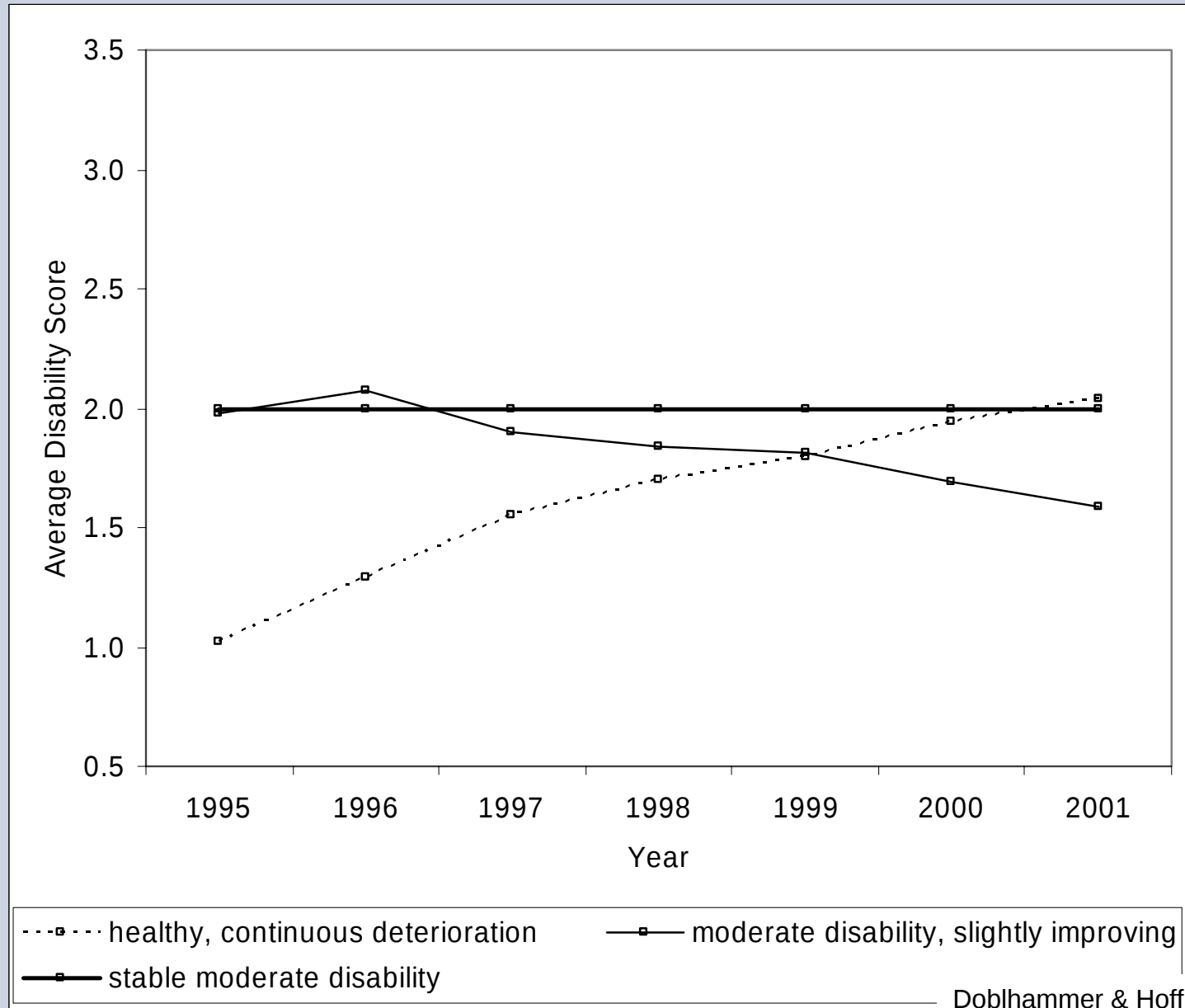
Healthy Trajectories (24%)





Survivors Aged 50+ Germany 1995-2001

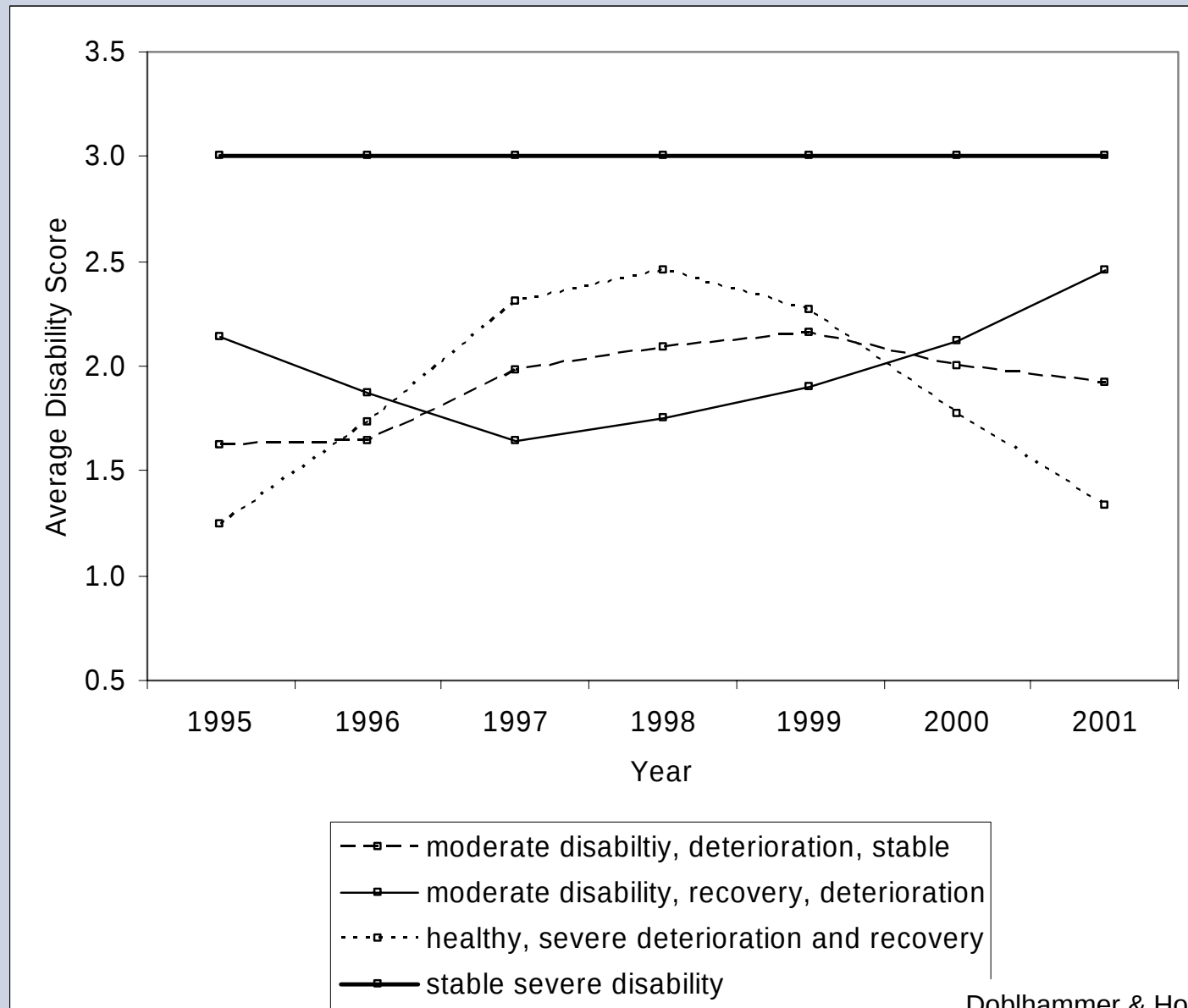
Moderate Disability Trajectories (38%)





