

# Inequality and Social Dysfunction

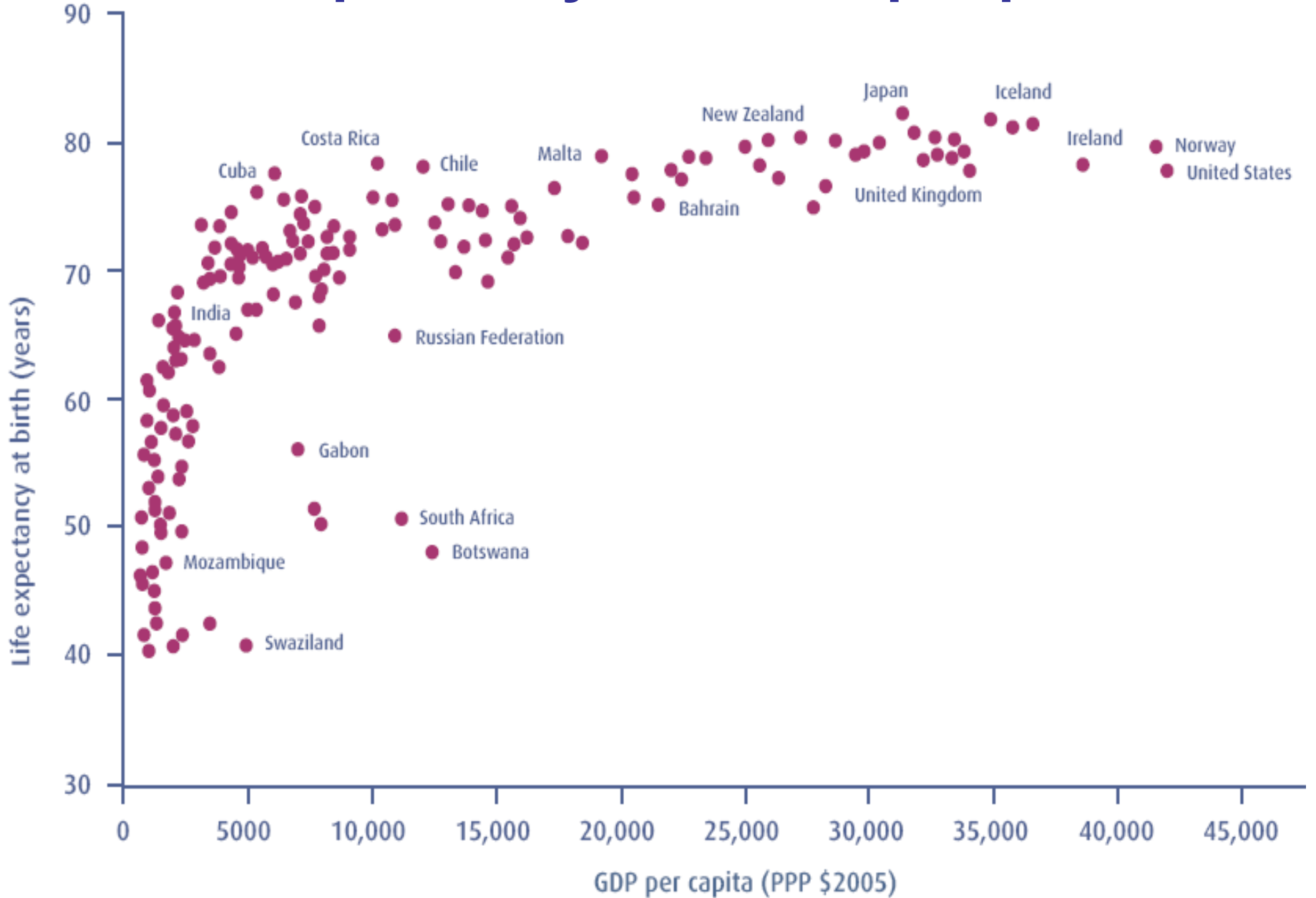
**Richard Wilkinson**

Emeritus Professor of Social Epidemiology

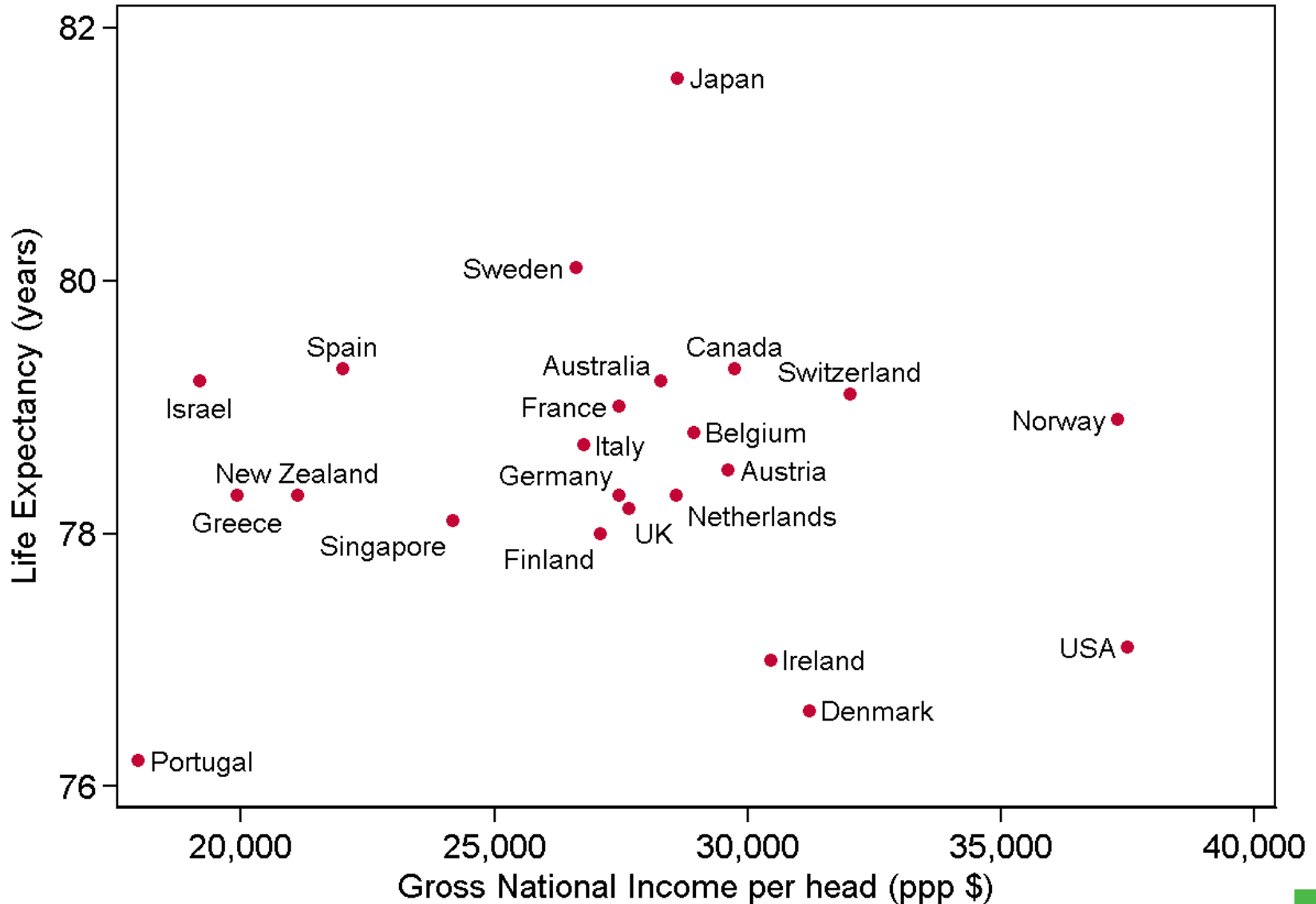


Photo by kind permission of Matt Stuart

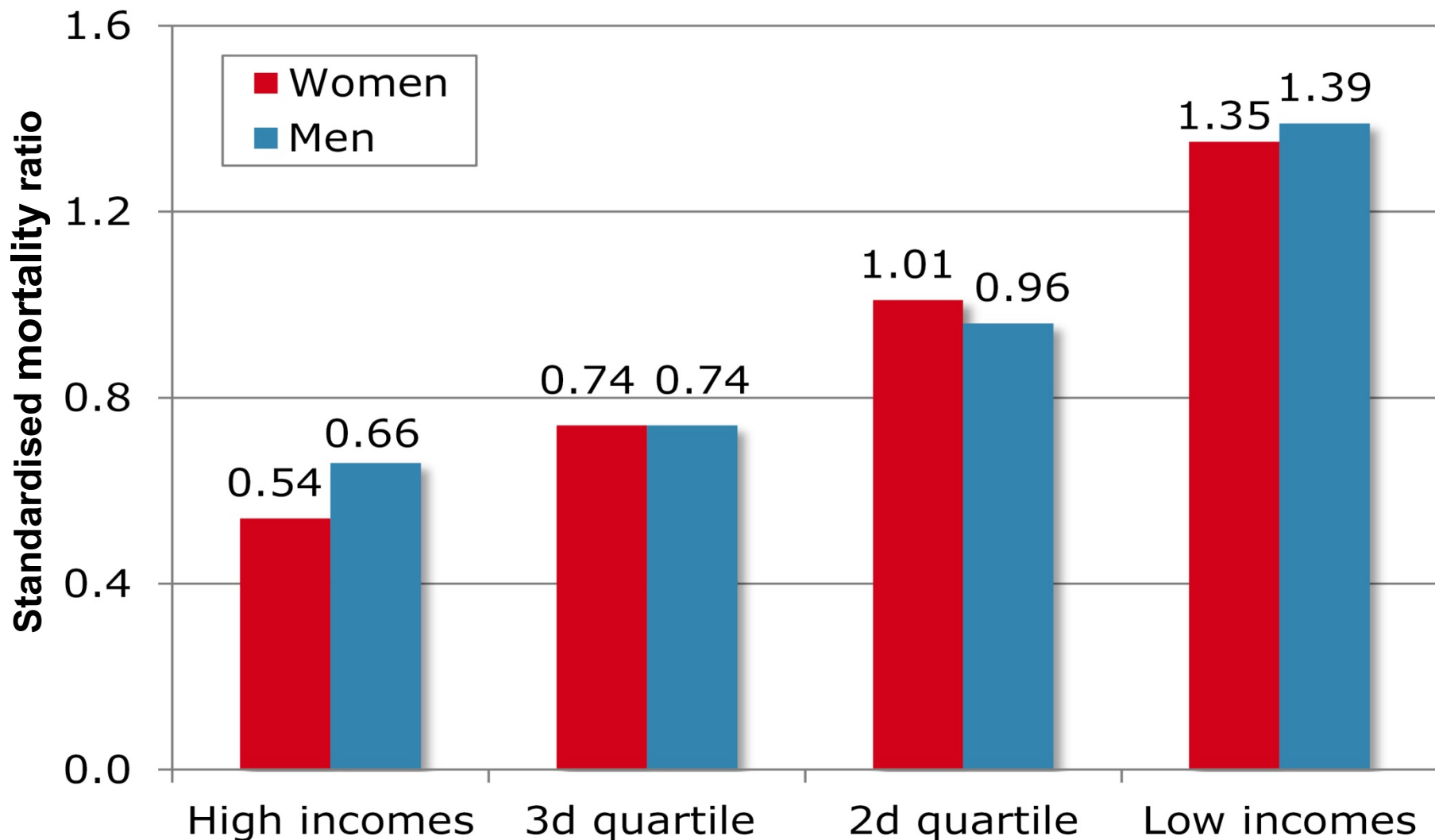
# Life expectancy and GDP per person



# Life expectancy in rich countries is no longer related to National Income per head



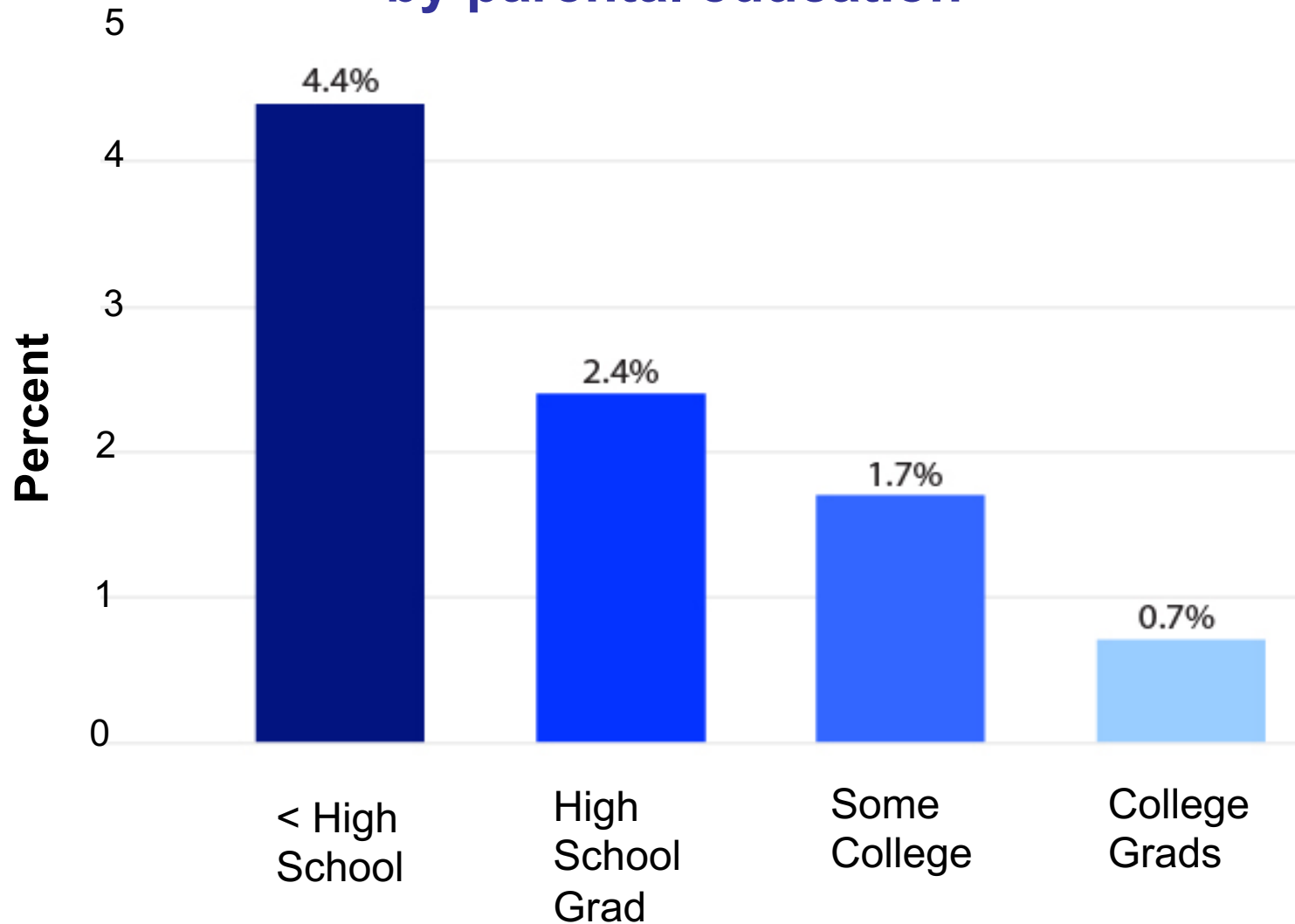
# Within countries, death rates rise as incomes fall



Source: Brookings Institution.

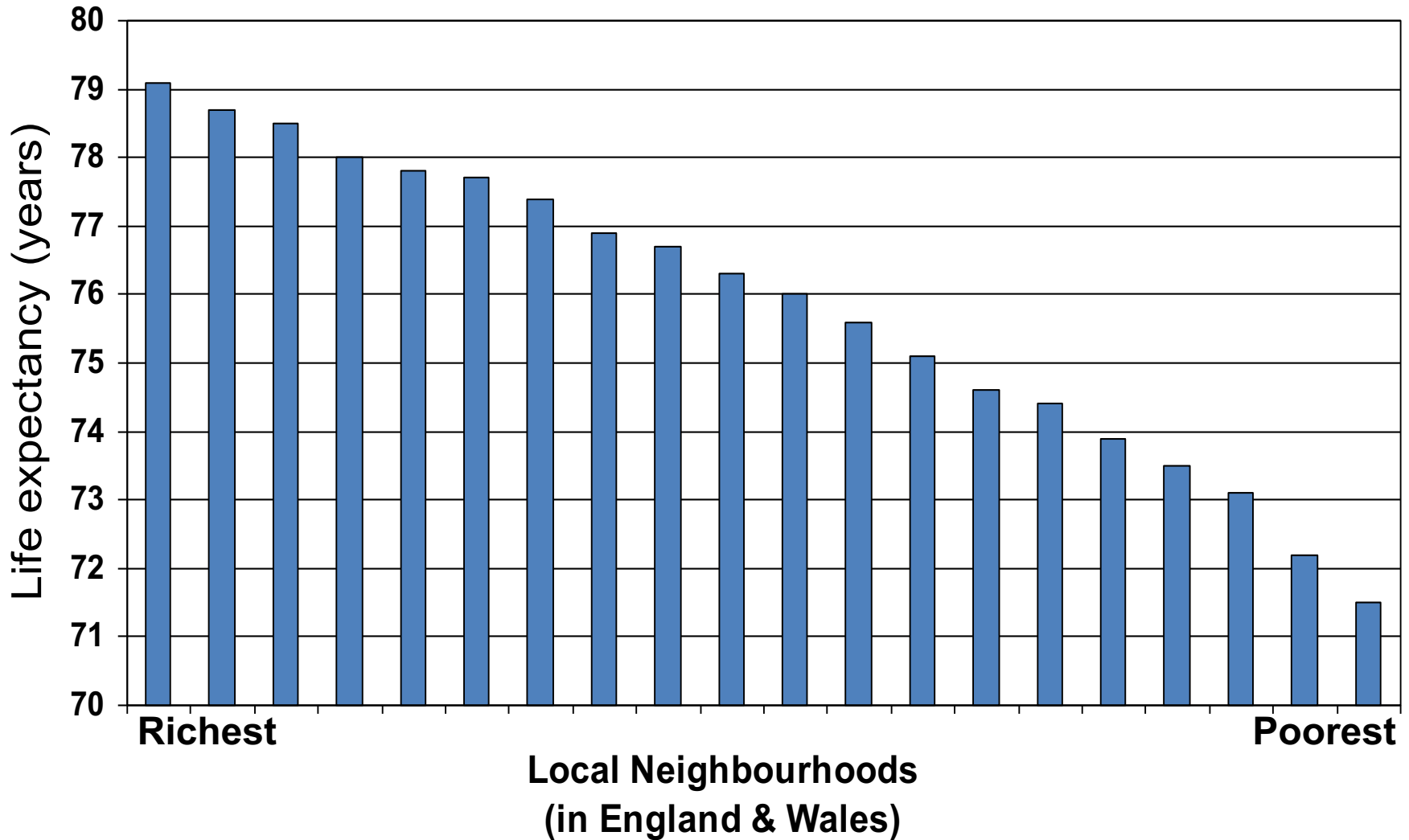
\* Annual death rates shown between 1992 and 2010 for individuals ages 50-74.

