

Beauty and the Beast - Numbers, the Media and Public Policy

Michael Blastland


Bristol, 2008

The quality media...

- “Every alcoholic drink increases a woman’s chance of breast cancer by 6 per cent.”

- BBC News At Ten.

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2008

2007

2006

2005

2004

2003

2002

- December



Press release archive

Alcohol, smoking and breast cancer: the definitive answer

TUESDAY 12 NOVEMBER 2002

Cancer Research UK Press Release

A woman's risk of [breast cancer](#) increases by six per cent for every extra alcoholic drink¹ consumed on a daily basis, the world's largest study² of women's smoking and drinking behaviour reveals.



Then goes here...

BBC CATEGORIES TV RADIO COMMUNICATE WHERE I LIVE INDEX

BBC NEWS

You are in: [Health](#)

Tuesday, 12 November, 2002, 14:43 GMT

Alcohol increases breast cancer risk



Drinking is linked to breast cancer, but smoking is not

Drinking alcohol increases a woman's risk of developing breast cancer - but smoking has no impact, researchers have found.

Scientists have calculated that a woman's risk of breast cancer rises by 6% for each extra alcoholic drink she consumes on an average daily basis (7% on international measures).

News Front Page
World
UK
England
N Ireland
Scotland
Wales
Politics
Business
Entertainment
Science/Nature
Technology
Health
Medical notes
Education

Talking Point

Country Profiles
In Depth

Programmes

BBC SPORT
BBC WEATHER
CBBC news

But sometimes...

- “Every alcoholic drink increases a woman’s chance of breast cancer by 6 per cent.”
 - BBC News At Ten.

Q1: Is that a *big* number?

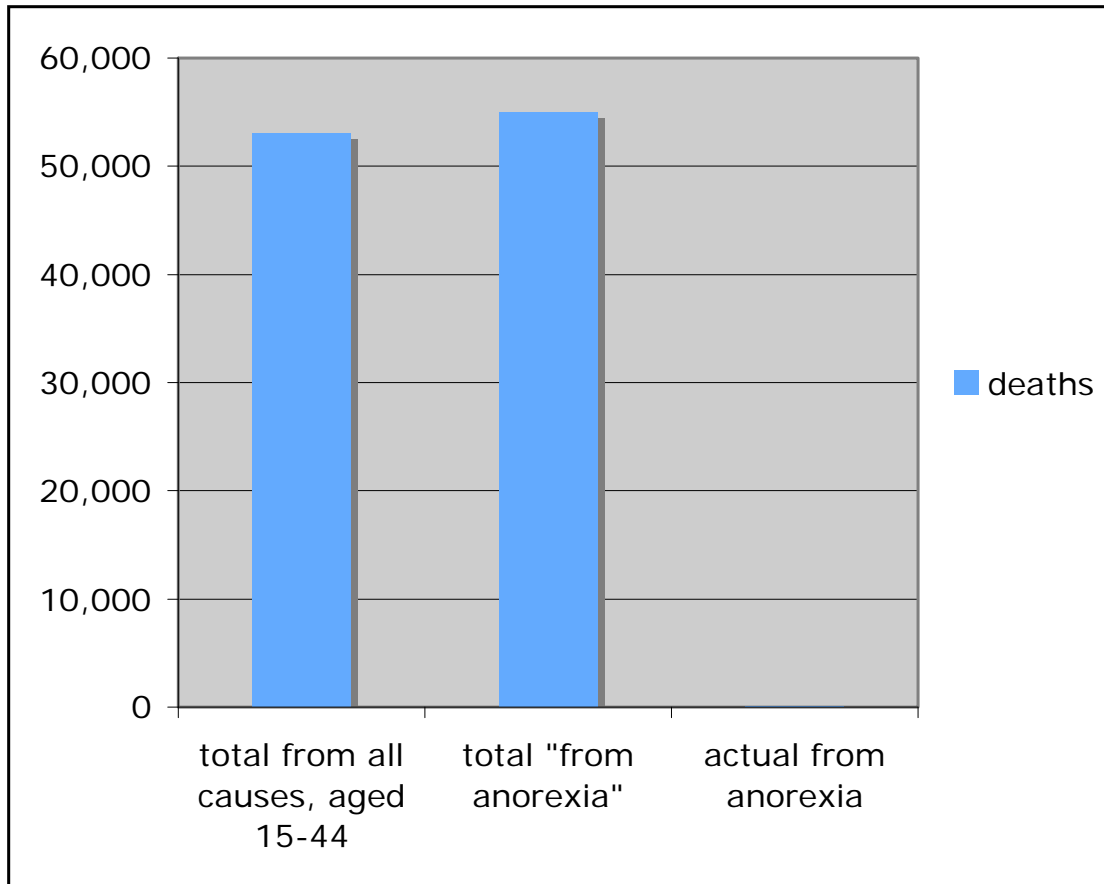
Story - Fat USA?

- 55,000 women in the US die of anorexia each year.
- Charities and pressure groups have launched a joint campaign, targeting schools and celeb images.
- List the elements and angles you want for a Today prog radio report.

Exercise for journalists

- But...
- Anorexia is a disease overwhelmingly of young women.
- Total deaths from *all causes* in US among females aged 15-44...
- = 53,000 approx

Er...



On reflection...

- What chance that more than 100 per cent of young women who die, die from anorexia?
- Based on real events. Except that the figure claimed in news reports in the US and UK, was...
- 150,000.

Who would fall for that..?

- 55,000 women in the US die of anorexia each year.

G8 debt relief of \$50bn

=\$1.5bn annually

=£750m

G8 population = 750m

=£1 per head.

=£0?

Q2: Who's counting whom?

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Britain in grip of norovirus as cases hit 3m

By Rebecca Smith, Medical Editor

Last Updated: 2:47am GMT 13/01/2008

Three million people have been struck down by the winter vomiting bug - with experts fearing that cases could rise through this month and next.

- [Norovirus symptoms](#)

The norovirus season began a month earlier than normal this winter. Cases of the bug increased rapidly, with more than 200,000 people a week now catching the infection, official figures claim.