Survivors Aged 50+ Germany 1995-2001

Severe Disability Trajectories (37%)





Survivors Aged 50+ Germany 1995-2001

% - Distribution of Trajectories by Age and Sex

Males				Females			
Age	Healthy	Moderate	Severe	Healthy	Moderate	Severe	Significance Gender Difference
50-59	35	33	32	28	39	33	**
60-69	25	40	35	18	46	36	*
70-79	18	37	46	18	37	45	
80+	34	40	25	7	33	60	**

** : $p \leq 0,05$

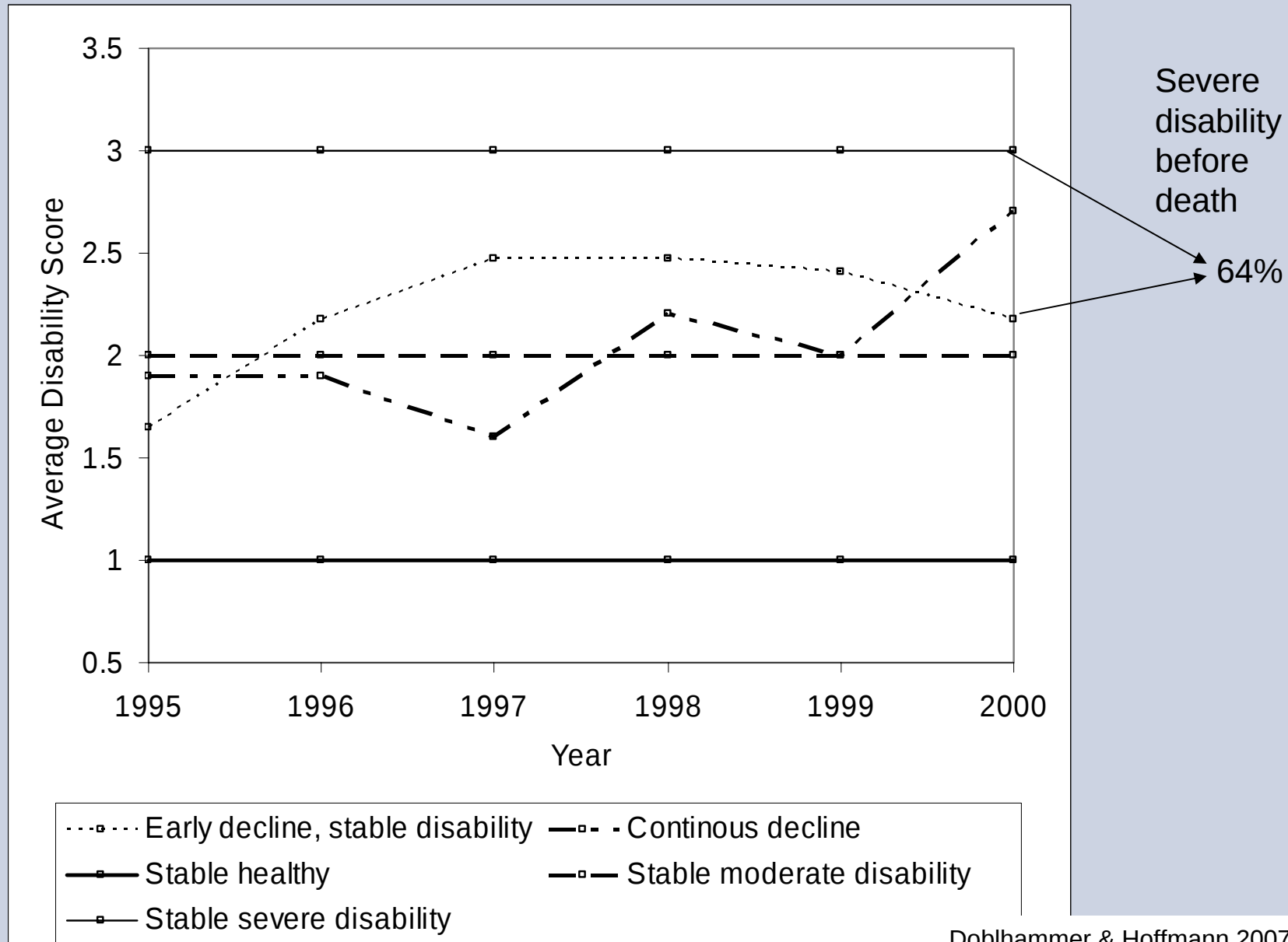
* : $p \leq 0,10$

Doblhammer & Hoffmann 2007



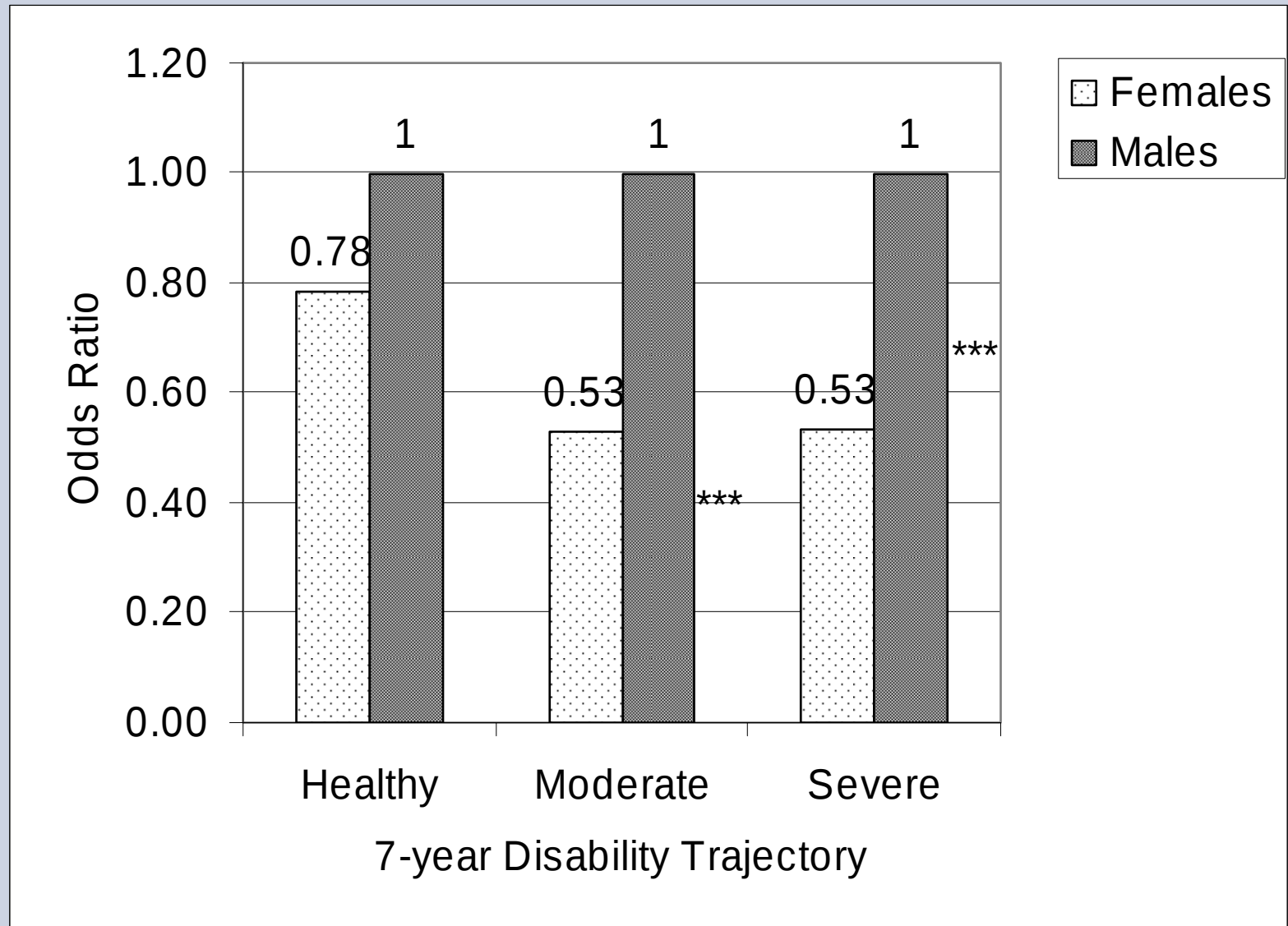
Deceased Aged 50+ Germany 1995-2001

Trajectories





Mortality Risk by 7-year Disability Trajectory Germany 2002-2005





