
Is crime a health problem?

SASO

14th November 2014

What people believe about Scotland's health

- u The Scots are unhealthy
- u It's because they smoke a lot
- u They eat the wrong kind of food
- u They drink too much
- u If only they adopted healthy habits, they would be healthy
- u Only ONE of these statements is true!

The pathogenesis paradigm

- u “Health is a complete state of physical, mental and social wellbeing and not merely the absence of disease or infirmity”

WHO 1948

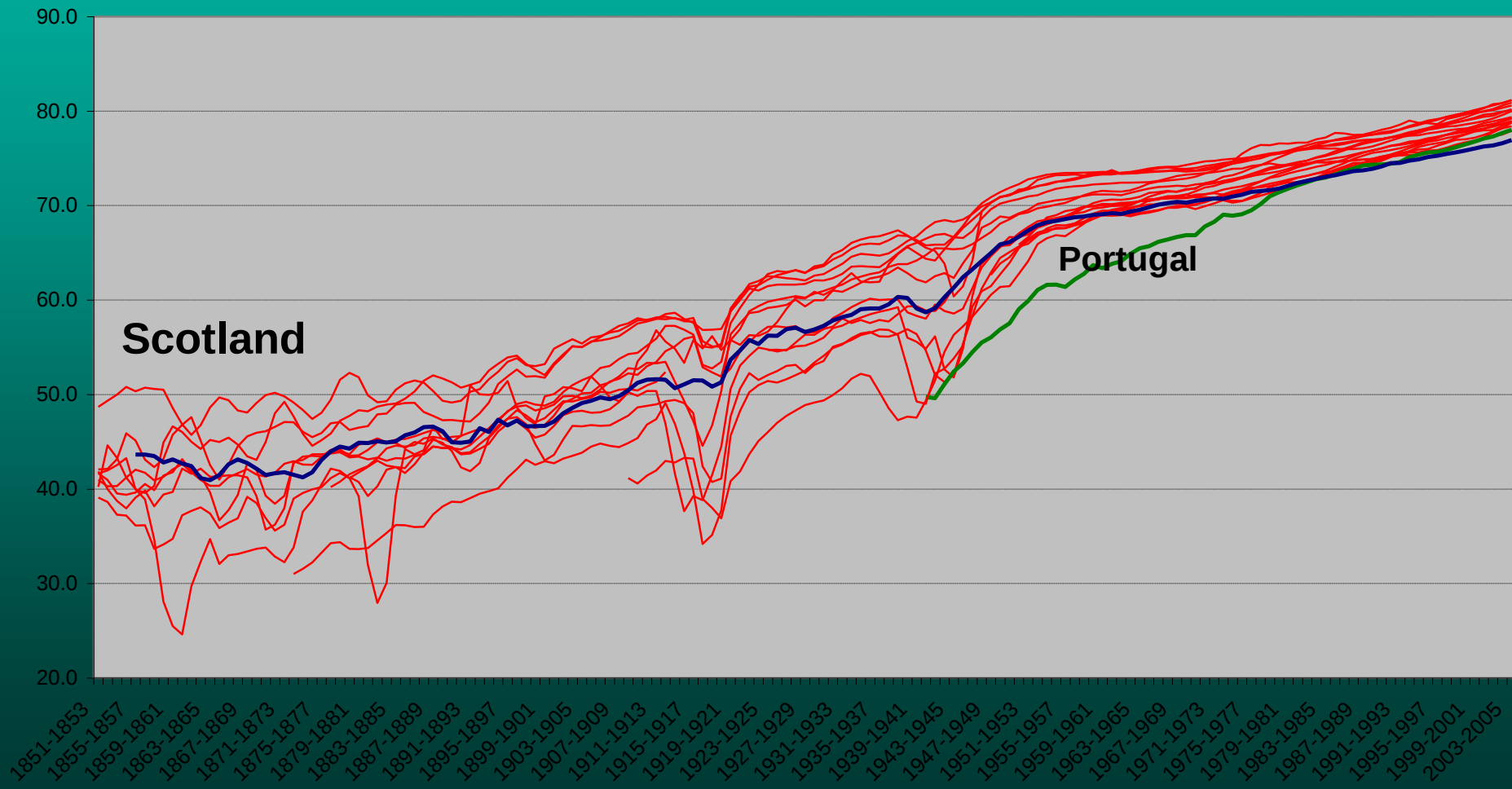
Medicine's silver bullets

- u Diabetes and insulin 1922
- u Tuberculosis and streptomycin 1943
- u Polio and Salk vaccine 1955

Life expectancy trends

Life expectancy: Scotland & other Western European Countries, 1851-2005

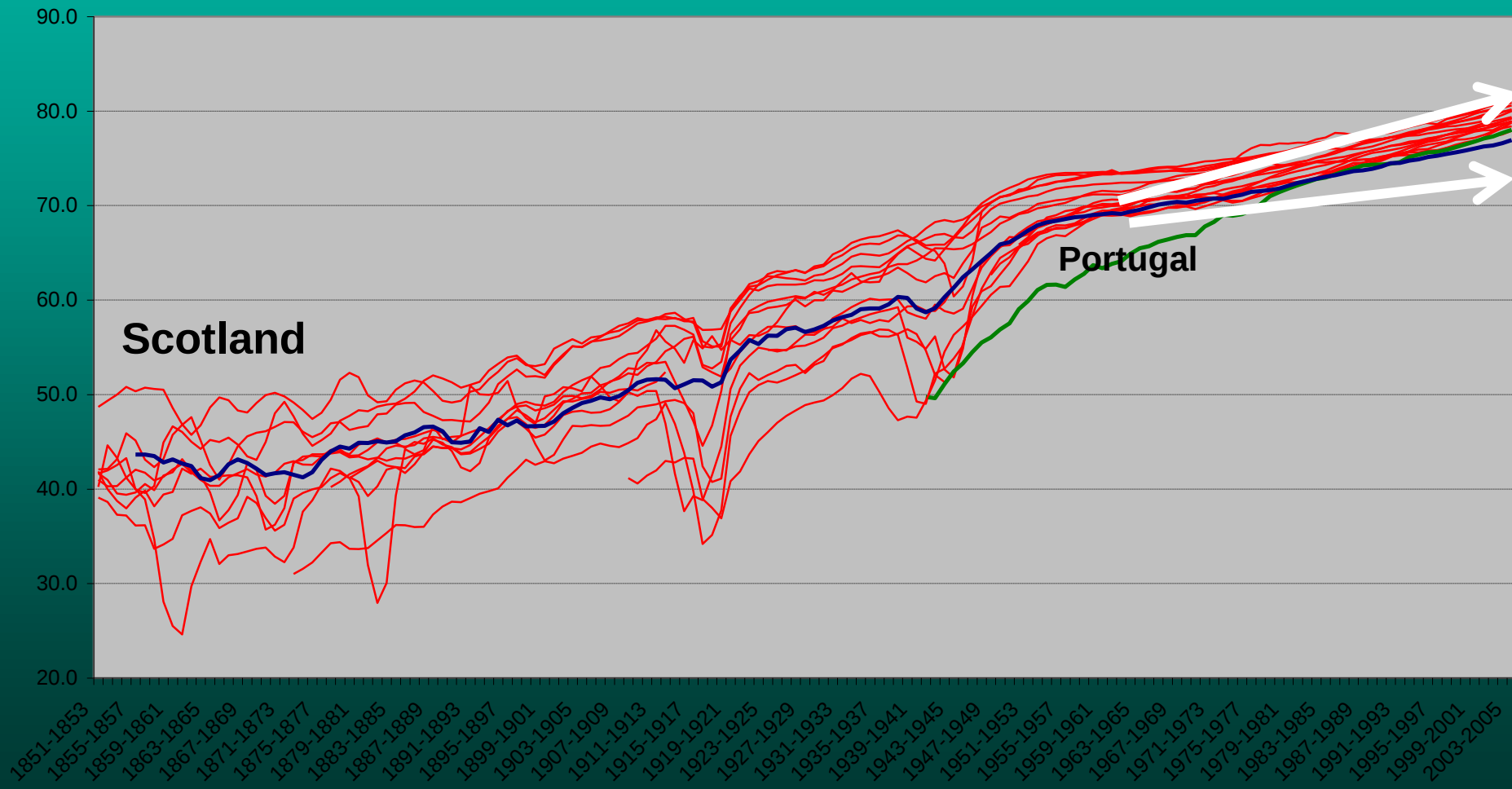
Source: Human Mortality Database



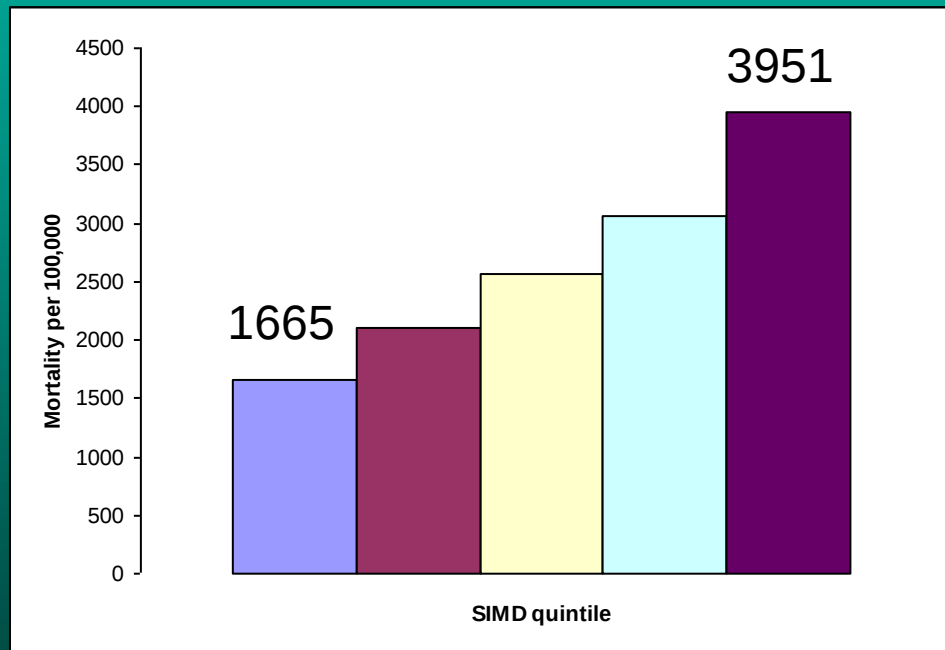
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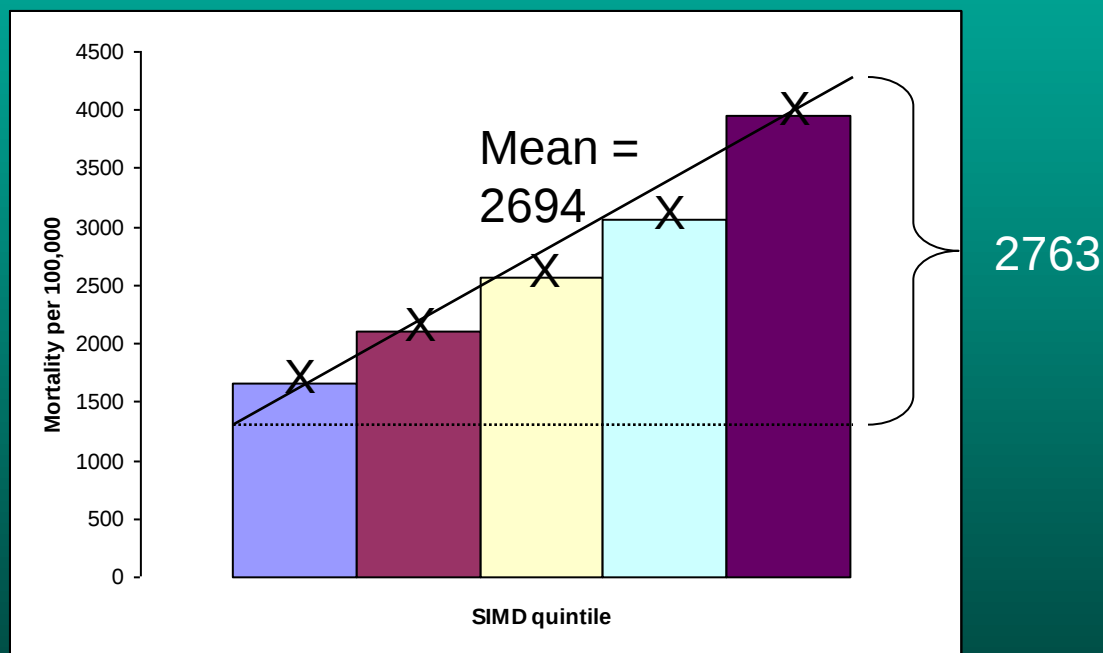
Source: Human Mortality Database