Norovirus confidence intervals

- 1:1500 (1 lab case = 1500 in community).
- 2000 lab cases = 3million in community

- But maybe 1:140 (lower end of 95% CI)
- (=280,000 cases)

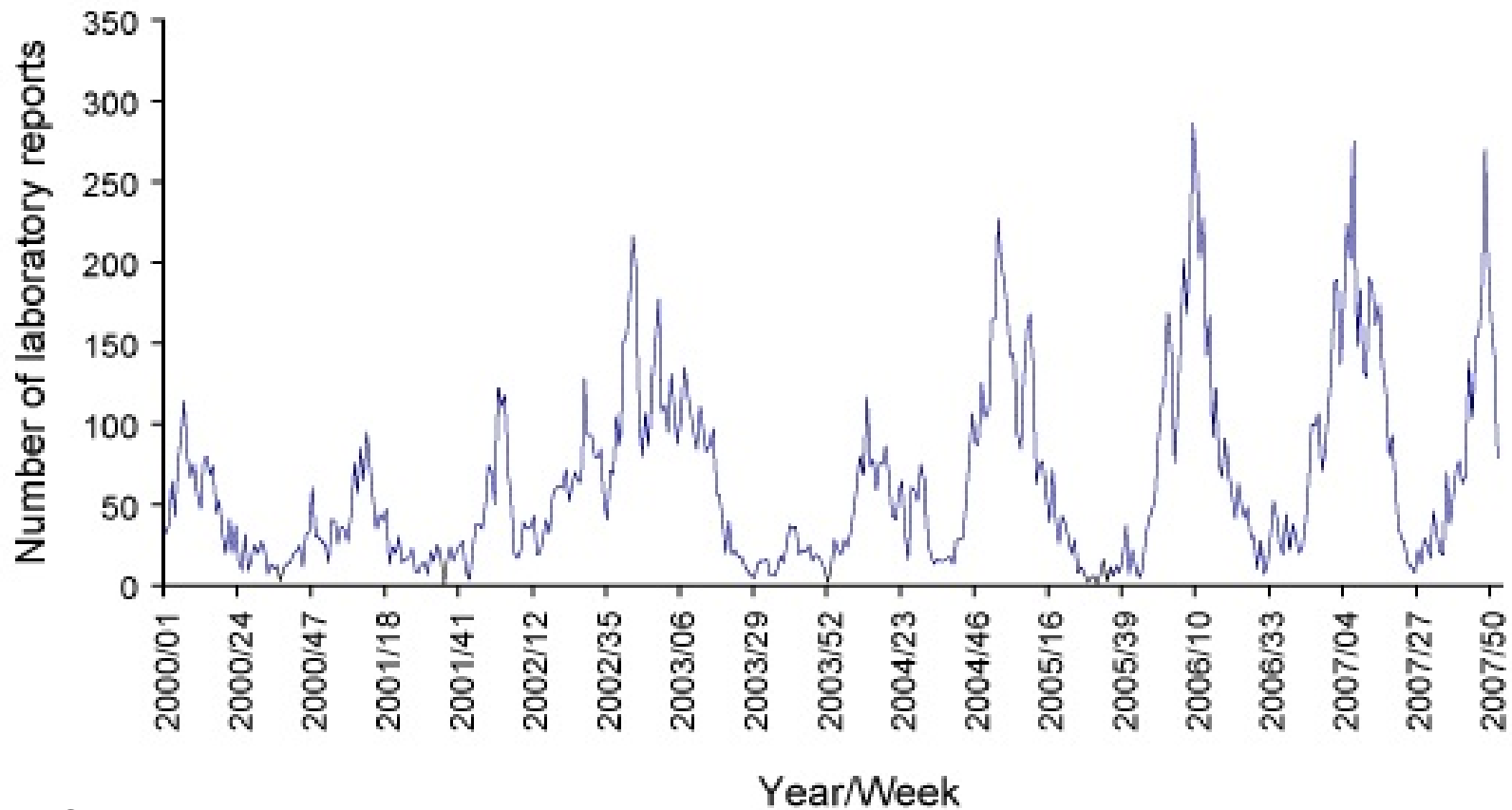
- Or maybe 1:17,000 (upper end of 95% CI)
- (=34 million cases)

- confirmed Norovirus lab cases in the IID community study...
- =1

Source: HPA

Norovirus lab reports

Figure Laboratory reports of norovirus 2000-2007 (England and Wales)

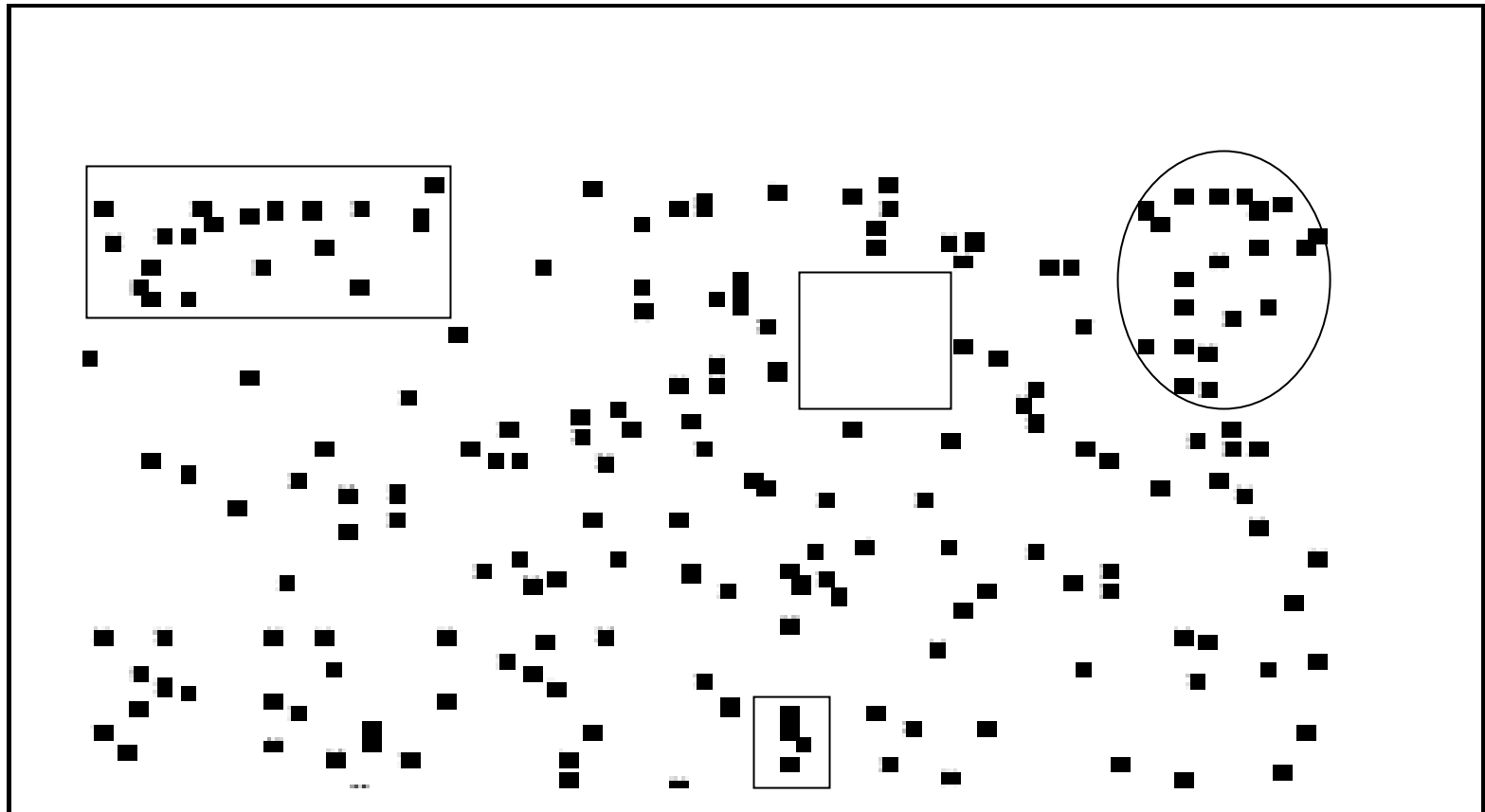


Source: Health Protection Agency

Q3: Why?