# Percent of US 17yr olds with only Poor/Fair Health by parental education



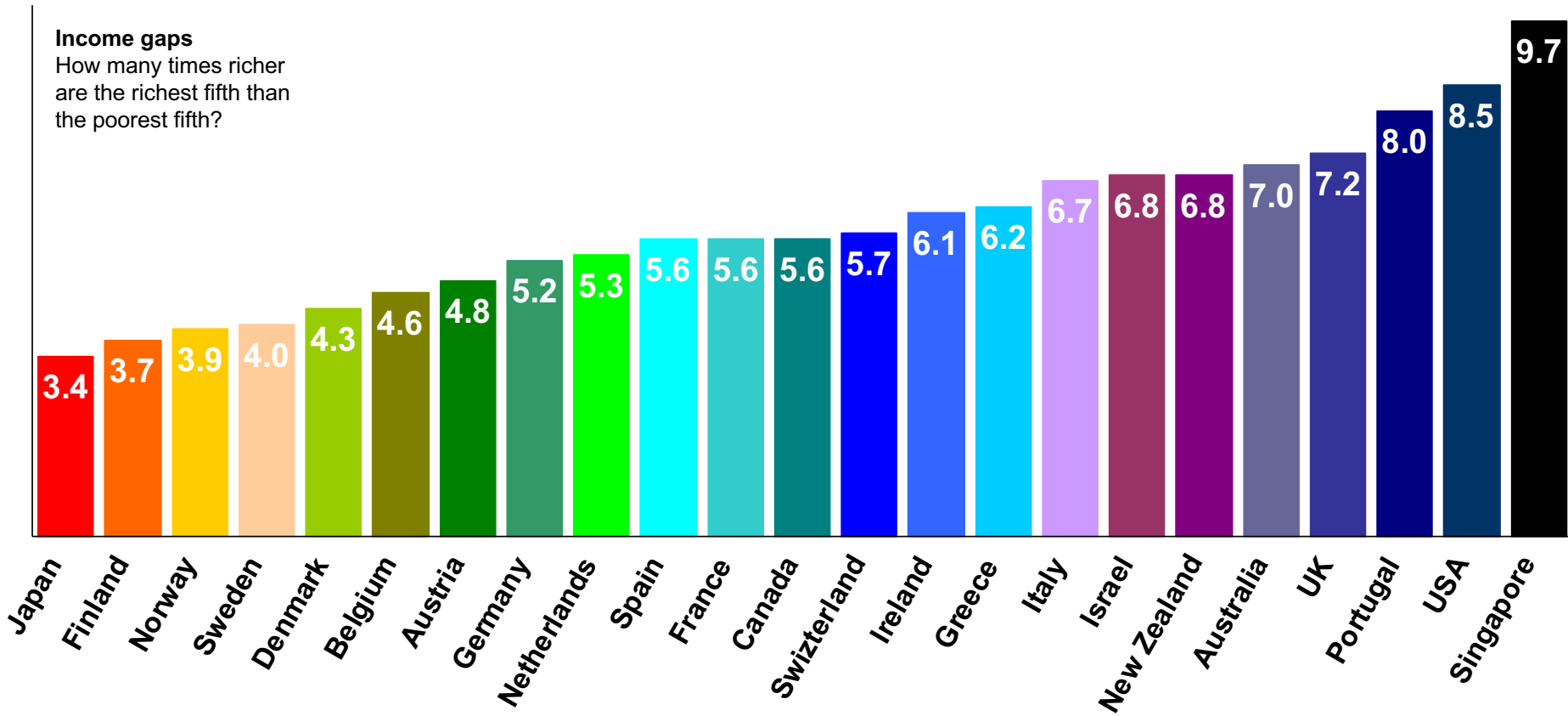
Commission to Build A Healthier America, *Education Matters for Health*, Issue Brief 6, Princeton, RWJF, 2009. Data: National Health Interview Survey, 2001-2005.

# Life expectancy is strongly related to income within rich countries

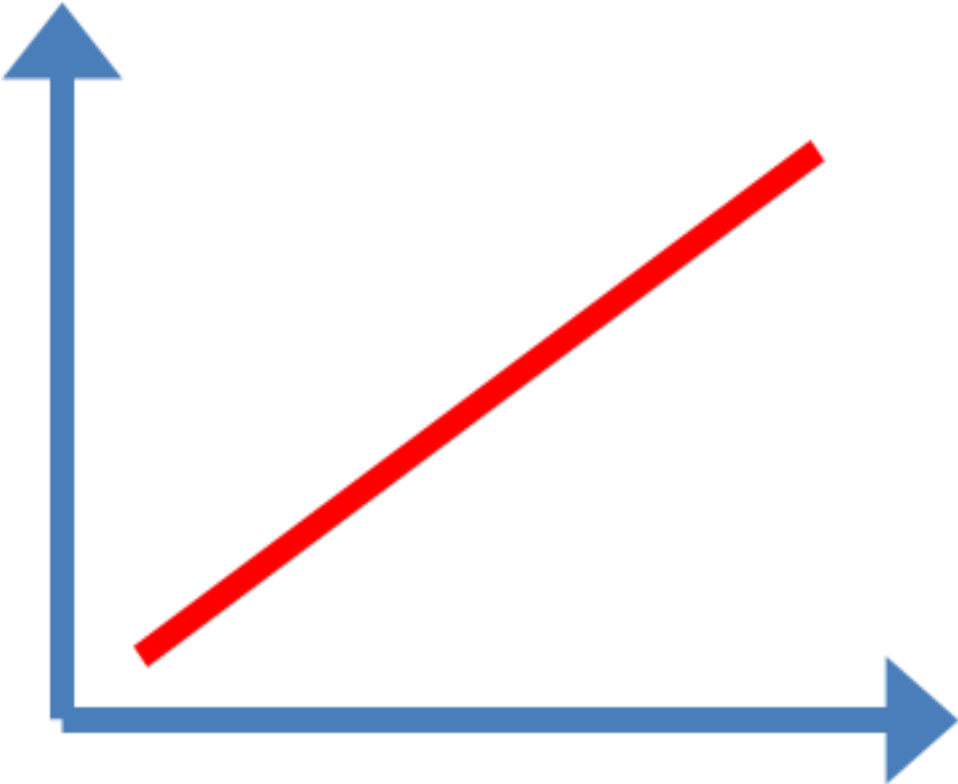


# Inequality...

## How much richer are the richest 20% in each country than the poorest 20%?



**Problems**



**Income  
inequality**



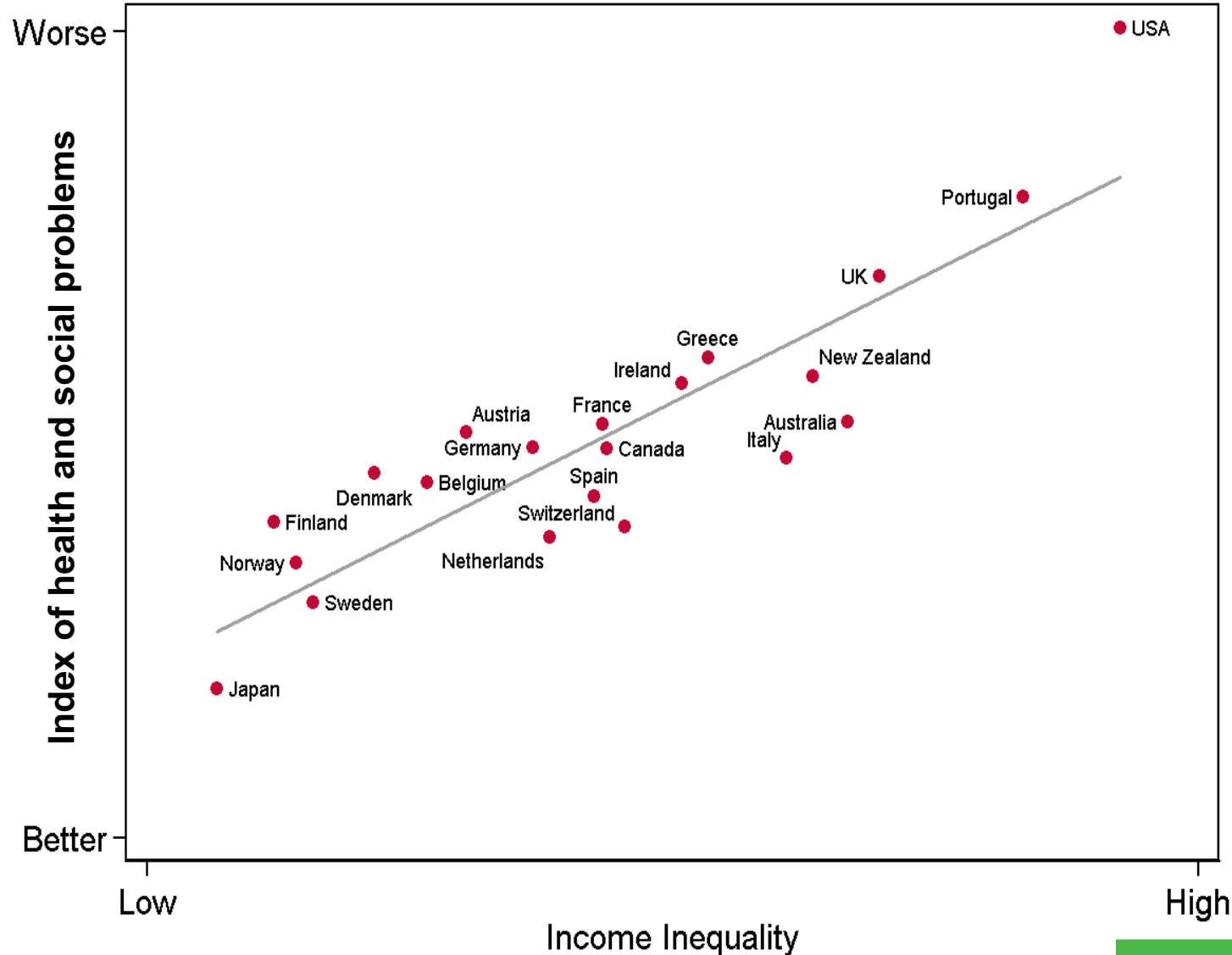
# Health and social problems with social gradients and internationally comparable data

- Life expectancy
- Math & Literacy
- Infant mortality
- Homicides
- Imprisonment
- Teenage births
- Trust
- Obesity
- Mental illness – incl. drug & alcohol addiction
- Social mobility

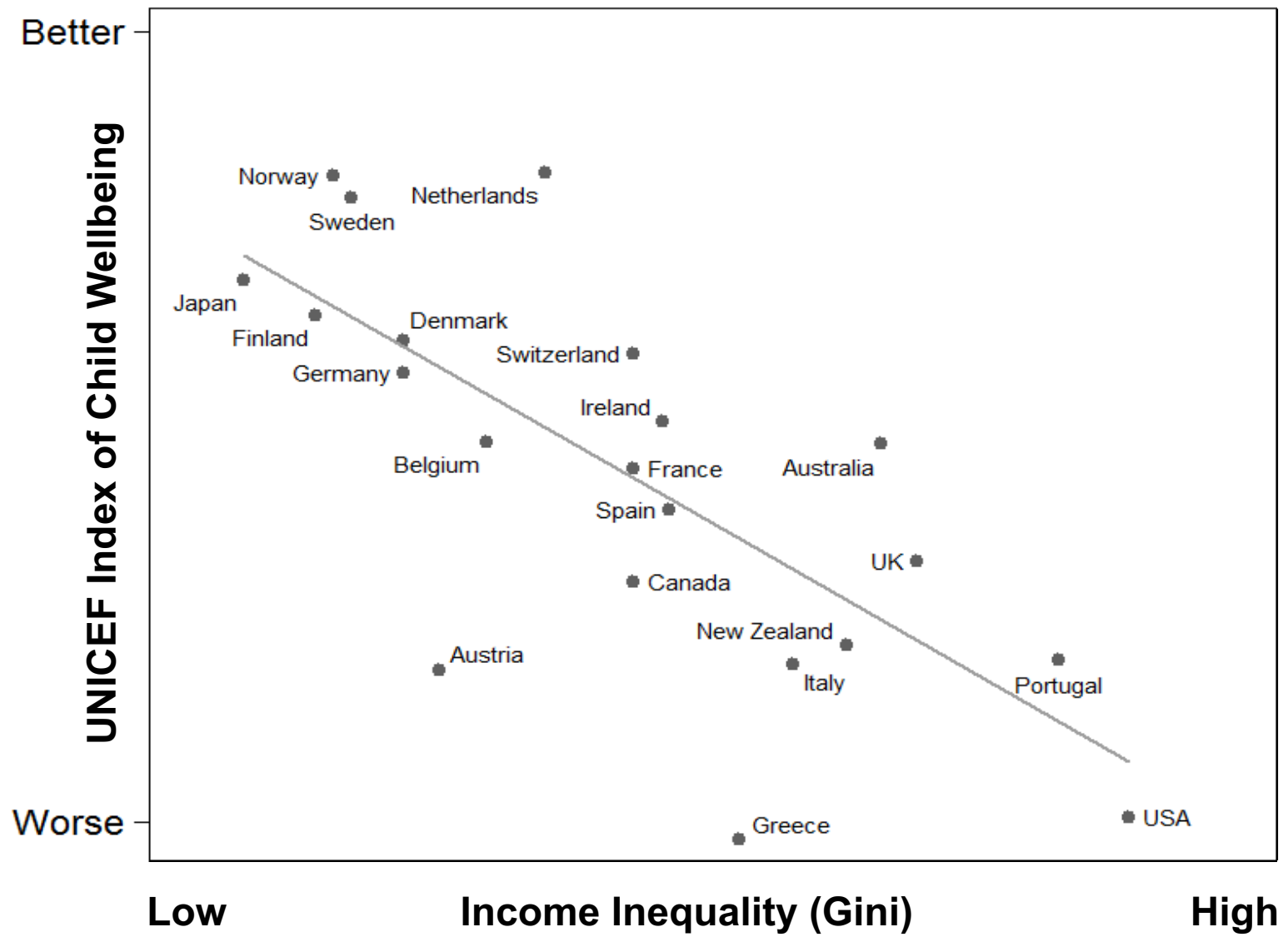
# Health and social problems are worse in more unequal countries

Index of:

- Life expectancy
- Math & Literacy
- Infant mortality
- Homicides
- Imprisonment
- Teenage births
- Trust
- Obesity
- Mental illness – incl. drug & alcohol addiction
- Social mobility