All cause mortality, men 65-69

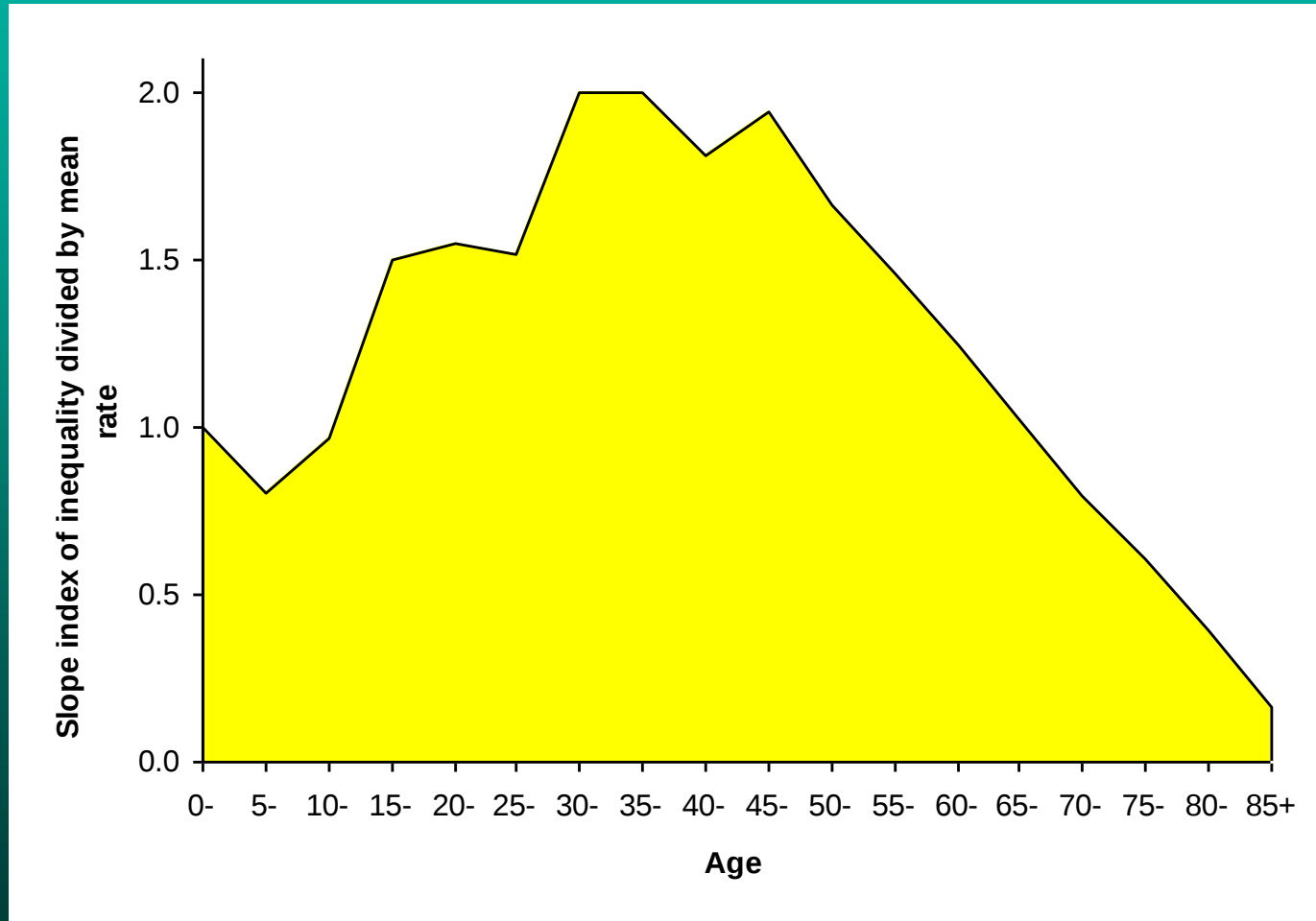


Slope index of inequality

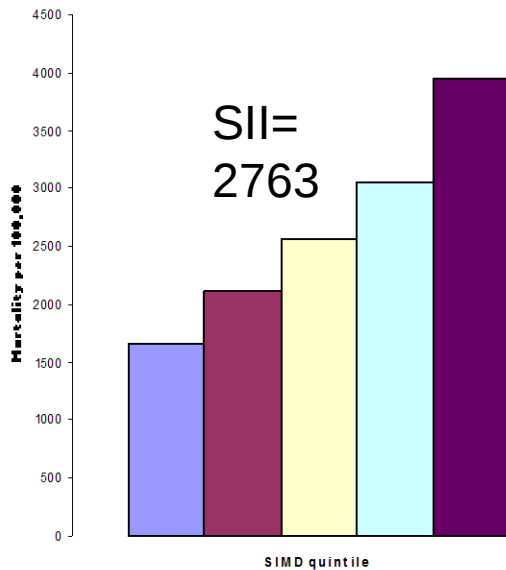


All cause, M65-69
 $2763/2694 = 1.025$

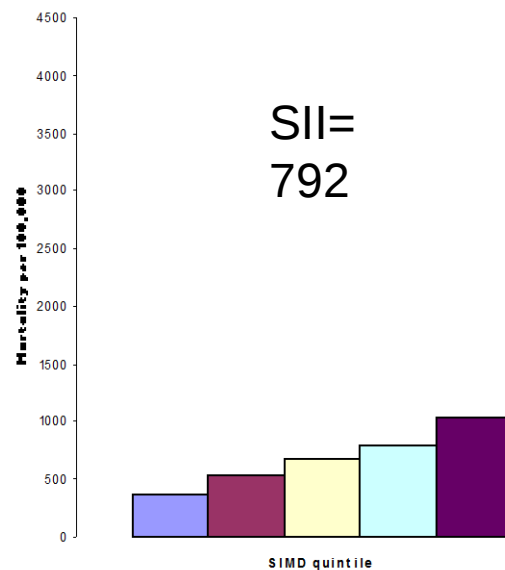
Male inequalities, all causes, all ages



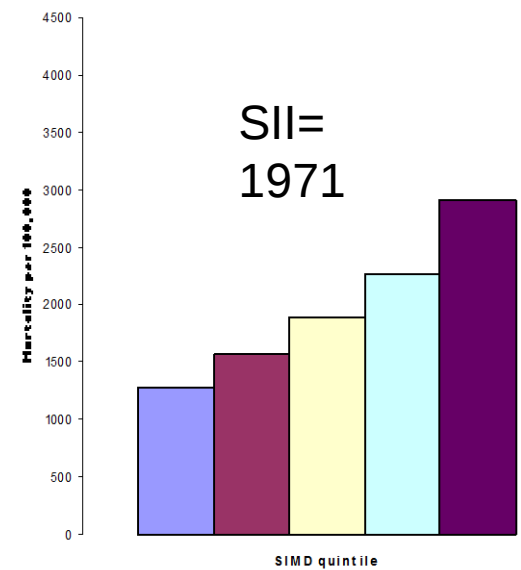
Slope index of inequality breakdown by cause of death