Health and Disability

Time Trends in Disability



Three Possible Scenarios

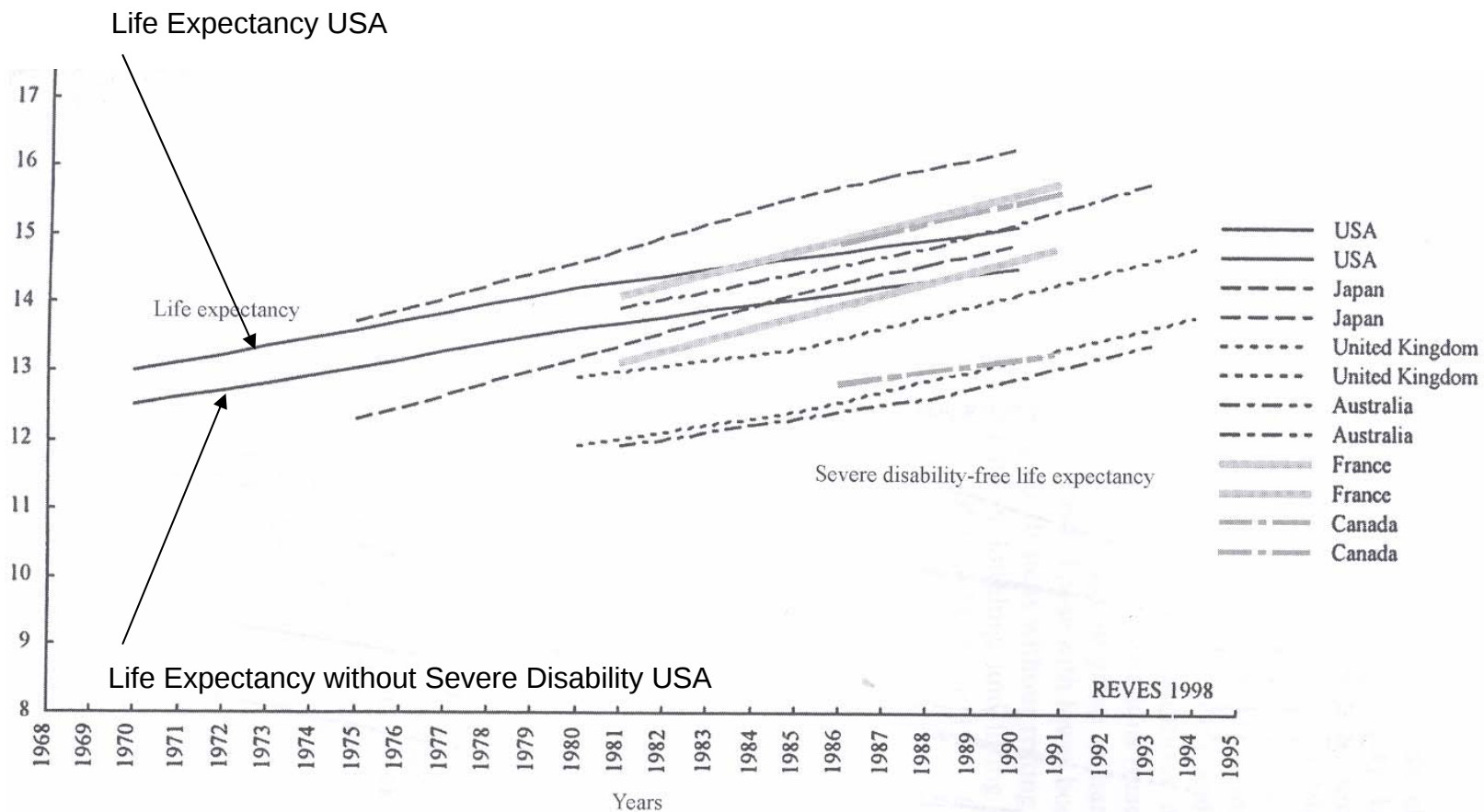
Compression of Disability (Fries)

Expansion of Disability (Olshansky)

Dynamic Equilibrium (Manton)



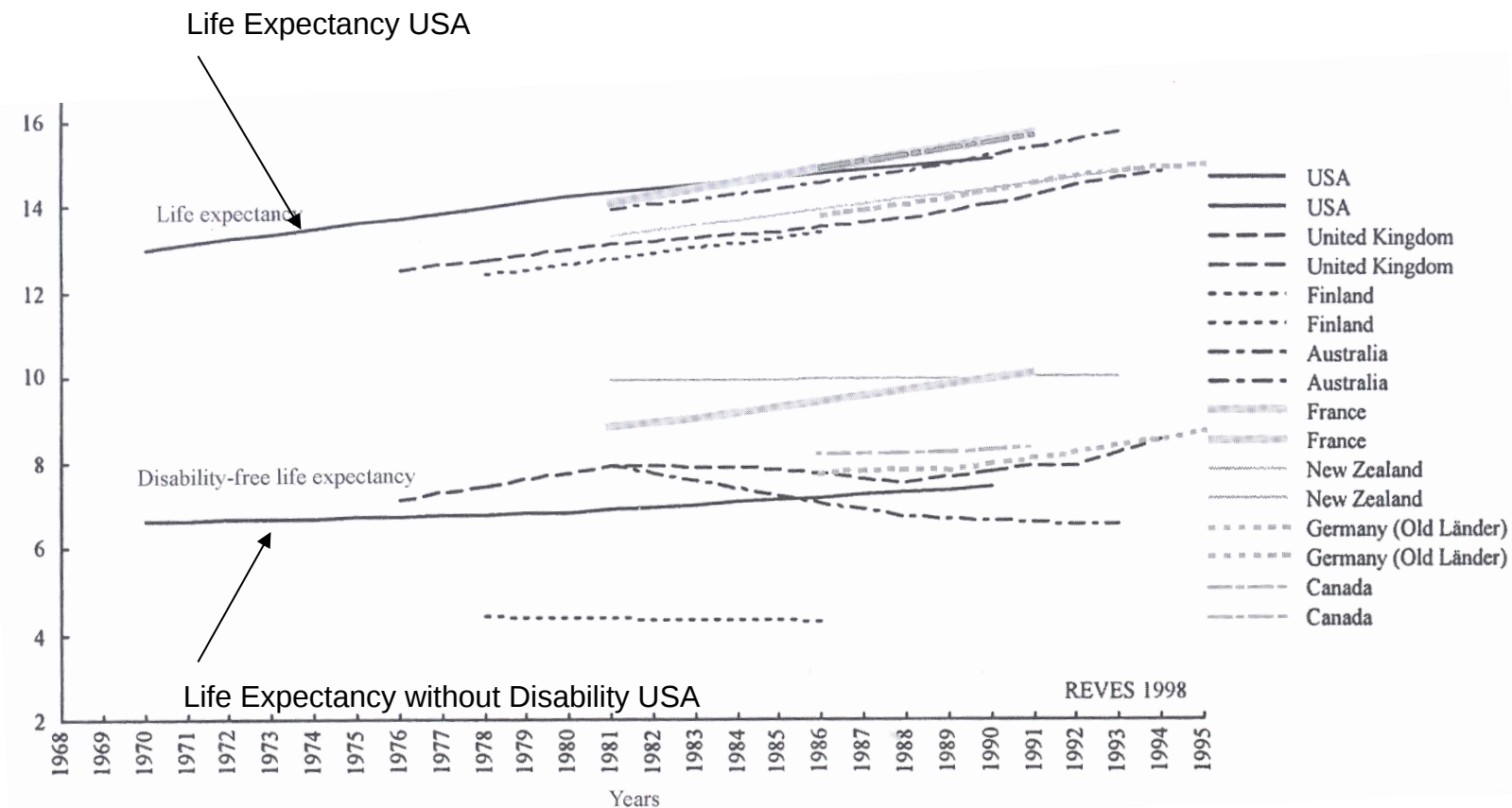
Trends in Disability-Free Life Expectancy