Scattergram generated by random x,y co-ords



The Texas Sharpshooter Fallacy

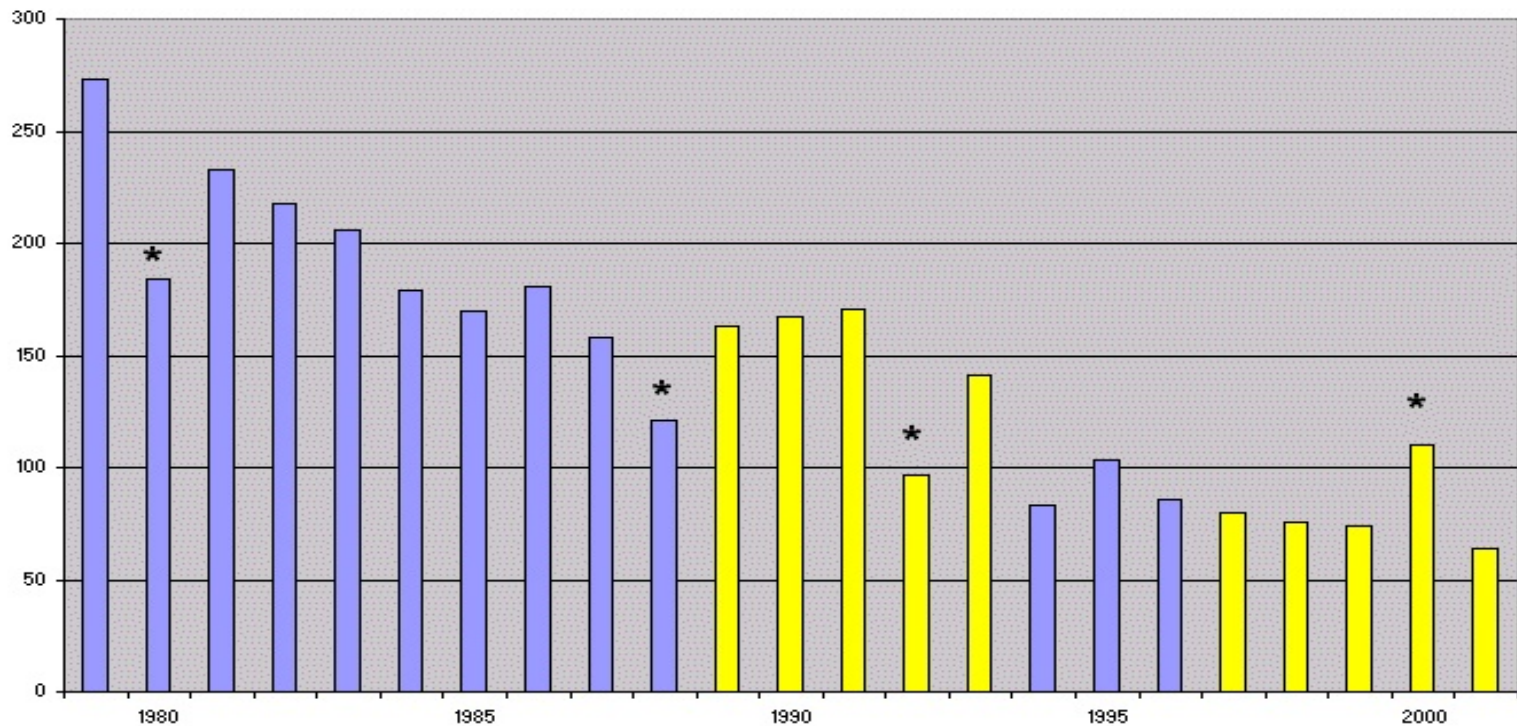
Up and down



Speed camera

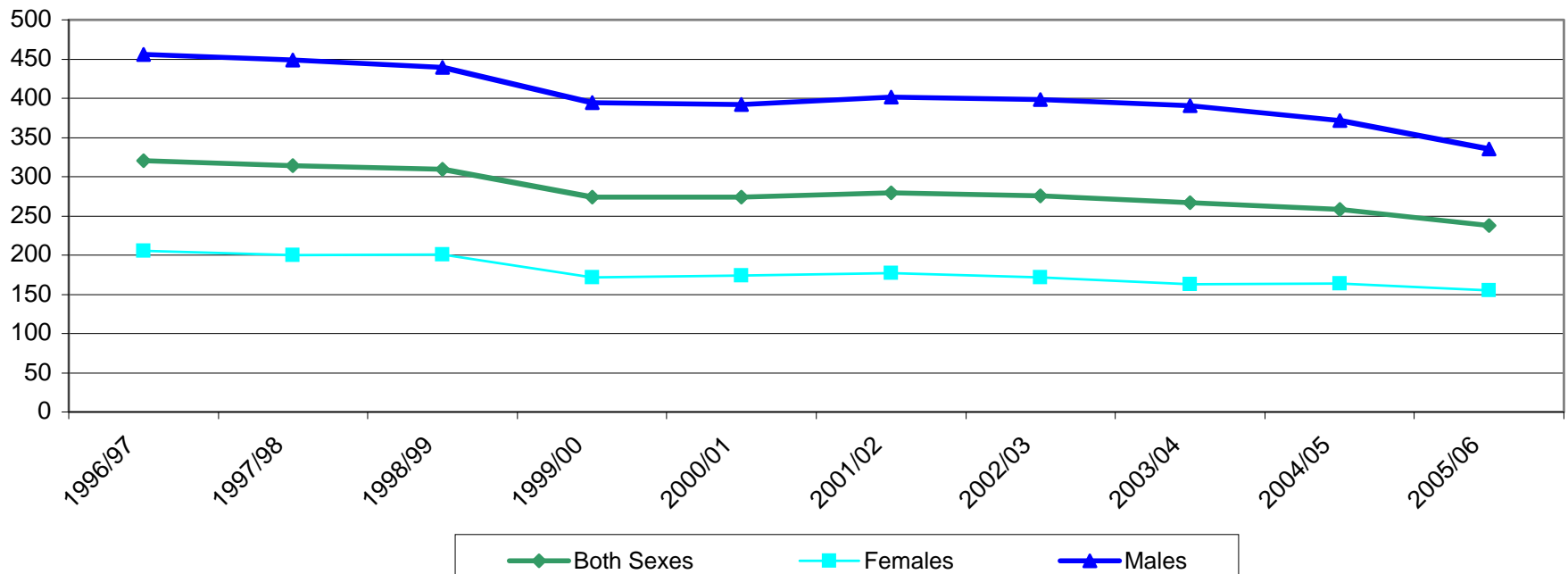
Up and down - Helena, Montanna

**Age Adjusted Mortality Rate for Acute Myocardial Infarction Among Persons Age 35+ Years,
Lewis and Clark County, Montana, 1979-2001**