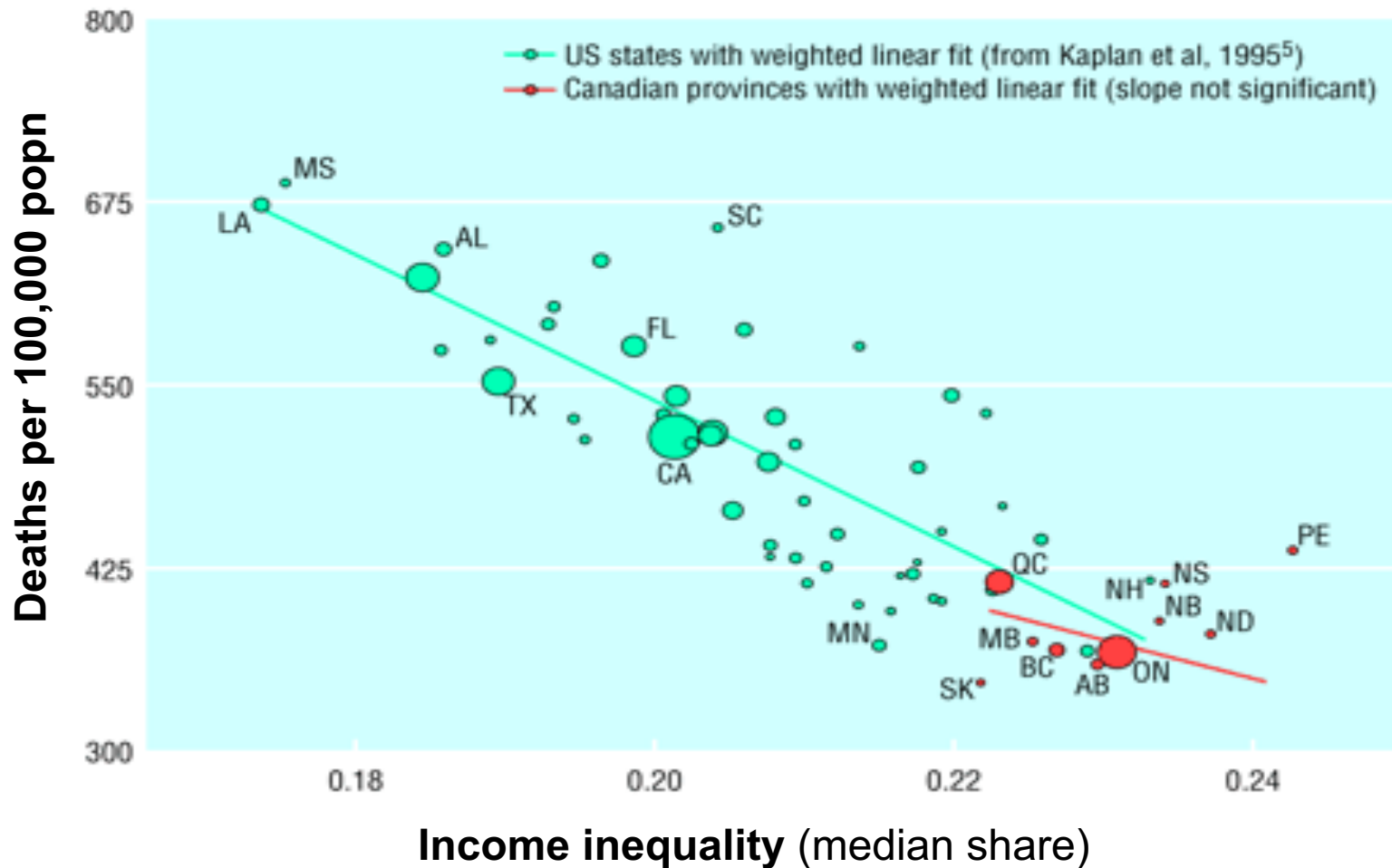


# Child Wellbeing is lower in more unequal countries

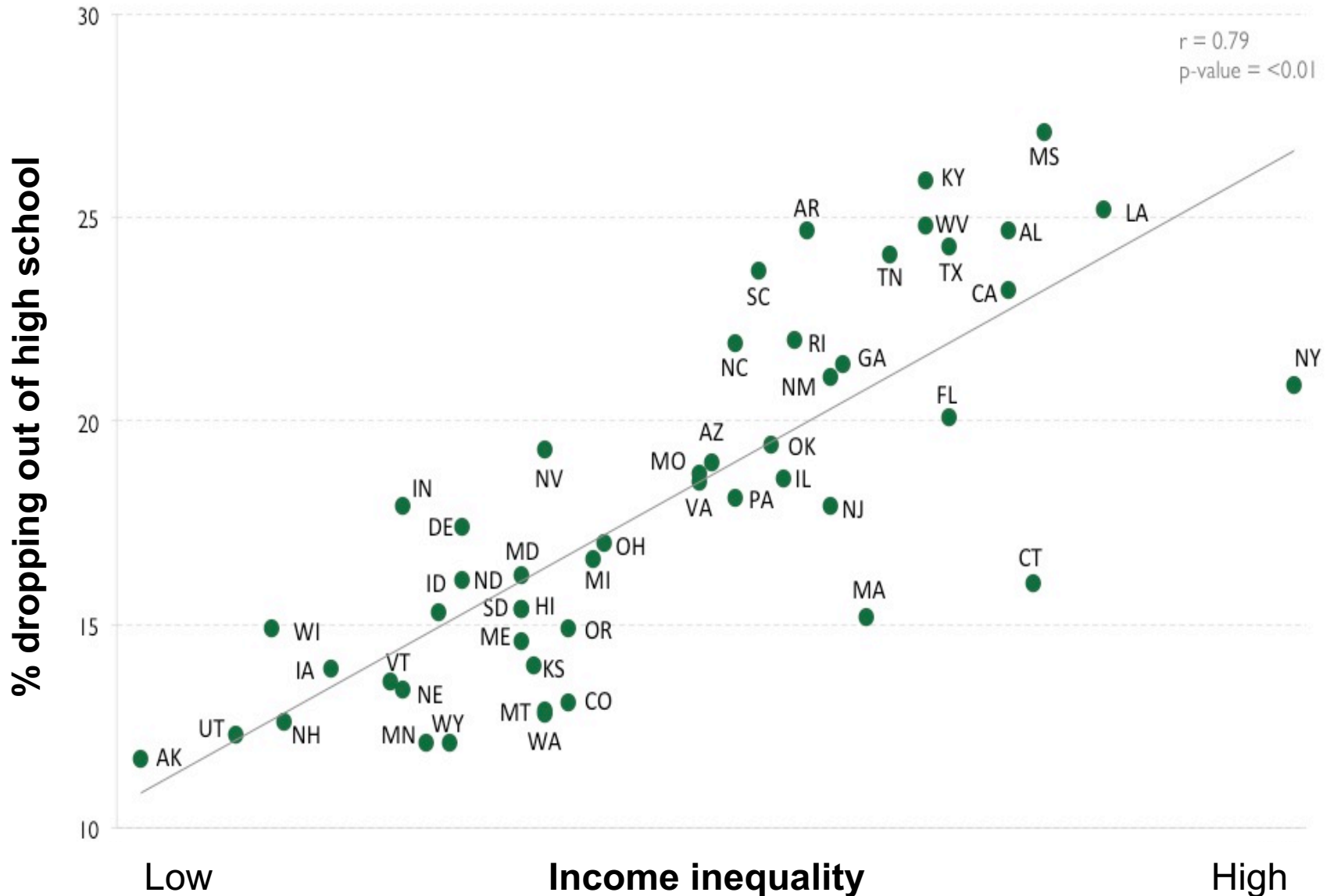


# Death rates of men 25-64yrs & income inequality

## US states and Canadian provinces



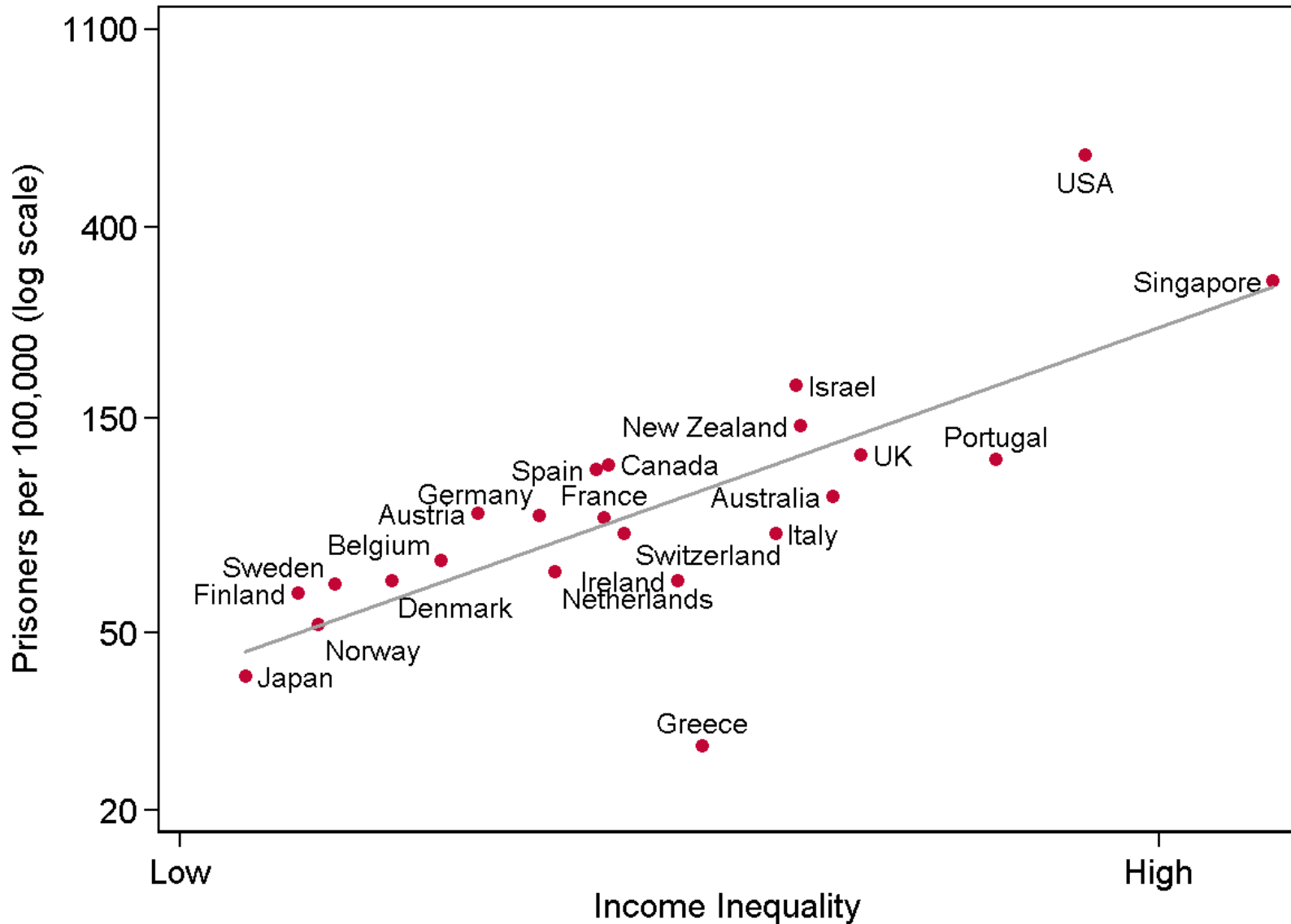
# More children drop out of High School in more unequal US states



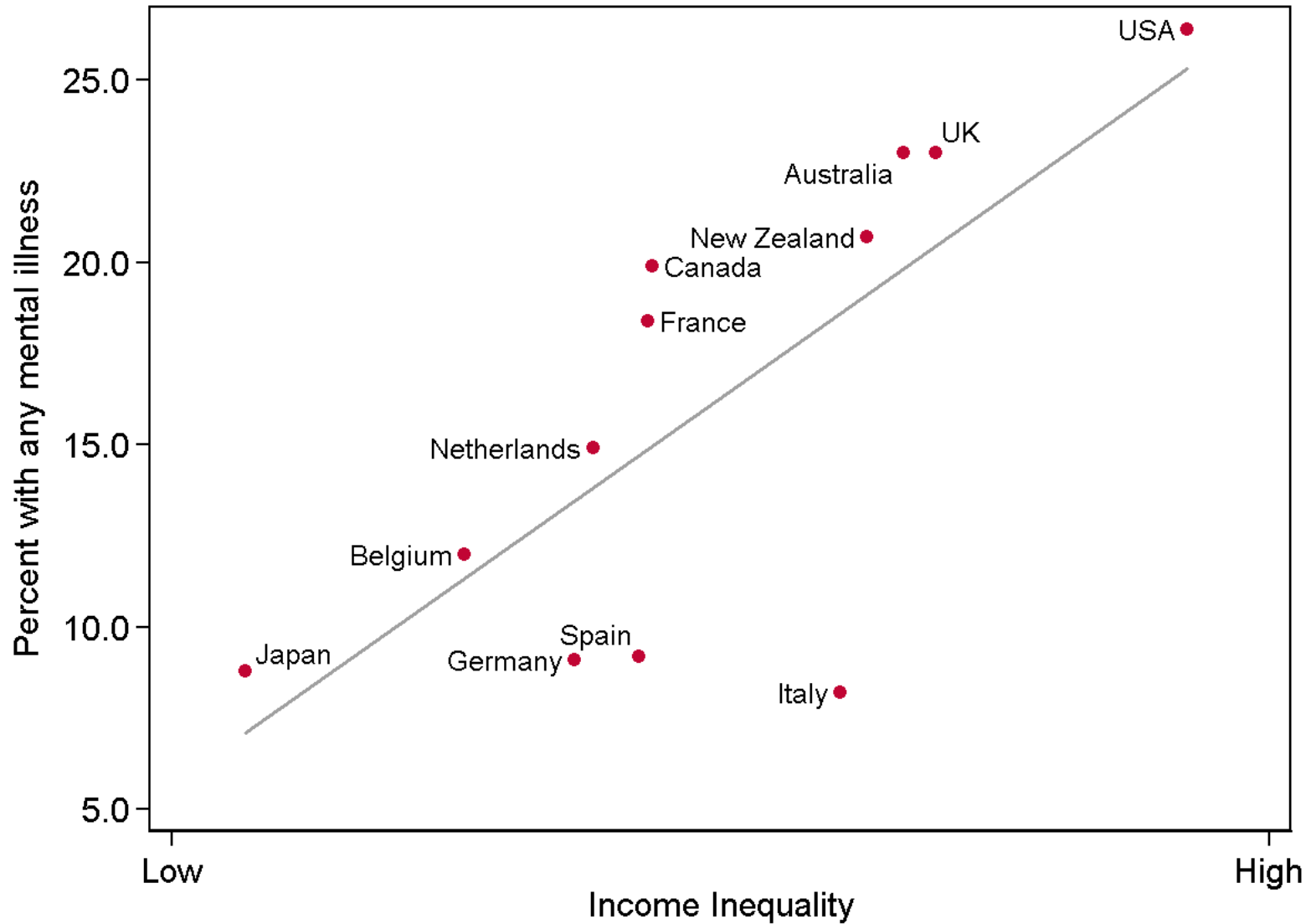
# Teenage Birth Rates are Higher in More Unequal Rich Countries



# Imprisonment rates are higher in more unequal countries



# Mental illness is more common in more unequal societies





# The Relationship between Income Inequality and Social Mobility

Around the world, high income inequality is associated with low social mobility.

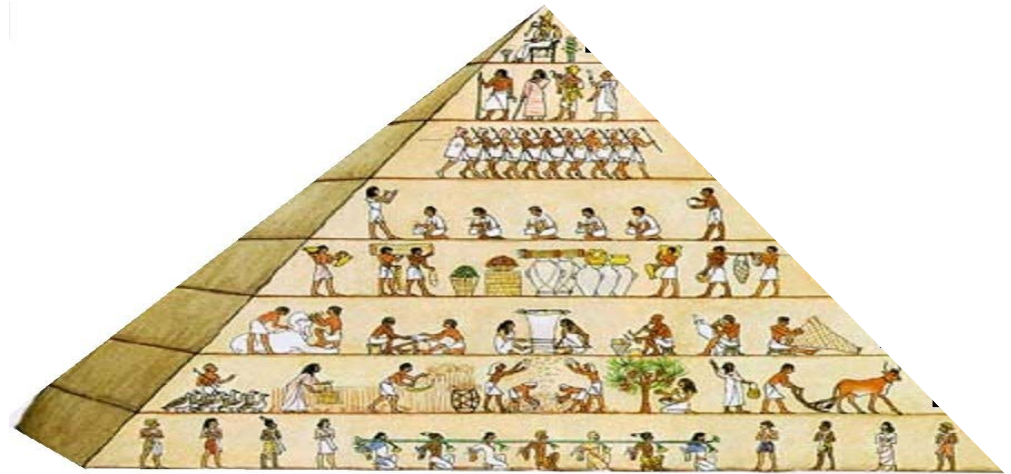
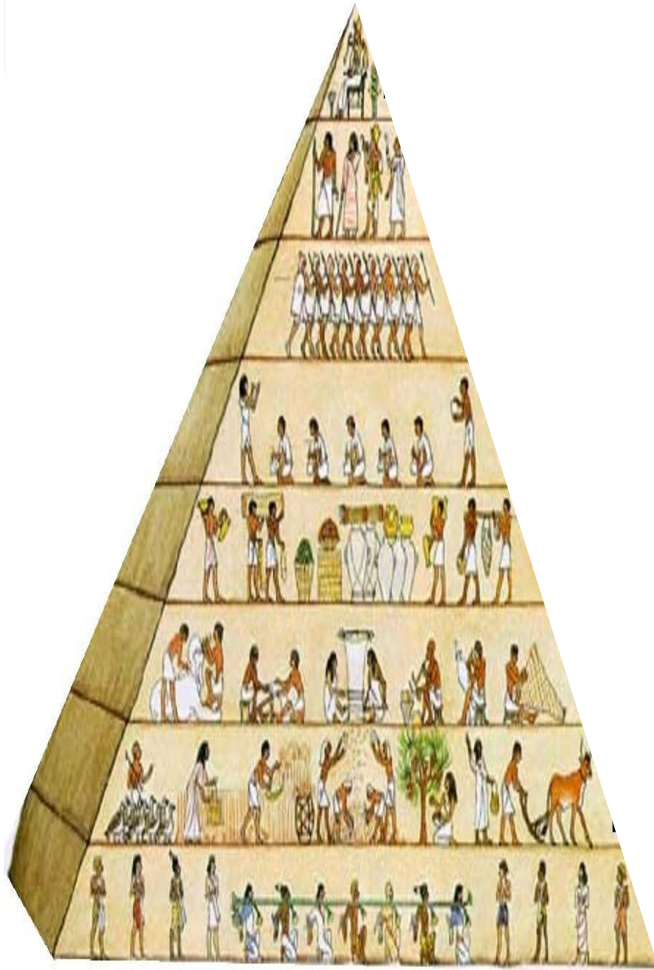


Data from Corak (2013), World Bank (2013)

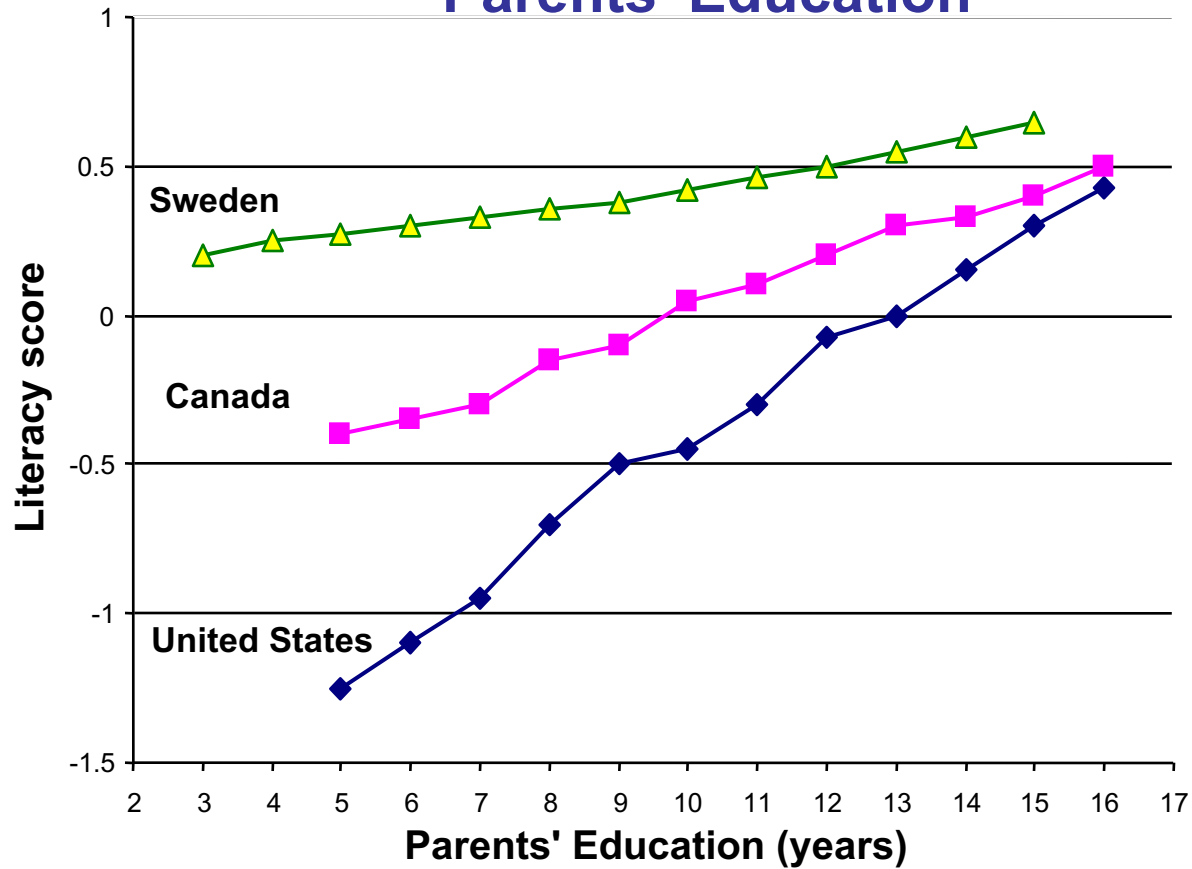


BROOKINGS

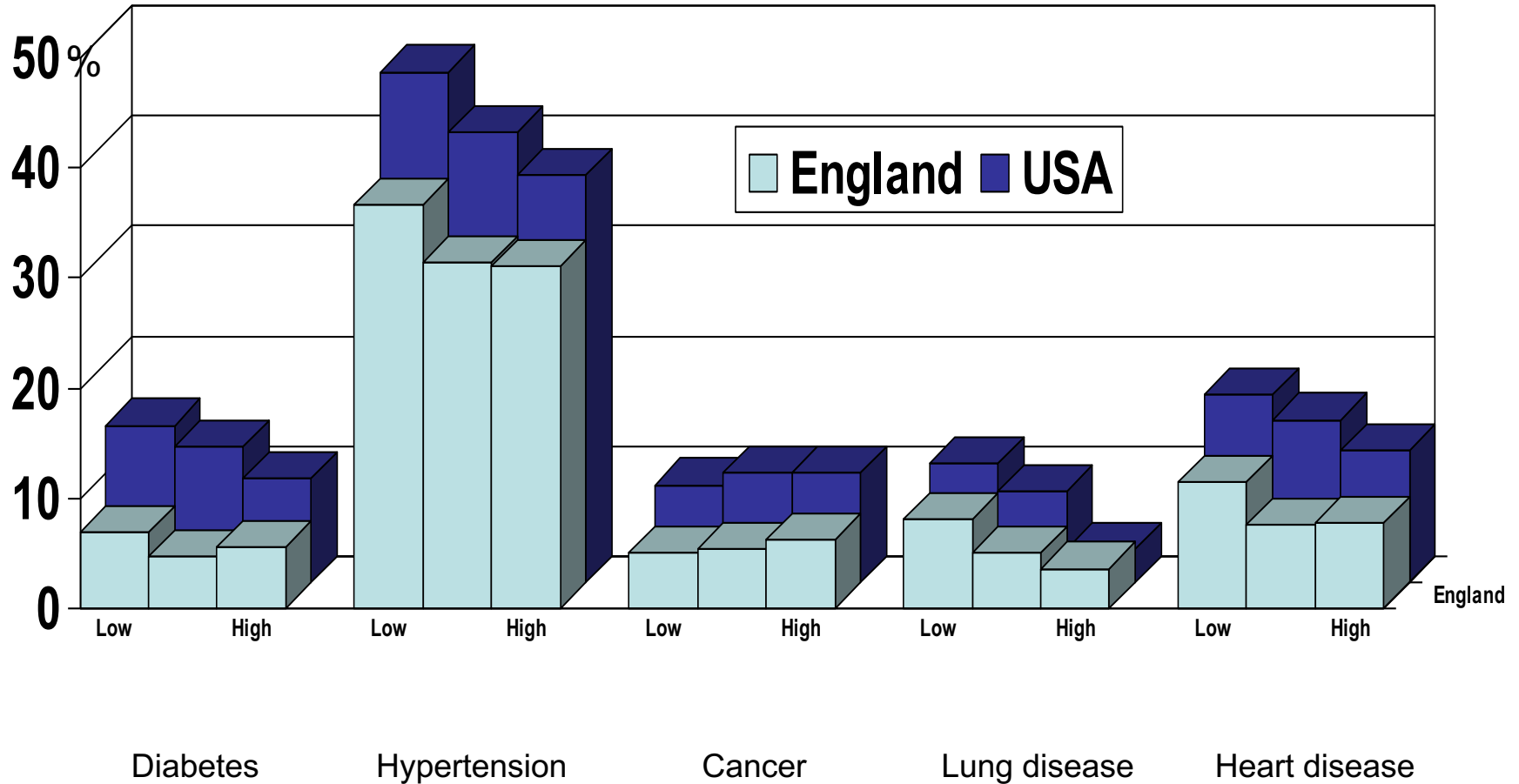
# Bigger material differences create bigger social distances and increase social class differentiation



