



Det Sundhedsvidenskabelige Fakultet



Gender and Social Determinants of Health

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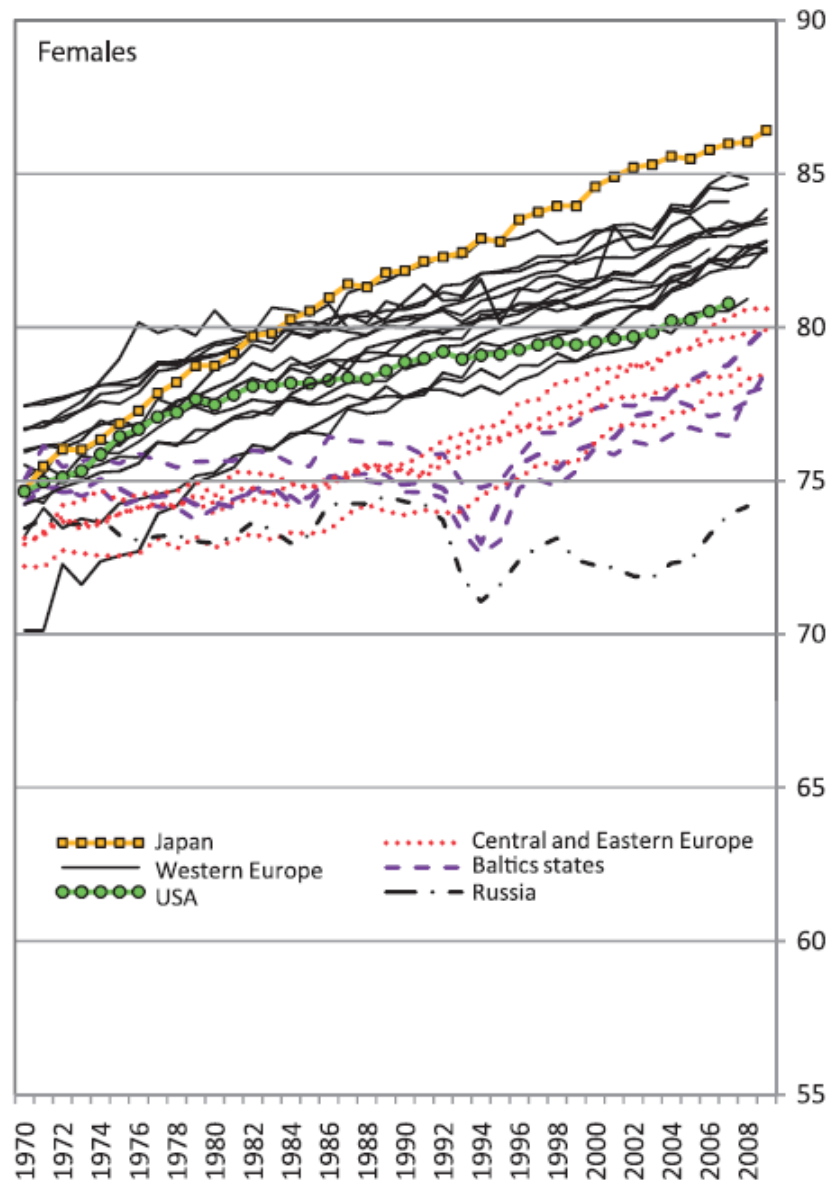
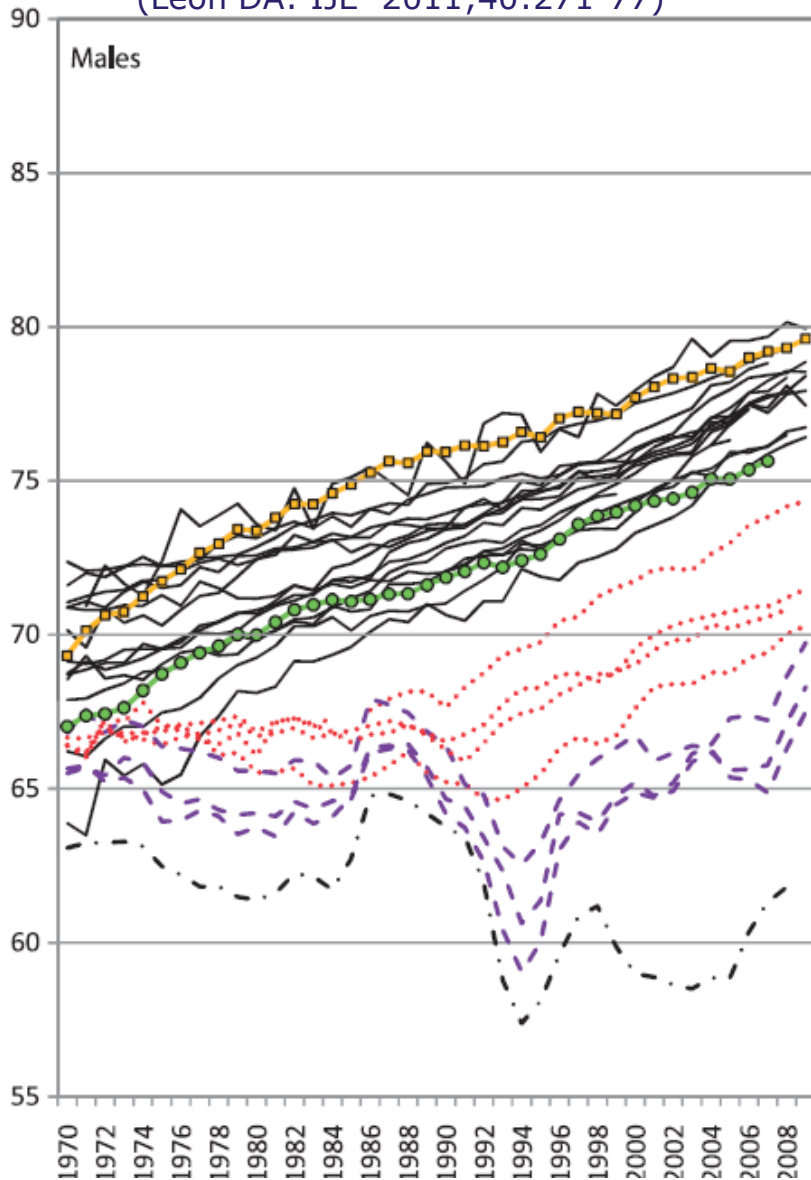
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Dias 1

Social determinants in action: Europe 1970-2009

(Leon DA: IJE 2011;40:271-77)



■ Japan
— Western Europe
● USA
⋯ Central and Eastern Europe
- - - Baltics states
- · - Russia



Health equity on the agenda – but does social determinants explain gender inequality?

Commission on Social Determinants of Health FINAL REPORT | EXECUTIVE SUMMARY



Closing the gap in a generation

Health equity through action on the social determinants of health



Sundhedsstyrelsen

KØBENHAVNS UNIVERSITET



ULIGHED I SUNDHED
– ÅRSAGER OG INDSATSER

2011

Gender differentials in the role of social determinants -

Is this due to

Differential exposure ?