Robine et. al



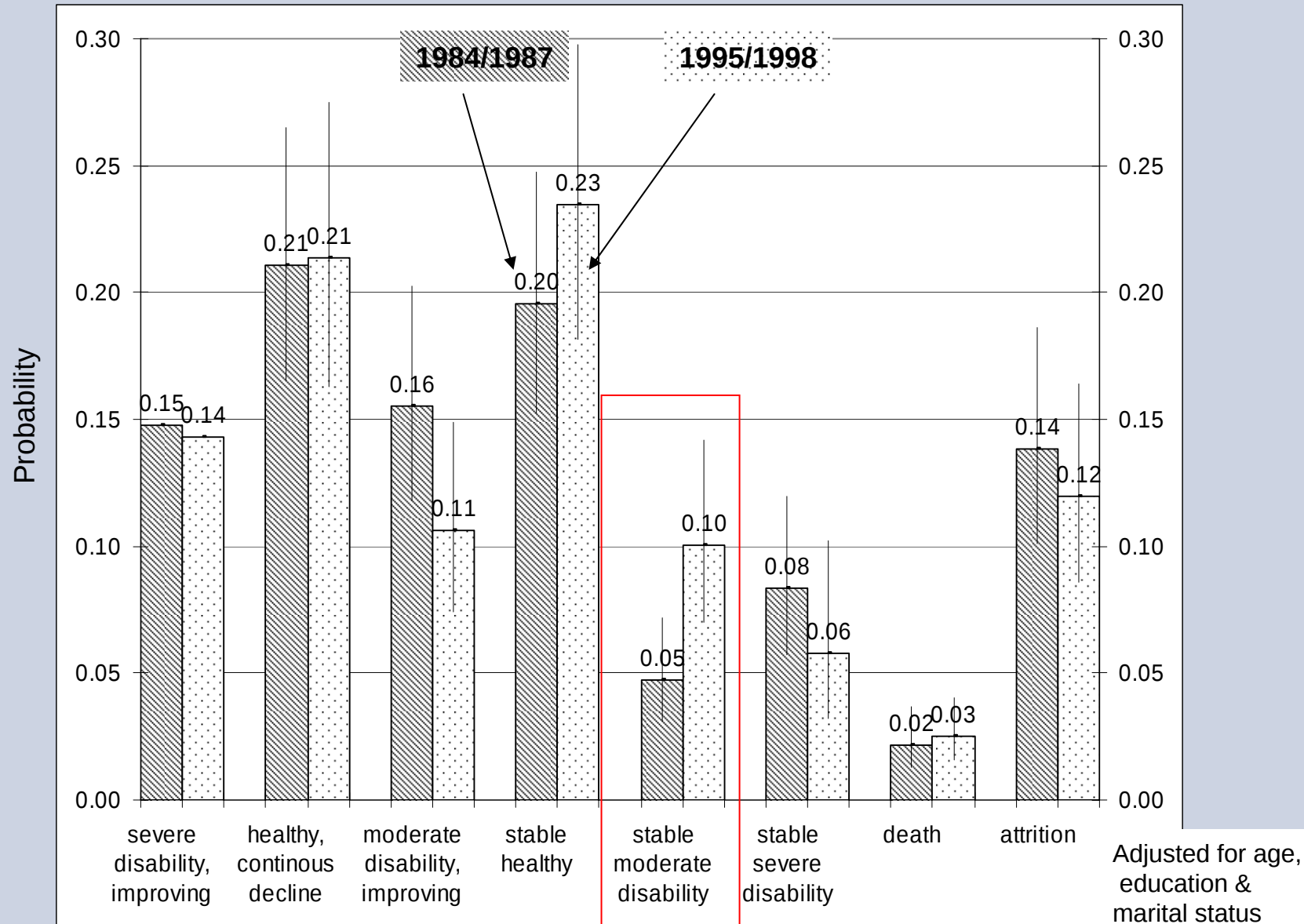
Trends in Disability-Free Life Expectancy: All Disabilities