All cause

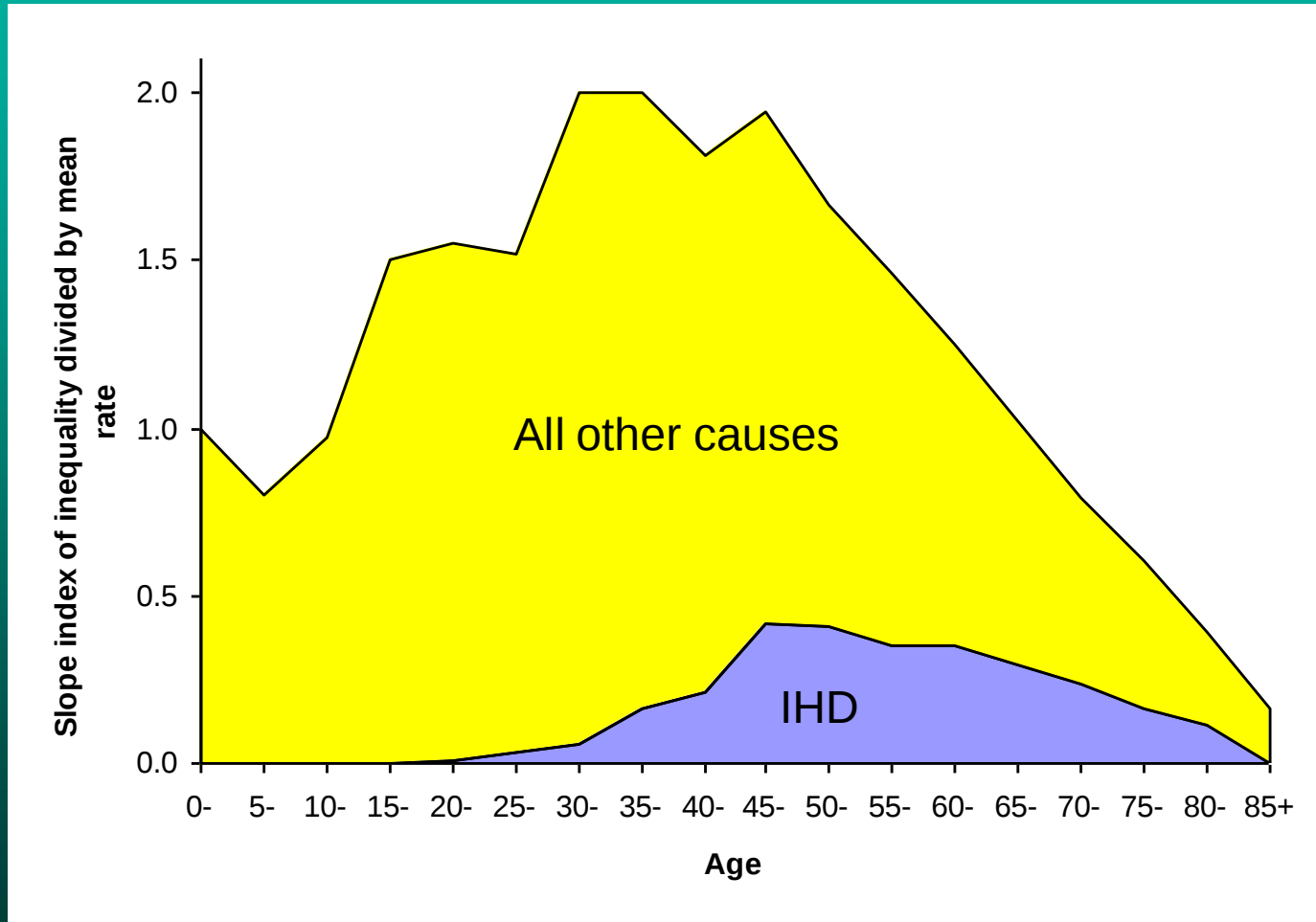


IHD



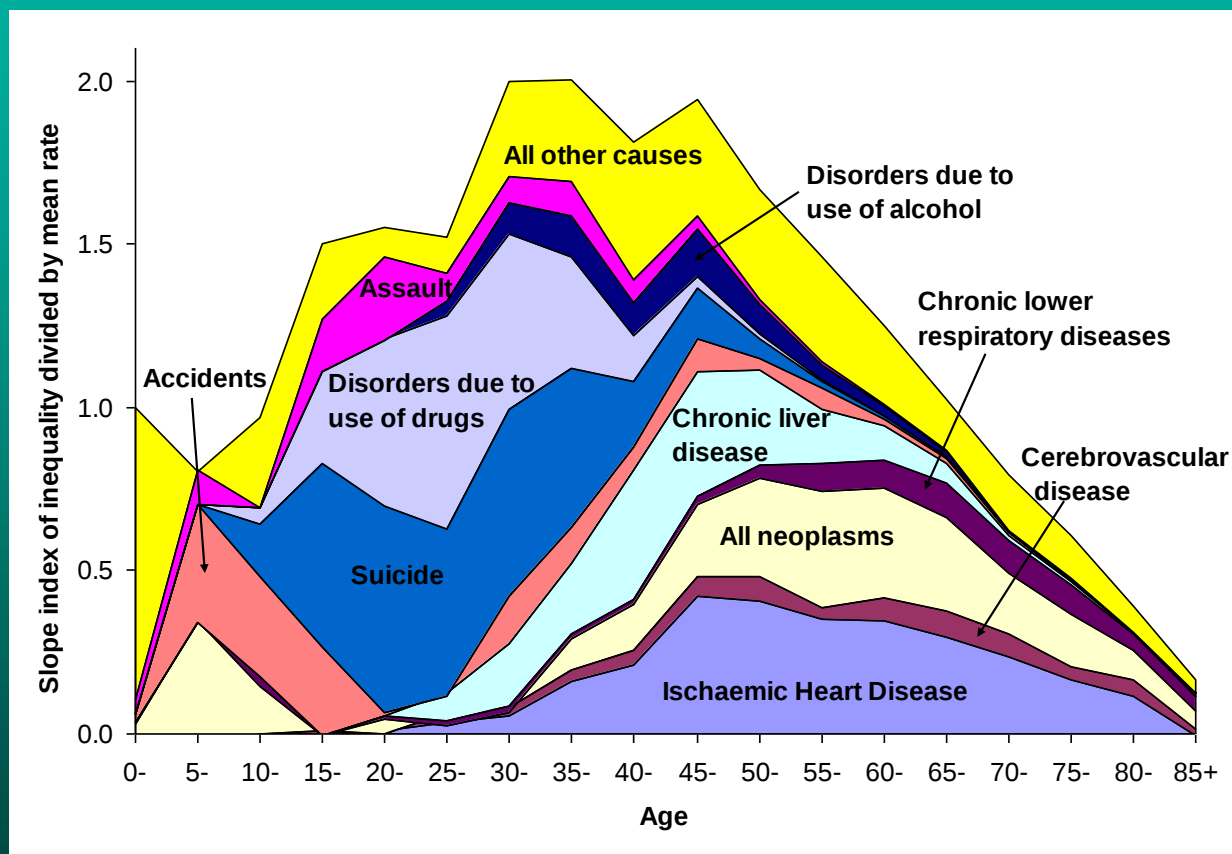
Other causes

Male inequalities, all ages, by cause



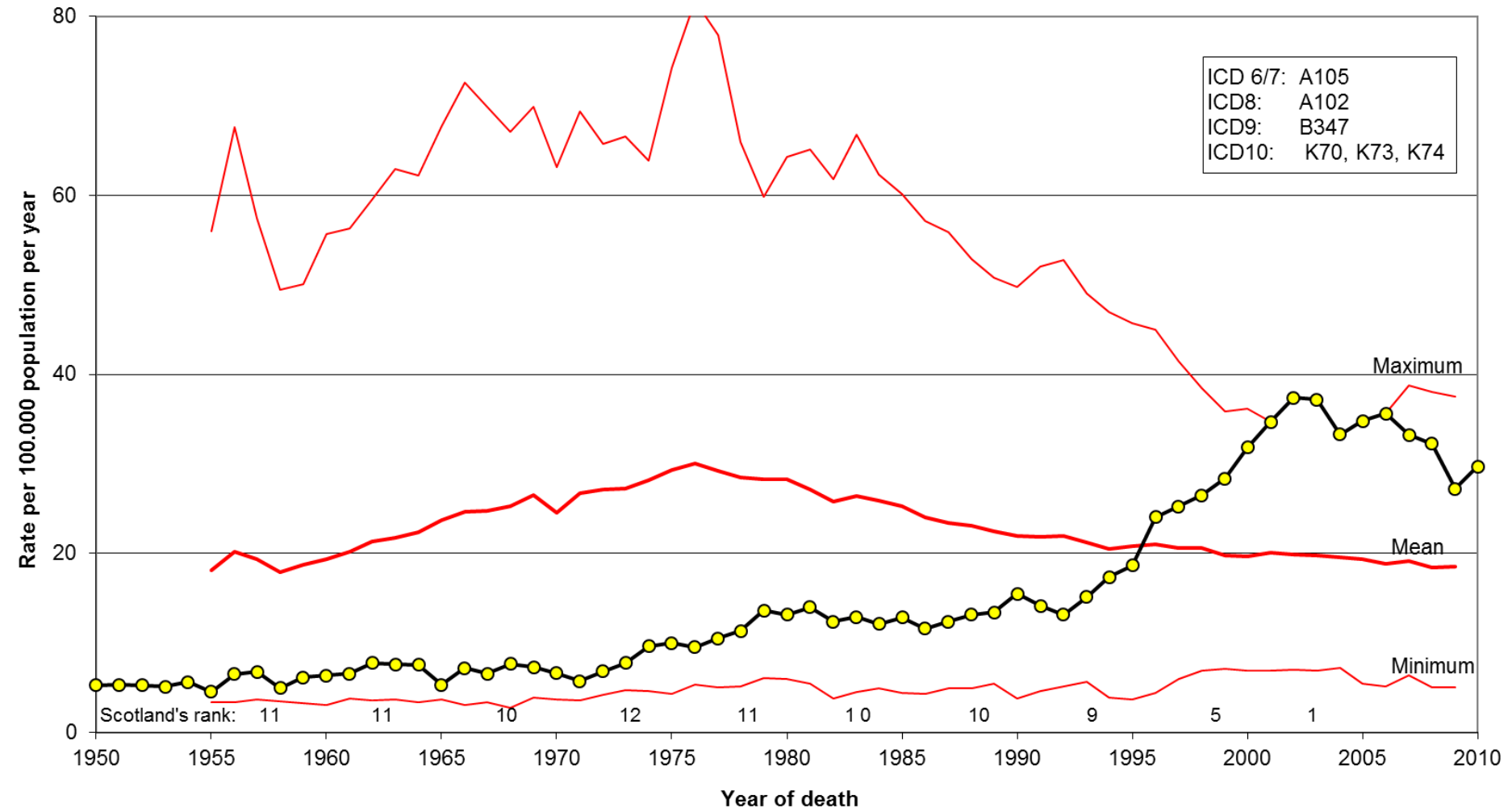
Relative inequalities in mortality by cause

Men, Scotland 2000-02



Chronic liver disease, including cirrhosis

Figure N1M
Mortality from chronic liver disease, incl. cirrhosis, age standardised rates among men 15-74 years
Scotland in context of maximum, minimum, and mean rates for 16 Western European countries
Source: WHOSIS (April 2012)



So, what causes wellness?

Salutogenesis

An assets approach

Gratitude
(McGullough)

Humour
(Martin)

Self-efficacy
(Bandura)

Hardiness
(Kobasa)

Empathy
(Eisenberg)

Coping
(Lazarus)

Learned resourcefulness
(Rosenbaum)

Learned optimism
(Seligman)

Cultural capital
(Bourdieu)

Social capital
(Putnam)

Empowerment
(Freire)

Locus of control
(Rotter)

Learned hopefulness
(Zimmerman)

Quality of Life
(Lindström)

Resilience
(Werner)

Will to meaning
(Frankl)

Wellbeing
(Diener)

Sence of coherence
(Antonovsky)

Connectedness
(Blum)

Flourishing
(Keyes)

Ecological system theory
(Bronfenbrenner)

Emotional intelligence
(Goleman, Akerjordet et al)

**Action
competence**
(Bruun Jensen)

Interdisciplinarity
(Klein)

Attachment
(Bowlby)

Man's search for meaning

- “Those who have a 'why' to live, can bear with almost any 'how'.”

Viktor Frankl 1902-97



Emily Werner and resilience

1. **Personal attributes:** outgoing, bright, and positive
2. **The family:** having close bonds with at least one family member or an emotionally stable parent
3. **The community:** receiving support or counsel from peers

Sense of coherence....

“.....expresses the extent to which one has a feeling of confidence that the stimuli deriving from one's internal and external environments in the course of living **are structured, predictable and explicable**, that one has the **internal resources** to meet the demands posed by these stimuli and, finally, that these demands are seen as **challenges, worthy of investment and engagement**.”