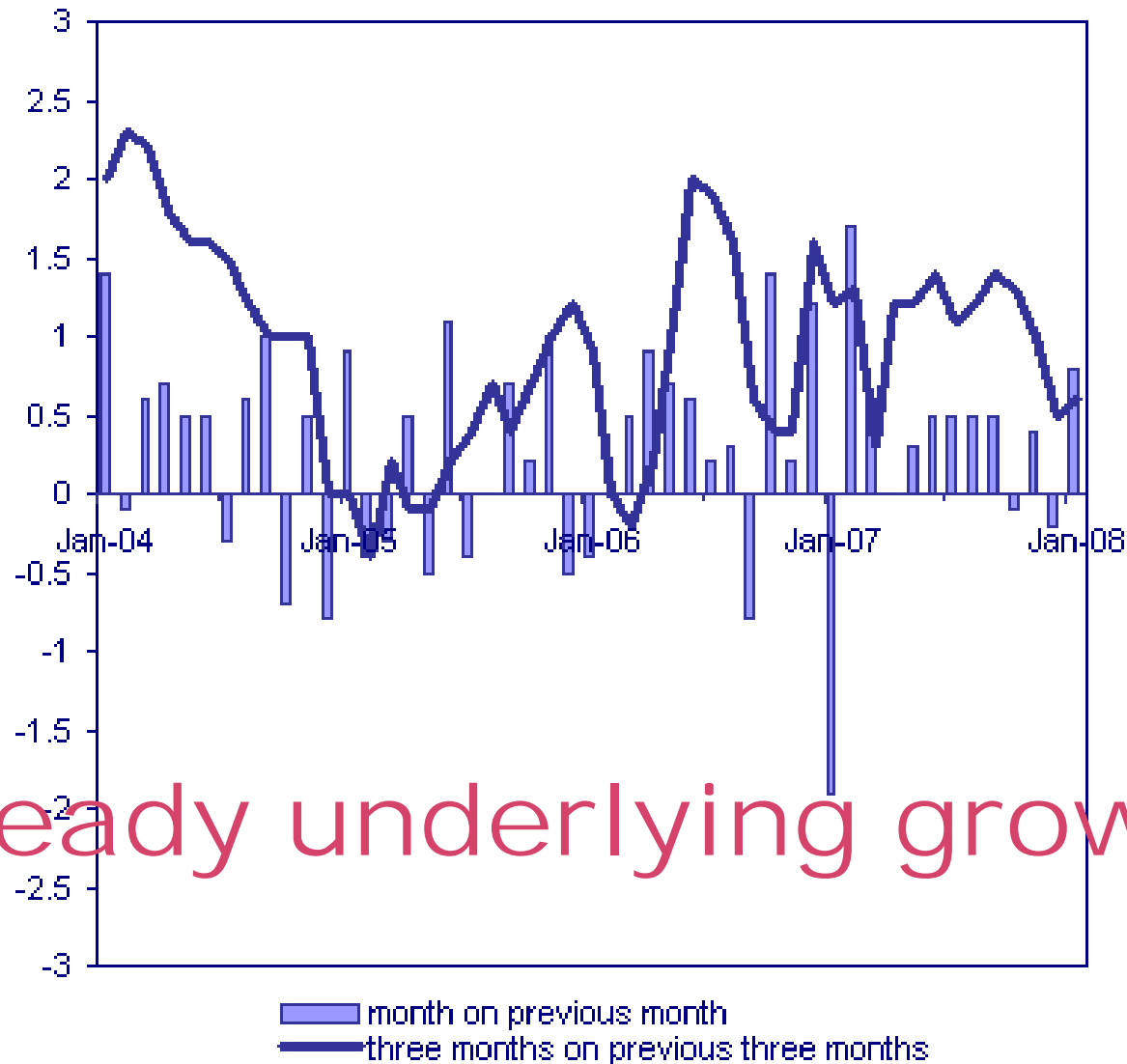
Heart attacks and smoking, Scotland.

Age Standardised (European Standard Population) Discharge rate per 100,000 population