Robine et. al

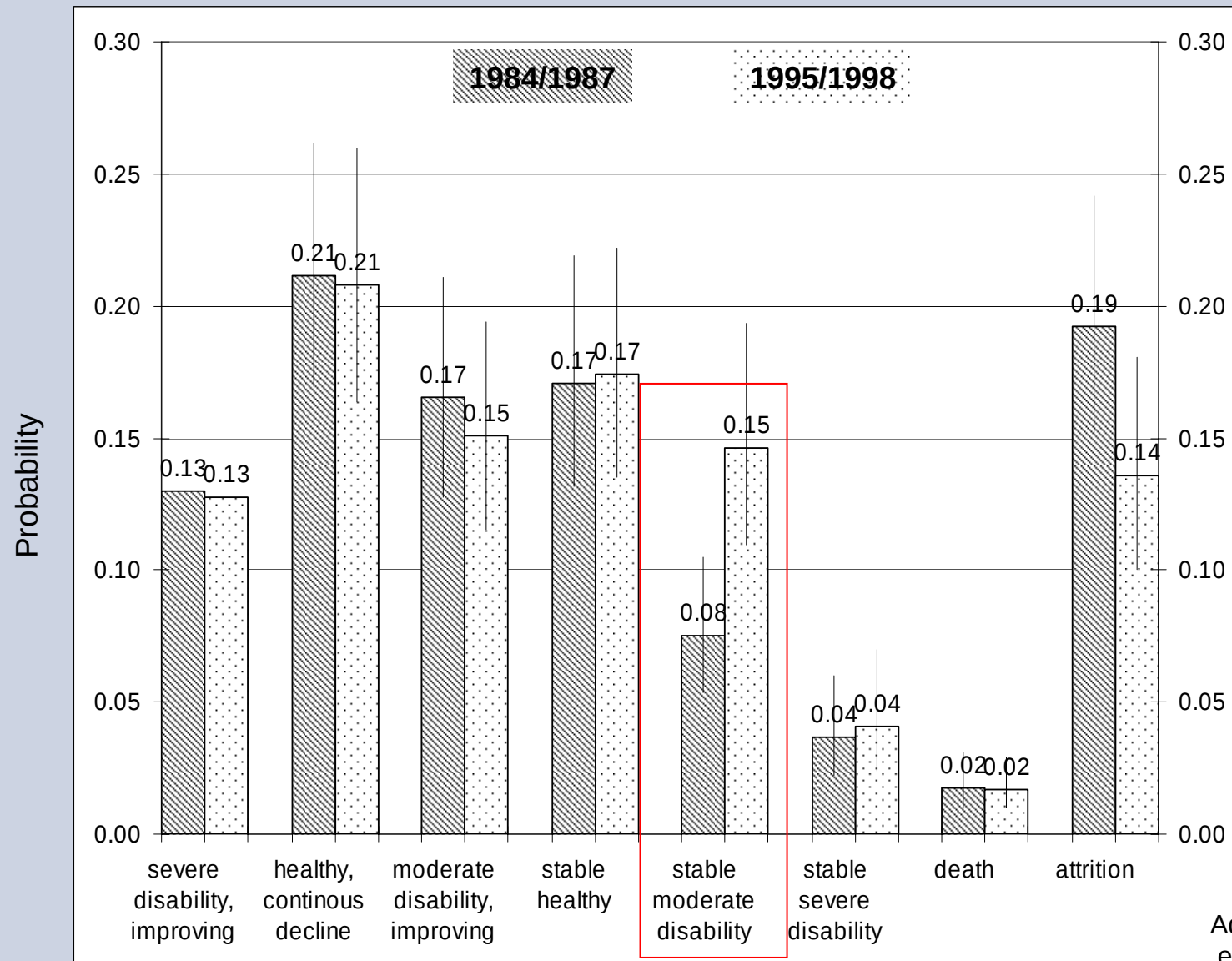


Males: Trends in German Health Trajectories 1984/1987 and 1995/1998





Females: Trends in German Health Trajectories 1984/1987 and 1995/1998

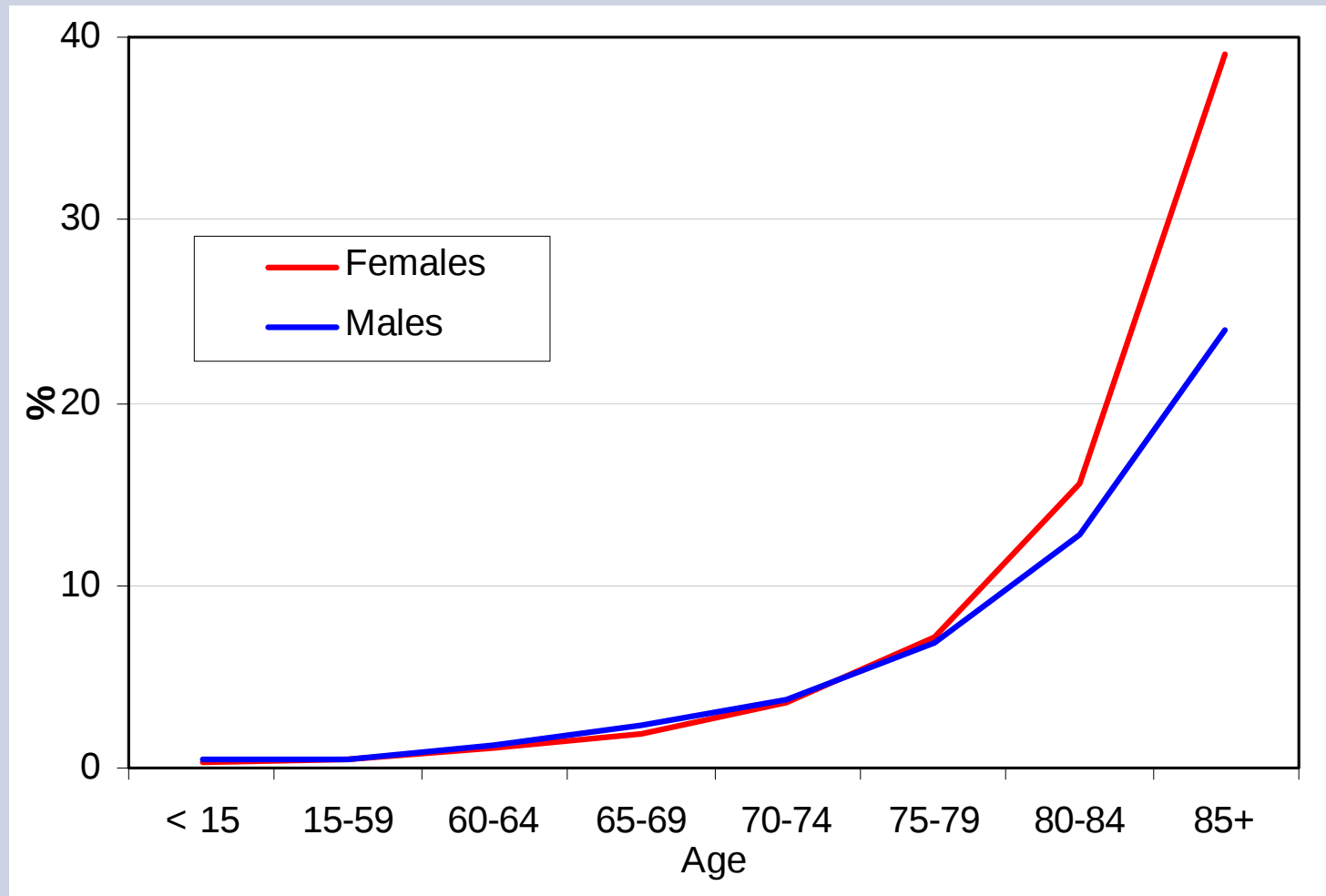




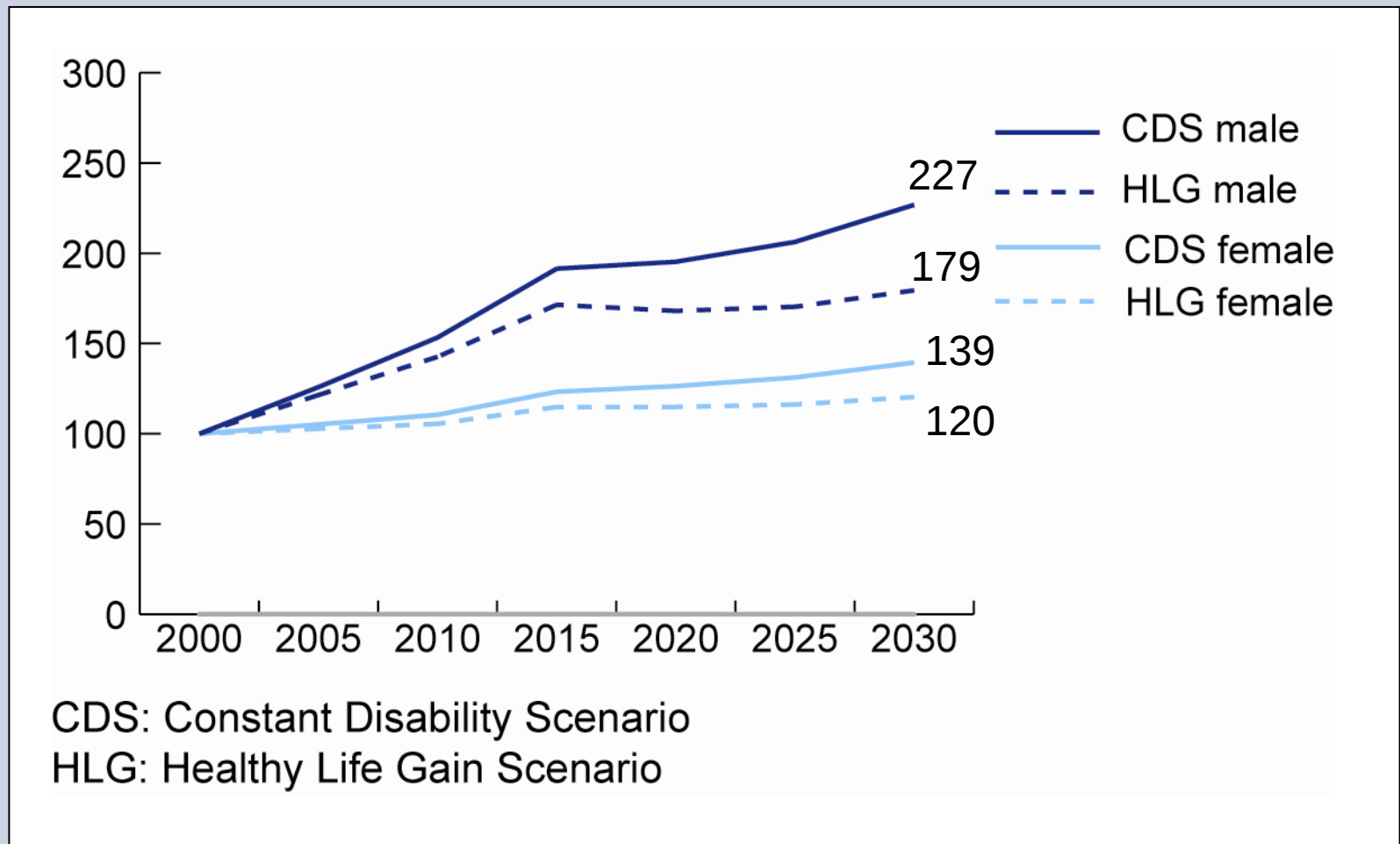
Care Need

Care Need Projections