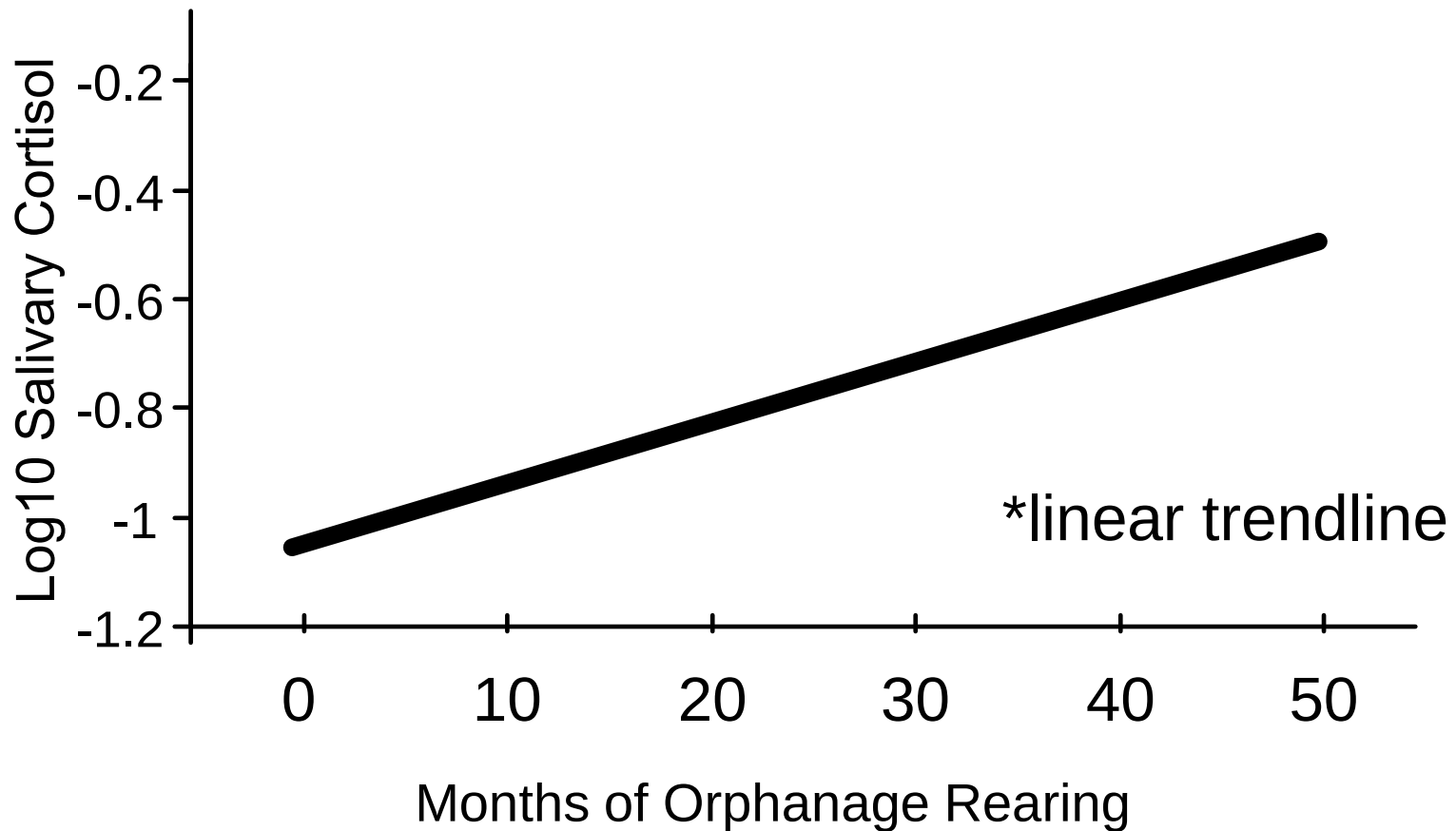
Corey Keyes and Flourishing

“They are happy and satisfied; they tend to see their lives as having a purpose; they feel some degree of mastery and accept all parts of themselves; they have a sense of personal growth in the sense that they are always growing, evolving, and changing; finally, they have a sense of autonomy and an internal locus of control, they chose their fate in life instead of being victims of fate.”

The causes of wellness?

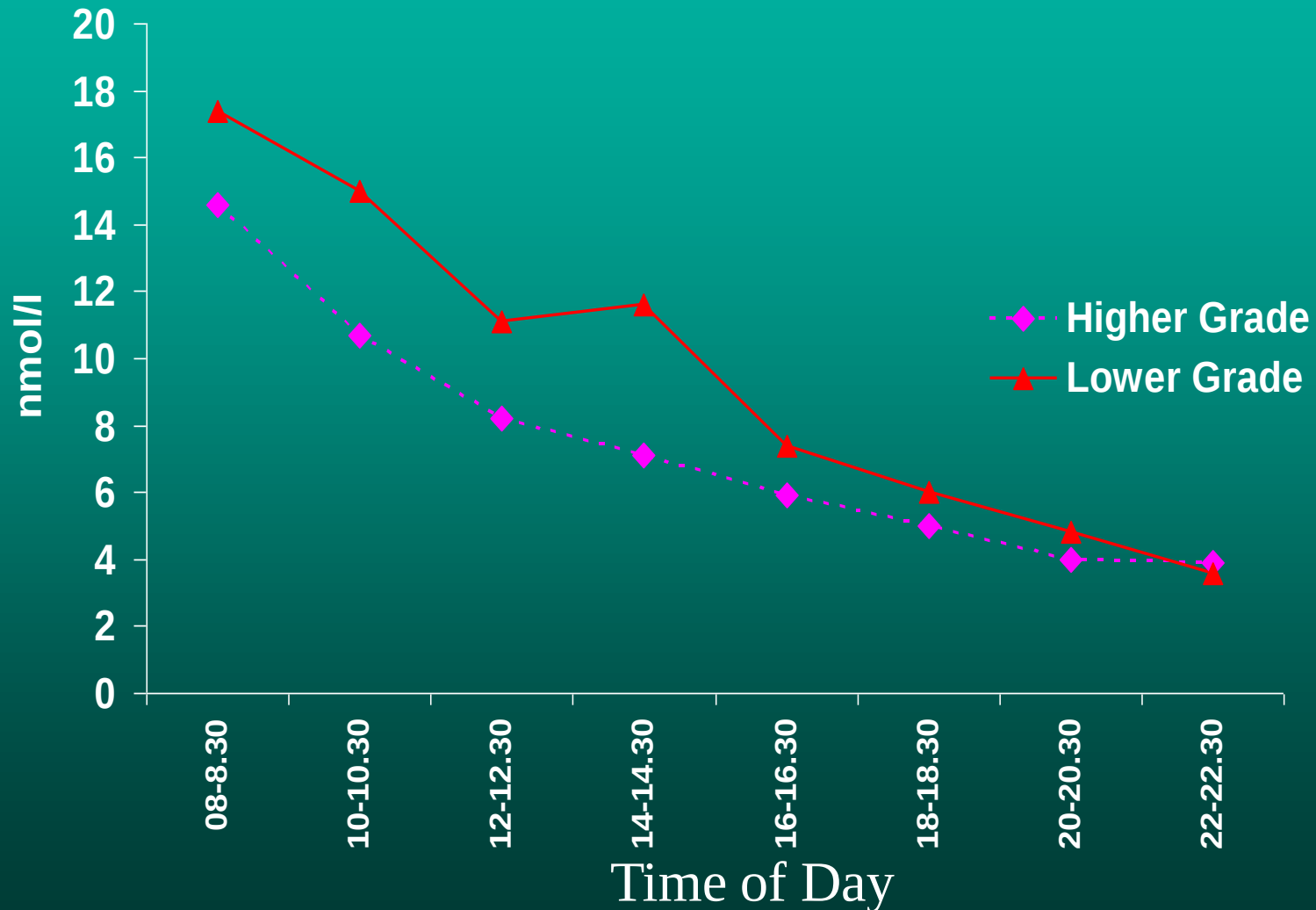
- u Optimistic outlook
- u Sense of control and internal locus of control
- u Sense of purpose and meaning in life
- u Confidence in ability to deal with problems
- u Supportive network of people
- u Nurturing family

Evening Cortisol Levels Increase with Months of Orphanage Rearing *



STRESS AND GRADE OF EMPLOYMENT: MEN

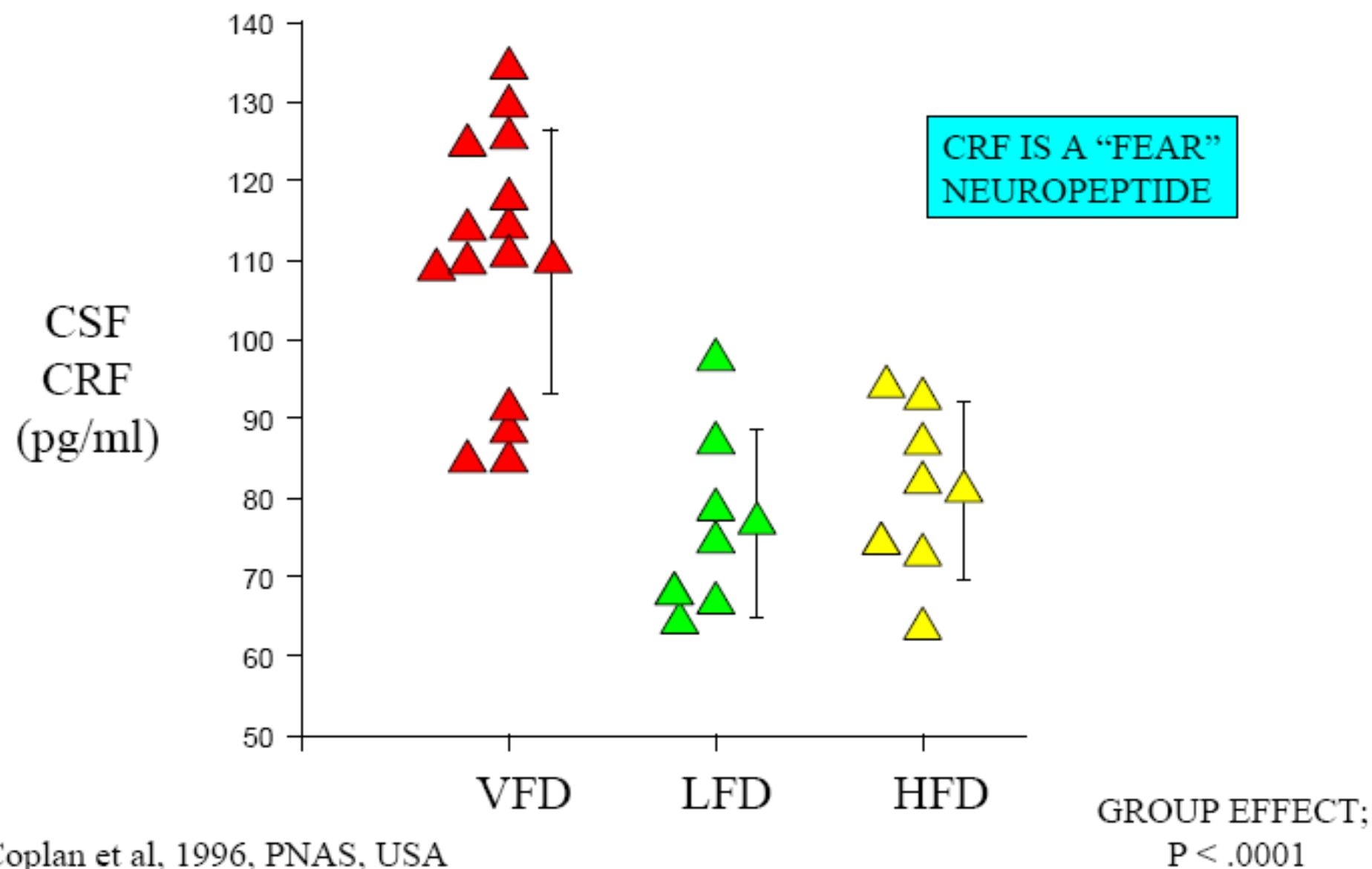
Salivary Cortisol



Steptoe et al. 2003, Psychosomatic Medicine, 65, 461-470



CSF CRF CONCENTRATIONS IN DIFFERENTIALLY-REARED JUVENILE PRIMATES:



The Human Brain Under Stress: key brain regions

Prefrontal cortex

Executive function, working memory

Atrophy

Hippocampus

Contextual, episodic, spatial
memory

Atrophy

Amygdala

Emotion. fear, anxiety

Hypertrophy.

later atrophy



Amygdala

Hippocampus

Image size: 1024 x 1024
View size: 1266 x 618
X: 290 px Y: 297 px Value: 430
WL: 715 WW: 1430

H

unnamed

498

SAG FSE T2

TR: 4220.0, TE: 96.4

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Im: 3/12

Zoom: 178% Angle: 0

Thickness: 3.0 mm Location: -27.8

X: -25.81 mm Y: -63.50 mm Z: 24.90 mm

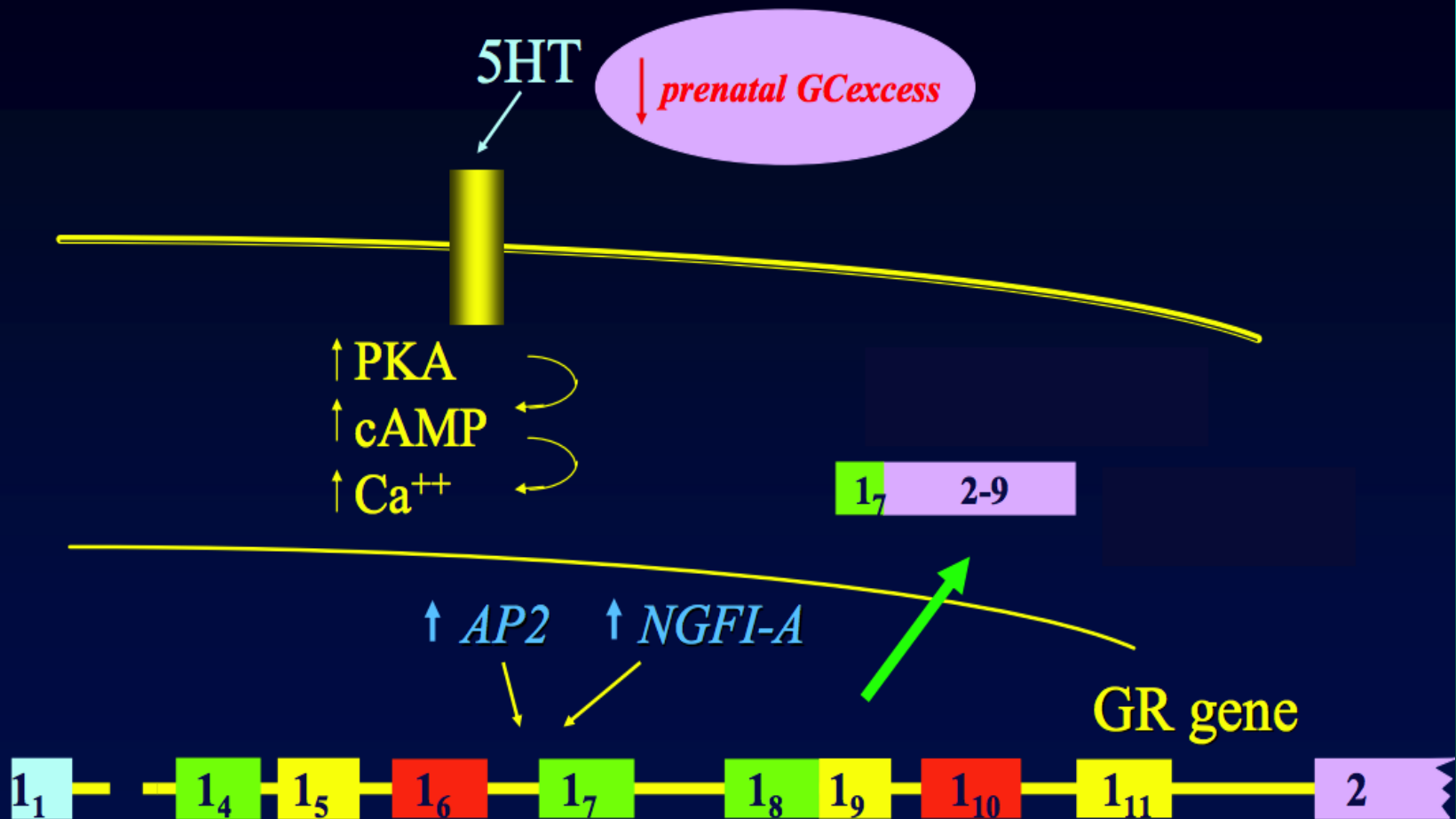
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13/07/2005

Made with OsiriX

The molecular biology of a hug

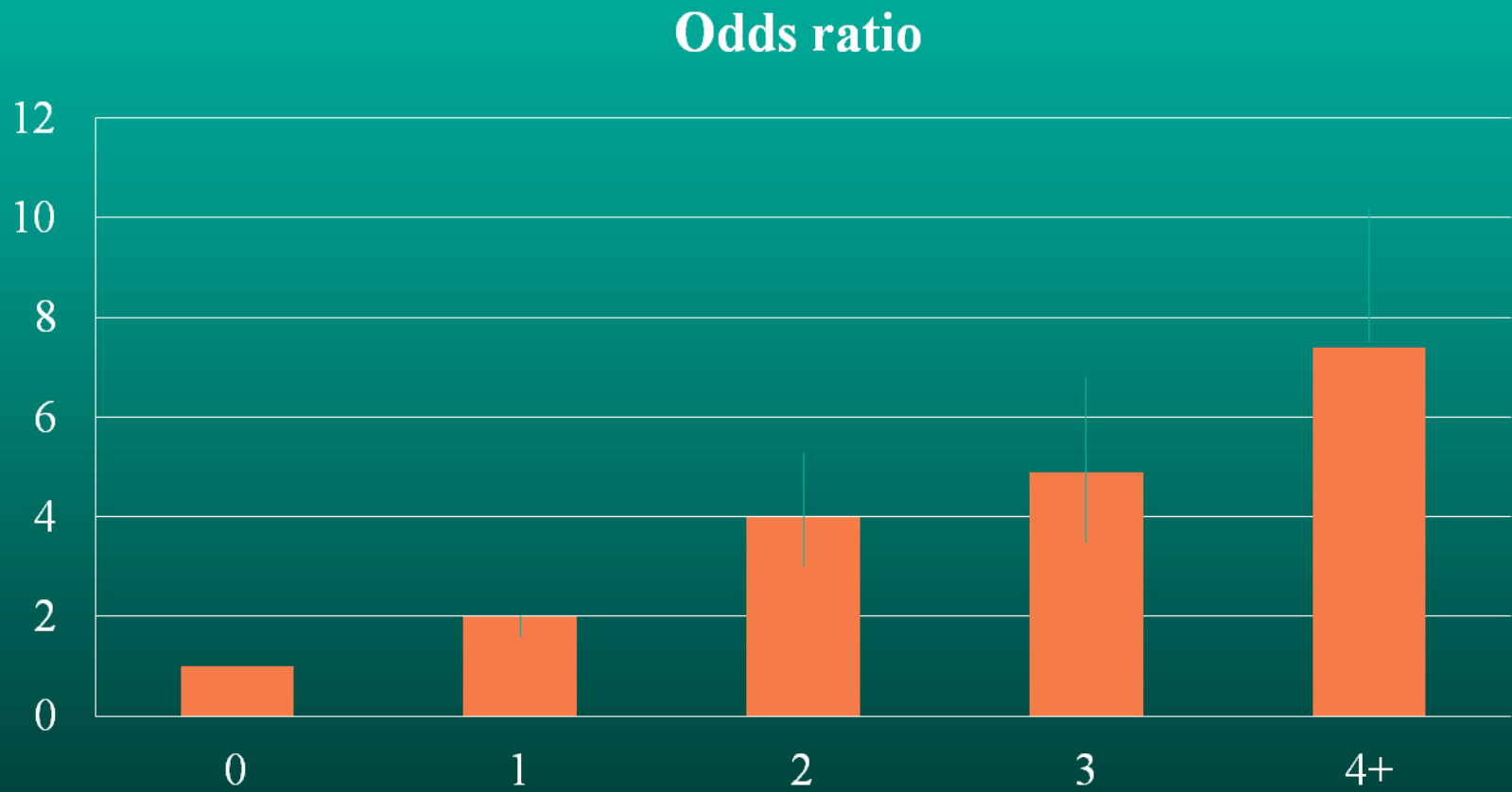
5HT regulates hippocampal GR gene transcription



Adverse childhood events study

- u Physical/sexual/emotional abuse
- u Neglect (physical/emotional)
- u Domestic substance abuse
- u Domestic violence
- u Parental mental illness
- u Parental criminality