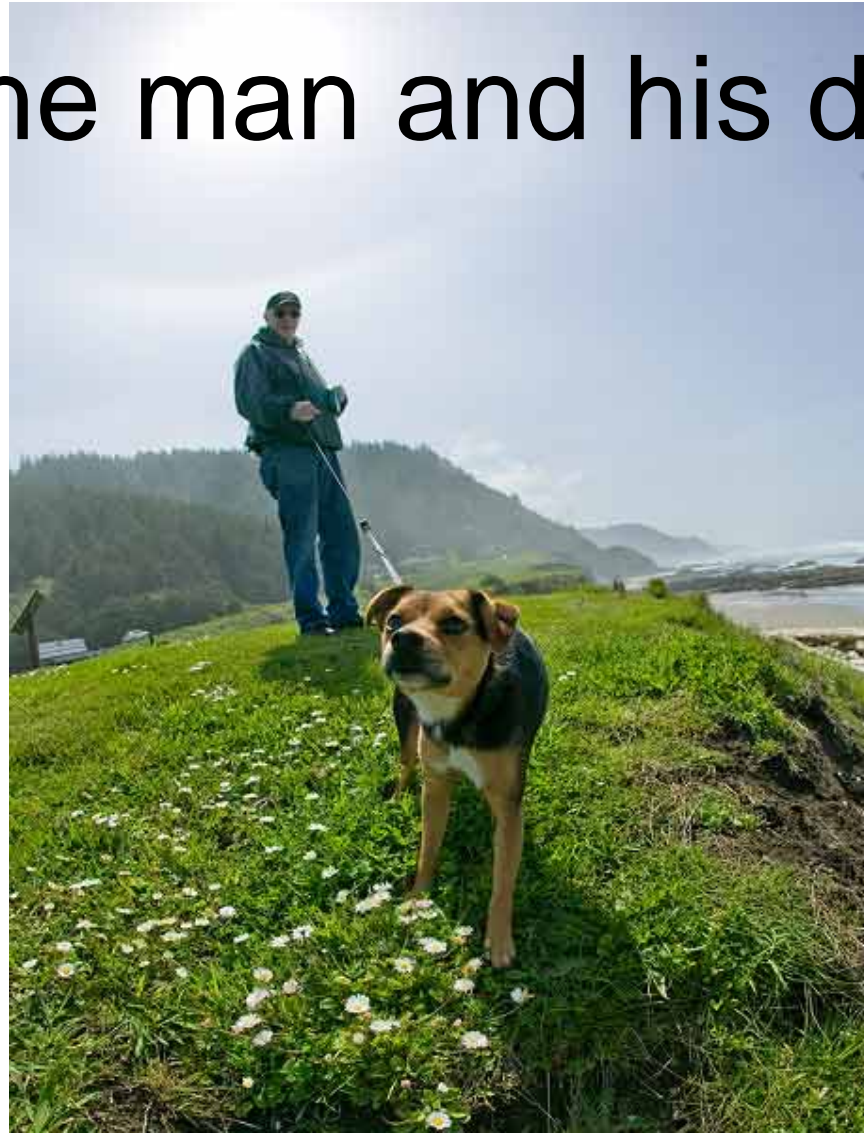


Retail sales growth - UK



“Steady underlying growth”

One man and his dog



Risk

Q4: How many *people*?



NEWS

Got a story? **6300**

Save our bacon: Butty battle



Bringing home the bacon

21% increase in risk of colorectal cancer for every 50g of bacon daily.

Baseline risk

5 in every 100 get colorectal cancer

21% increase on 5

= 6 in every 100 get colorectal cancer

ie 99 out of 100 unaffected

Which is clear?

- An extra 50g of bacon consumed on a daily basis increases the risk of colorectal cancer by 21 per cent (incidence of 40 per 100,000).

OR

- About 5 in every 100 men typically get colorectal cancer in a lifetime. If they all eat an extra rasher or two of bacon *every day for life*, about 6 will.



What's the story?

Labour and Tax

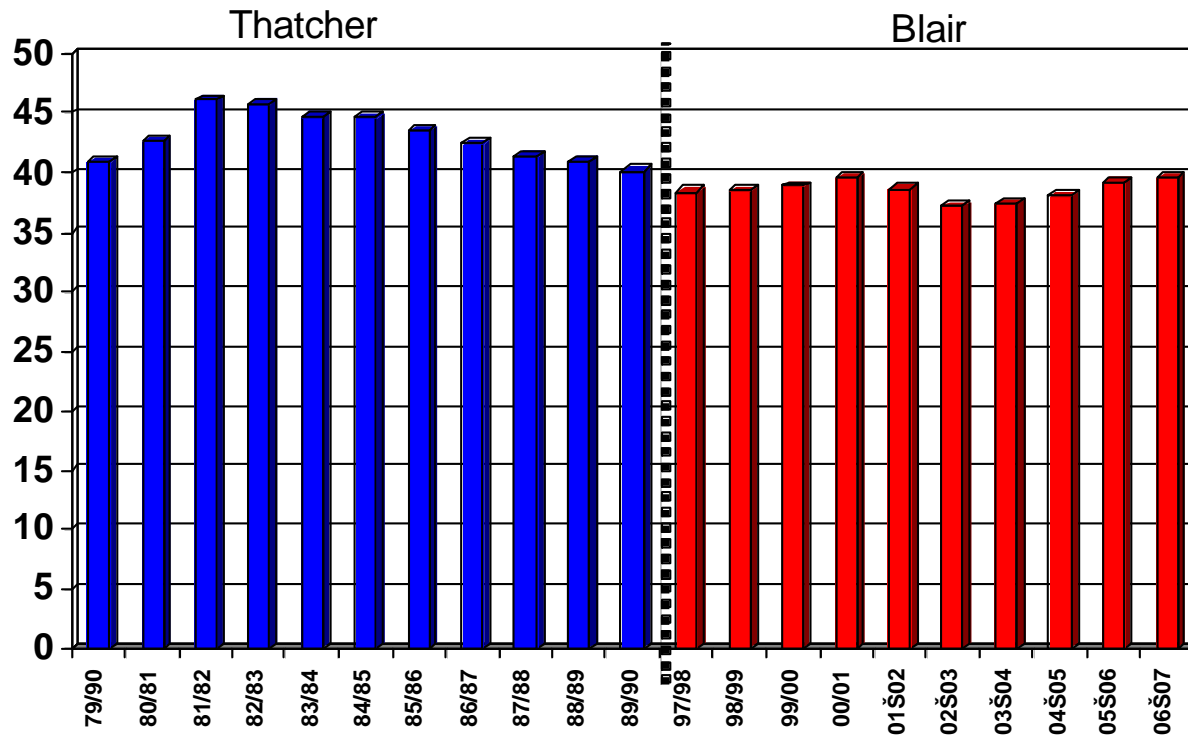
Taxes up?

Stealth?

Big Government?

Your turn...

Tax as % of National income



Tax as a proportion of nat income

Data

‘Data! Data! Data!’ he cried impatiently. ‘I can’t make bricks without clay.’

- Sherlock Holmes in *The Adventures of the Copper Beeches*

Q4: What’s the data?