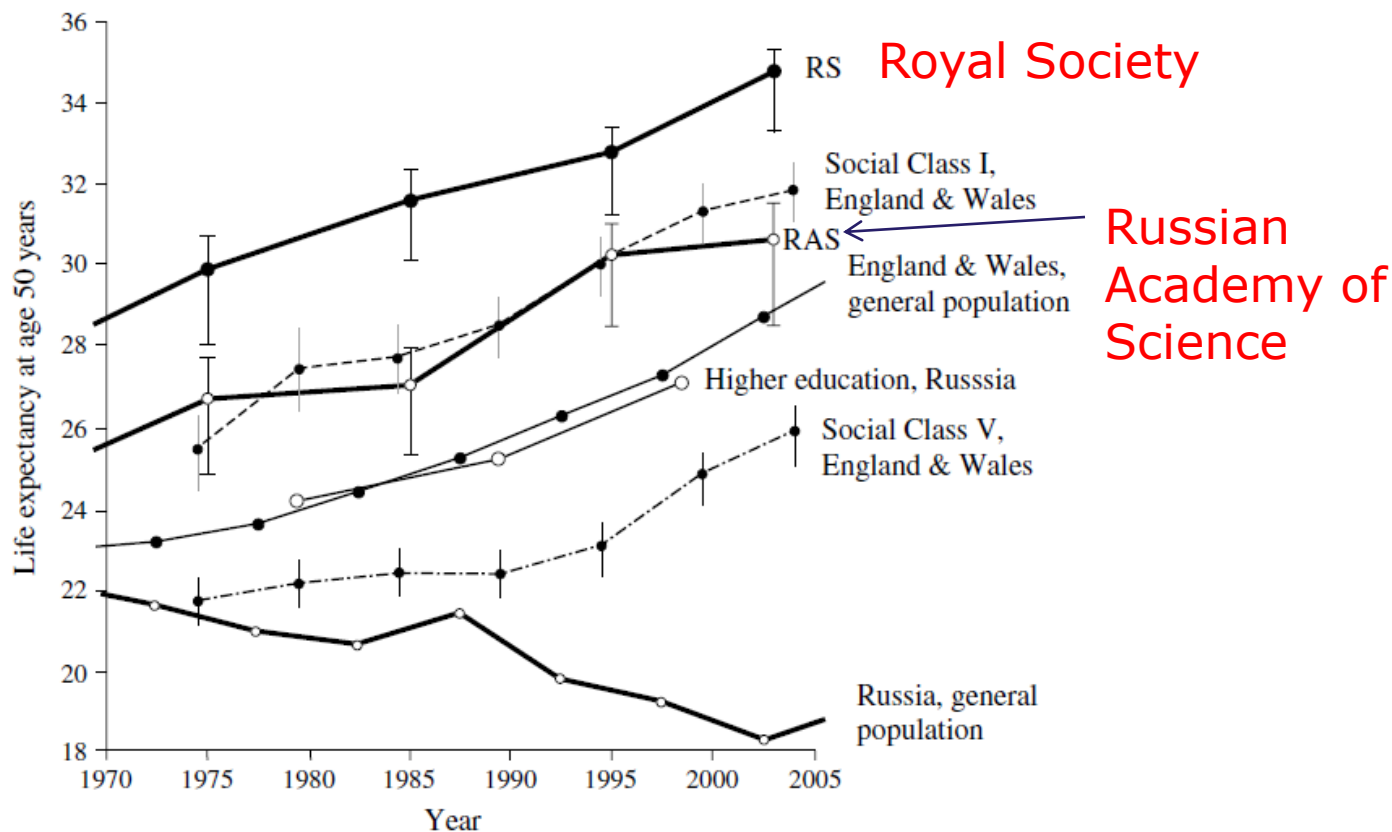
or

Differential vulnerability ?

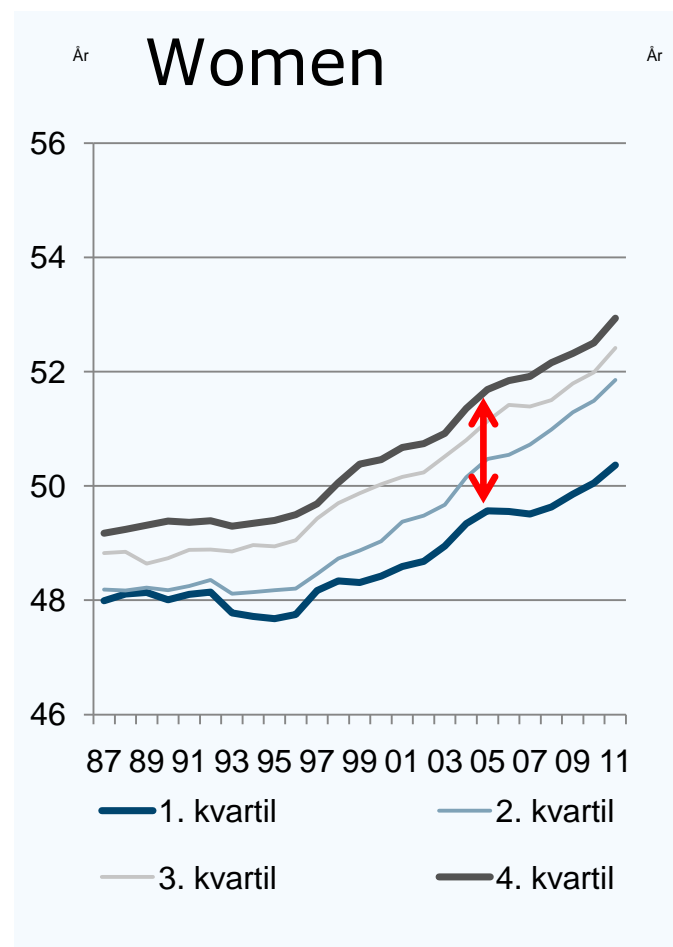
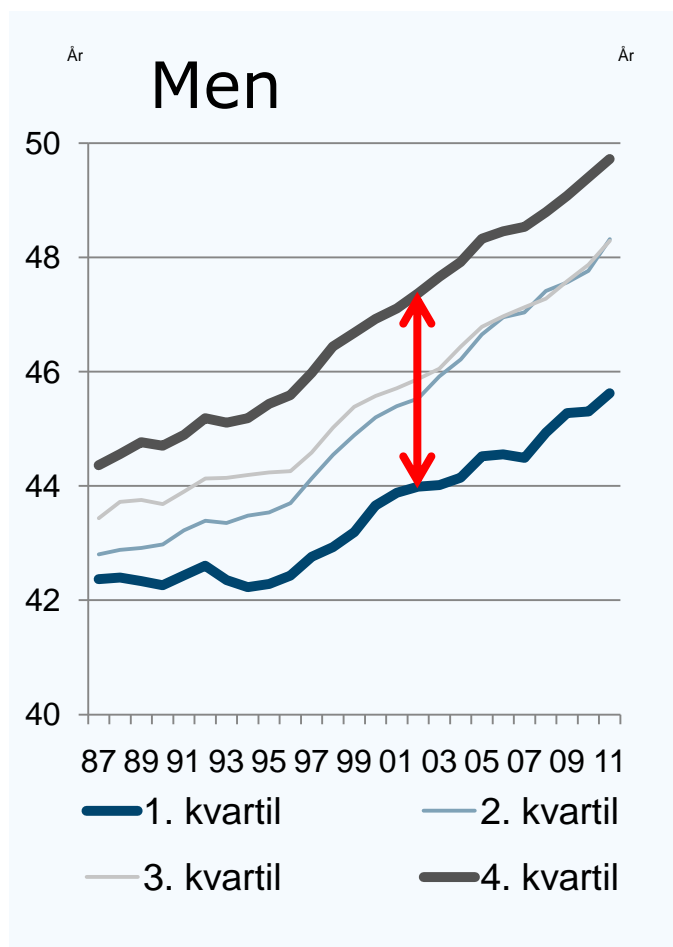


LE for 50 year old men -in England and Russia

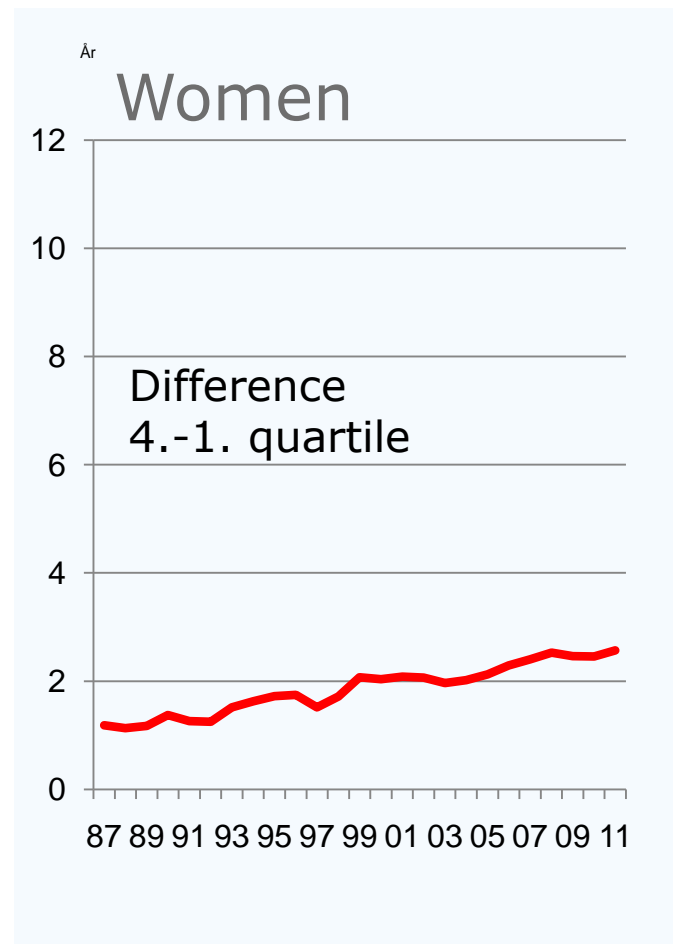
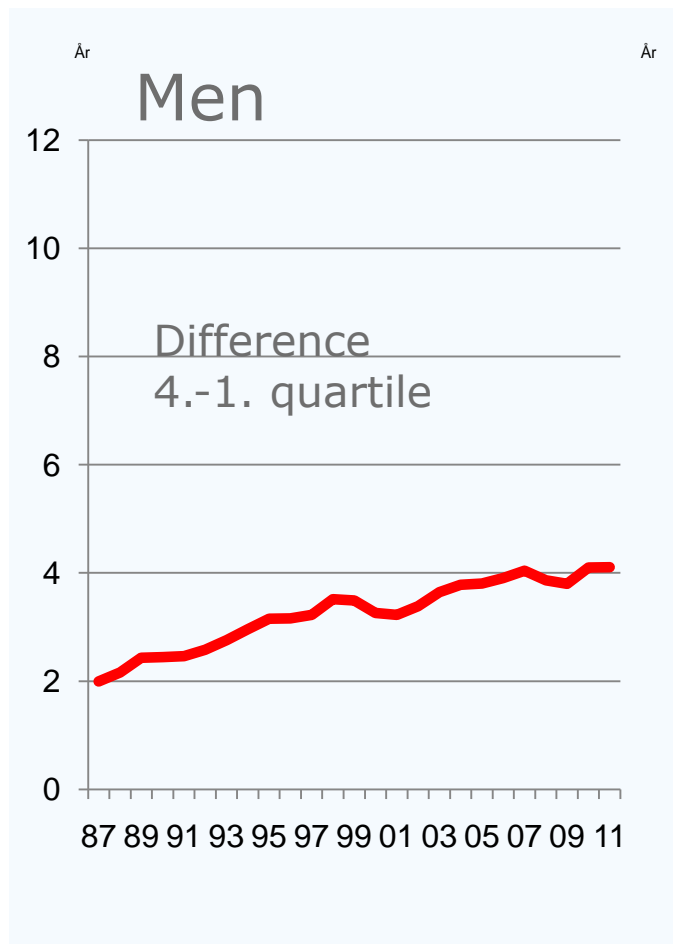
Andreev et al; Population Studies 2011;65:319-34