Adverse childhood events risk of alcoholism

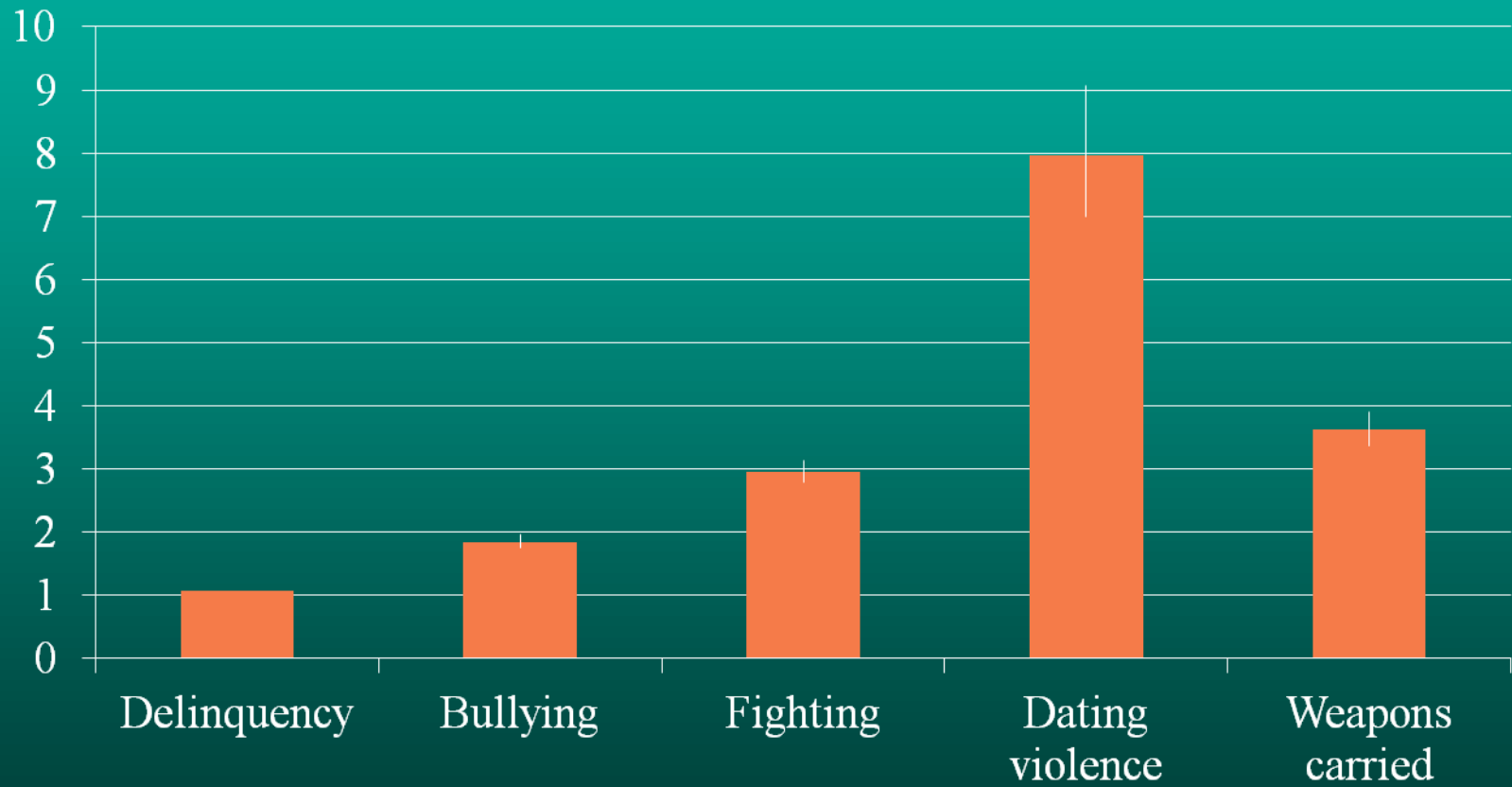


Hillis et al 2011

Adverse childhood events

risk of perpetrating violence

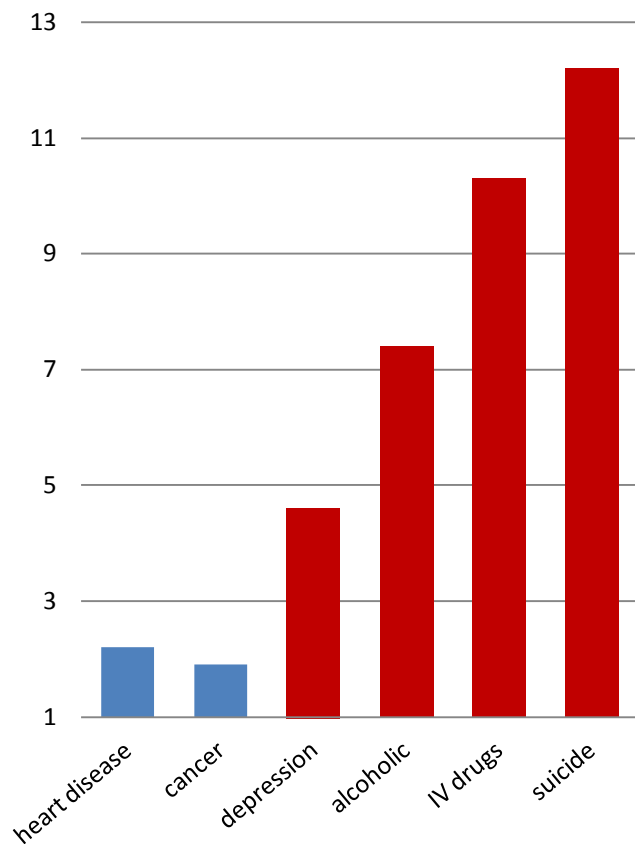
Boys experiencing physical abuse



Duke et al 2010

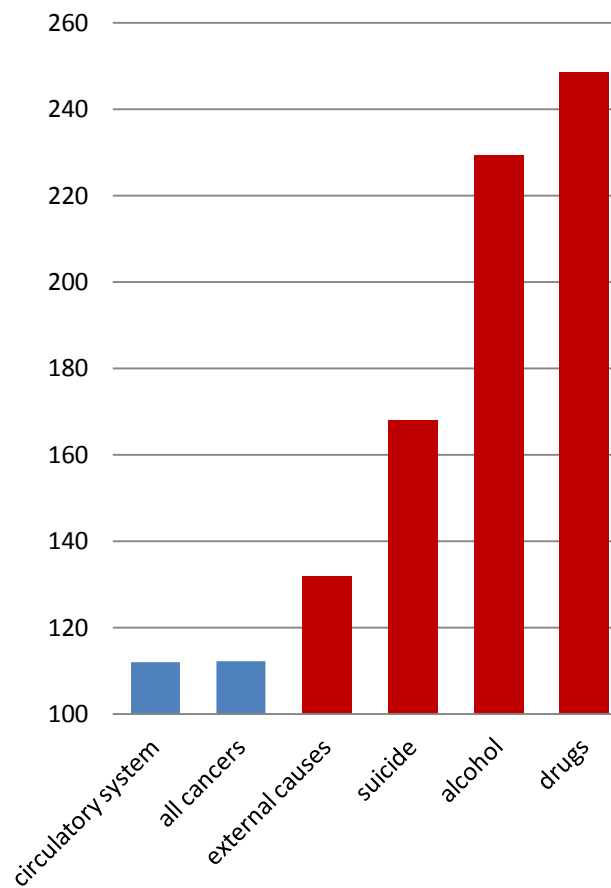
ACE and morbidity

(adjusted odds ratio, 4+ ACE)

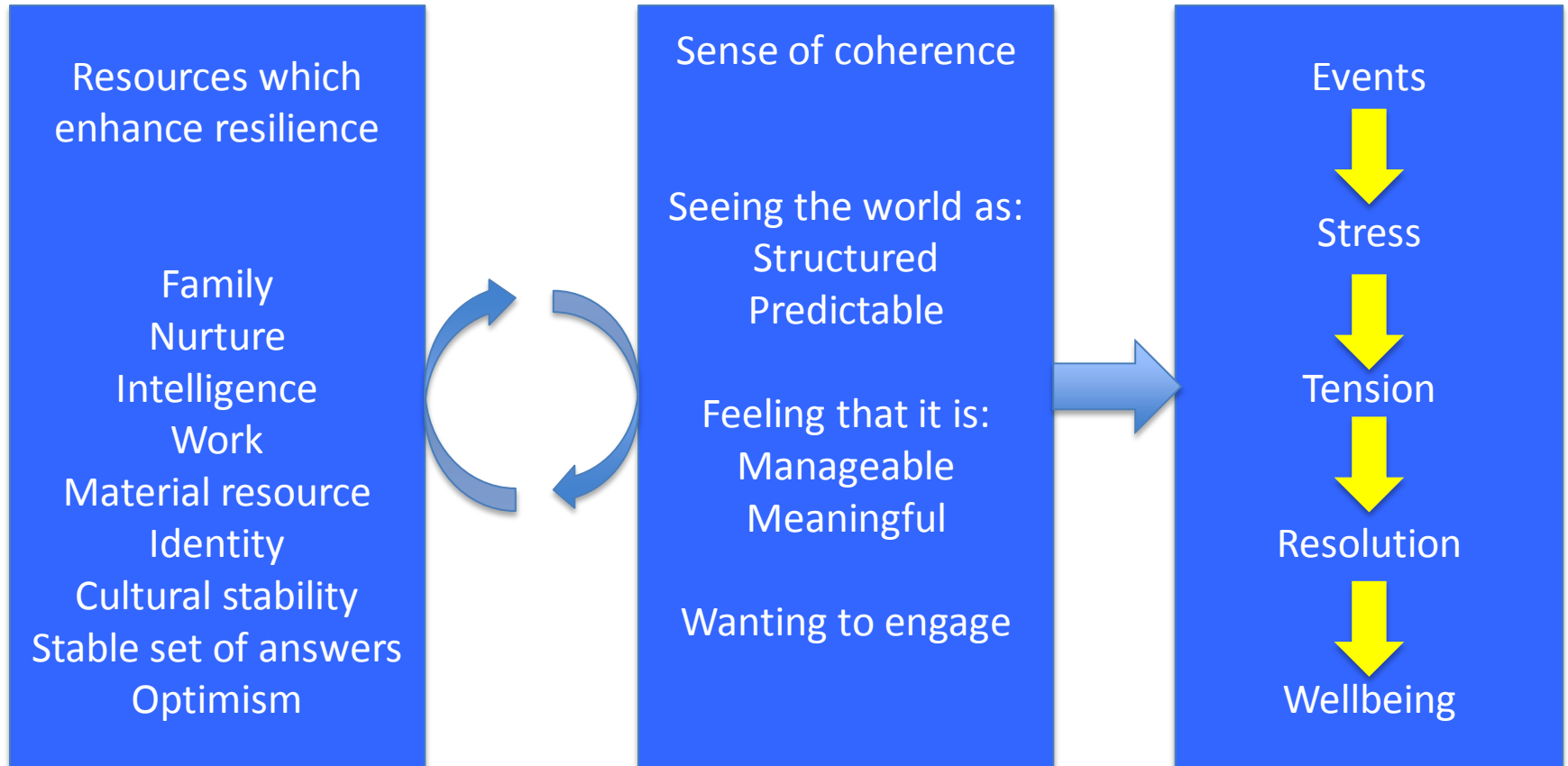


Glasgow excess mortality

(cause-specific SMR, compared to Liverpool & Manchester)



Creating wellness



Maslow 2.0

Self-actualization

morality,
creativity,
spontaneity,
problem solving,
lack of prejudice,
acceptance of facts