## Literacy Scores of 16-25 year olds by Parents' Education



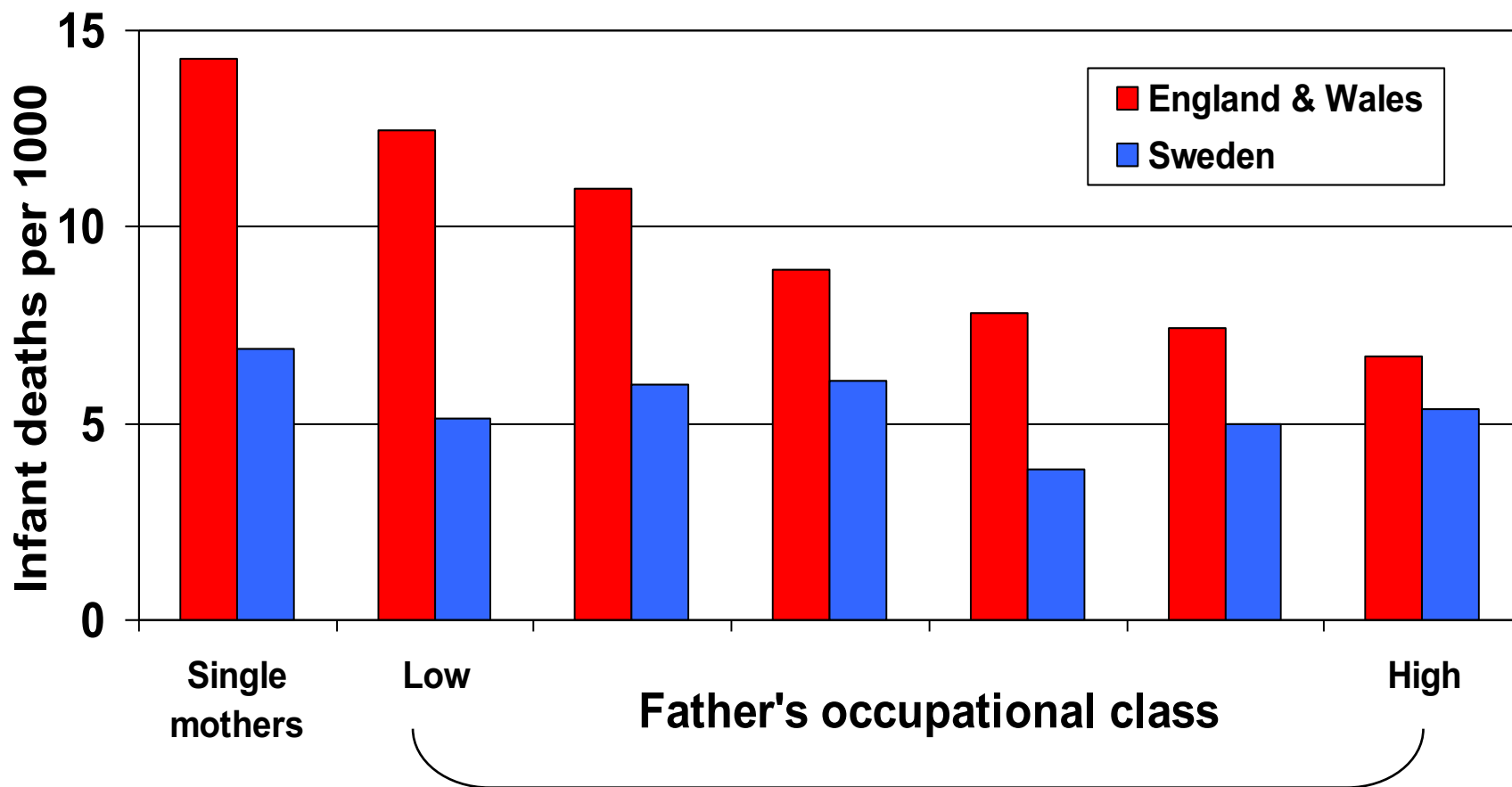
# Self-reported prevalence of illness by education



Source: Banks et al. JAMA 2006; 295: 2037-2045

# The benefits of greater equality are not confined to the poor but extend to all social classes

Infant mortality by class: Sweden compared with England & Wales

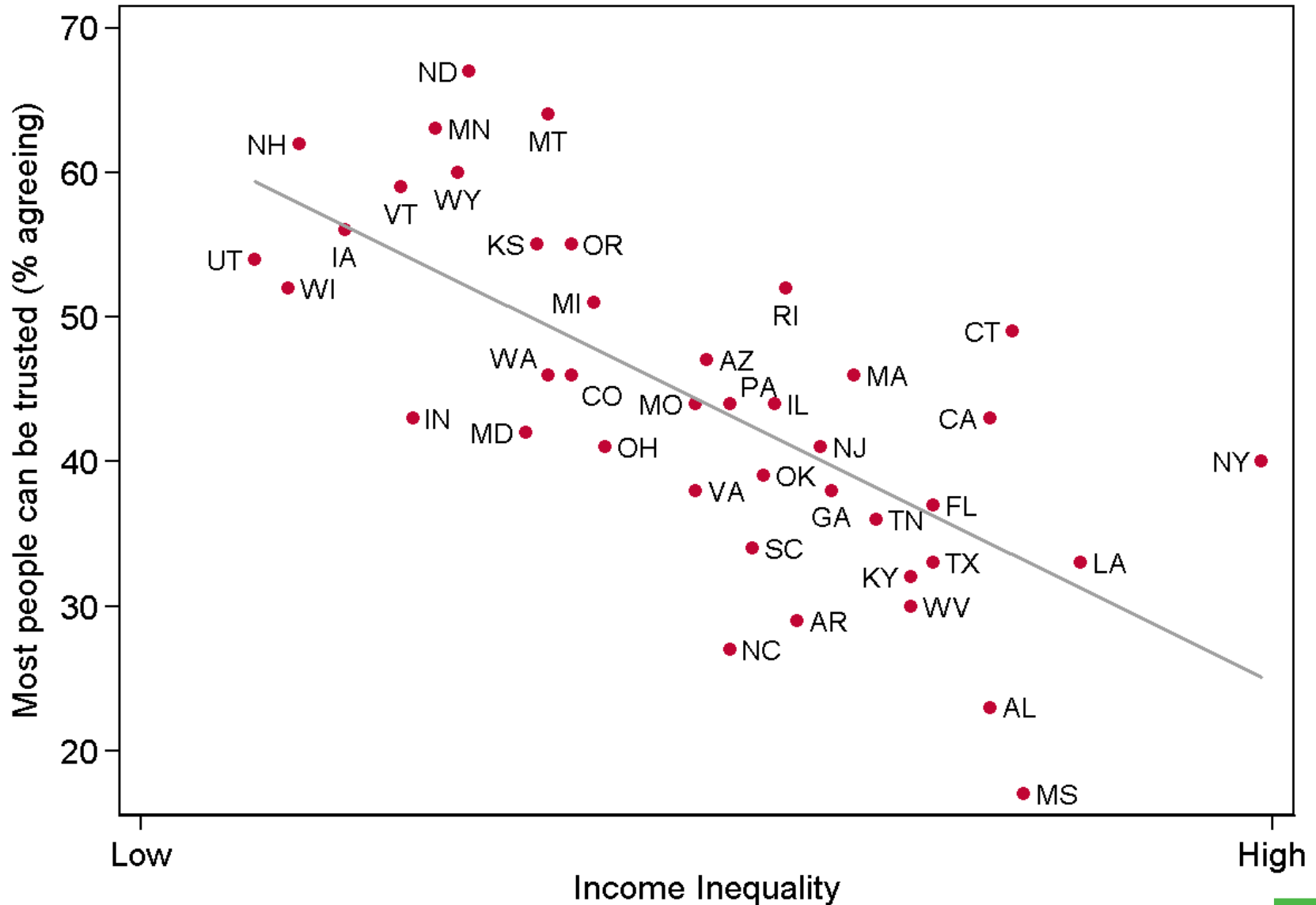


Leon, D. A., D. Vagero, et al. (1992). "Social class differences in infant mortality in Sweden: comparison with England and Wales." Brit Med J 305(6855): 687-91.

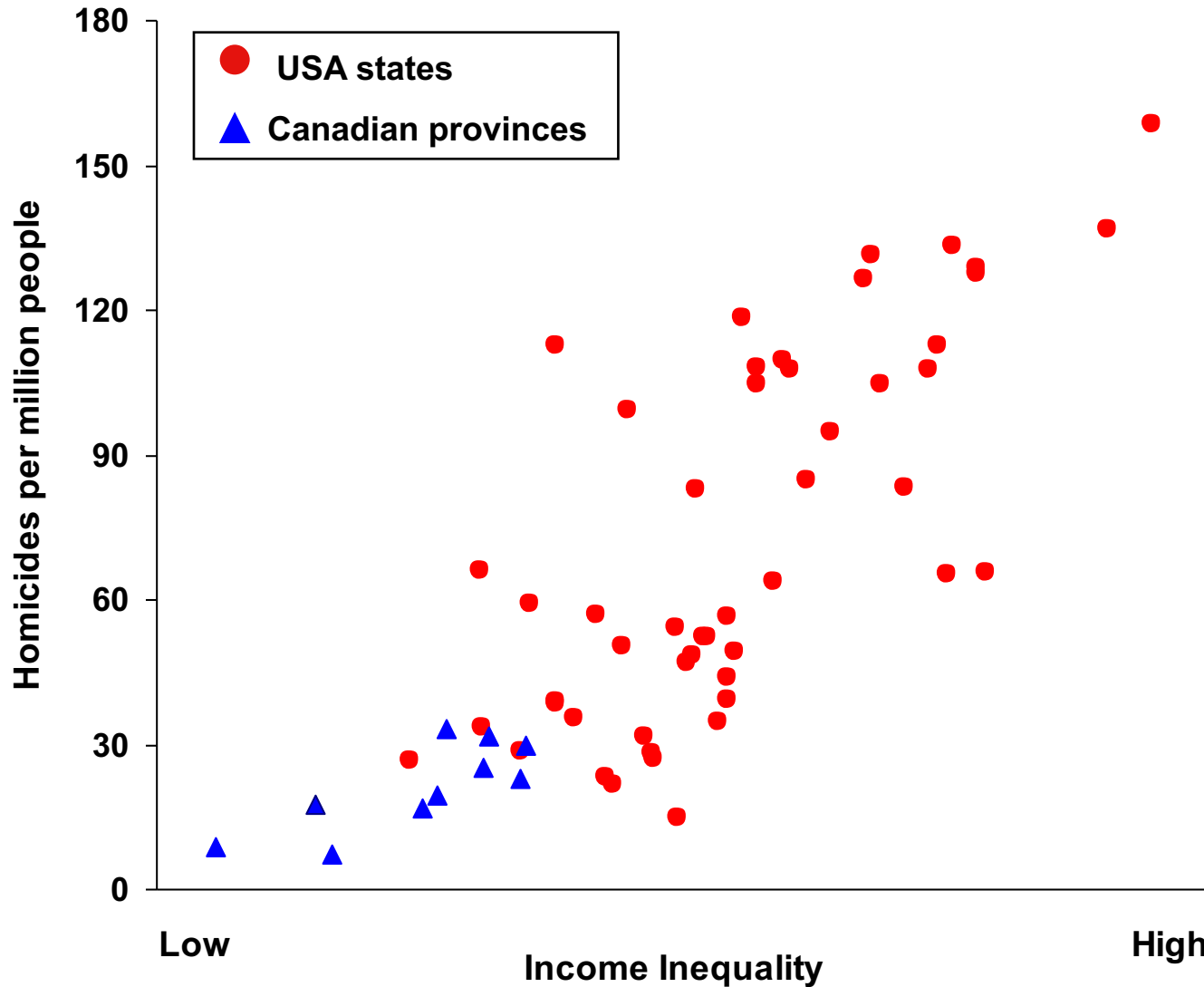
# People in more unequal countries trust each other less



# People in more unequal states of the USA trust each other less



# Homicide rates are higher in more unequal US states and Canadian provinces





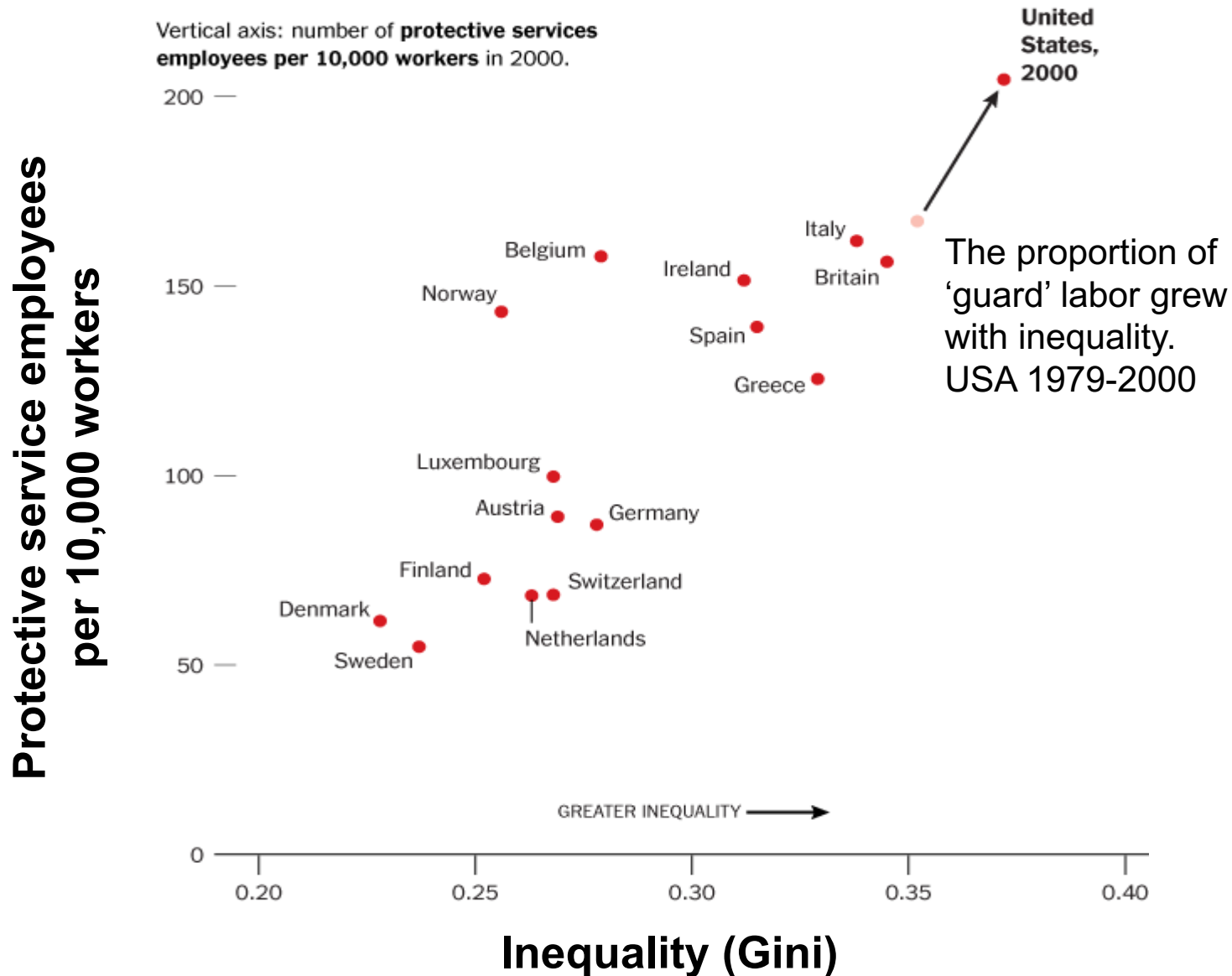
# Cuernavaca, Mexico



# 'Armed Response' - Pretoria, South Africa.



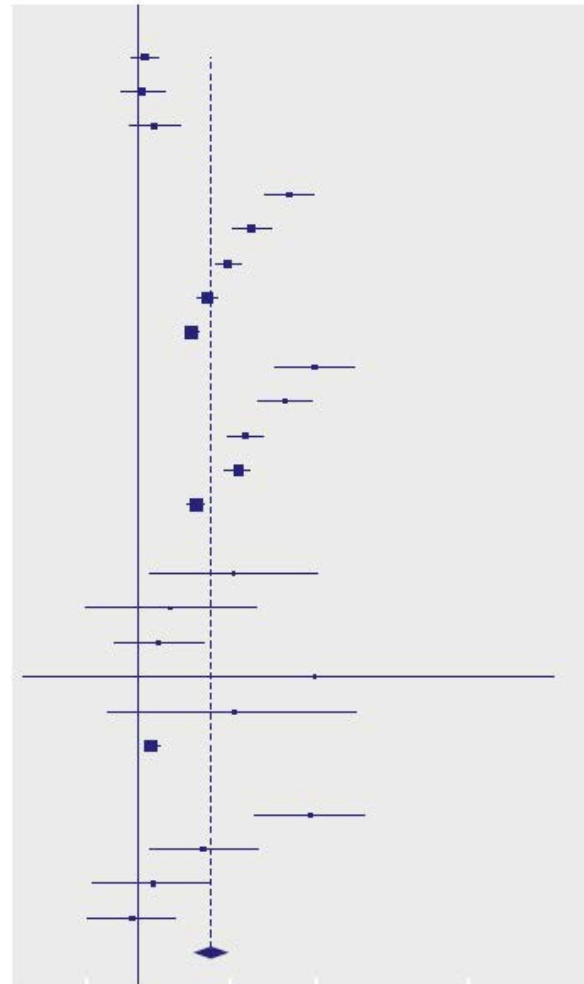
# Societies with wider Income differences need more “guard labor”



# Inequality and mortality over time: multilevel cohort studies

Cohort study	Weight (%)	Relative risk (95% CI)
Denmark, CCHS/CPS 1976-8 <sup>w1</sup>		
Male	5.45	1.01 (0.99 to 1.02)
Female	5.17	1.01 (0.98 to 1.03)
Finland, Census 1990 <sup>w2</sup>	5.09	1.02 (0.99 to 1.04)
Norway, Census 1980-2002 <sup>w3</sup>		
Male age 30-39	5.06	1.17 (1.14 to 1.20)
Male age 40-49	5.28	1.13 (1.10 to 1.15)
Male age 50-59	5.45	1.10 (1.08 to 1.11)
Male age 60-69	5.55	1.07 (1.07 to 1.08)
Male age 70-79	5.58	1.06 (1.05 to 1.06)
Female age 30-39	4.46	1.20 (1.15 to 1.25)
Female age 40-49	5.00	1.16 (1.13 to 1.20)
Female age 50-59	5.30	1.12 (1.10 to 1.14)
Female age 60-69	5.48	1.11 (1.10 to 1.12)
Female age 70-79	5.56	1.06 (1.05 to 1.07)
New Zealand, Census 1991 <sup>w4</sup>		
Male	2.49	1.10 (1.01 to 1.20)
Female	2.46	1.04 (0.95 to 1.13)
Sweden, Census 1990 <sup>w5</sup>	4.13	1.02 (0.98 to 1.07)
Sweden, SLC 1980-6 <sup>w6</sup>	0.42	1.17 (0.89 to 1.53)
US, NHEFS 1971-5 <sup>w7 w8</sup>	1.50	1.10 (0.97 to 1.25)
US, NHIS 1987-94 <sup>w9</sup>	5.57	1.01 (1.01 to 1.02)
US, NLMS 1979-85 <sup>w10</sup>		
Male age 25-64	3.65	1.19 (1.13 to 1.26)
Female age 25-64	3.70	1.07 (1.01 to 1.13)
Male age ≥65	3.44	1.02 (0.96 to 1.08)
Female age ≥65	4.20	0.99 (0.95 to 1.04)
Combined	100.00	1.08 (1.06 to 1.10)

$I^2 = 96\%$  (95% CI 95% to 97%), heterogeneity  $P=0.000$



## **Time lags between changes in inequality and changes in health**

Zheng H. Do people die from income inequality of a decade ago?

*Social Science & Medicine* 2012;75(1):36-45.

Lillard DR, Burkhauser RV, Hahn MH, Wilkins R. Does early-life income inequality predict self-reported health in later life? Evidence from the United States.

*Social Science & Medicine* 2015;128(0):347-55.

# Psychosocial risk factors for ill health

- **Low social status**
- **Weak social connections**
- **Stress in early life (pre- & post-natal)**



# The Jekyll & Hyde of Public Health?

- **Social status** (dominance hierarchies, pecking orders) are orderings based on power, coercion and privileged access to resources – regardless of the needs of others.
- **Friendship** in contrast, is based on reciprocity, mutuality, social obligations, sharing and a recognition of each other's needs.