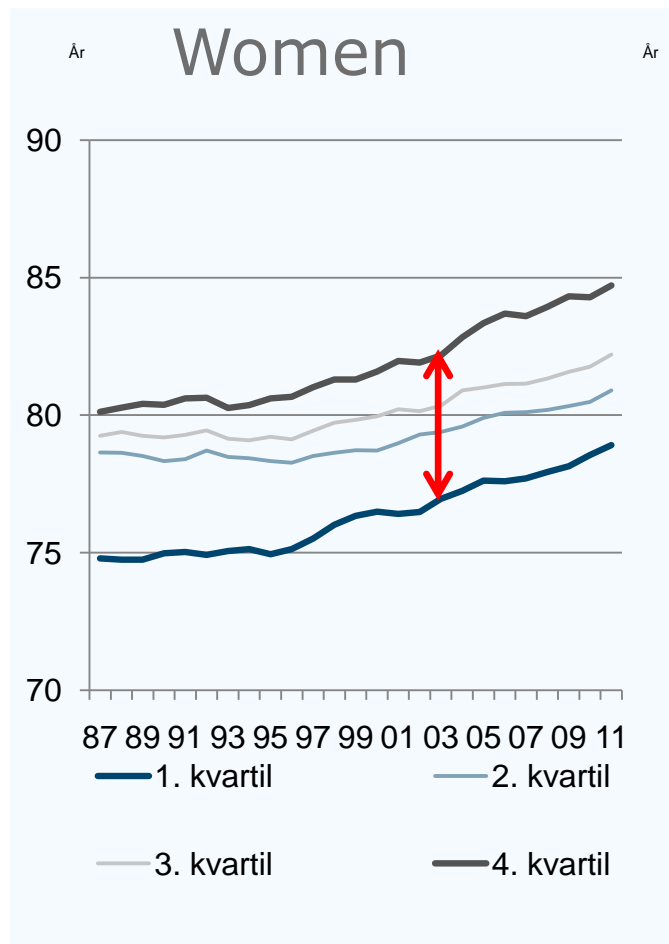
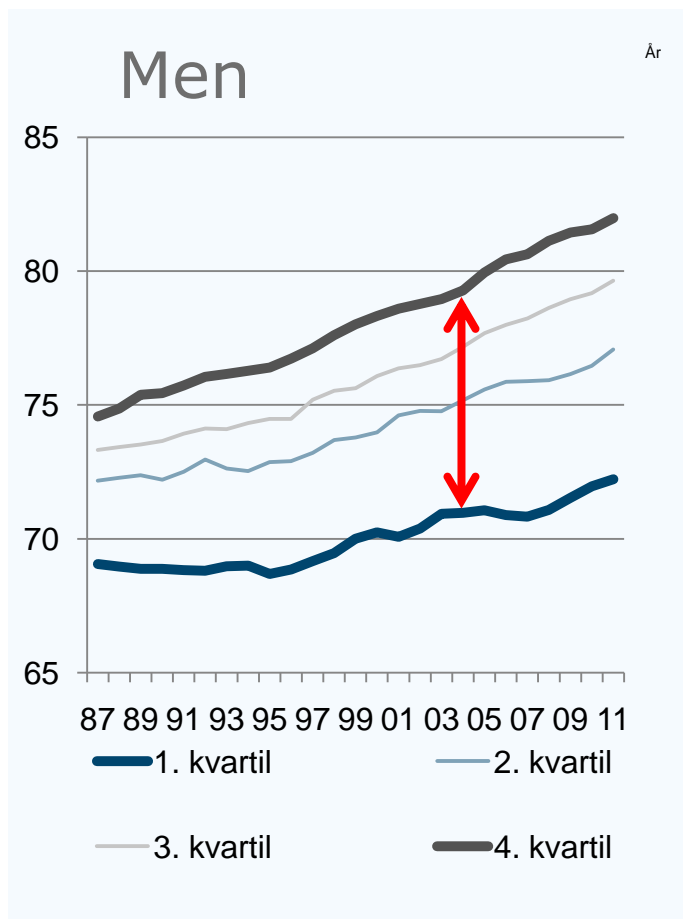
Growing educational differences in life-expectancy. Denmark 1987-2011. 30-year old men and women



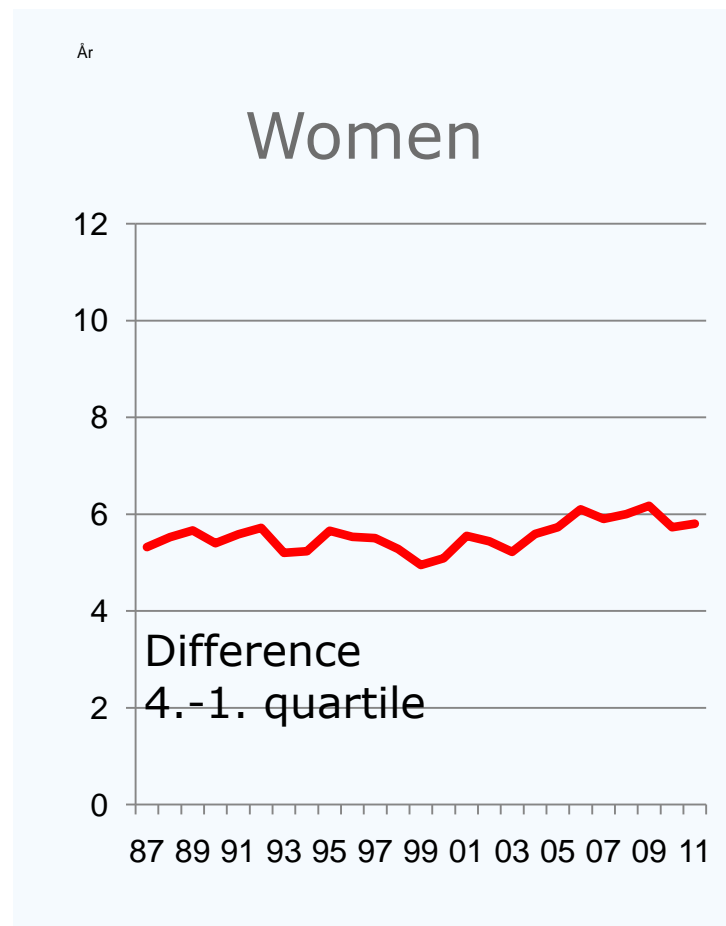
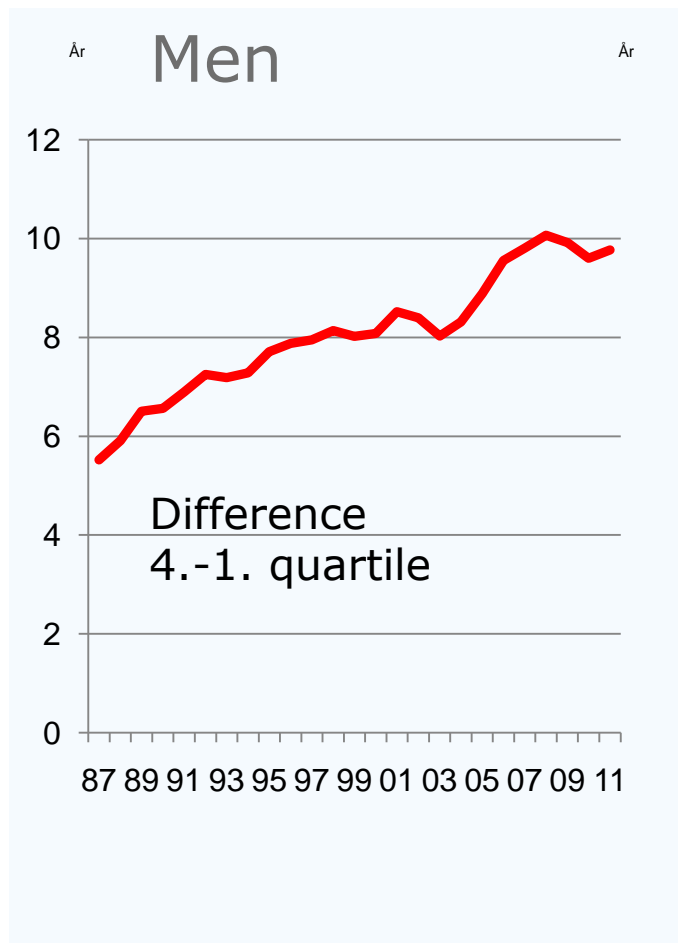
Larger educational differences for men than for women