Esteem

self-esteem, confidence,
achievement, respect of others,
respect by others

Love/belonging

friendship, family, sexual intimacy

Safety

security of: body, employment, resources,
morality, the family, health, property

Physiological

breathing, food, water, sex, sleep, homeostasis, excretion



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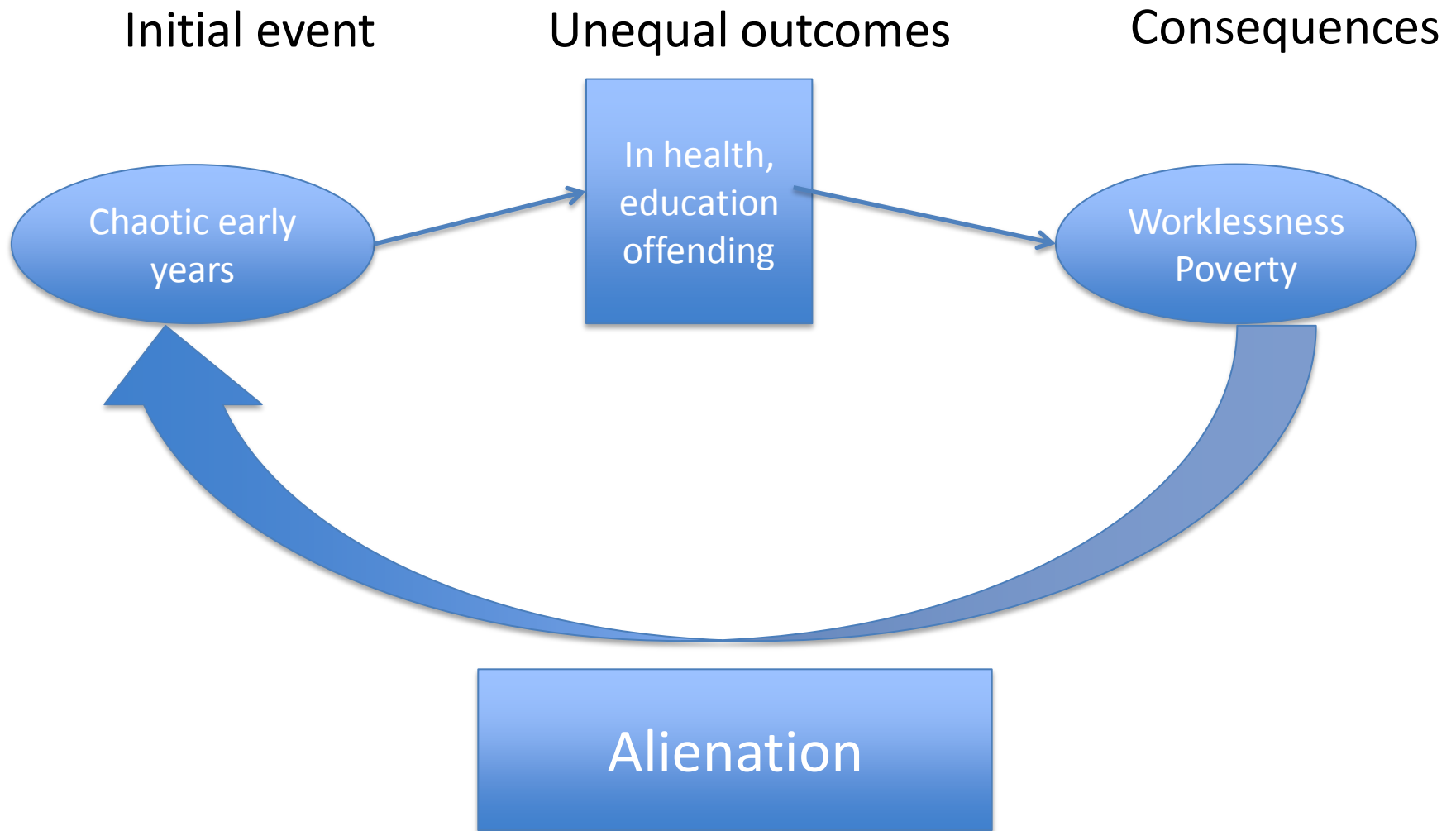
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WIFI



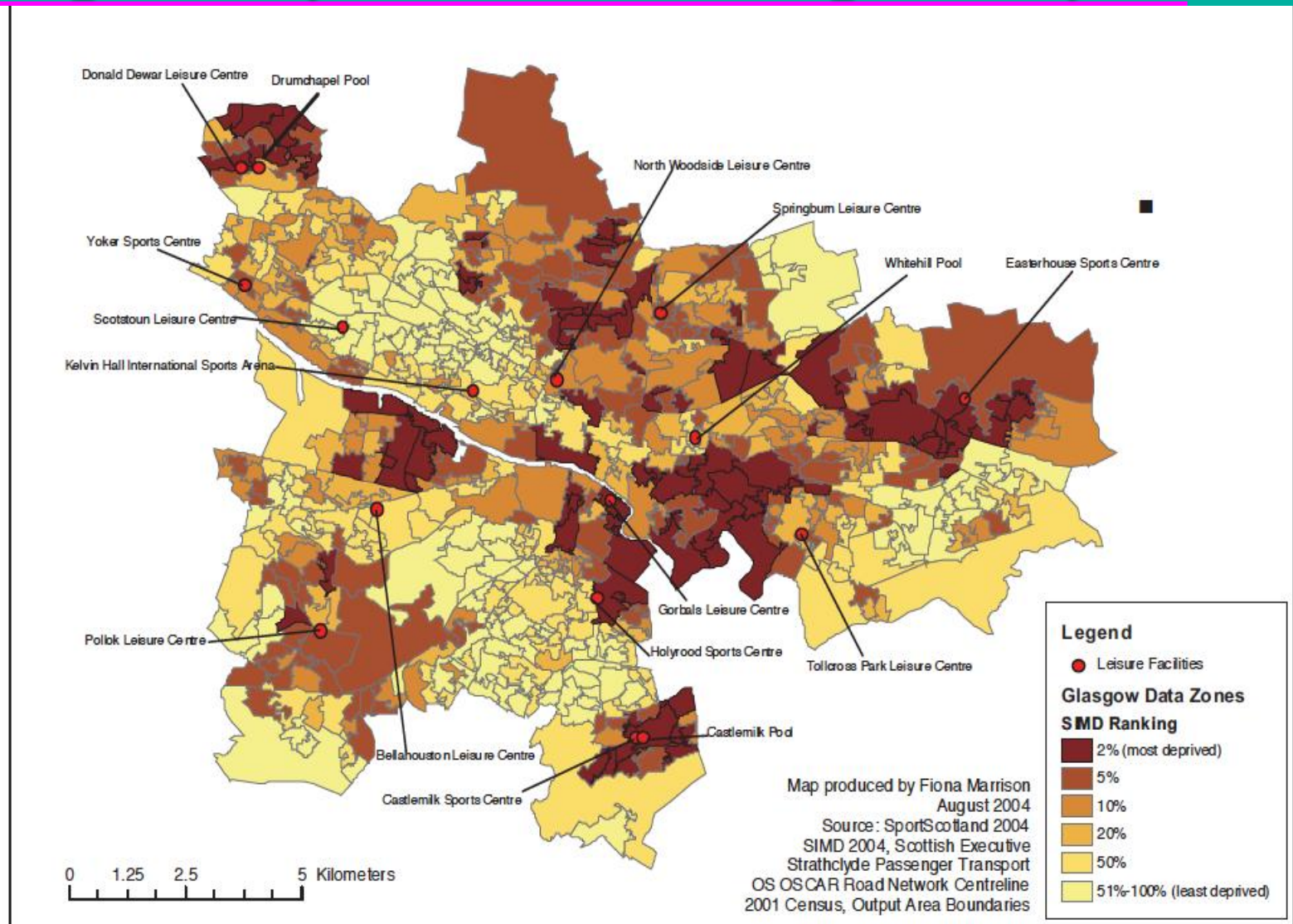
The cycle of alienation



What does this mean for policy?

- u Inequality in Scotland (and elsewhere?) is not primarily due to conventional risk factors
- u Early years experience is important in building resilience and wellbeing in later life
- u Conventional methods for preventing illness will not be effective in creating wellness
- u The system is not a machine. It's complex!

A complex system of complex systems



Change in complex systems

- u Destabilise the existing system
- u Set simple order generating rules
- u Accept emergence

06:44



Change in complex systems

- u Destabilise the existing system
- u Set simple order generating rules
- u Accept emergence

—or

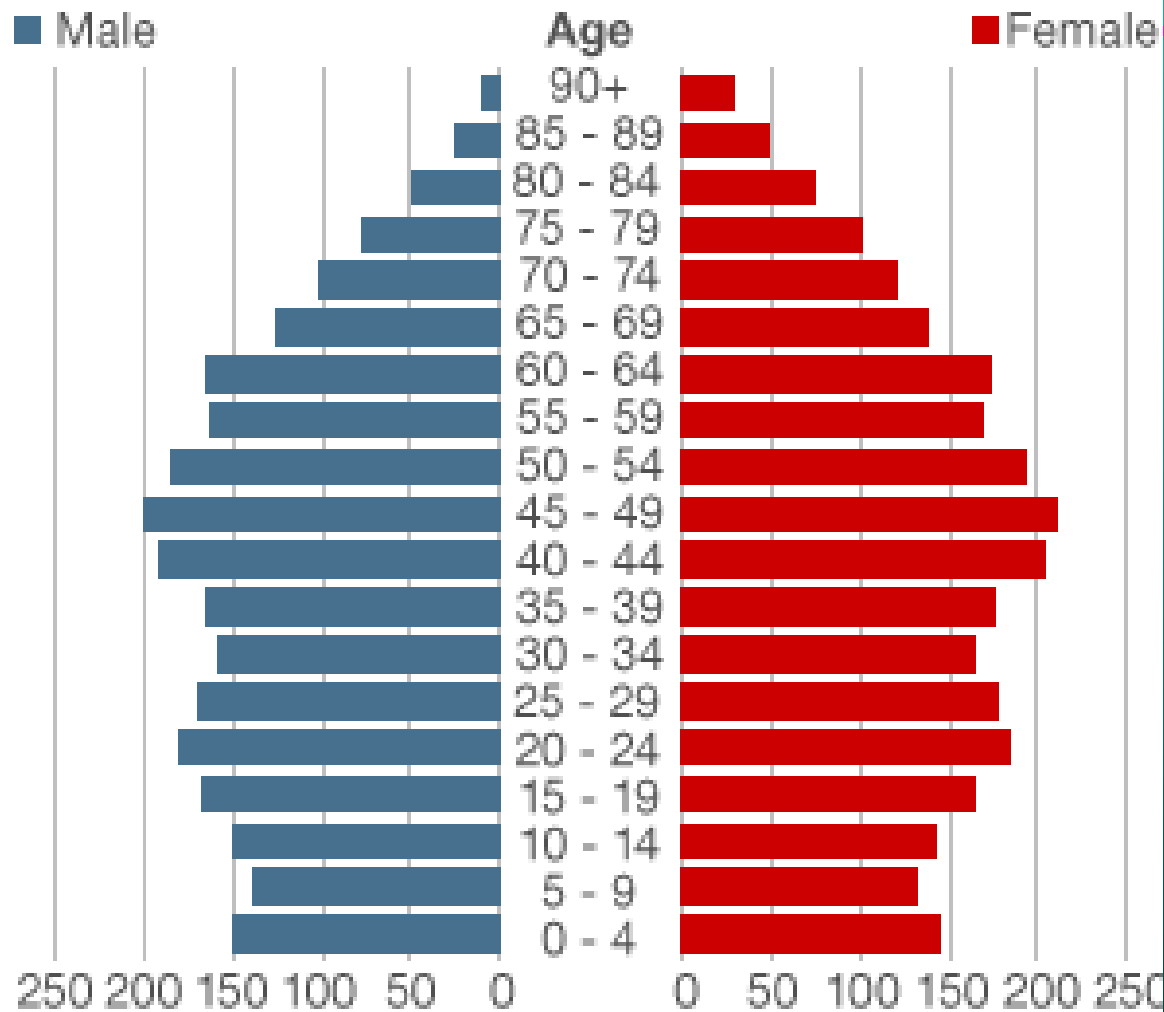
- u Build the will for change
- u Agree the direction of travel
- u Accept emergence

What's the direction of travel?