Thomas Hobbes,  
*The Leviathan*.  
1651

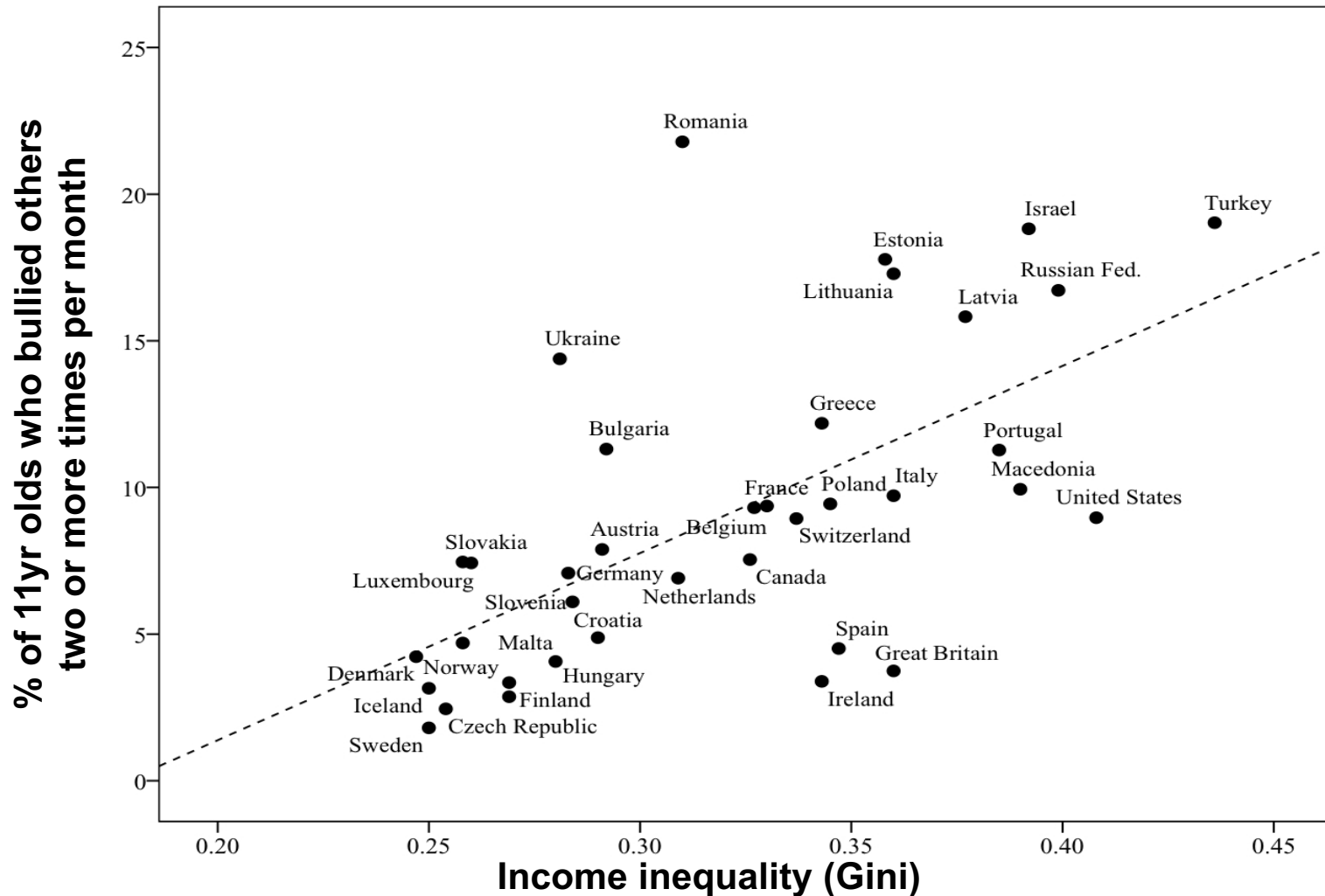
**“...war of each  
against all”**





# School bullying is much more common in countries with bigger income differences.

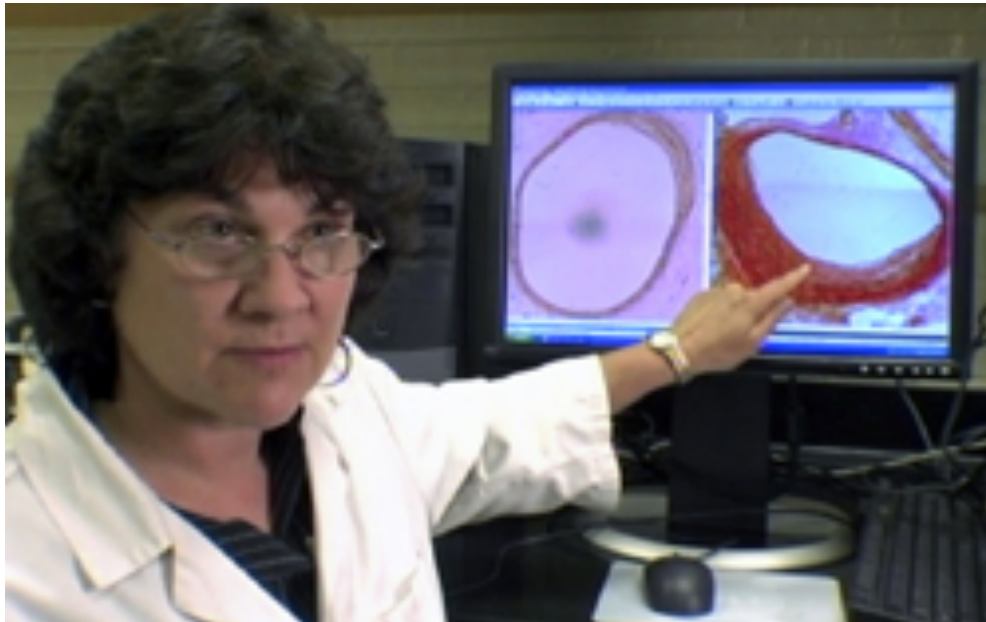
## 11-year-olds in 37 countries ( $r = .62$ )



# Social hierarchy in non-human primates

**Robert Sapolsky studies baboons in the wild**

**Carol Shively studies macaques in captivity**



## **Companion**

**Spanish: Compañero;**

**French: Copain**

**from the Latin “Con” (with)**

**and “Pan” (bread)**

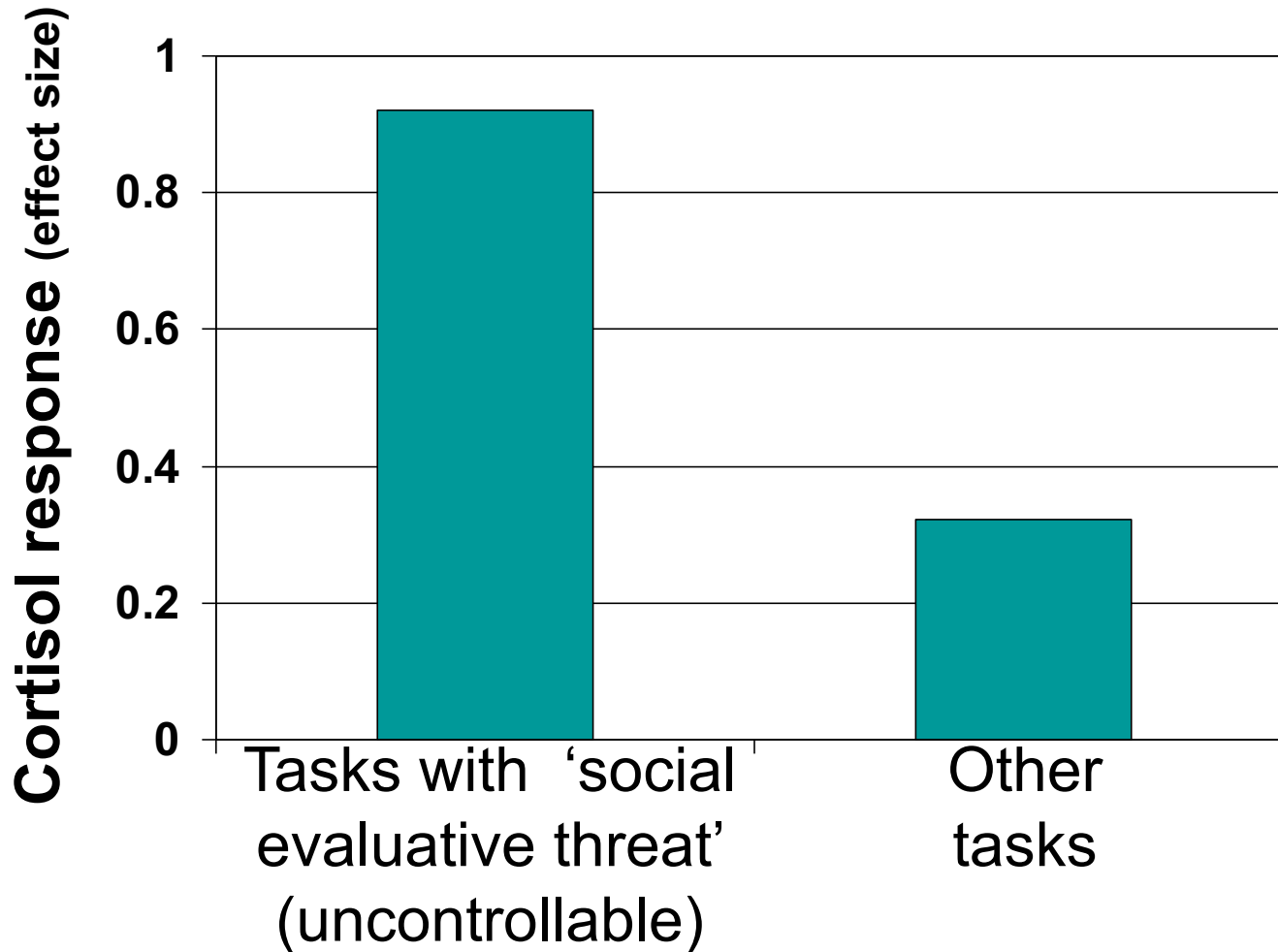
**- someone with whom you eat bread**

“Gifts make friends and  
friends make gifts”



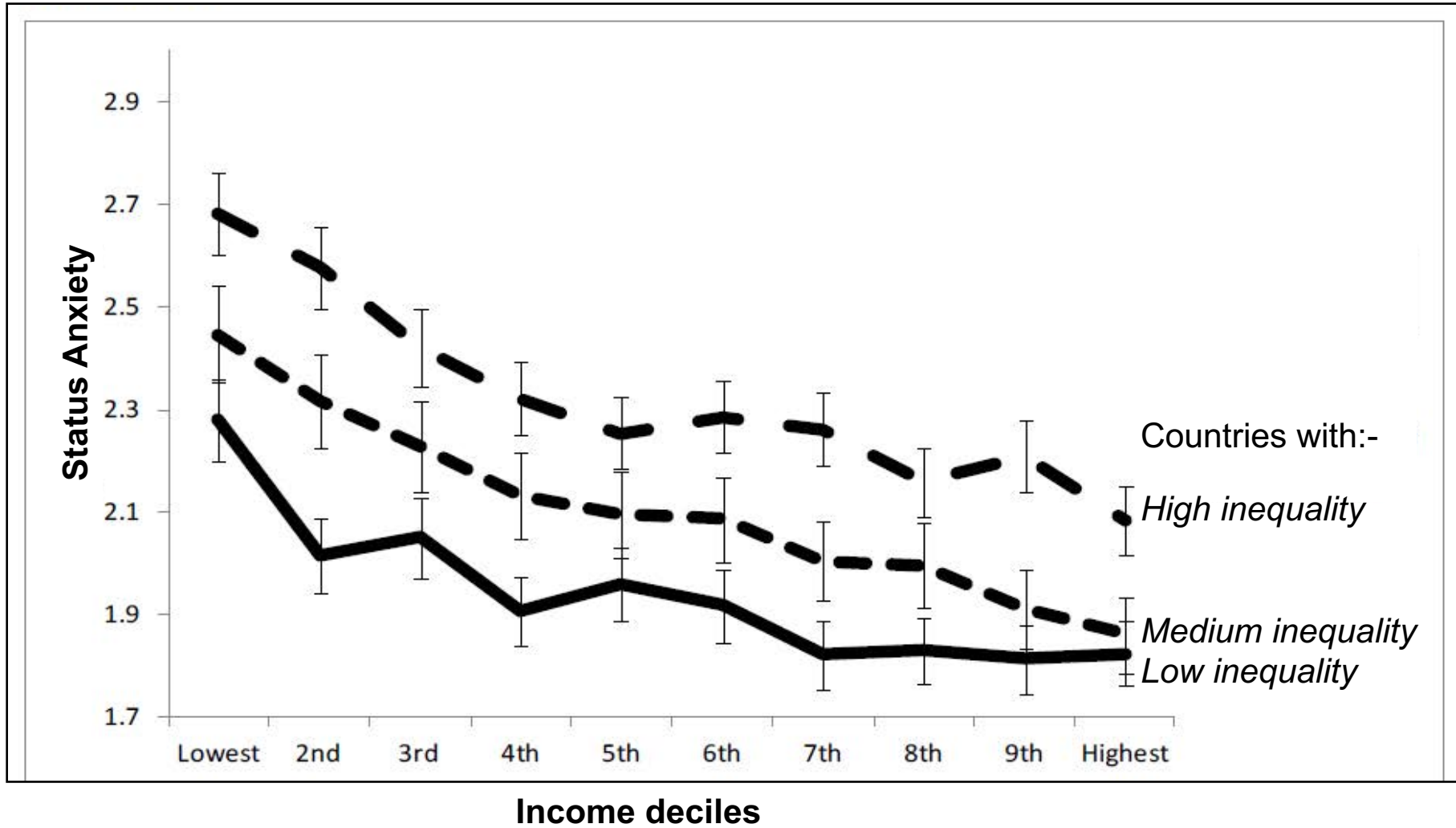
**Marshall Sahlins, *Stone Age Economics* (1974)**

# What kind of stress cause the biggest rises in stress hormones?



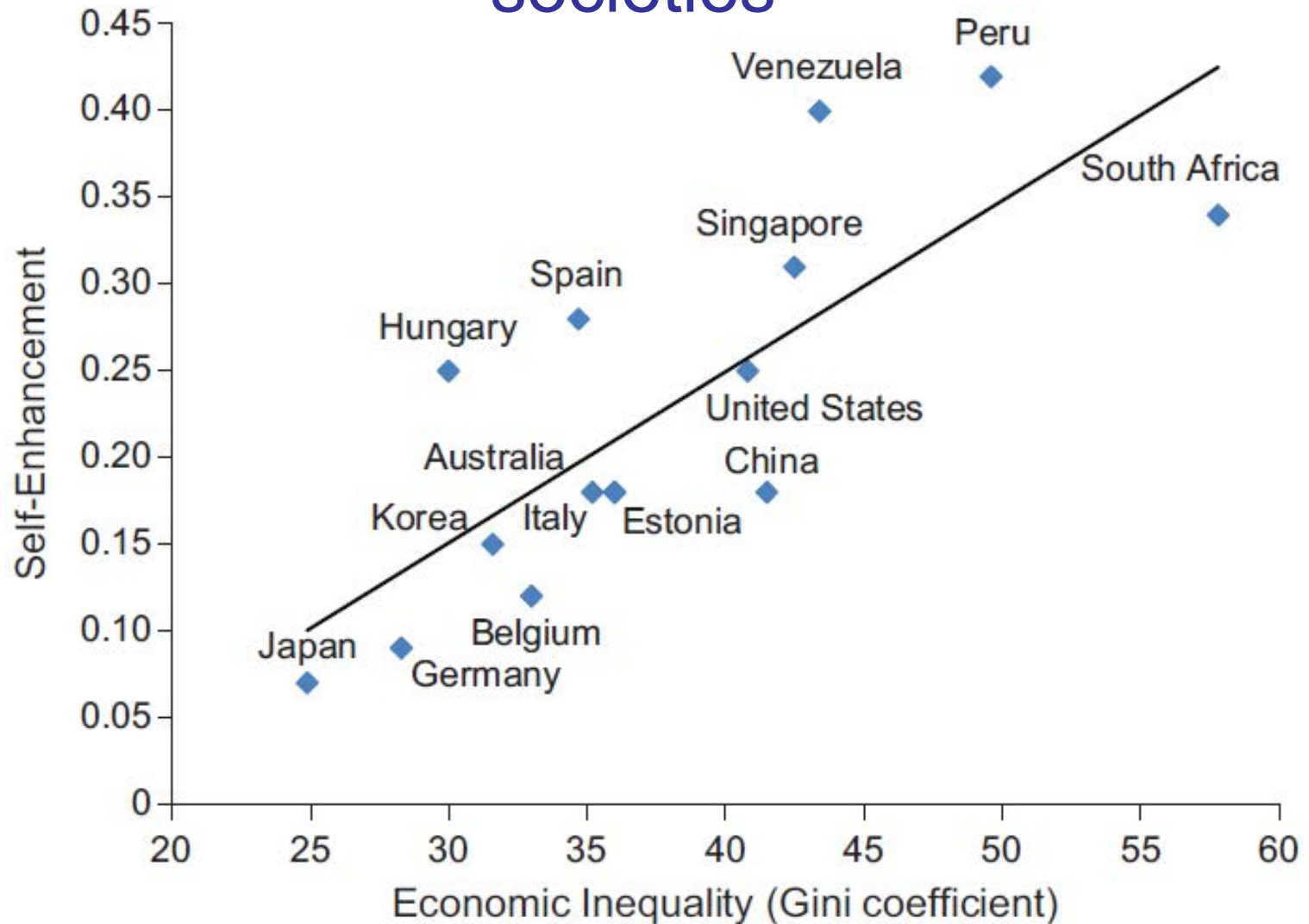
Dickerson SS, Kemeny ME. Acute stressors and cortisol responses. *Psychological Bulletin* 2004; 130(3): 355-91.

# Status Anxiety across income deciles for high, medium and low inequality countries



Layte R, Whelan CT. Who Feels Inferior? A Test of the Status Anxiety Hypothesis of Social Inequalities in Health. *European Sociological Review*, 2014.