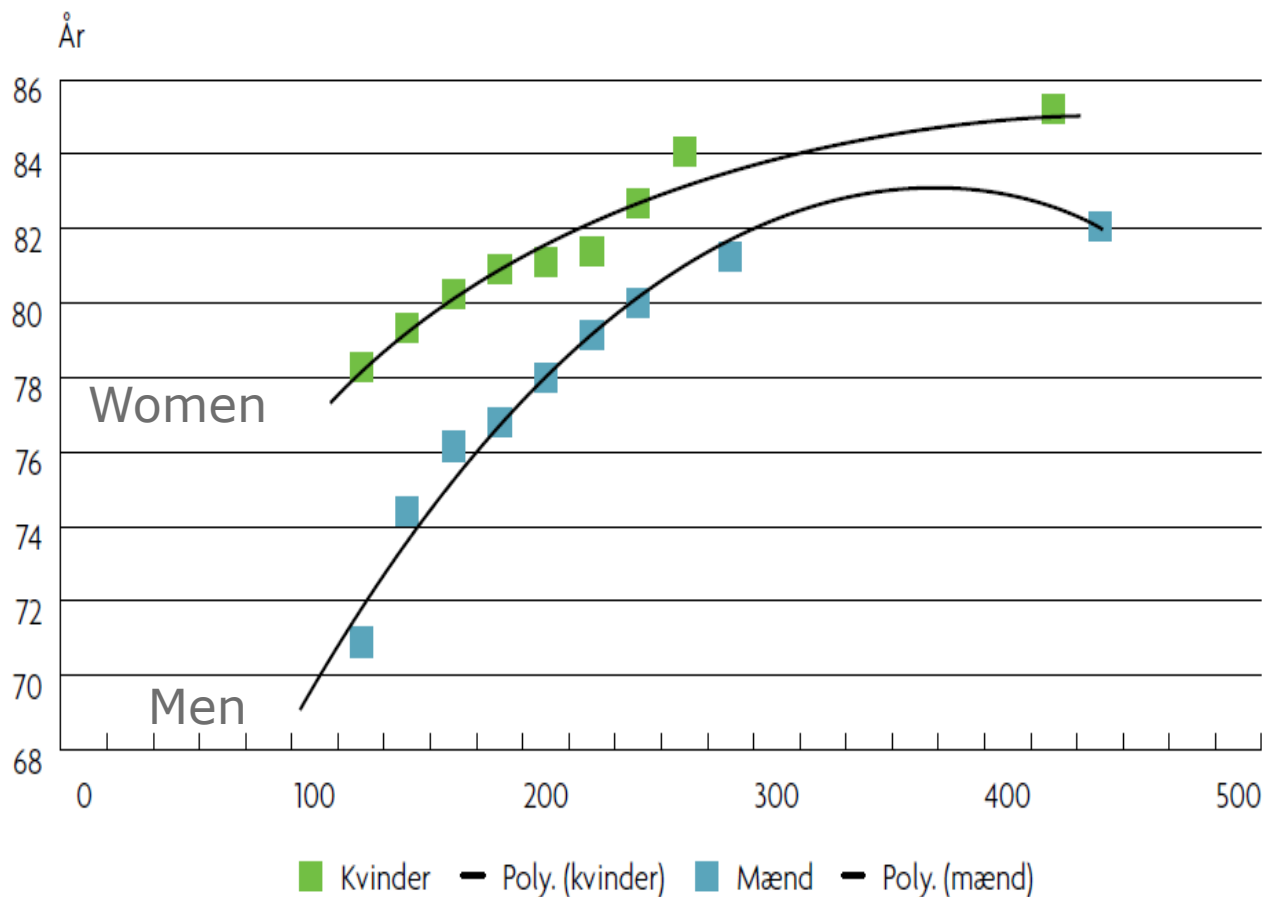
Much larger and also growing **income** differentials in life expectancy income as cause and effect of ill health Denmark 1987-2011:



Sharply growing inequality for **men** – persisting for **women**. Denmark 1987-2011

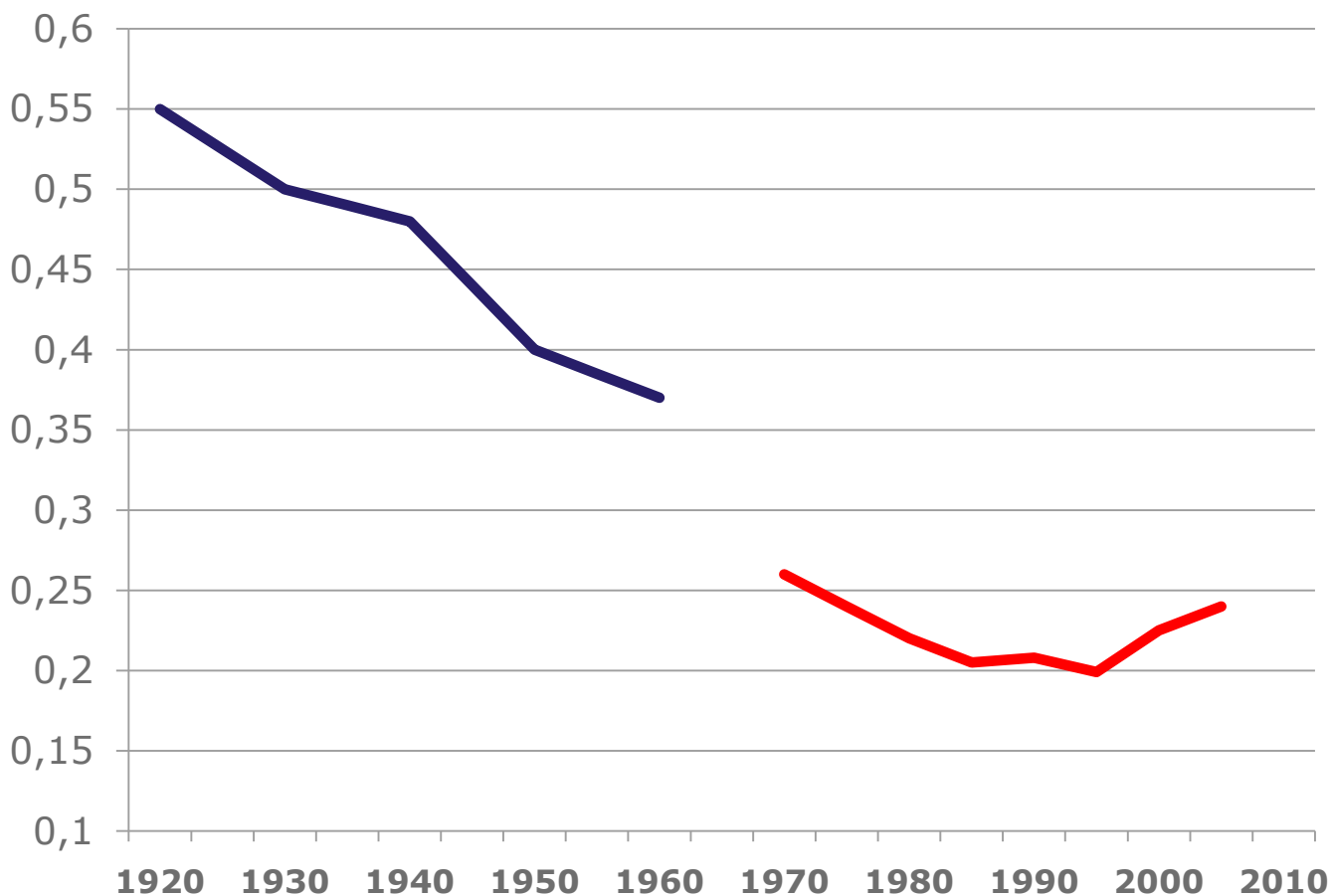


The curvilinear relationship between income (deciles in 1000 DKK) and life expectancy Denmark 2008-09.