Railway safety

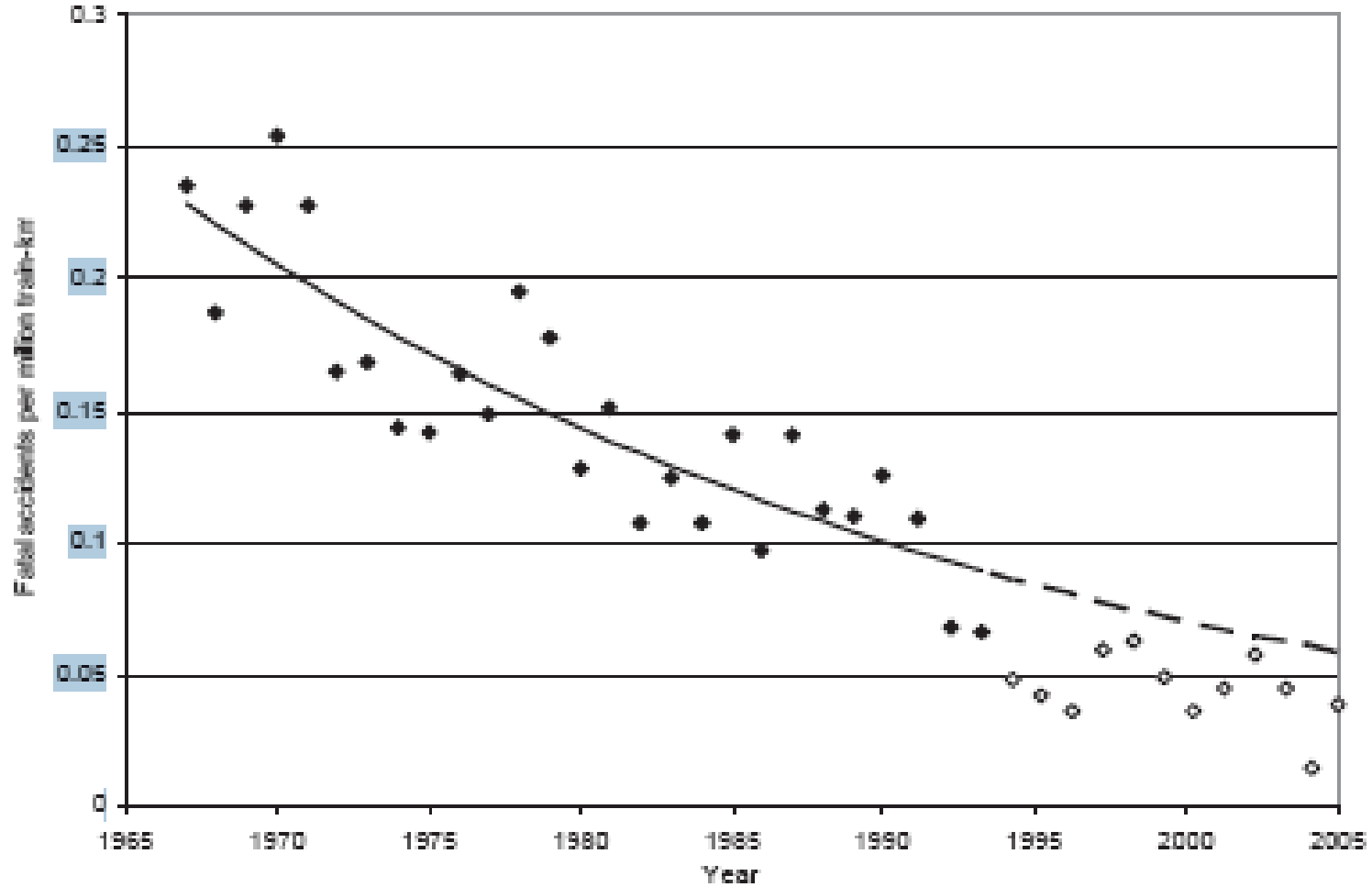


Figure 1. Fatal movement and non-movement accidents per million train-kilometres, 1967-2005

Source: HMI railways inspectorate and Prof Andrew Evans

Railway safety

- “That can’t possibly be true. Hatfield proved that safety got worse...”

How much must a childless couple earn
(after tax and benefits)
to be in the top 10% of incomes for this
group?

- £35,000
- £50,000
- £60,000
- £75,000
- £100,000
- £150,000

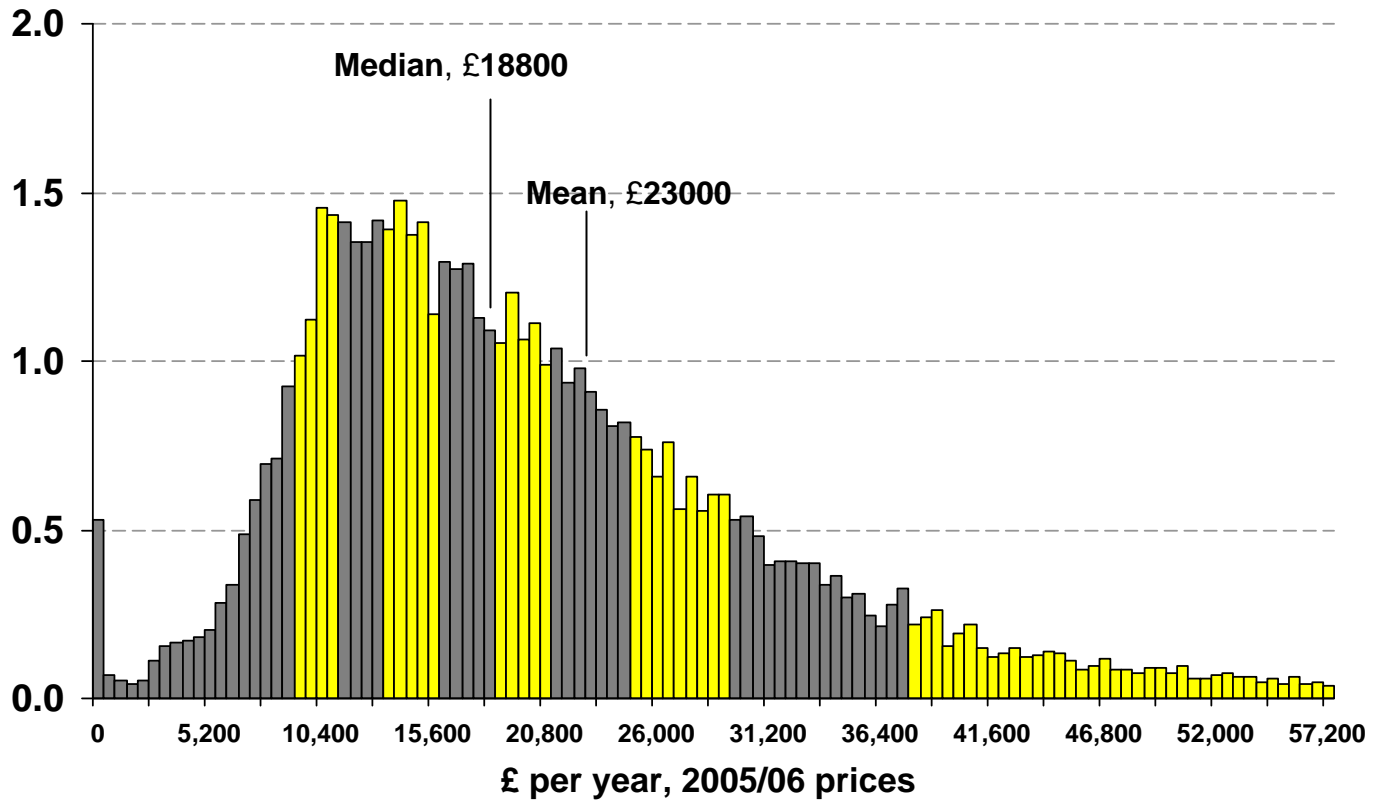
How many stakeholder pensions already?

- 10%
- 20%
- 30%
- 40%

How many gymslip mums?

