Happiness

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Esmee Fairbairn 2006 Lecture, Lancaster
Economics is changing
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Researchers are studying mental wellbeing.
Economics is changing

Researchers are studying mental wellbeing.

We are drawing closer to psychology and medicine.
Could we learn how to ...
..make Lancaster U (even) happier?
and countries and prime ministers..?
Using large random samples of individuals from many nations:

Researchers have examined what influences the psychological wellbeing of

(i) individuals
(ii) nations.
A taste of research (1)

Happiness is high among:
A taste of research (1)

Happiness is high among:

Women
People with lots of friends
The young and old
Married and cohabiting people
The highly educated
The healthy
Those with high income
A taste of research (2)

Happiness is particularly low among:
A taste of research (2)

Happiness is particularly low among:

The unemployed
Newly divorced and separated people
A taste of research (2)

Happiness is particularly low among:

The unemployed
Newly divorced and separated people

and children have no effect on happiness
Economic growth does not make an industrialized country happier.
A taste of research (3)

Economic growth does not make an industrialized country happier.

Plus there is evidence that stress levels at work, and rates of depression, have been increasing.
A taste of research (4)

Noise levels and environmental quality matter to happiness.

Let’s clean up so all our rivers look this good

Green
Global warming makes these last two findings particularly important.
But is it possible to study happiness and mental wellbeing in a systematic way?
Self-reported happiness relates strongly to:

- activity in the brain’s pleasure centres
- health, smiles, positive emotional arousal, and future intentions
Brain Responses in Two Pictures (MRI Scans)

Source: Richard Davidson, University of Wisconsin
Reported happiness is correlated with...

- Person’s assessment of happiness by friends and family
- Person’s assessment of happiness by spouse
- Person’s recall of good and bad events
- Heart rate and blood pressure response to stress
- The risk of getting coronary heart disease
Typical GHQ mental-strain questions

Have you recently:

Lost much sleep over worry?
Felt constantly under strain?
Felt you could not overcome your difficulties?
Been feeling unhappy and depressed?
Been losing confidence in yourself?
Been thinking of yourself as a worthless person?
Some cheery news:
Some cheery news:

In Western nations, most people are happy with their lives
The distribution of life-satisfaction levels among British people

But obviously life is a mixture of ups and downs
Statistically, wellbeing is strongly correlated with life events
Two examples

A) By Employment Status

- Employed: Average Life Satisfaction = 5.20
- Unemployed: Average Life Satisfaction = 4.60

A) By Marital Status

- Not Married: Average Life Satisfaction = 5.10
- Married: Average Life Satisfaction = 5.35

*Source: BHPS, 1997-2003. N = 74,481*
Happiness is U-shaped through the life cycle
The pattern of a typical person’s happiness through life

![Graph showing the pattern of life satisfaction scores across different age groups. The scores decrease from 15-20 to 30-40, remain relatively stable from 40-50, and increase significantly from 50+.]
This holds in many settings
This holds in various settings

For example, we see the same age pattern in the probability of depression among a recent sample of 800,000 UK citizens:

[Blanchflower and Oswald, 2006]
The probability of depression by age

Males, LFS data set 2004-2006

Regression coefficient

Year of birth

### Age at which GHQ-N6 Mental Distress Reaches its Peak:

<table>
<thead>
<tr>
<th>Country</th>
<th>Age at the maximum</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>52</td>
<td>1005</td>
</tr>
<tr>
<td>Denmark</td>
<td>35</td>
<td>995</td>
</tr>
<tr>
<td>Greece</td>
<td>53</td>
<td>984</td>
</tr>
<tr>
<td>Italy</td>
<td>49</td>
<td>940</td>
</tr>
<tr>
<td>Spain</td>
<td>56</td>
<td>981</td>
</tr>
<tr>
<td>France</td>
<td>45</td>
<td>972</td>
</tr>
<tr>
<td>Ireland</td>
<td>44</td>
<td>972</td>
</tr>
<tr>
<td>Netherlands</td>
<td>47</td>
<td>957</td>
</tr>
<tr>
<td>Portugal</td>
<td>60</td>
<td>937</td>
</tr>
<tr>
<td>East Germany</td>
<td>46</td>
<td>942</td>
</tr>
<tr>
<td>Austria</td>
<td>48</td>
<td>963</td>
</tr>
<tr>
<td>UK</td>
<td>47</td>
<td>1285</td>
</tr>
</tbody>
</table>
Now what about money?
Now what about money?