# Self enhancement increases in more unequal societies



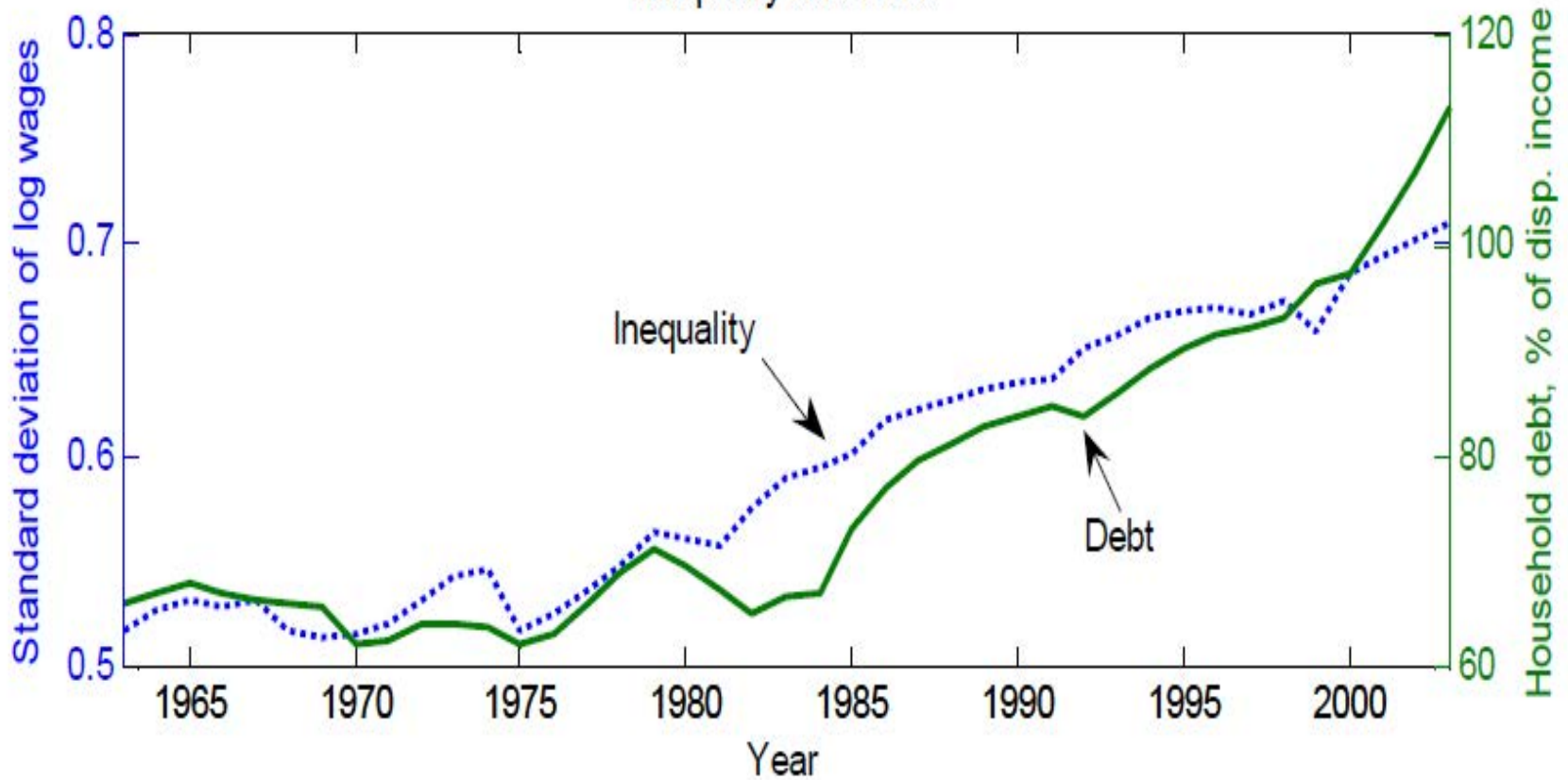
Loughnan S, et al. Economic Inequality is linked to biased self-perception.  
*Psychological Science*, 2011; 22: 1254

## **Inequality increases conspicuous consumption and consumerism**

- **People in more unequal areas of the USA are more likely to buy high status cars**
- **Data from Google searches shows that people in more unequal US states and more unequal countries are more likely to search for status goods**

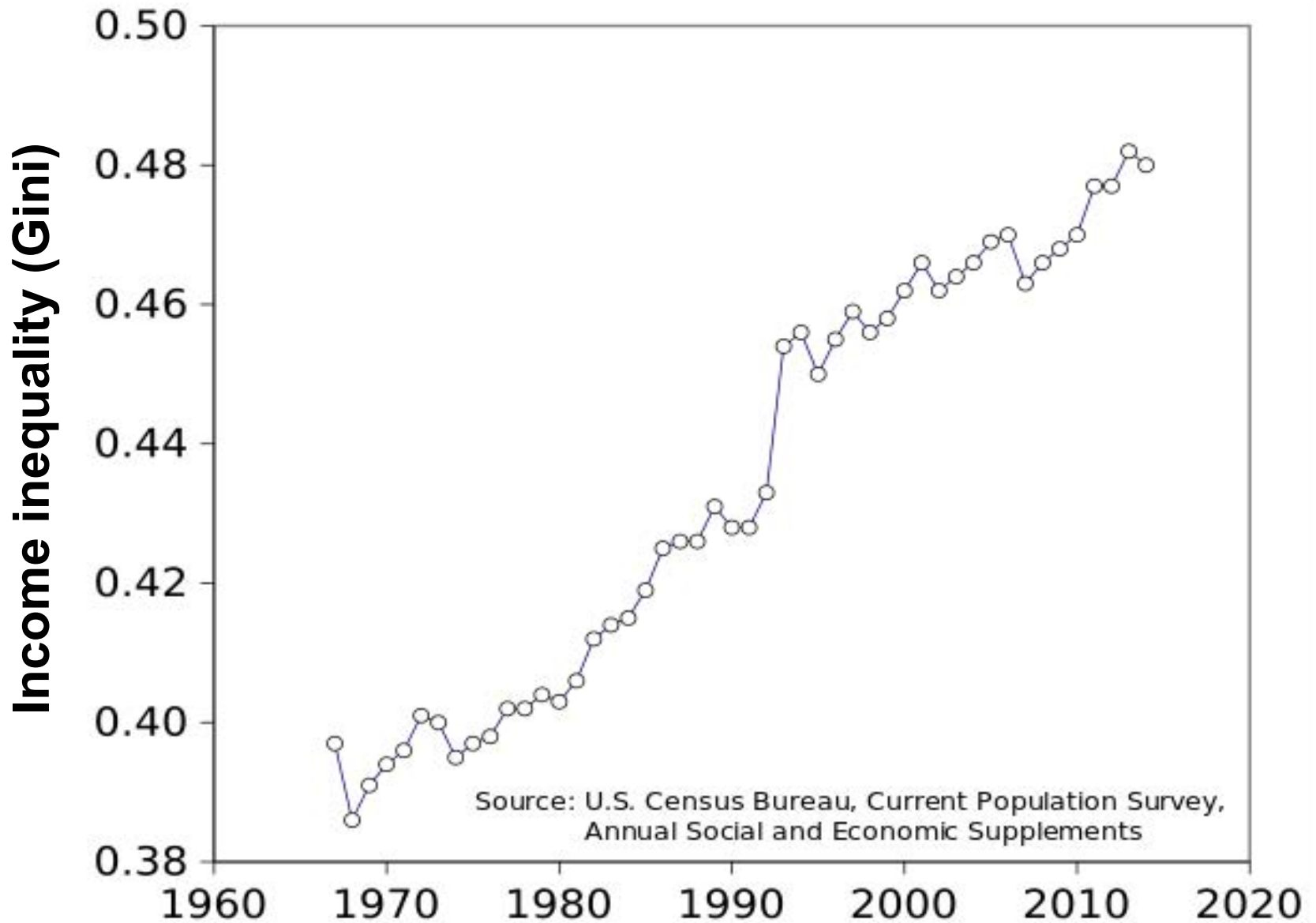


# Household Debt and Income Inequality USA

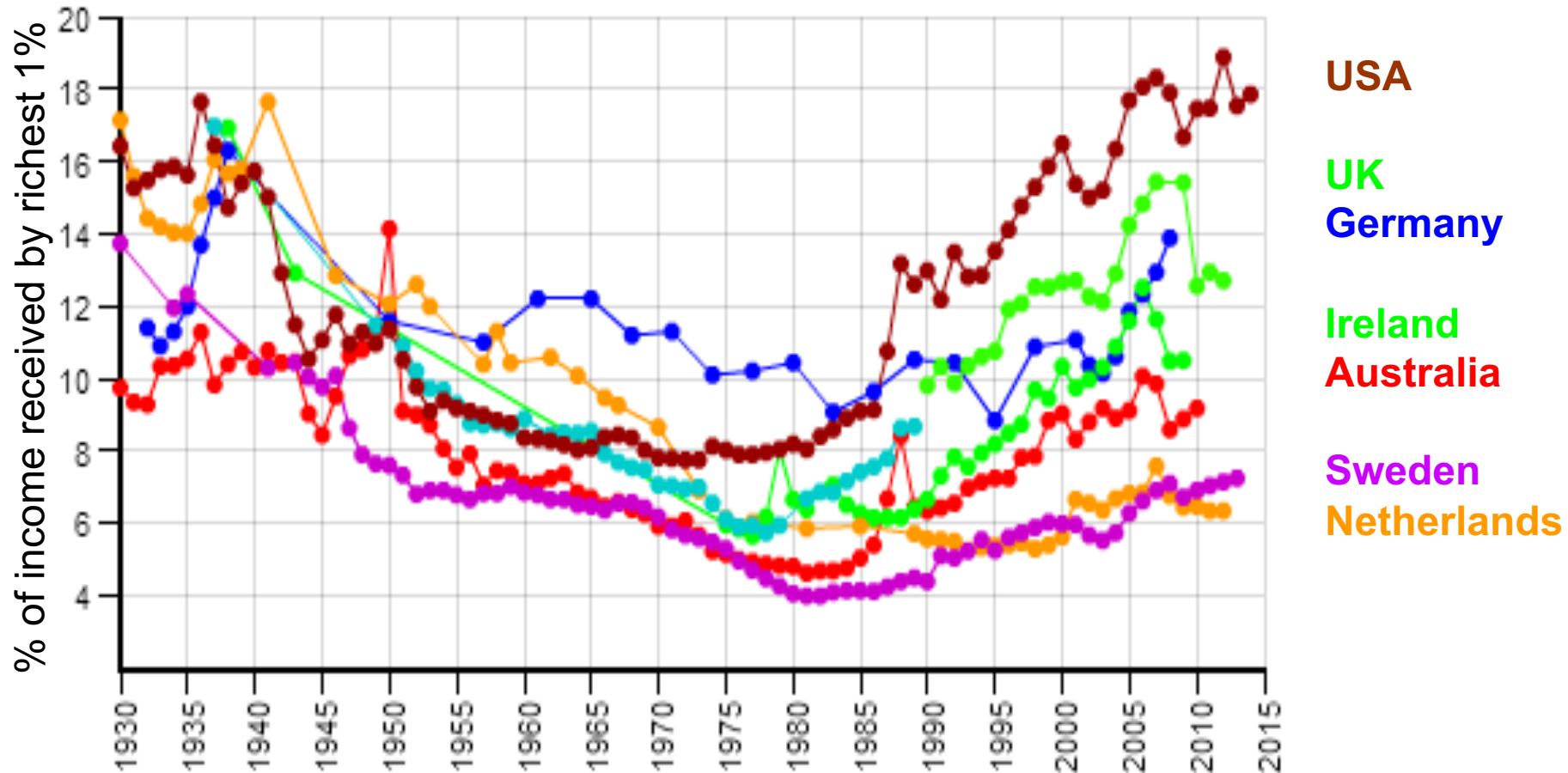


Iacoviello M. Household Debt and Income Inequality, 1963–2003. *Journal of Money, Credit and Banking* 2008;40(5):929-65.

# Widening income differences: USA 1967-2014



# Percent of all income going to top 1% 1930-2014



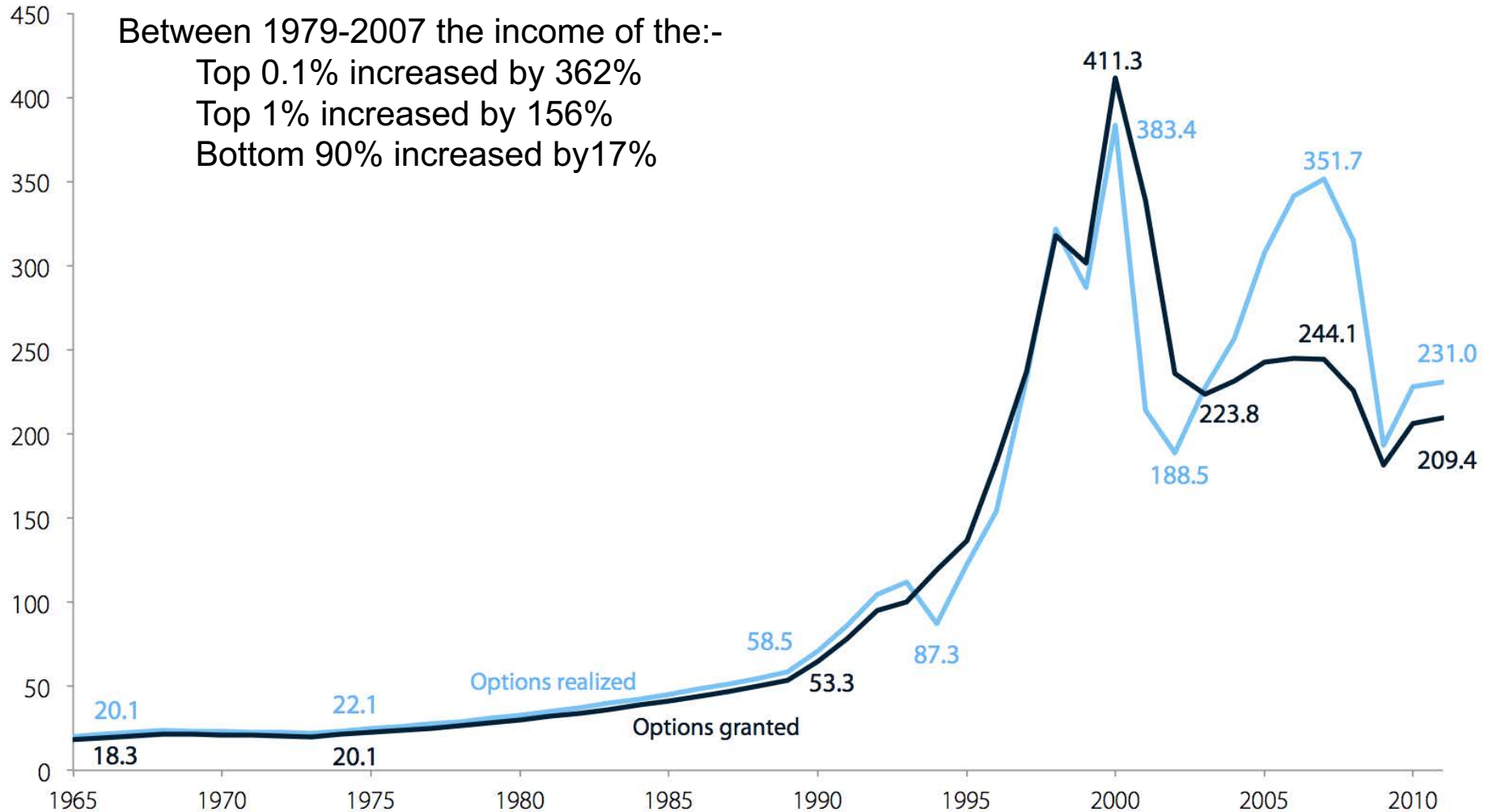
Source: World Top Incomes Database

## Trade Unions membership (% workforce) and Share of Income going to top 10% (USA, 1918-2008)

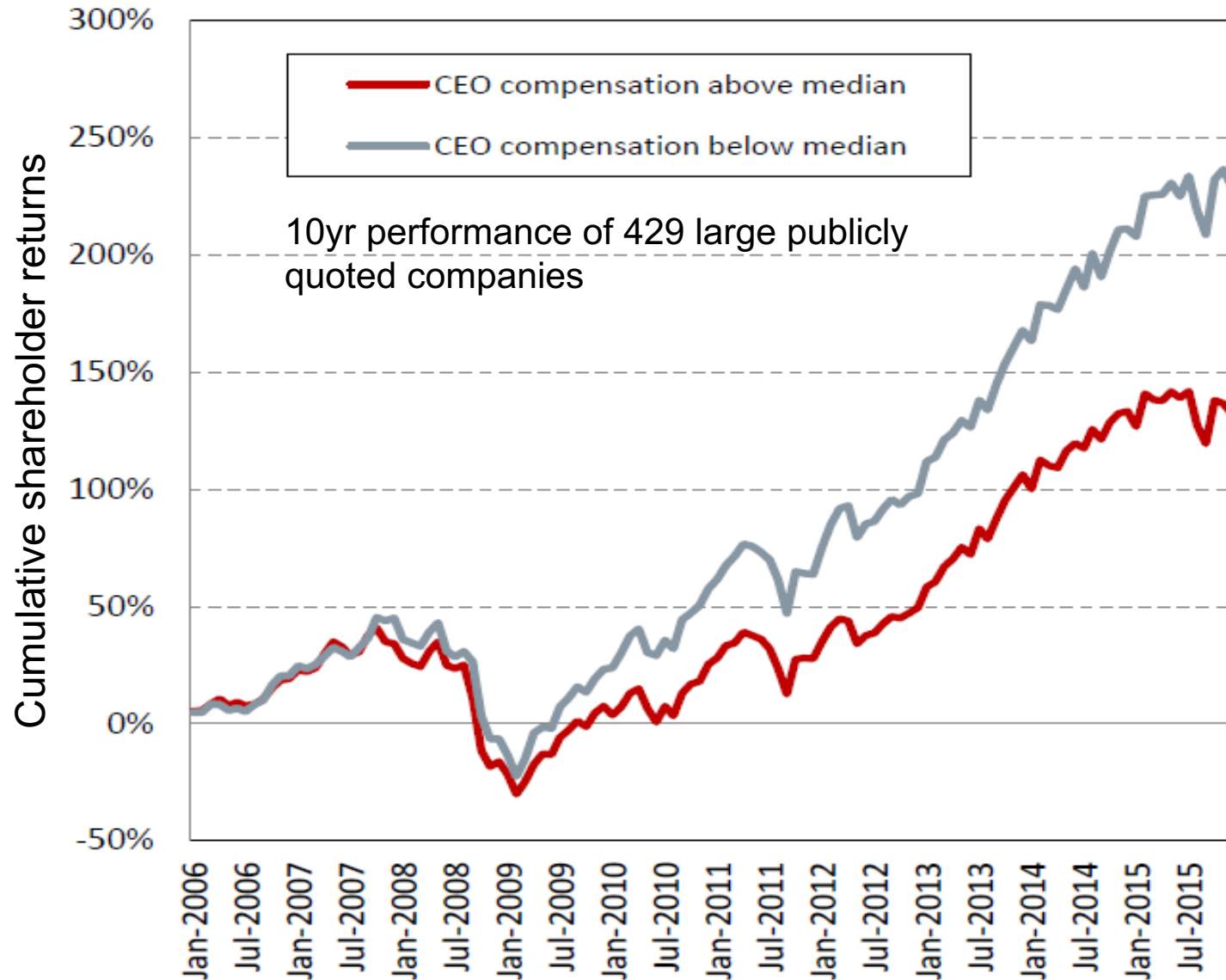


Colin Gordon's analysis of Historical Statistics for the US, unionstats.com, Piketty and Saez 2003, and World Top Incomes Database. Economic Policy Institute, Washington DC.