- There are 780,000 single parents on means tested benefits. How many are under 18 (ie how many 'gym-slip mums?')
- 20,000
- 50,000
- 100,000

The UK Income Distribution in 2005/06

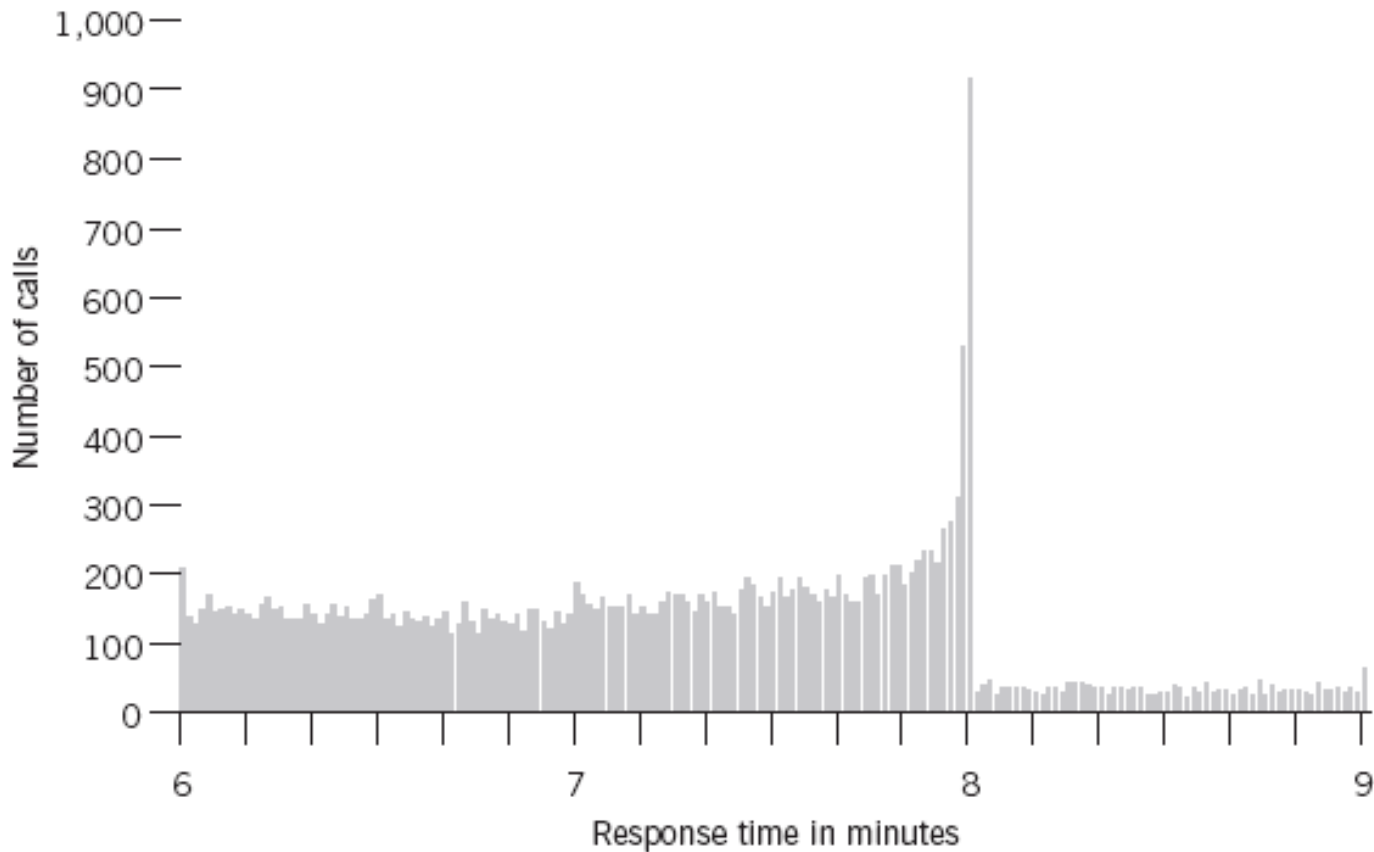


Targets: Bevan and Hood's performance typology

- 1: All is well, performance is improving and the numbers capture what's going on
- 2: The numbers capture what's going on in the parts we're measuring but not the weird stuff now happening elsewhere.
- 3: Performance as measured seems fine, but it's not what it seems because of gaming.
- 4: The numbers are lies.
- Unfortunately, we often can't tell which.

Bull's Eye?