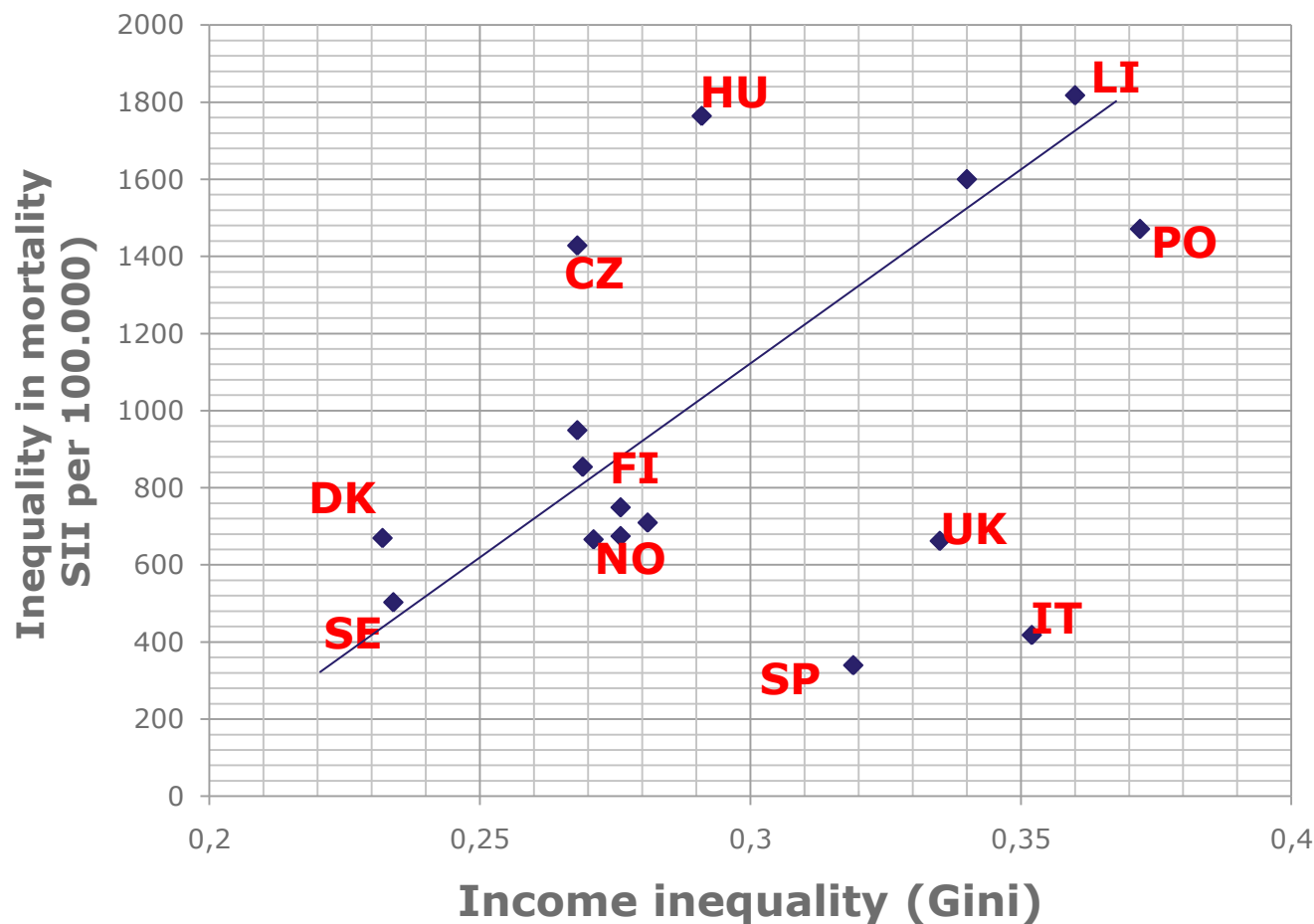


When the dying old were young: Income inequality (Gini) Denmark 1920-2005

Source Viby-Mogensen 2010



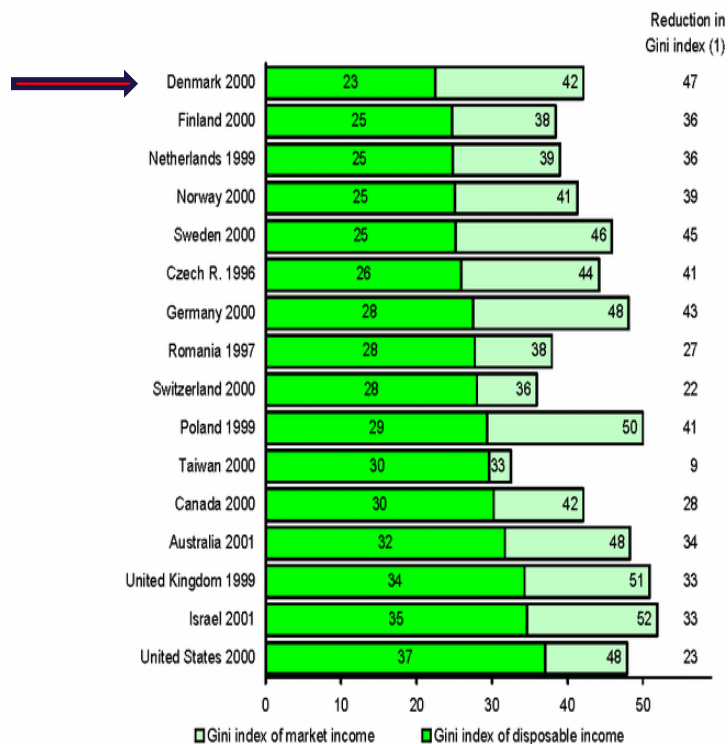
16 european countries: Income inequality (Gini) and educational inequality in mortality (SII per 100.000).



"The Scandinavian welfare paradox of health"

Hurrelman et al.: J.Publ.Health 2011

Figure 4. Gini Indices of Market Income and Disposable Income in 16 OECD Countries (percent)

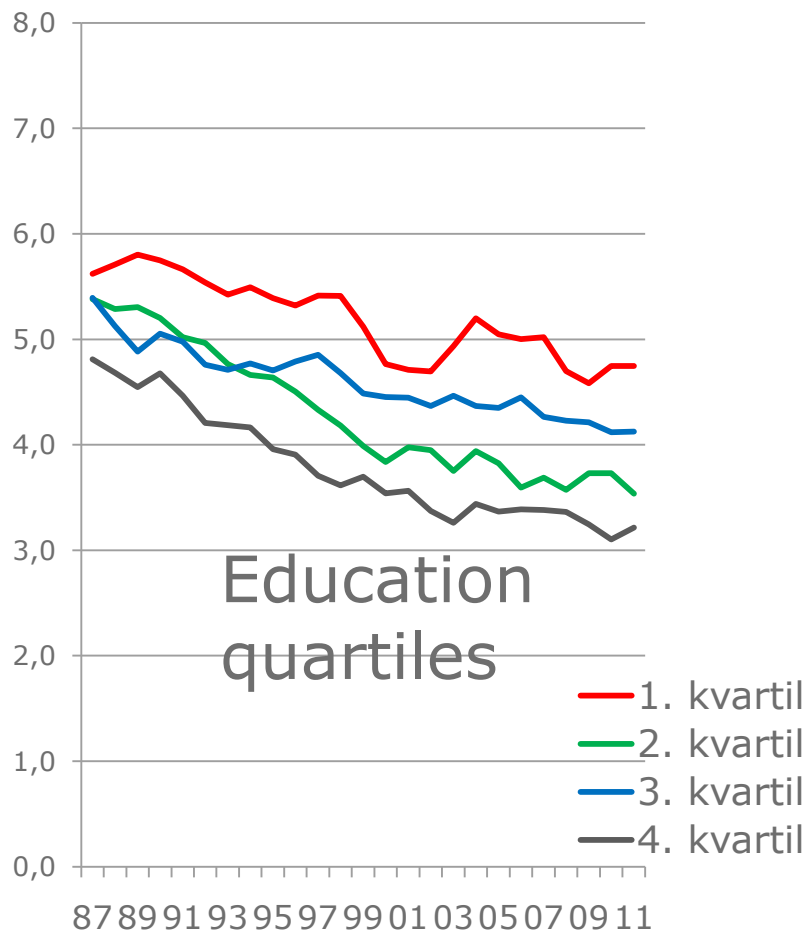
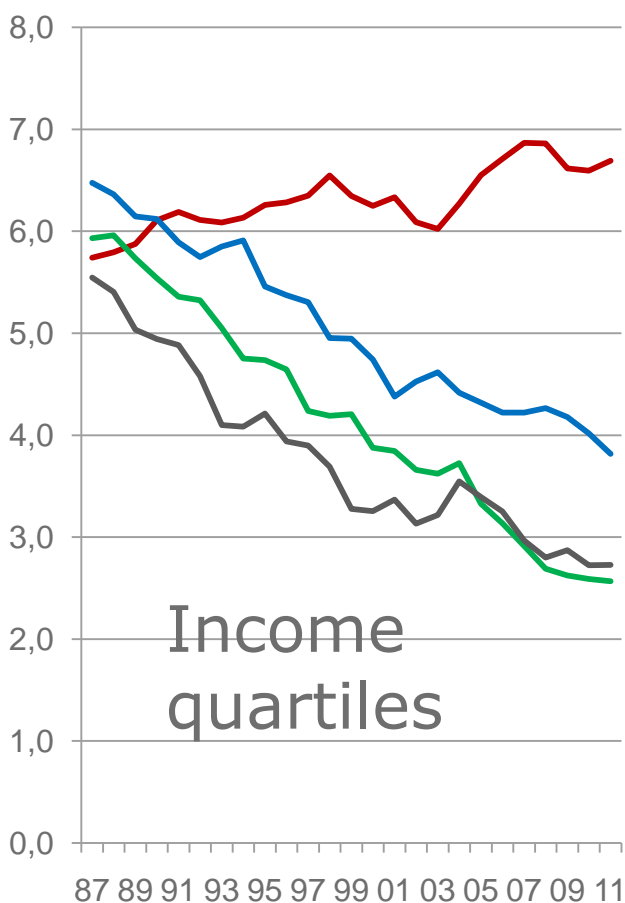