# Changing ratio of CEO pay to average pay of production & non-supervisory workers in top 350 US companies



# Companies paying CEOs above the median performed less well than those paying below the median

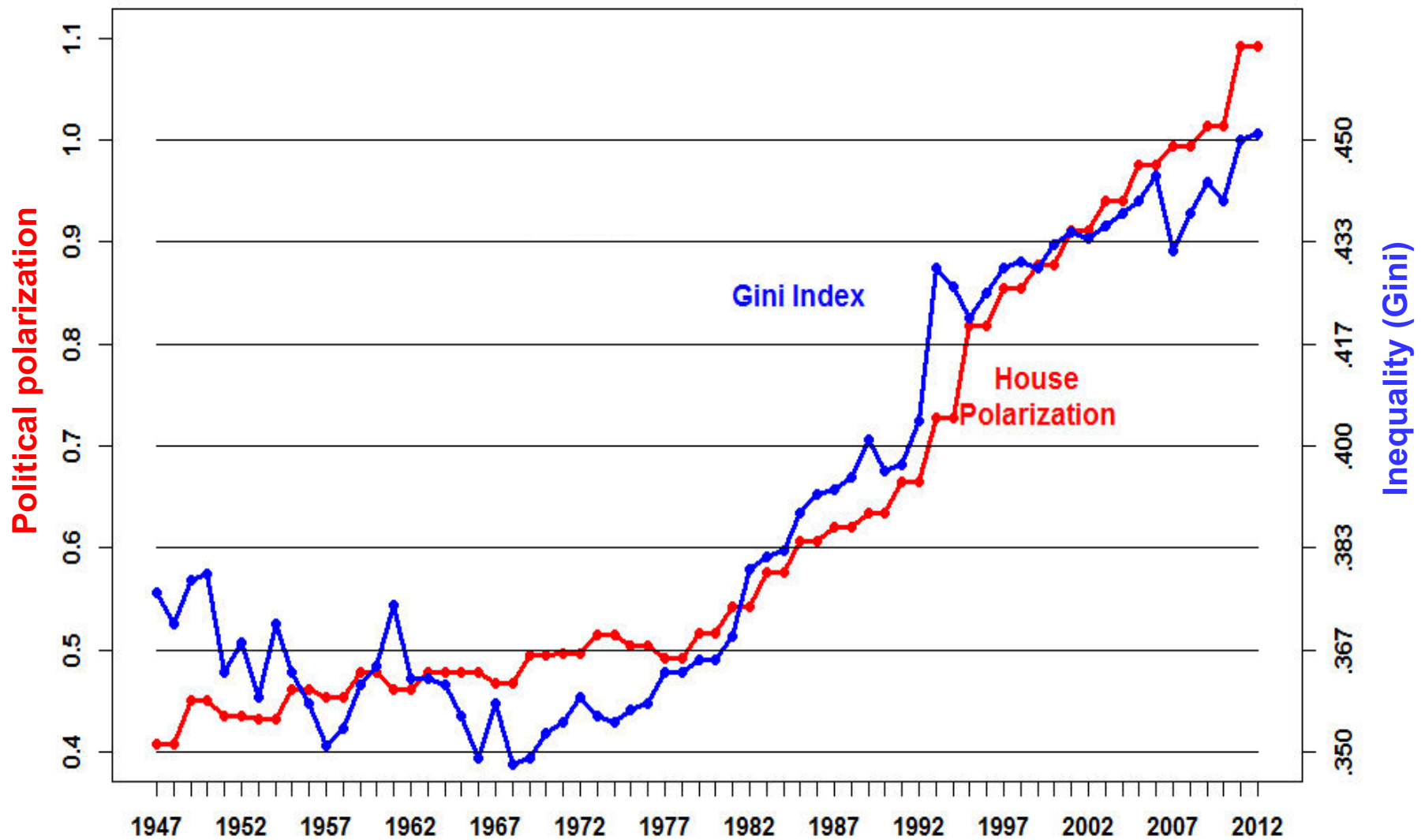


# **Economic democracy:-**

- **“turns companies from being pieces of property into communities”**
- **reduces pay ratios within companies**
- **transforms the experience of work**
- **redistributes wealth & reduces unearned income**
- **improves productivity**
- **makes companies more environmentally & socially responsible**

**Boards can include employee, community and consumer representatives**

# Income Inequality & Political Polarization 1947-2012



McCarty, Poole & Rosenthal. *Polarized America*. MIT, 2006.







# The Spirit Level

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## Why Equality is Better for Everyone

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Richard Wilkinson and Kate Pickett

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'A big idea, big enough to change political thinking'  
*Sunday Times*

'A sweeping theory of everything' *Guardian*



For more information:  
... a book

and a  
website...

The **Equality Trust**

<http://www.equalitytrust.org.uk>

**FABIAN  
SOCIETY**

**FRIEDRICH  
EBERT  
STIFTUNG**



# **A CONVENIENT TRUTH**

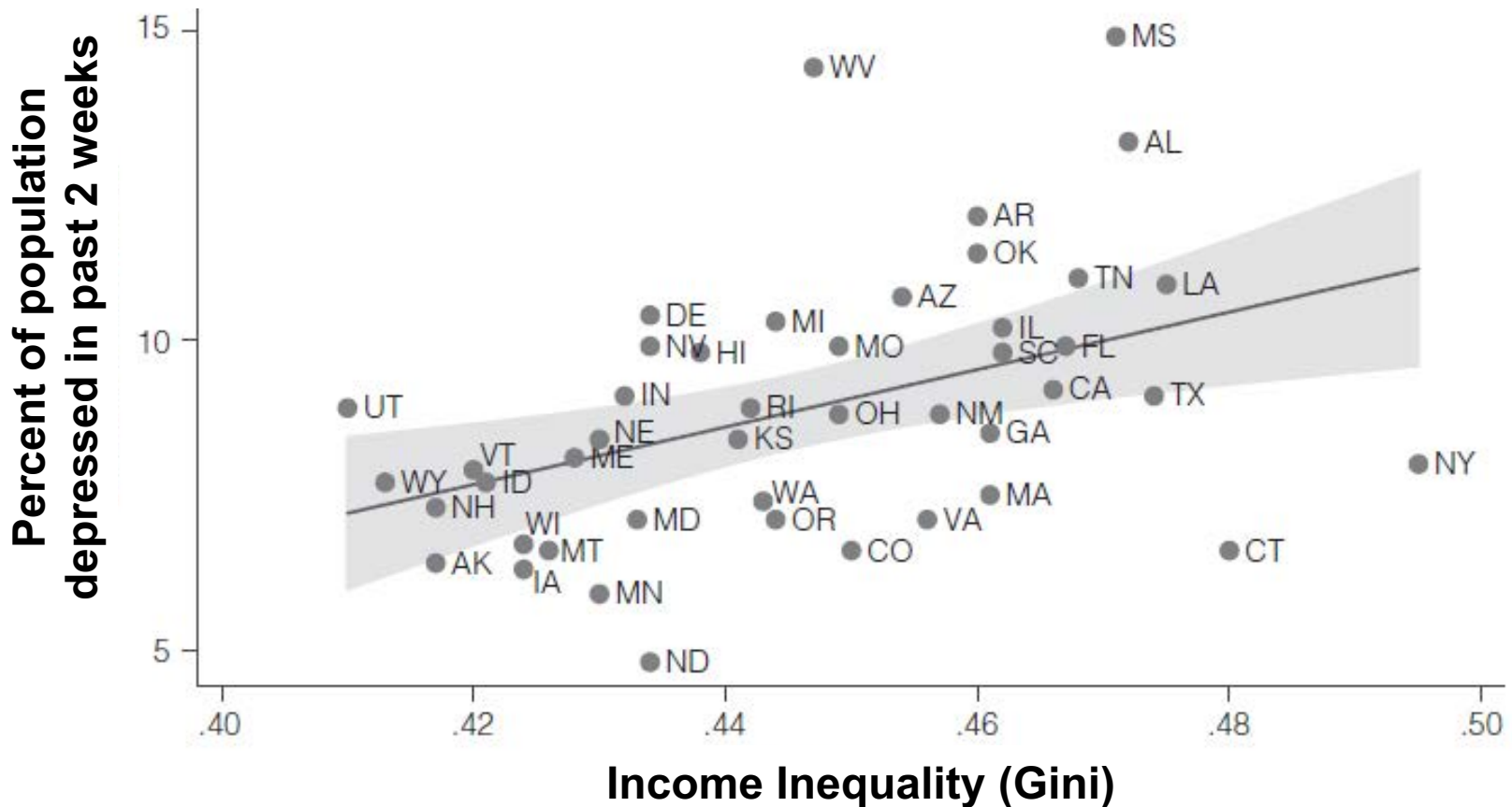
A BETTER SOCIETY FOR  
US AND THE PLANET

**by Richard Wilkinson  
and Kate Pickett**

Fabian Ideas 638

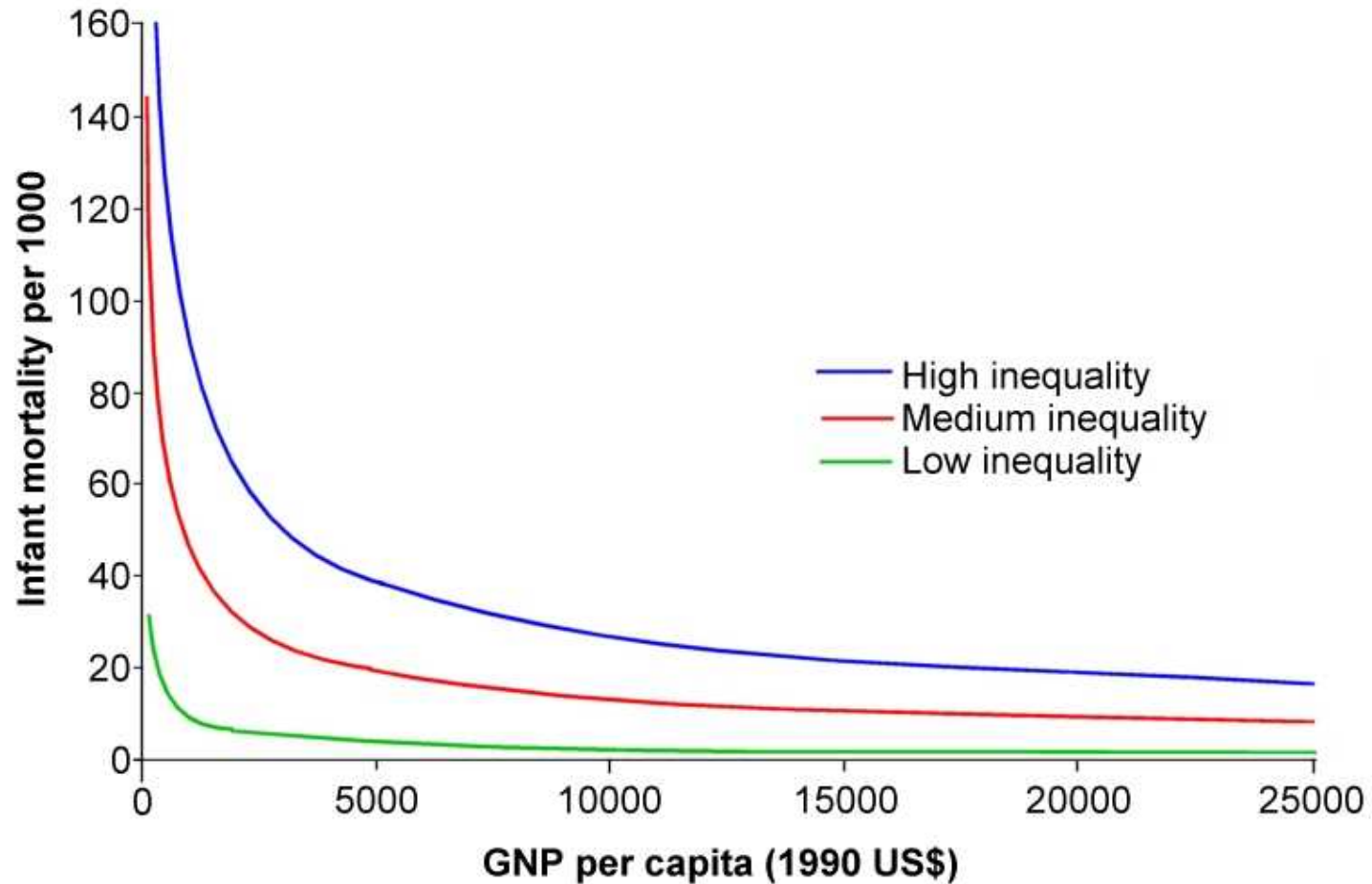
<http://www.fabians.org.uk/publications/a-convenient-truth/>

# Depression is more common in more unequal states



Messias E, Eaton WW, et al. . Economic grand rounds: Income inequality and depression across the United States: an ecological study." Psychiatric Services, 2011; 62(7): 710-2.

# Relation between infant mortality and GNP p.c. at high, medium and low income inequality



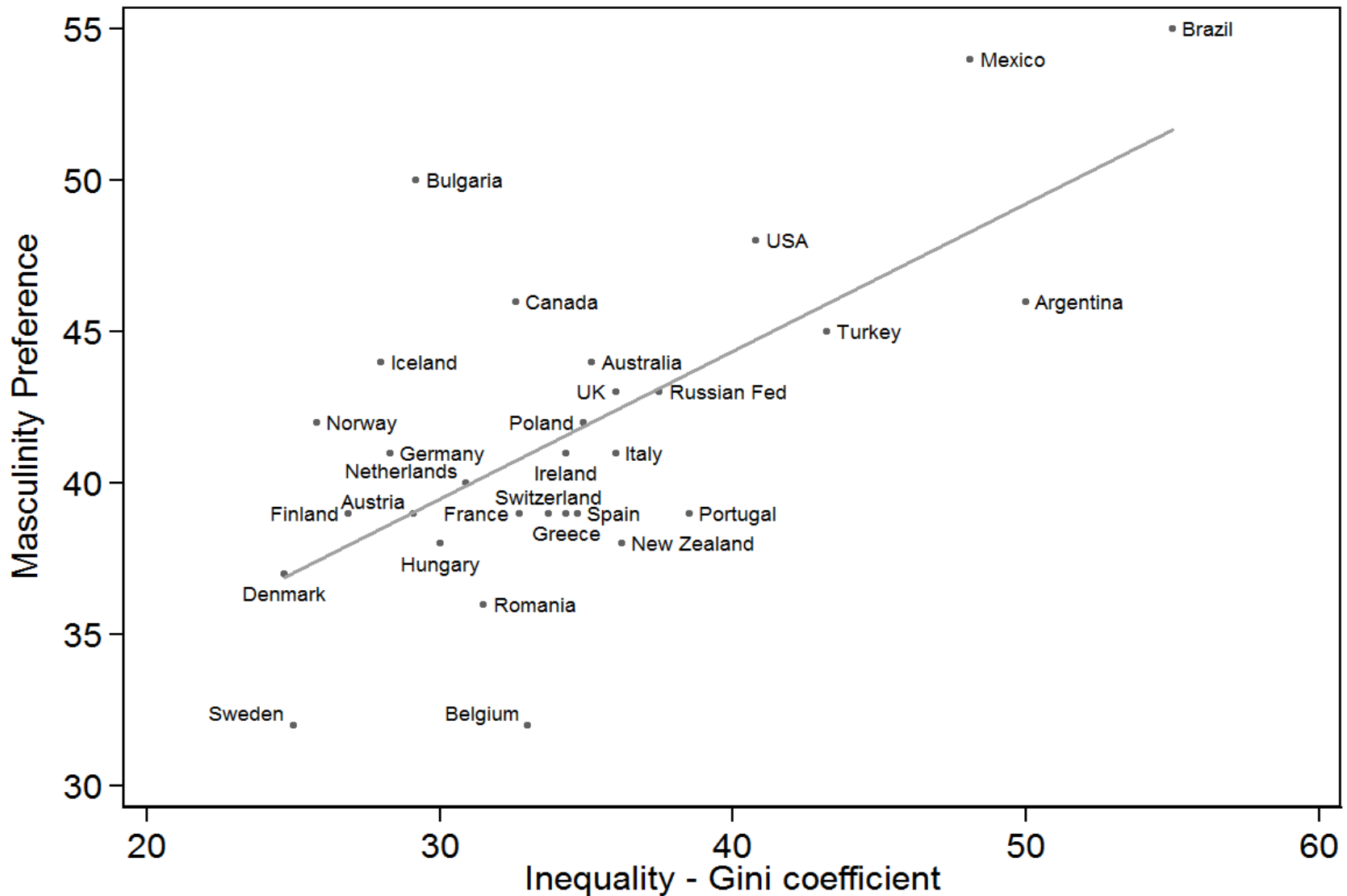
Hales S, Howden-Chapman P, Salmond C, Woodward A, Mackenbach J..  
Infant mortality, gross national product & income distribution. *Lancet* 1999;  
354: 2047

# Plasma fibrinogen by employment grade among Civil Servants, Whitehall II.



(Adjusted for age, ethnic origin and women's menopausal status)

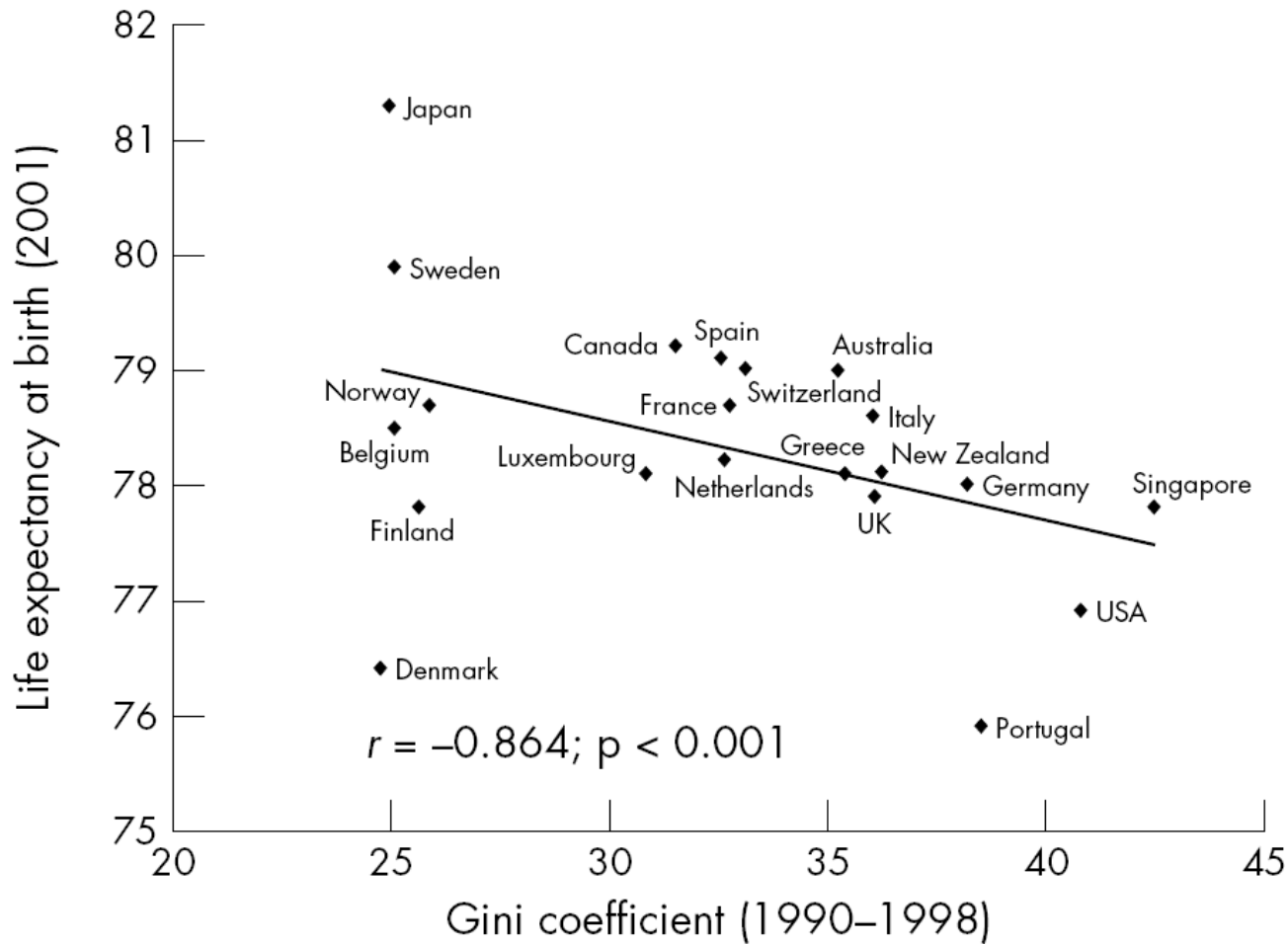
# Women's preference for more masculinized faces is stronger in more unequal societies



Brooks R, Scott IM, et al. Proceedings of the Royal Society, B, 2011;

278: 810-12

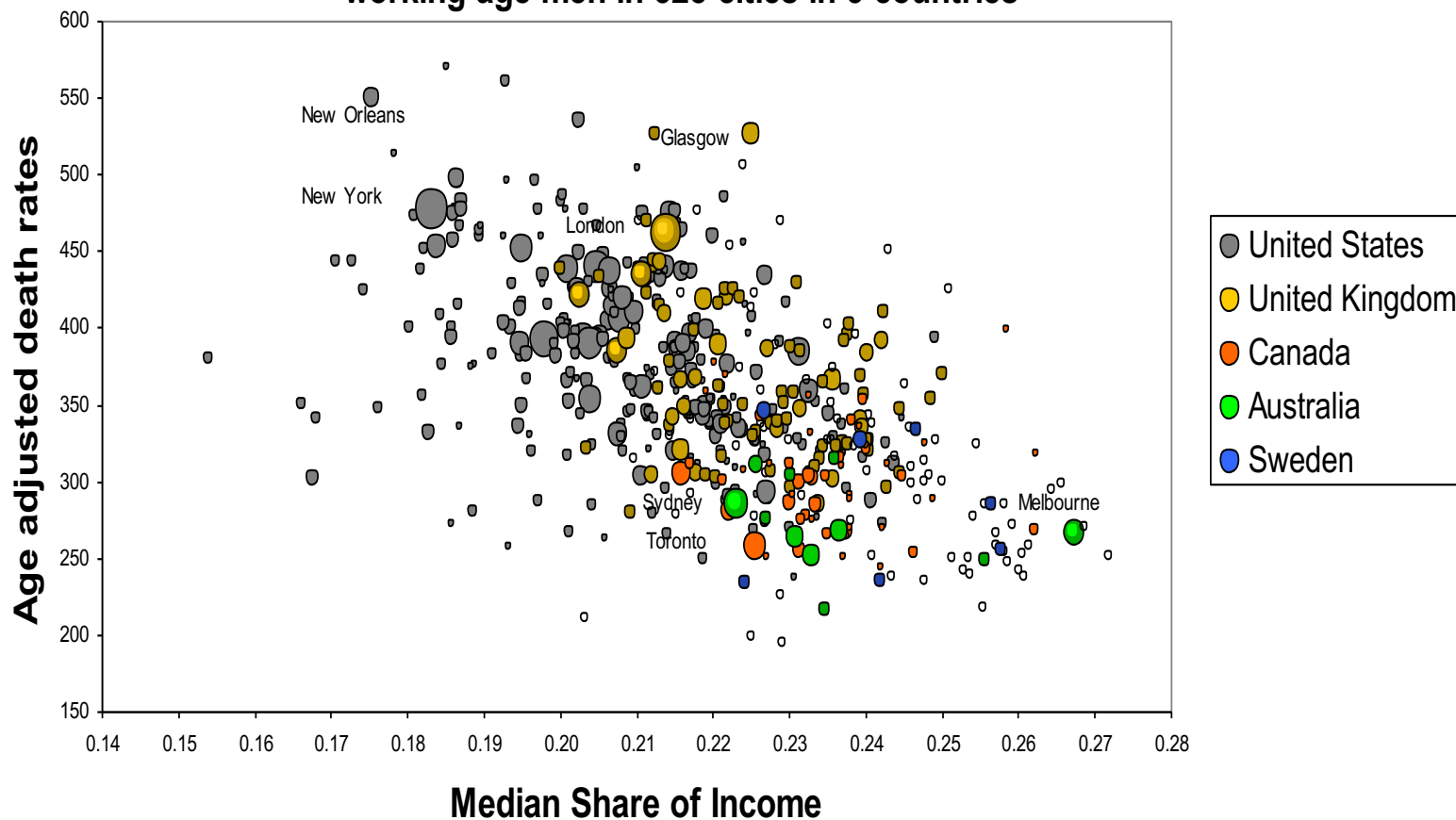
## Life Expectancy and Income Inequality among Rich Countries



Source: De Vogli R, Mistry R, Gnesotto R, Cornia GA, Income inequality and life expectancy: Evidence from Italy and top industrialised countries. *Journal of Epidemiology and Community Health* 2005; 59: 158-162.