Figure 4 Ambulance response times



The Whole Elephant

It was six men of Indostan

To learning much inclined,

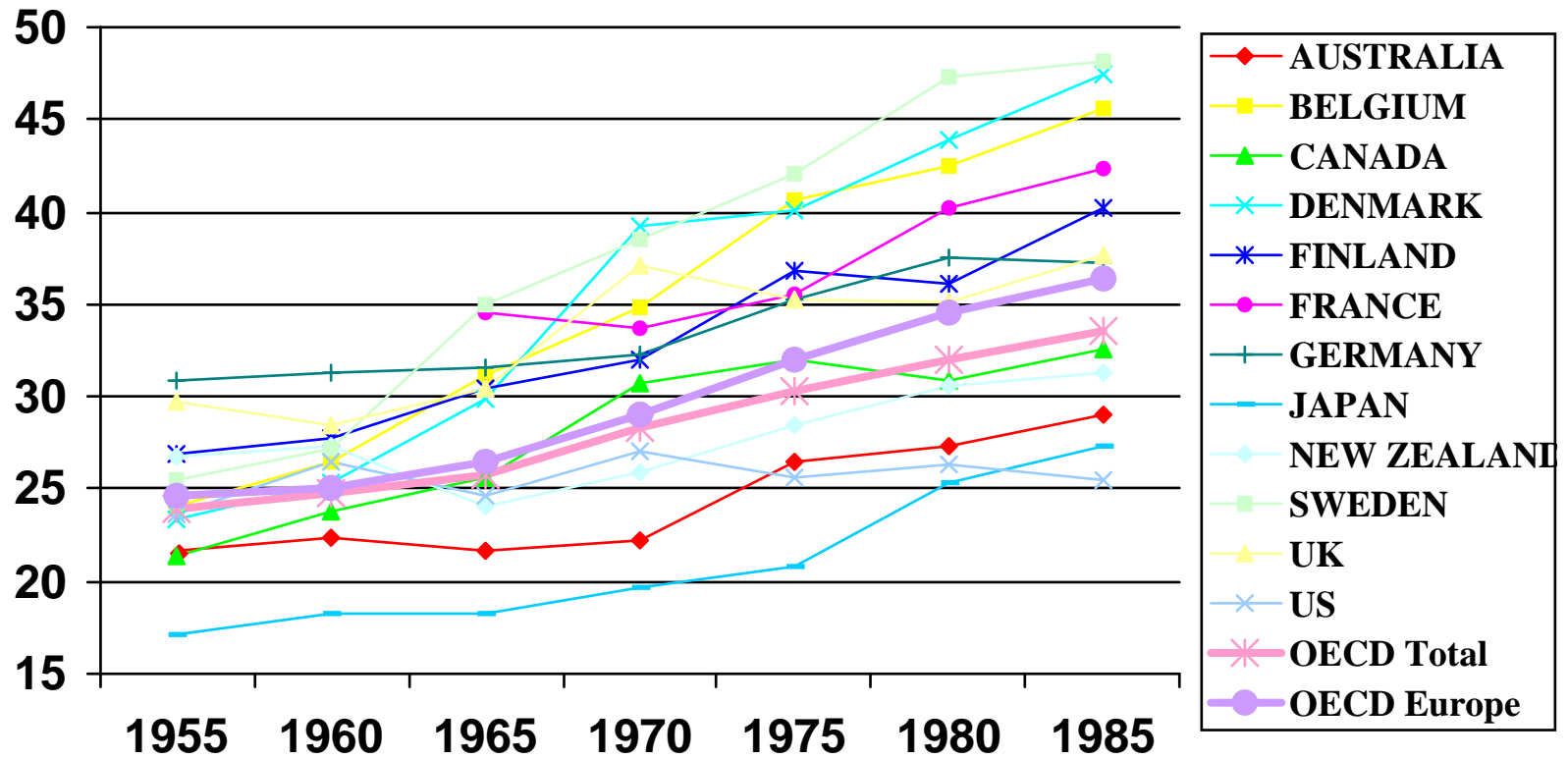
Who went to see the Elephant

(Though all of them were blind),

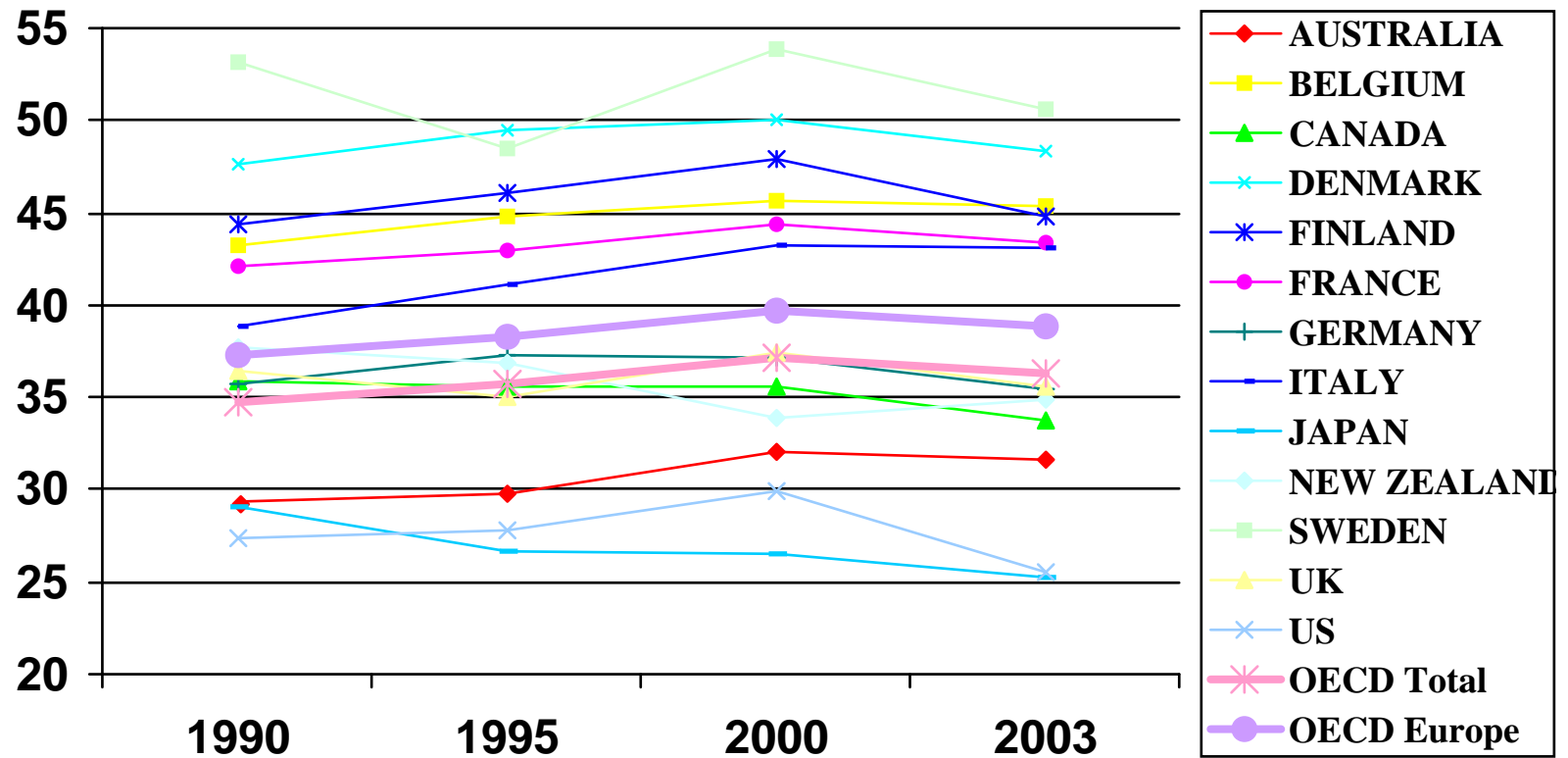
That each by observation

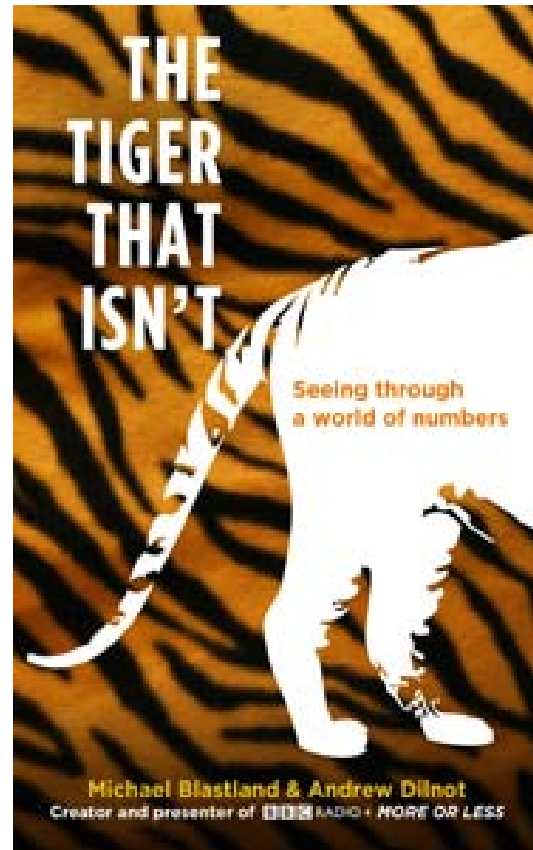
Might satisfy his mind...

Total tax revenue as % of GDP



Total tax revenue as % of GDP





“Makes statistics far, far too interesting” - Rory Bremner