* Universal and preventive welfare state in a generation

* A century with falling income inequality

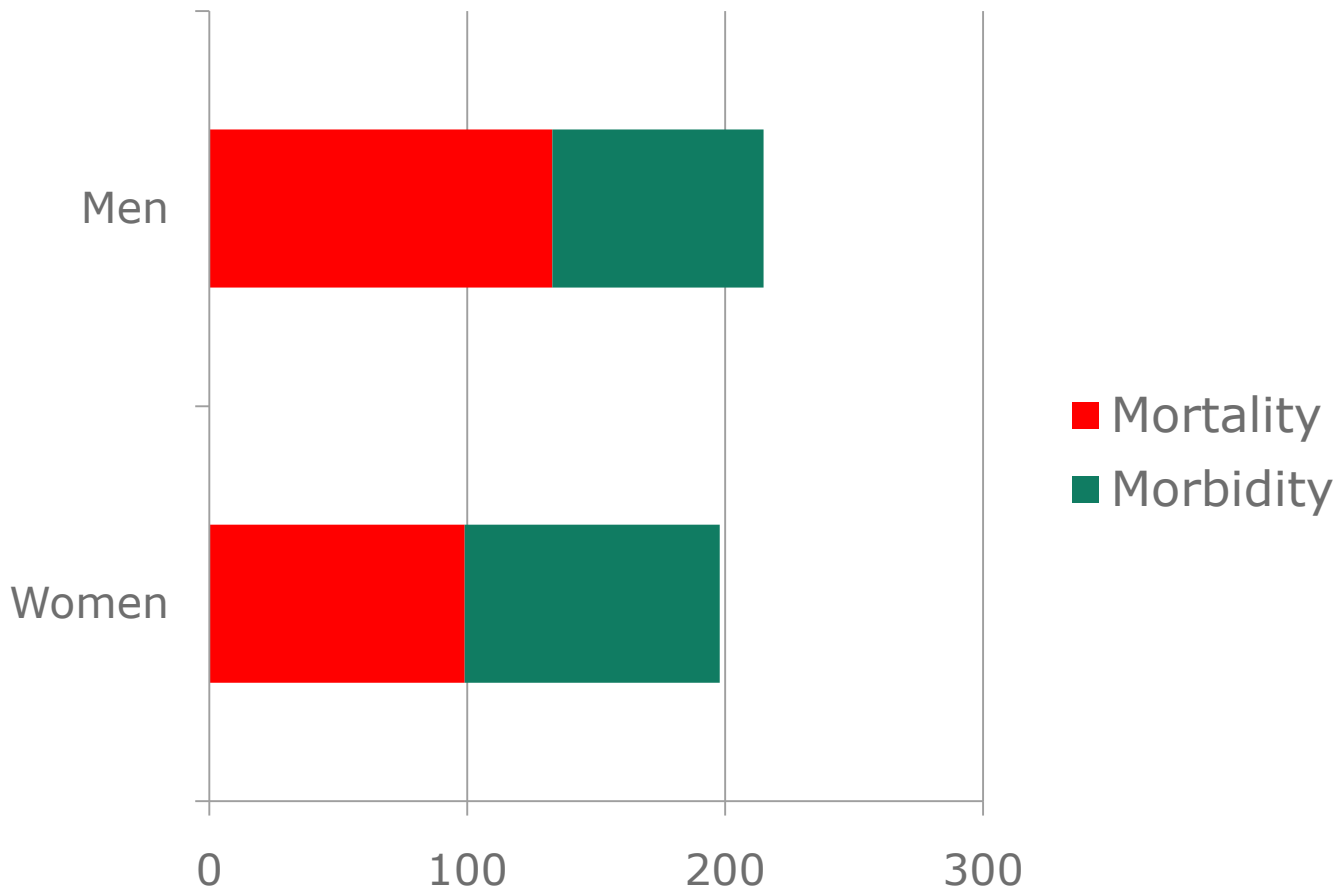
* 4 decades of growing social inequality of mortality in all age groups

Changing gender (**women – men**) differences in life expectancy across income- and education- quartiles