The data show that richer people are happier and healthier.
In the literature, one broader feature is striking:
The state of the mind determines the health of the body
The state of the mind determines the health of the body

Those with high status live longer
(being promoted seems more important than a healthy diet and exercise)

Married people are healthier (marriage offsets smoking)
To the gentlemen:
To the gentlemen:

If you must smoke,
To the gentlemen:

If you must smoke,

it is essential to get married.
Another intriguing feature of the data:
Humans are adaptive.

They have amazing resilience: eg. to
(i) divorce
(ii) disability.
Comparing two years before divorce to two years after, there is marked improvement in psychological health.

*We use a GHQ mental strain score.*
Divorce eventually makes people happier

Lead–Lag Analysis for Marital Transitions
Mean GHQ Mental Stress Levels

Event at time 0
- Divorce
- Widowed
- Remain married

Data Source: BHPS
Human beings also bounce back remarkably from, say, disability.
Figure 3: Life Satisfaction of Those Who Entered Disability at Time $T$ and Remained Disabled in $T+1$ and $T+2$, BHPS 1996-2002

Note: There were 72 individuals who became disabled at time $T$ and remained disabled in $T+1$ and $T+2$. The mean life satisfaction of these individuals at $T-2$ is 4.53. The $t$-test statistics [p-value] of whether the mean life satisfaction of the individual is equal are 1.374 [0.172] (between $T-1$ and $T$), -0.466 [0.642] (between $T$ and $T+1$) and -0.738 [0.461] (between $T+1$ and $T+2$).
However, there is a downside to that adaptability
However, there is a downside to that adaptability
What about happiness in whole countries?
When a nation is poor, extra riches will raise happiness.
When a nation is poor, extra riches will raise happiness.

Say we look at a scatter plot across many countries:
Life Satisfaction and GDP Per Capita
World Values Survey

Life Satisfaction = -0.9 + 0.8 * Log GDP (t=8.3)

Life Satisfaction, WVS
Average Score (1='Dissatisfied' to 10='Satisfied')
GDP per capita in US$ at PPP (log scale)
Yet

• Growth in income is now not correlated with growth in happiness

• This is the “Easterlin paradox”
A simple graph to worry finance ministers all over the world:
Average Happiness and Real GDP per Capita for Repeated Cross-sections of Americans.
Wellbeing is flat through time in the other rich countries
In the USA, real income levels have risen six-fold over 100 years but:

**Year 1900** Suicide rate = 10 in 100,000 people

**Year 2005** Suicide rate = 10 in 100,000 people
Are there diminishing returns to real income?
Are there diminishing returns to real income?

Very probably yes.
1995/2000 World Values Survey results
Similar results within a nation
(though cardinality questionable)

Take American families in 1994 for example
So what exactly goes wrong when a wealthy country gets richer?

We are not certain, but..
Some clues…

- Social comparison (you compare your 3 BMWs to people with 3 BMWs)
- Habituation: people adapt to money
- Mistaken choices (long commutes and working hours)
Social Comparisons

Brad's income = £40,000

Neighbour 1 = £120,000

Neighbour 2 = £90,000

Neighbour 3 = £60,000
Producing a happier society?
Possible ideas

• Envy and social comparisons are counter-productive at the aggregate level

• Some argue for a ‘corrective tax’ system – one that reduces work effort to a level where the fruitless incentive to raise your relative income has been fully offset (Frank and Layard)