People in Need of Care in Germany in 2003



Care Need Projections for Germany

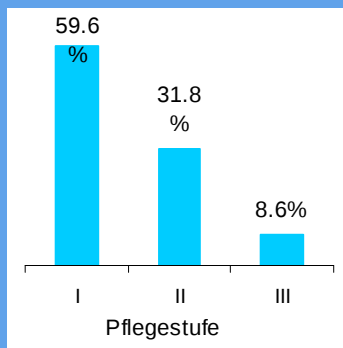


People in Need of Care in Germany 2003

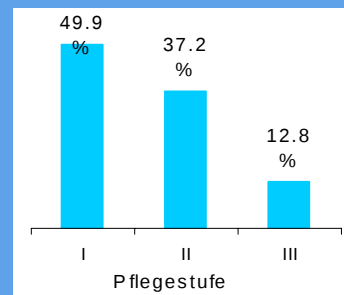
2.08 Million People in Need of Care (2.52%)

**At Home:
1.44 Mio (69%)**

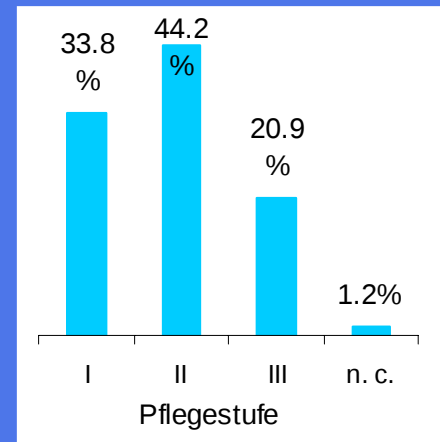
**Help only from
Kinship:
987.000 (68.5%)**