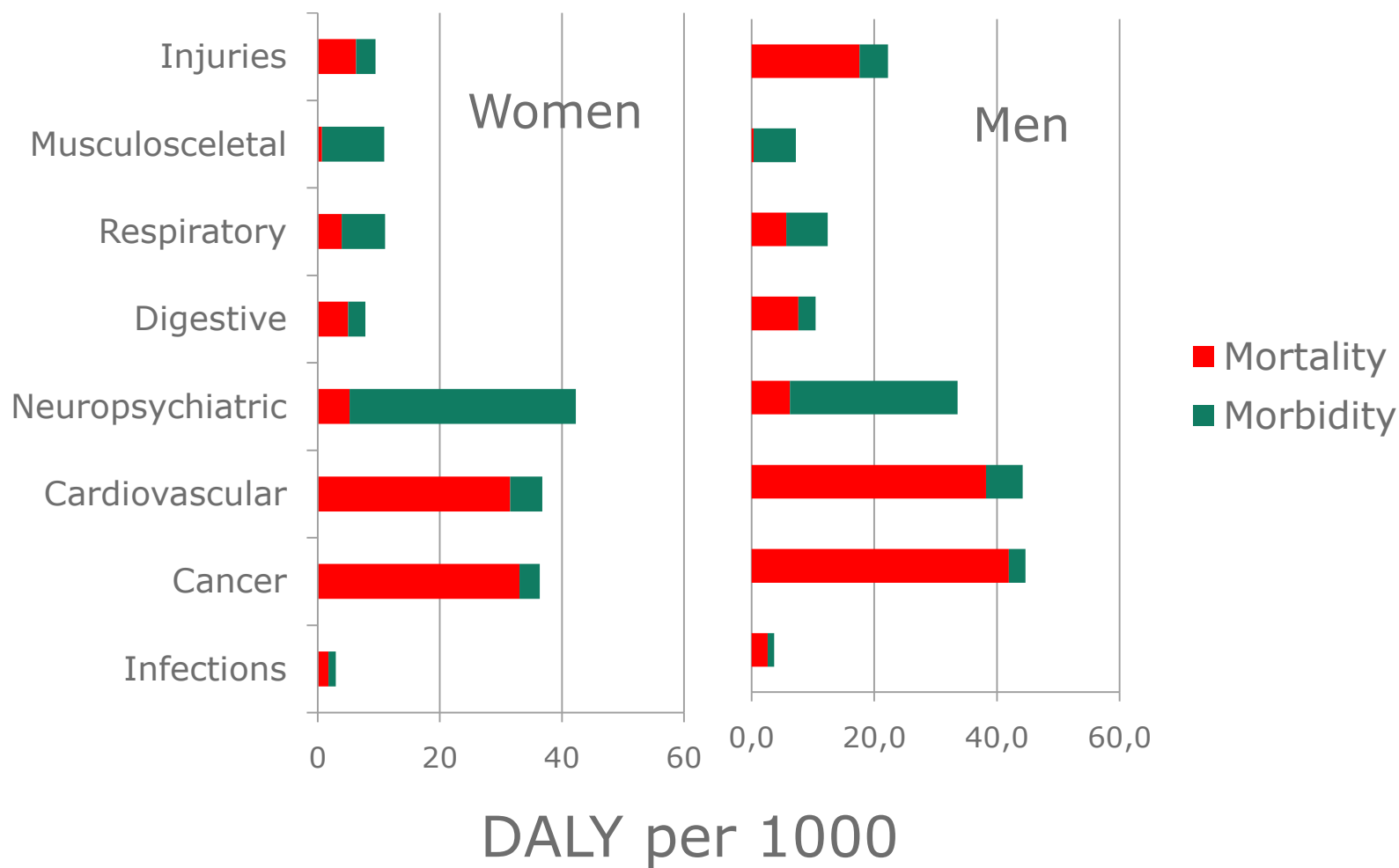
Burden of disease. West Europe 2004

DALY per 1000. WHO BoD 2009



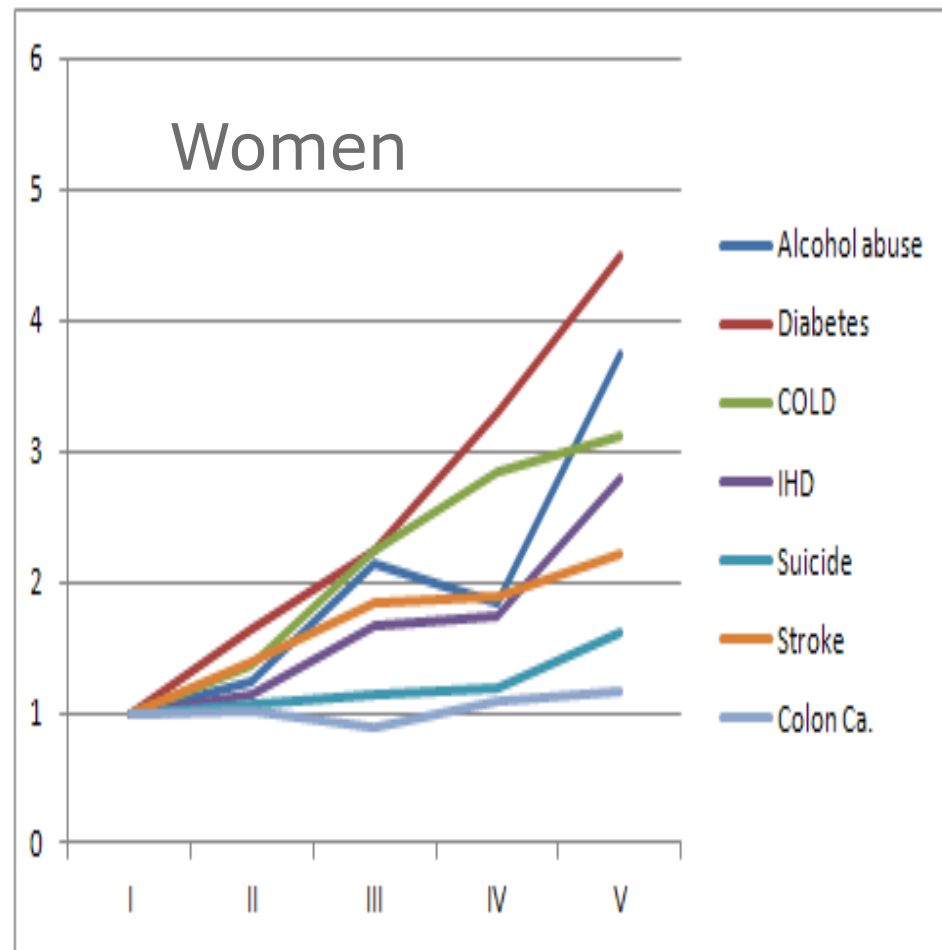
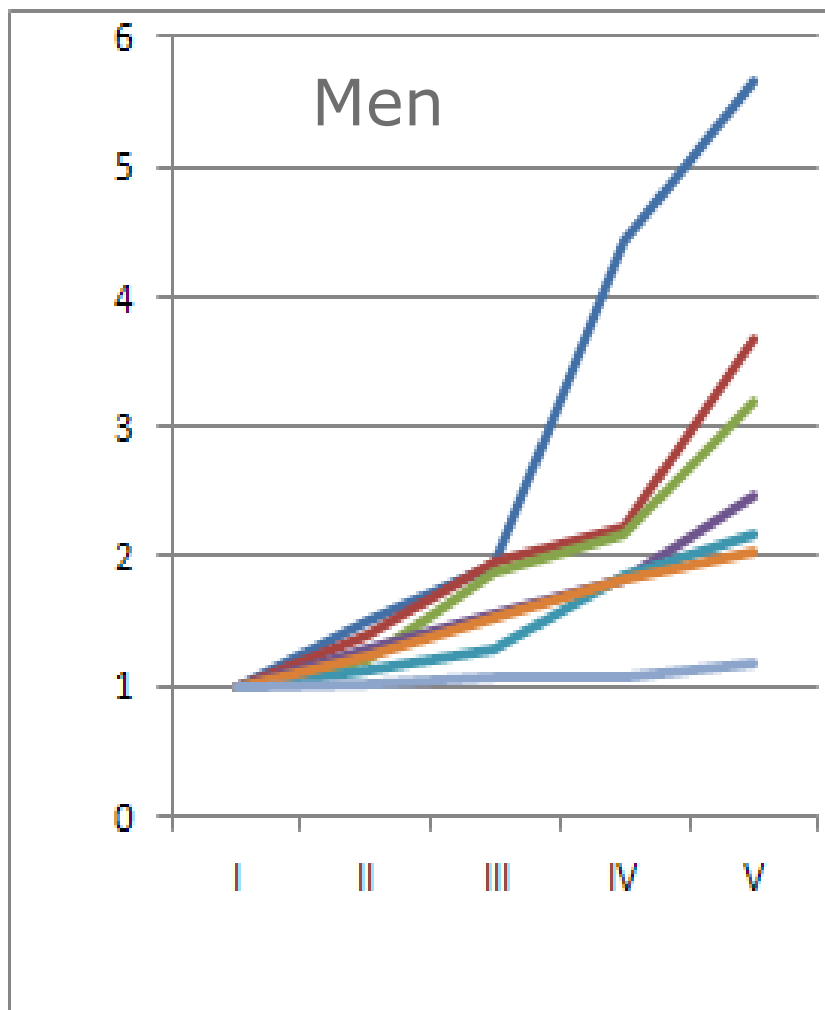
Gender praradox is not paradox – it is confounding by diagnosis