• In terms of positional goods, e.g. luxury cars – could be taxed much more
Another difficulty: Long working hours in the EU

Graph 1: % of employees working over 45 hours per week

Source: European Working Conditions Survey, 2000
Some societies seem to have a work-life balance problem.
“I would like to spend much more time with my family” (% workers)

<table>
<thead>
<tr>
<th>Country</th>
<th>% Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>46%</td>
</tr>
<tr>
<td>New Zealand</td>
<td>26%</td>
</tr>
<tr>
<td>Great Britain</td>
<td>36%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>23%</td>
</tr>
<tr>
<td>Sweden</td>
<td>32%</td>
</tr>
<tr>
<td>Italy</td>
<td>21%</td>
</tr>
<tr>
<td>Norway</td>
<td>27%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>18%</td>
</tr>
<tr>
<td>Denmark</td>
<td>26%</td>
</tr>
<tr>
<td>Japan</td>
<td>9%</td>
</tr>
<tr>
<td>Canada</td>
<td>26%</td>
</tr>
<tr>
<td>Spain</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: Blanchflower and Oswald (2000a) and International Social Survey Programme, 1997
Figure 8. GHQ stress score, BHPS, 1991-2004
New work on the long ‘shadow’ of childhood

• An individual’s happiness is lower if a parent died before they were 18
• His or her happiness is lower if the parents quarrelled frequently
• The effect of parental arguing on children’s happiness approximately disappears if the parents divorced
These findings hold in 16 countries.
We will continue to link up more with science and psychology researchers.

Eg. studying cortisol levels.
Plus we are learning how to measure the value of subtle things (eg. Clow’s work)
Cortisol levels can drop very fast in a pleasant situation: response to 35 minute art gallery visit

![Graph showing cortisol concentration before and after the visit, with a significant decrease indicated by * p<0.001.]

Claw & Fredholt, 2006
Blood pressure patterns too

• Denmark has the lowest reported levels of high blood pressure in our data

• Denmark also has the highest happiness levels

• Portugal has the highest reported blood pressure levels -- and the lowest levels of life satisfaction and happiness

Source: Blanchflower, D.G. and A.J. Oswald (2006d), "Hypertension and happiness across nations"
What of broader economic and social policy itself?
Gross National Happiness (GNH) Policy in Bhutan

- 4 pillars of public policy
  - Sustainable and equitable socio-economic development
  - Conservation of environment (e.g. banning of plastic bags)
  - Preservation and promotion of culture (e.g. ban US programmes and advertising)
  - Promotion of good governance

Source: Jigmi Y. Thinley, Minister of Home and Cultural Affairs, Bhutan
A finding from our equations

Friends and partners matter much more than money.
# How much are social relationships worth in terms of happiness?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Valuation (in £)</th>
</tr>
</thead>
<tbody>
<tr>
<td>See friends once a month</td>
<td>£57,500 p.a.</td>
</tr>
<tr>
<td>See friends once a week</td>
<td>£69,500 p.a.</td>
</tr>
<tr>
<td>See friends on most days</td>
<td>£85,000 p.a.</td>
</tr>
<tr>
<td>Getting married</td>
<td>£50,500 p.a.</td>
</tr>
<tr>
<td>Losing a job</td>
<td>- £143,000 p.a.</td>
</tr>
</tbody>
</table>

Interestingly, happy people cohabit with other happy people.

Figure 2: Cross-Tabulation of the Life Satisfaction Scores of Cohabitees and their Partners

Source: BHPS, Waves 6-10 and 12-13.
As a society, we could also pay attention to improving public goods, and the environment in the broadest sense.
Summing up

Given our current real income levels:
Summing up

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Growth is not making the industrialized nations happier.
The natural conclusion

Policy in the coming century will need to concentrate on non-materialistic goals.
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GNH not GNP.
Thank you for coming
Happiness

Papers downloadable at
www.andrewoswald.com

I here owe a great debt to the work of David G Blanchflower, Paul Frijters, Nick Powdthavee, and Justin Wolfers