- u The role of governments should be to ensure that every citizen has the opportunities and support to develop their talents and attain their full human potential

Population by age and sex Scotland, 2011

Population, in thousands



Source: National Records of Scotland

Jimmy Reid 1971



Trade Union leader

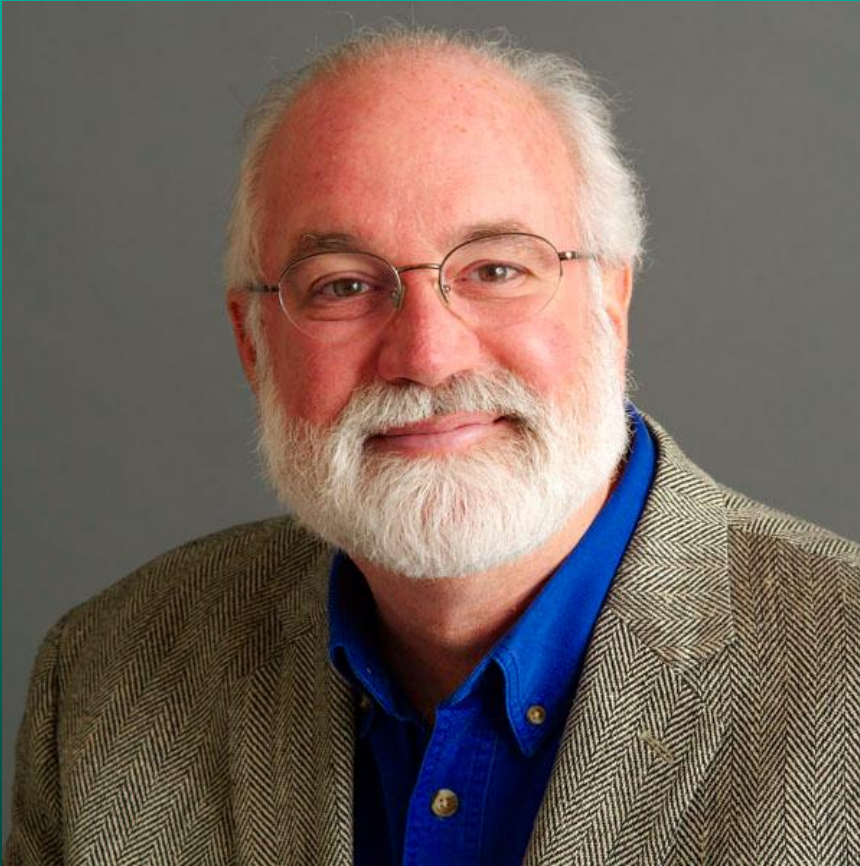
Elected by students as Rector of Glasgow University

Alienation in 1970s Scotland

- “Let me right at the outset define what I mean by alienation. It is the cry of men who feel themselves the victims of blind economic forces beyond their control. It's the frustration of ordinary people excluded from the processes of decision making. The feeling of despair and hopelessness that pervades people who feel with justification that they have no real say in shaping or determining their own destinies....”



Fr Greg Boyle

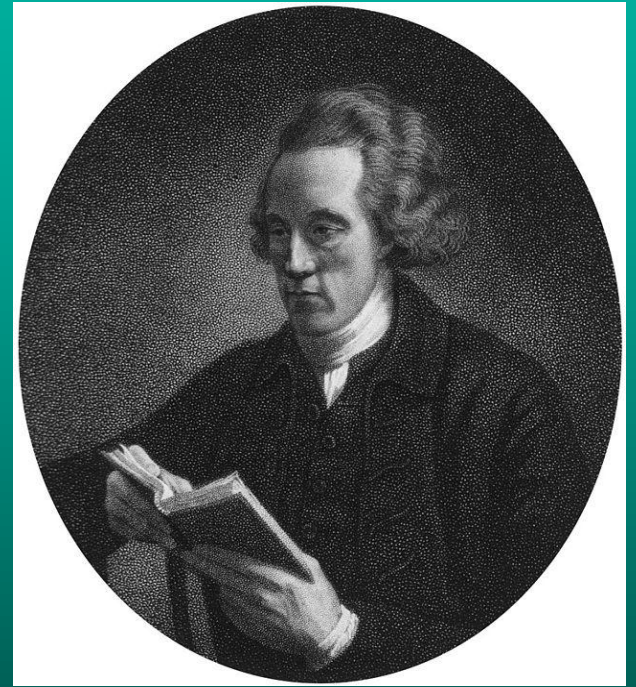


“Here is what we seek: a compassion that can stand in awe at what the poor have to carry rather than stand in judgment at how they carry it.”

— Gregory Boyle

Joseph Townsend 1739-1816

- u “Hunger will tame the fiercest animals. “It will teach decency and civility, obedience and subjection ... it is only hunger which can spur and goad the poor on to labour.”



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predominantly on
to pay the costs of
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Salmond — who
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Touchdown The Philae probe became the first spacecraft to land on a comet. It took this image during its descent. Pages 8-9

Boasting traders lead to £2.7bn bank fines

Patrick Hosking Financial Editor
Harry Wilson City Editor

Traders' online boasts about rigging markets and cheating clients led to fines of £2.7 billion for some of the world's biggest banks yesterday.

In what was billed as a more serious scandal than the manipulation of Libor interest rates that rocked London two years ago, six banks — including Royal Bank of Scotland, which is 80 per cent owned by UK taxpayers, and HSBC — were found to have tried to manipulate benchmark foreign currency prices.

The Financial Conduct Authority and regulators in the US and Switzerland fined the banks for the attempts to

manipulate the foreign exchange markets, which are at the heart of capitalism and international trade.

Traders at the banks formed close-knit groups and, in private internet chat rooms, shared information about clients using code names. The groups had names such as “the players”, “the 3 musketeers”, “1 team, 1 dream”, “a co-operative” and “the A-team”.

“YESssssssssss,” one trader wrote in a chat room after manipulating a foreign exchange (forex) benchmark. “Yeah baby” responded another, while a third wrote: “Nice work gents... I don my hat”. One asked: “How can I make free money with no f***ing heads up?”

Traders tried to boost their employ-

ers' profits and their own bonuses by colluding and sharing client information to manipulate the foreign exchange rates used to price many deals in the forex markets, where \$5 trillion (£3.17 trillion) is traded each day.

The UK's chief City watchdog and the Commodity Futures Trading Commission in the US released hundreds of pages of documents to show how traders tried to manipulate foreign exchange prices known as the “1.15p fix” and the “4pm fix” to make profit.

One of the traders quipped: “Thank you go... early, move it, hold it, push it”. Another wrote: “Loved that manipulation worked lovely”, adding: “We need

Continued on page 4, col 5

Confucianism

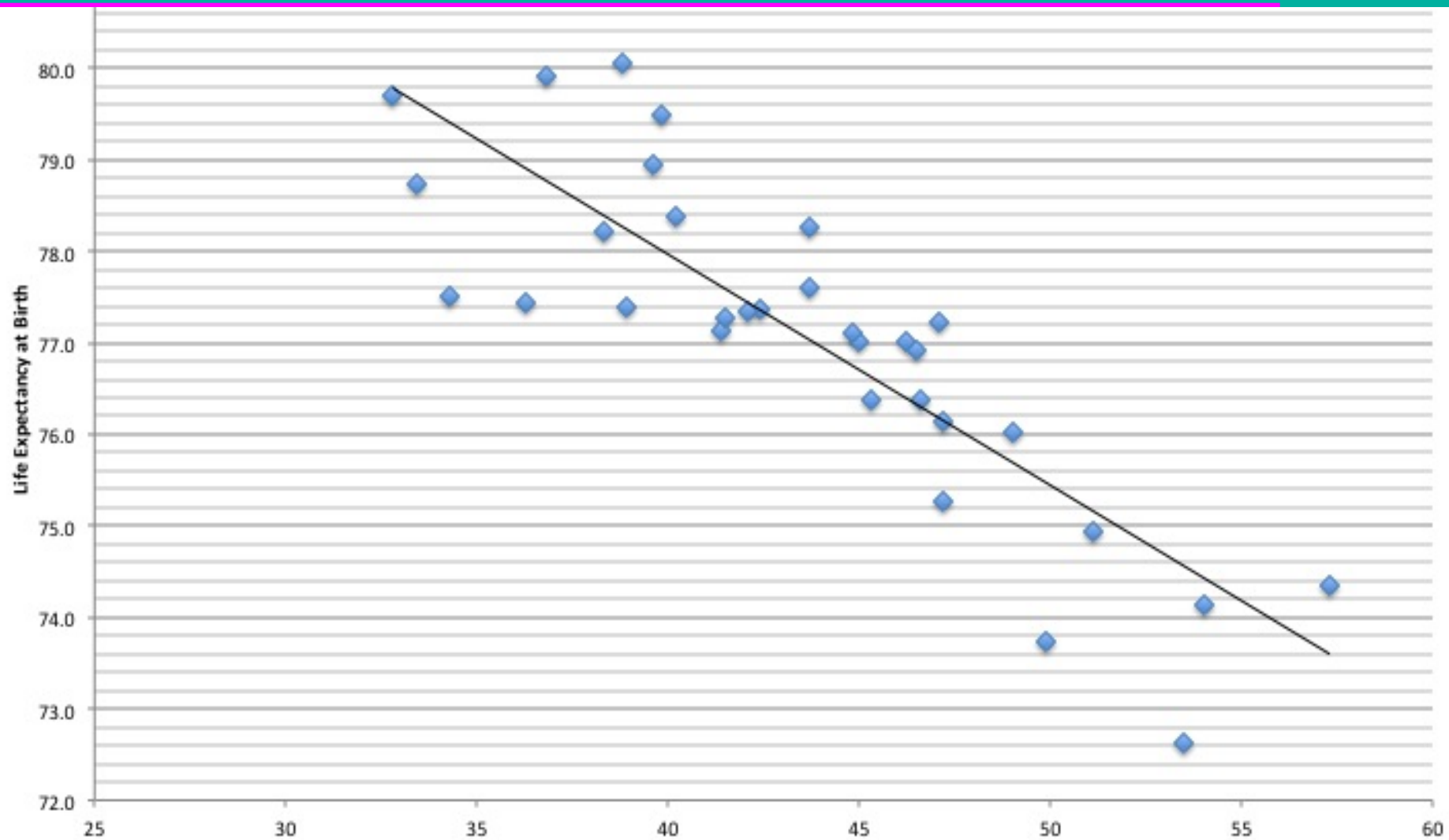
- u “We indicate to rulers after Us that rather than punish the countries deviants, instead consider the poverty of the multitudes and relieve their misery and then criminals will disappear. The reason why ordinary people act badly comes from widespread inability to survive day to day. There is no source of criminality in the country but waste of natural resources. There is a reason why ignorant underclasses are not honest: its because the rulers, who should be honest, are not

Lex Innocentium 1,300 years ago

- u "It is the same payment for the crime for someone who does the injury, and for the one who looks on and does not protect the victim with all his might".

Adomnán, the 9th Abbot of Iona.

Life expectancy and votes for independence





What do you mean, “it’s a bit muddy”?