WHO: Burden of disease. West Europe 2004

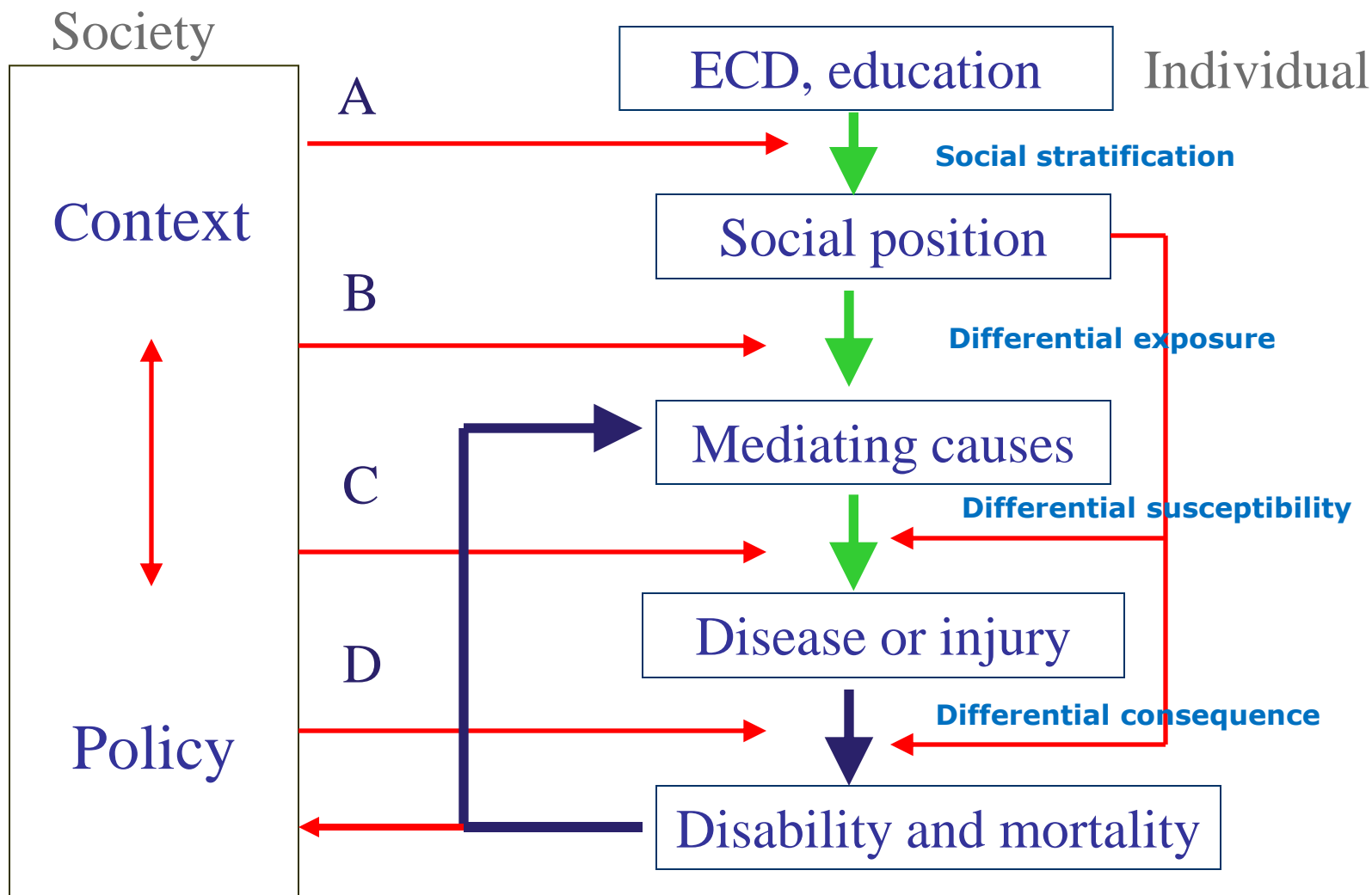


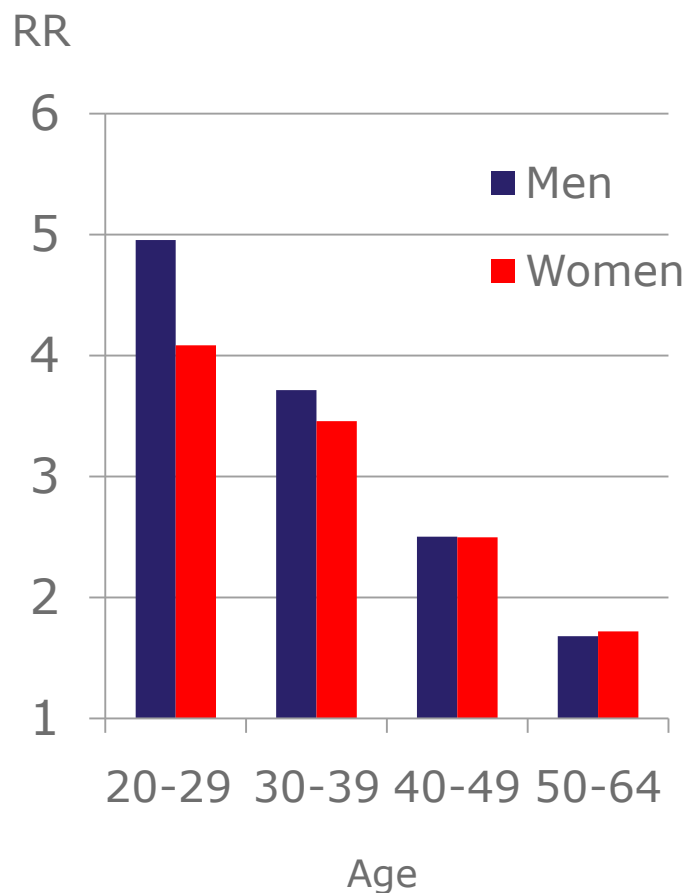
Similar gradients across disorders for men and women

(RR mortality 30-59 year Sweden). Erikson & Thorsander *EuJPH* 2008;18:473-78



Mechanisms of the gradient and the gap





Excess mortality (relative risk) among those not finishing any education after basic school

Differential exposure to social determinants ?

among men and women. Denmark 2010

	Men	Women
Unemployment	6,2	6,2
Only basic school when 30	23,5	21,8
Heavy lifting at work	38,3	24,6
Low decision latitude	14,2	17,0
High mental demands	11,9	17,8
Daily smoking	22,7	19,3
High alcohol consumption	13,3	8,0



Differential vulnerability to the health effects of social determinants?

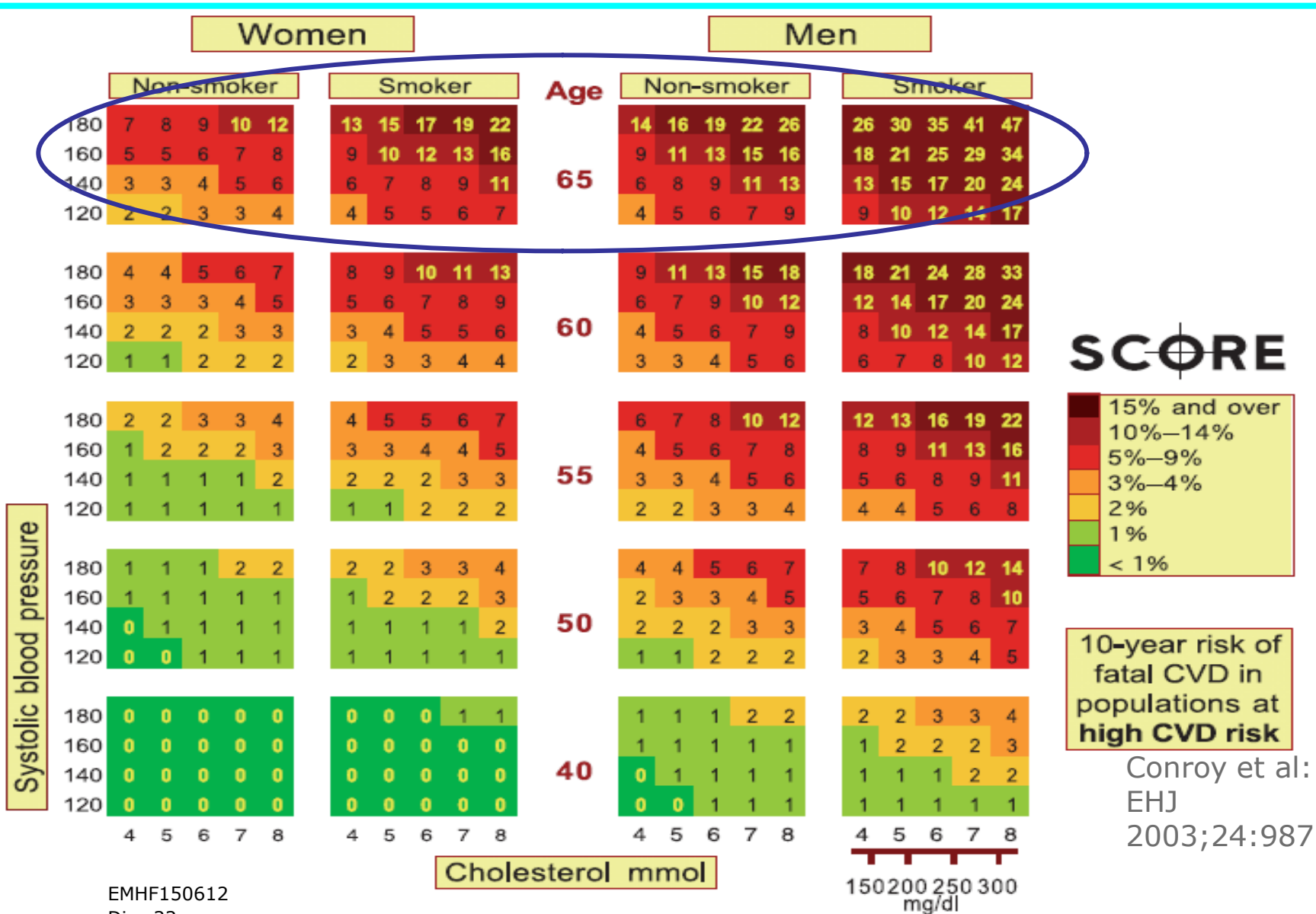
A slightly more complicated issue !

Differential vulnerability means differential size of health effects

- But what effect measure ?



Cardiovascular risk factors interact



Gender difference in vulnerability – depends on effect measure: 10 year risk for a fatal CVD attack for a 65 year old.

Relative effect: no gender difference

Absolute effect: large gender difference ..

	Men	Women	Relative risk: men vs women	Risk difference men vs. women
Smoker vs. Non-smoker	9 vs. 4	4 vs. 2	2,2 vs. 2,0	5 vs. 2
180 vs. 120 mmHg BP	14 vs. 4	7 vs. 2	3,5 vs. 3,5	10 vs. 5
8 vs. 4 mmol/l cholesterol	9 vs. 4	4 vs. 2	2,2 vs. 2,0	5 vs. 2



Effect (relative risk) of psychosocial work environment on incidence of common mental disorders. (Stansfeld ScJWEH 2006;32:443-62)

	Men	Women
High mental demands	1,6	1,3
Low decision latitude	1,2	1,2
Job strain	1,8	1,8
Low social support	1,4	1,2
Effort/reward imbalance	1,8	1,8

Since depression is more common among women – then the absolute effect might be stronger



Psychophysiological stress reactions to social determinants

Two examples:

Same cortisol response for men and women

Adrenalin response stronger for men, but compared to women in male dominated occupations



Explaining the growing social differentials:

The **clustering and interaction** of several social, behavioural and biological riskfactors among low educated – aggravates the role of both differential exposure and differential susceptibility.

The interaction is stronger among men than among women – may explain some of the steeper gradient for men.



Employment consequences of low education is stronger for women

Percentage out of workforce 3 years after hospital discharge 2006 depending on education and diagnosis .Agestandardized 25-59 years

	Men		Women	
	Basic school	Higher education	Basic school	Higher education
Whole population	25	4	33	3
Injuries	26	5	42	5
Cancer	39	8	43	8
Cardiovascular dis.	45	13	52	9
Psychiatry	71	38	74	30
Prescr. psychotrop.drugs	58	14	59	12





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Thank you for your time !