**Additional
Help from
Nursing Service:
450.000 (31.5%)**



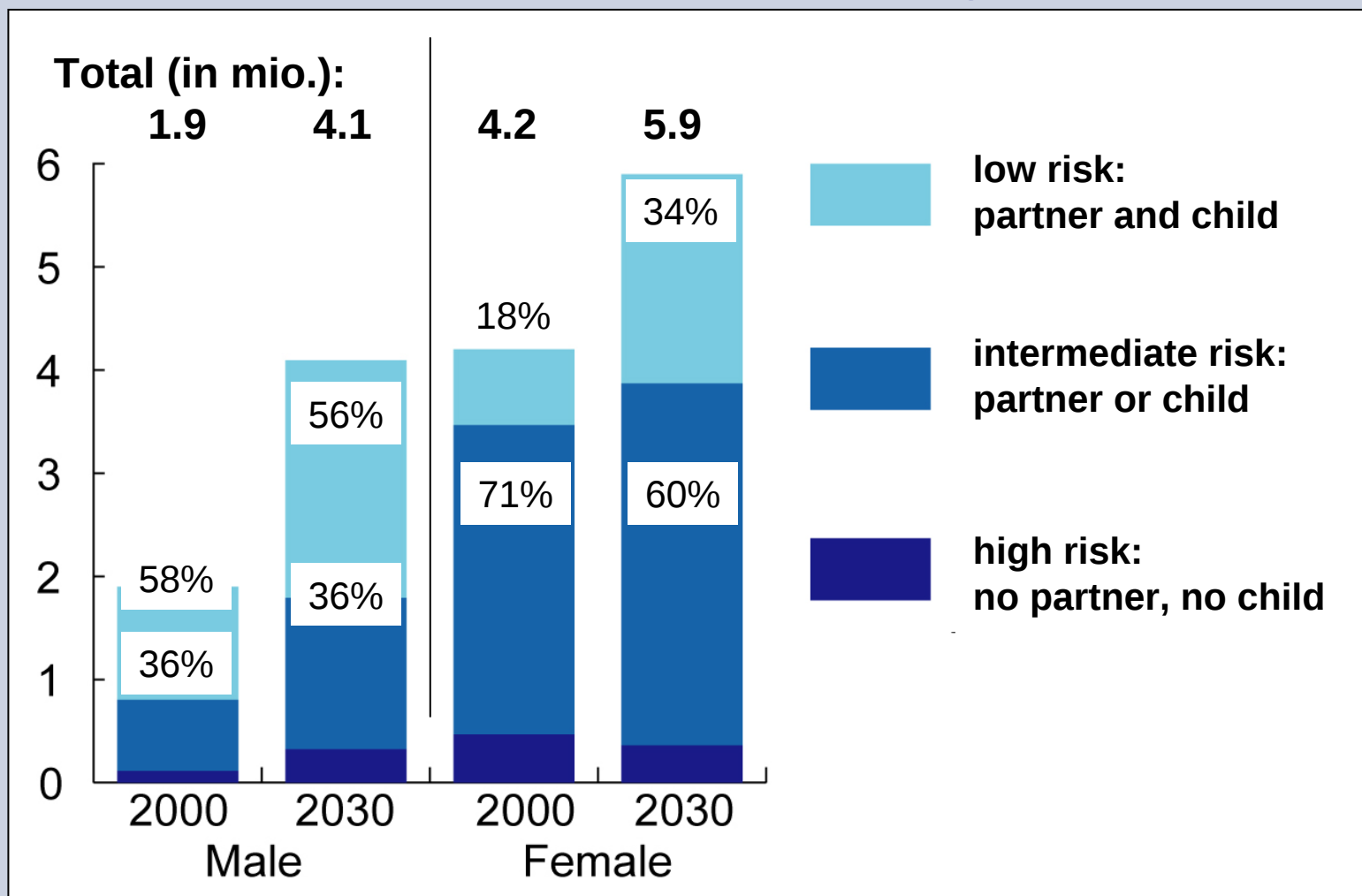
**In Institutions:
640.000 (31%)**





Who needs institutional care?

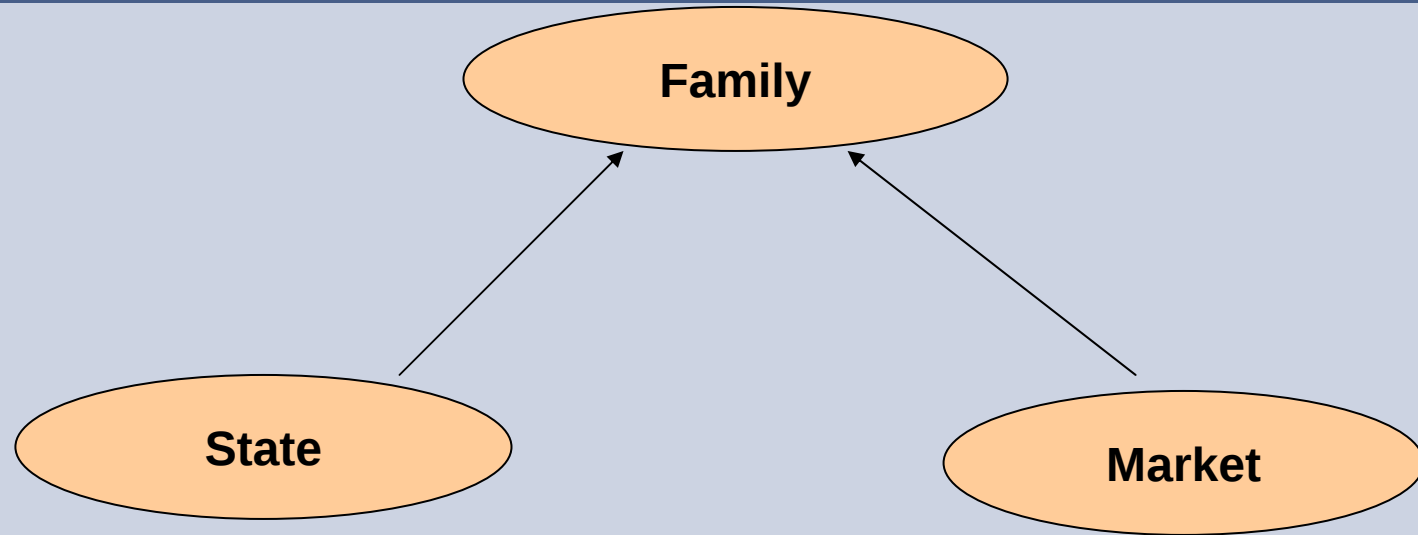
Germany 2000 and 2030, Age 75+





Policy Implications

Three Pillars of Welfare



-Support families by promoting:

- Nursing services
- Institutional care for vulnerable groups
- Care allowances and pension entitlements for care providers to relatives
- Care leave
- Flexible job markets
- Gender equality
- ...

- Private care insurance
- New mortgage forms (re-mortgage)
- New housing forms
- Flexible job markets
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