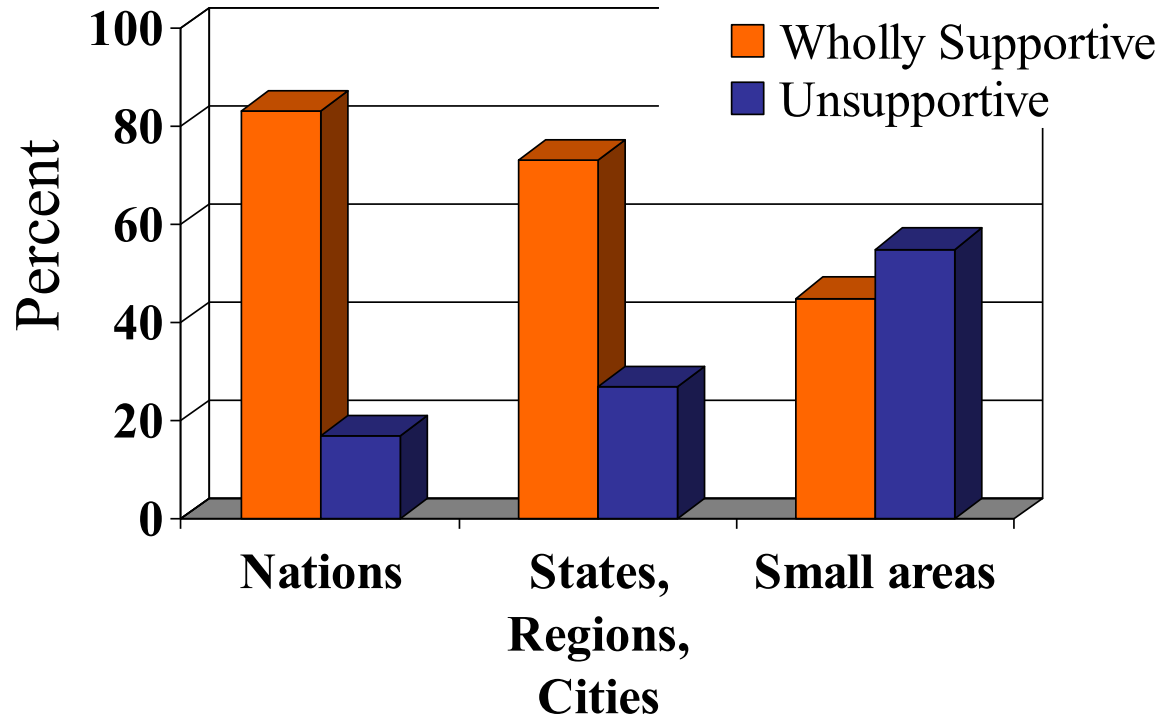


## Income inequality and death rates among working age men in 528 cities in 5 countries



Source: Ross N, Dorling D, Dunn JR, Hendricksson G, Glover J, Lynch J. Metropolitan income inequality and working age mortality: a cross-sectional analysis using comparable data from five countries. *Journal of Urban Health* 2005; 82(1): 101-110.

## Review of 168 analyses of the relation between income inequality and health.



Wilkinson RG, Pickett KE. Income inequality and health: a review and explanation of the evidence. *Social Science and Medicine* 2006; 62: 1768-84.

## **Alan Bennett, *Untold Stories*, Faber/Profile, 2005**

“(My parents) put...down...most of their imagined shortcomings to their not having been educated, education (was) to them a passport to everything they lacked: self-confidence, social ease and above all the ability to be like other people.

Put simply and as they themselves would have put it, both my parents were shy, a shortcoming they thought of as an affliction while at the same time enshrining it as a virtue.

I assured them, falsely, that everybody felt much as they did but that social ease was something that could and should be faked.

‘Well, you can do that,’ Dad would say, ‘you've been educated,’ adding how often he felt he had nothing to contribute. ‘I'm boring, I think. I can't understand why anybody likes us. I wonder sometimes whether they do, really.’

NOT PRETTY  
ENOUGH

NOT SMART  
ENOUGH

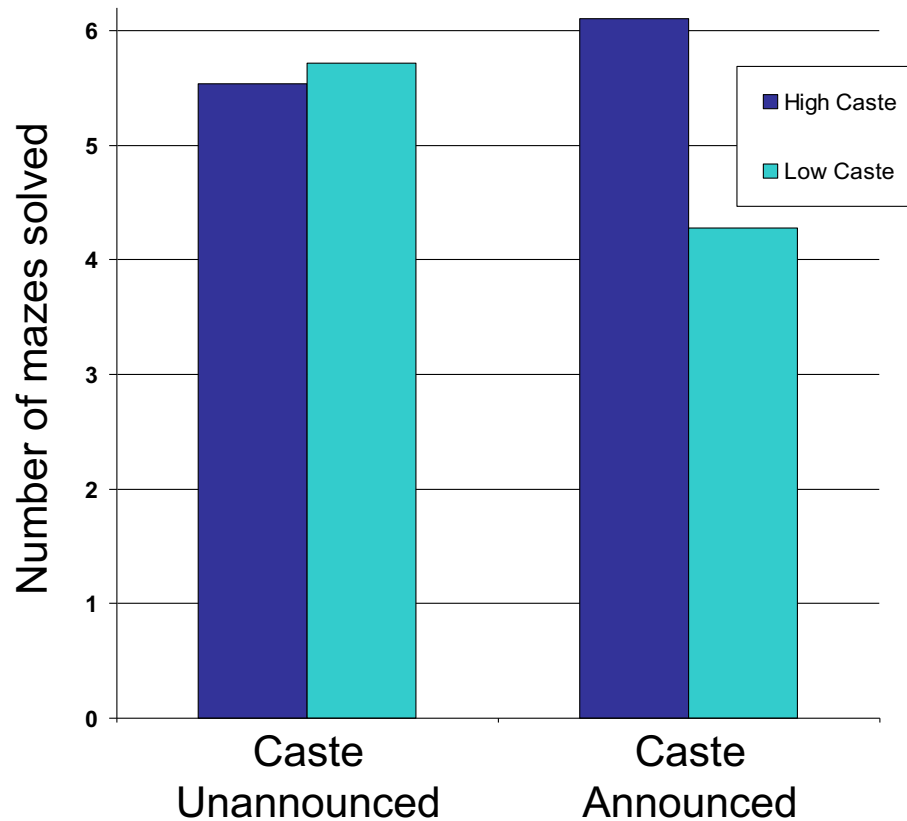


NOT GOOD  
ENOUGH

NOT FUNNY  
ENOUGH

# Status differentiation has a direct effect on cognitive performance

## The Effect of Caste Identity on Children's Performance

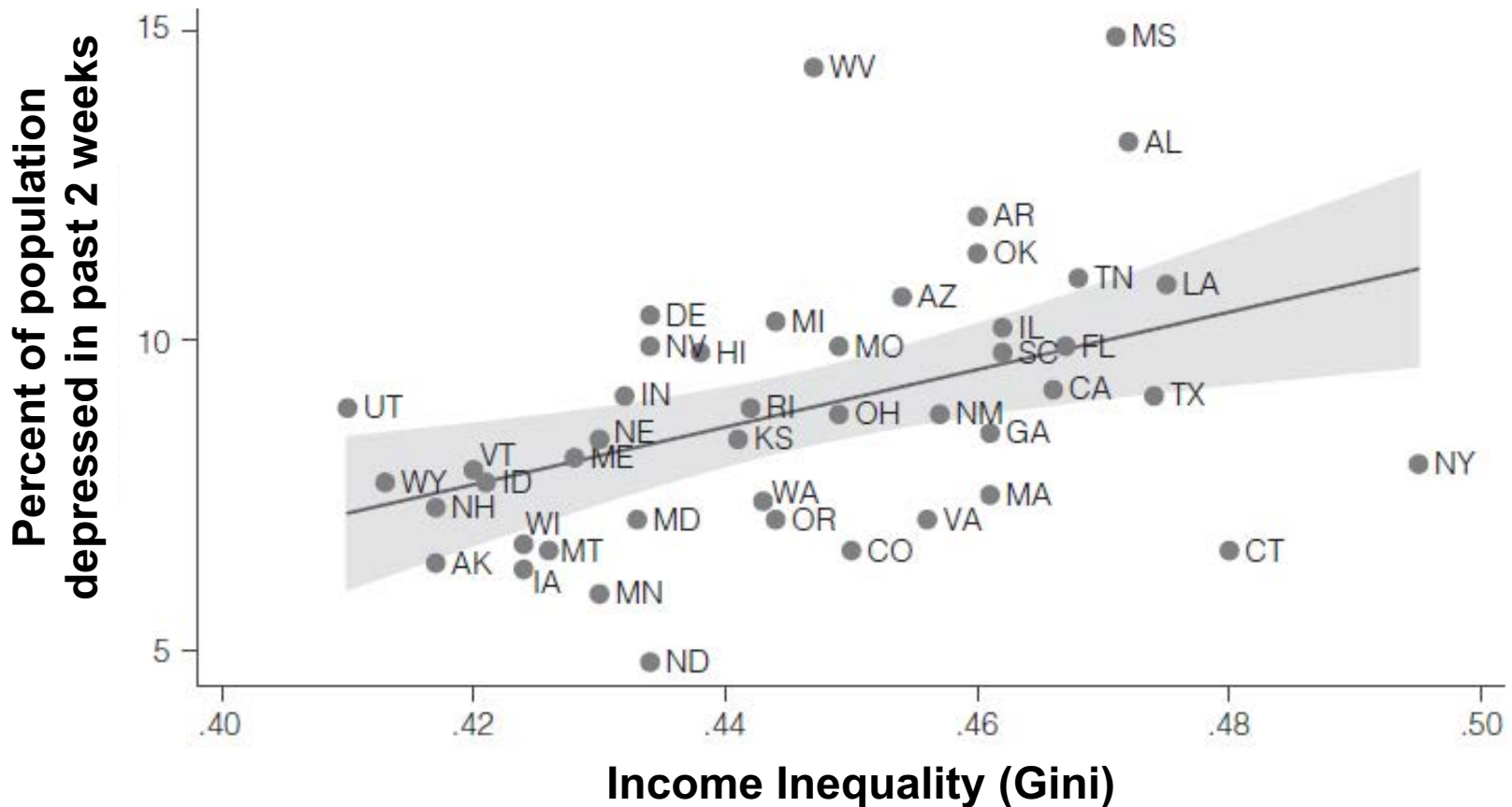


Johnson SL, Leedom LJ, Muhtadie L.

The Dominance Behavioral System and Psychopathology: evidence from self-report, observational, and biological studies. *Psychological Bulletin*. 2012; 138(4): 692-743.

**ABSTRACT:** “We begin by describing psychological, social, and biological correlates of the **Dominance Behavioral System**. Extensive research suggests that externalizing disorders, mania proneness, and narcissistic traits are related to heightened dominance motivation and behaviors. Mania and narcissistic traits also appear related to inflated self-perceptions of power. Anxiety and depression are related to **subordination and submissiveness**, as well as a desire to avoid subordination. Models of the DBS have received support from research with humans and animals; from self-report, observational, and biological methods; and use of naturalistic and experimental paradigms.”

# Depression is more common in more unequal states



Messias E, Eaton WW, et al. . Economic grand rounds: Income inequality and depression across the United States: an ecological study." Psychiatric Services, 2011; 62(7): 710-2.

# **Sensitive periods in early life allow organisms to adapt to the environment in which they are growing up.**

**For humans that is primarily an adaptation to the quality of social relations. Is a child growing up in a world based on:-**

- trust, cooperation, reciprocity, empathy?**

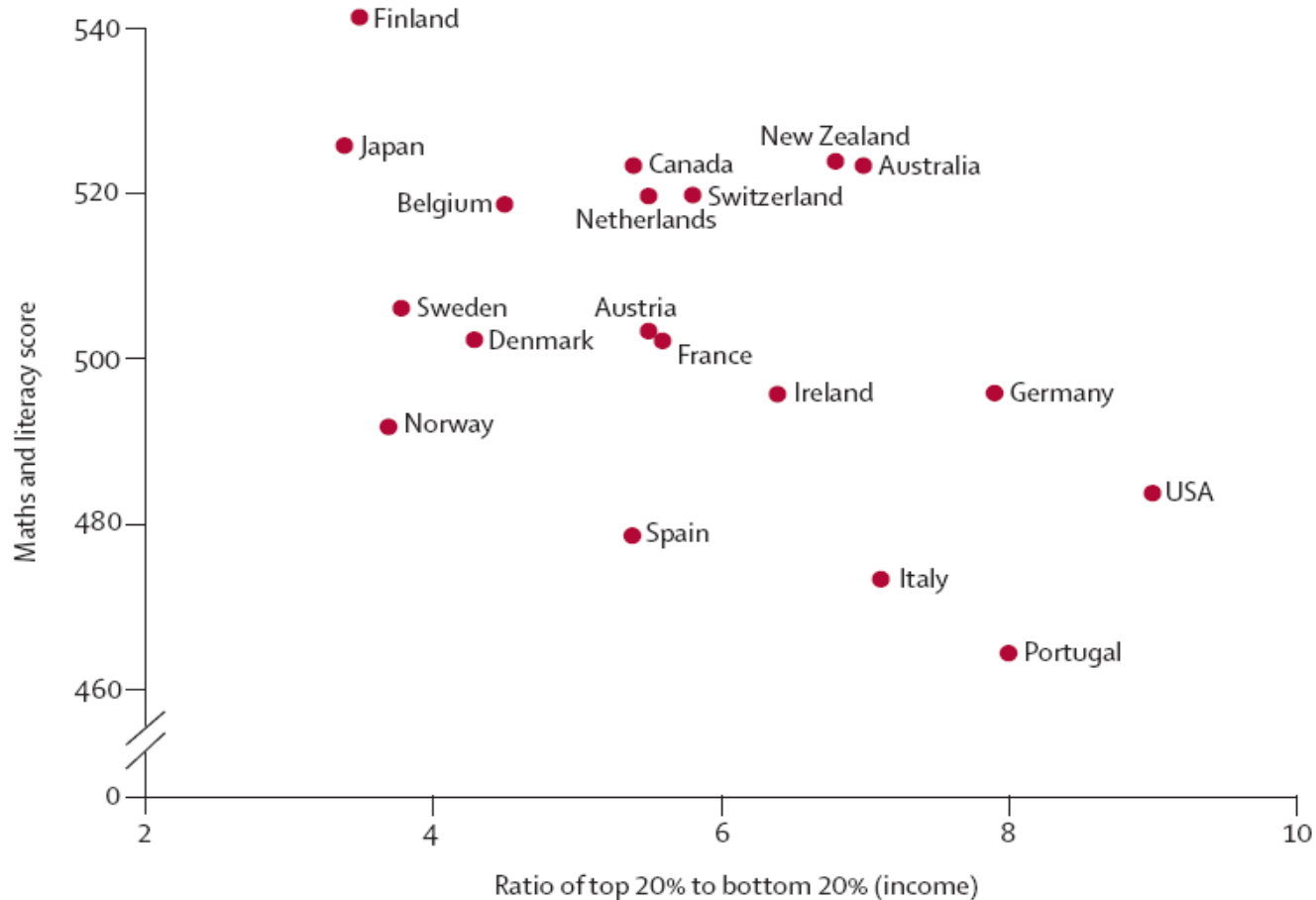
***or:***

- a ‘dog eat dog’ society, in which you have to fend for yourself and learn not to trust others?**

**The adaptive processes almost certainly involve epigenetics**



# Maths & Literacy scores and Income Inequality



**Source: Wilkinson and Pickett. *Lancet* 2006; 367:1126-8.** Data from: OECD (2004), *Learning for Tomorrow's World: first results for PISA 2003*.

**Walker, R. et al.**  
**Poverty in global perspective.**  
***Journal of Social Policy***  
**2013; 42, 215-233**

The experience of poverty in rural Uganda and India;  
urban China, Pakistan, Korea, United Kingdom and Norway.

*“Respondents universally despised poverty and frequently despised themselves for being poor. Parents were often despised by their children, women despised their men-folk and some men were reported to take out their self-loathing on their partners and children. Despite respondents generally believing that they had done their best against all odds, they mostly considered that they had both failed themselves by being poor and that others saw them as failures. This internalisation of shame was further externally reinforced in the family, the workplace and in their dealings with officialdom. Even children could not escape this shaming for, with the possible exception of Pakistan, school was an engine of social grading, a place of humiliation for those without the possessions that guaranteed social acceptance.*

*No parent was able to escape the shame of failing to provide for their children even when children were prepared to stop asking for things – the latter itself being a further source of shame.*

*...For men, relying on others or on welfare benefits was perceived as a challenge to their sense of masculinity: a British father to two children admitted that he felt ‘like shit ... I’m the man in this relationship. I am meant to be the man ... to take care of the missus and my kids. And I don’t.’*

# Bigger income gaps lead to deteriorations in:-

## Social Relations

- Child conflict
- Homicide
- Imprisonment
- Social cohesion
- Trust

## Health

- Drug abuse
- Infant mortality
- Life expectancy
- Mental illness
- Obesity

## Human Capital

- Child wellbeing
- High school dropouts
- Math & literacy scores
- Social mobility
- Teenage births