

A New Agenda

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A New Agenda seeks to explore all aspects of society using all the academic disciplines paying special attention to values ... with special interest in modelling ... not disinterested in practice ... and aspiring to high academic standards.

Commentary, July 2014

No. 6

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Two young men. Yesterday a young man scored an amazing goal in extra time to win the World Cup for Germany. Two months ago, a young man in California went on the rampage and killed six people before shooting himself.

World history ... prediction ... literature ... not feeling at home in the world are the themes of this month's *Commentary*. When the Islamic State of Iraq and al-Sham (Isis) declared itself ruler of all Muslims and destroyed mosques in Mosul, the events found echoes from throughout world history. The declaration of a new caliphate can be thought of in terms of the fractal core-periphery model of world history discussed in the March issue of *Commentary* and the last couple of months have seen a number of events concerning other core-periphery relationships. Turning to the world economy we return to the Piketty debate around the issues of growth and inequality discussed in the April issue of *Commentary*. To help me think through what is involved I have developed a very basic descriptive model conceptualising growth and inequality.

This month the OECD produced a report predicting the next 50 years of the world economy. The theme of prediction cropped up again in Daniel Finkelstein's

reflections on Bruce Bueno de Mesquita's political predictionering. Finkelstein also offered predictions in advance of the World Cup: he predicted surprises! See this month's separate *Commentary Special Supplement: 'The World Cup 2014: probability, prediction and outcome'*. Turning to social affairs, FBI statistics for rampage killings provide a probabilistic prediction of what might happen in any particular such event. Meanwhile a physicist has offered a model which predicts a different value for the speed of light.

Steven Pinker notes that 'the philosophes of the Enlightenment extolled the way novels engaged a reader's identification with and sympathetic concern for others'. A recent highly praised book on the novel has been written by Pavel: 'an extraordinary accomplishment ... a work of intellectual and literary history, literary theory, and moral philosophy'. Pavel writes: 'the novel asks whether human beings can ever be morally reconciled with the world in which they are born, and *feel at home* in it'. Hence:

'Not feeling at home in the world' was the experience of: Dustin Hoffman and Emma Thompson; a football-unfeeling mother; a Jihadist; and a rampage killer. An extended account is given of the life of a young man who killed six people in California: his family, his schooling and his community ... his thinking and the group which reinforced his thinking.

1 The destruction of religious buildings, a world history ... Mosul ... Kirkstall

Nearly a dozen Shia shrines and mosques have been demolished by Isis in Mosul, and in the towns of Tal Afar and El Mihalabiya in western Iraq ... Shia and Christian shrines have been repeatedly attacked in Syria – as well as trees associated locally with good luck.

The Times (2014) Isis blows up Shia shrines and mosques. Monday July 7, pp. 30-31

The destruction of religious buildings has occurred throughout world history. A central event in the history of England was the Act of Supremacy which gave Henry VIII the authority to enact the dissolution of the monasteries – in the 16th century. At the same time as these events in England, similar events were occurring elsewhere in Europe in Sweden, Denmark and Switzerland. In a later century the French Revolution declared that the property of the Church was at the disposal of the nation. A similar secularisation of church estates occurred in Romania and it also occurred to Spanish missions in California in the 19th century. A thousand years earlier '... in 845 the Chinese Emperor Wuzong of Tang suppressed thousands of Buddhist monasteries and confiscated their considerable properties. The Emperor's combined economic and religious motives for this act have many similarities to those of Western rulers taking a similar step towards Catholic or Orthodox Monasteries.'

http://en.wikipedia.org/wiki/Suppression_of_Monasteries

http://en.wikipedia.org/wiki/Dissolution_of_the_Monasteries

http://en.wikipedia.org/wiki/Acts_of_Supremacy

Those of you coming to the CRS conference in Leeds will be close to Kirkstall Abbey. There are many other such ruins in Yorkshire – all or many destroyed by Henry VIII.

http://en.wikipedia.org/wiki/Kirkstall_Abbey

<http://www.timetravel-britain.com/guides/yorkshire/abbey.shtml>

The establishment of a national church in England was what enabled UK Community Minister Eric Pickles to say a few months ago "We're a Christian nation. We have an established church. Get over it. And don't impose your politically correct intolerance on others." (See *Commentary*, June 2014).

2 World politics

A new caliphate

'Islamic extremists proclaimed the establishment of a caliphate yesterday, as sources in Iraq admitted that recapturing large cities such as Mosul could take six months. The Islamic State of Iraq and al-Sham (Isis) declared itself ruler of all Muslims ... Isis rules territory spanning eastern Syria and western Iraq ...'

The Times (2014) Isis declares the creation of its own Islamic state. Monday June 30. p. 1.

The Times (2014) Jobs and security promise at the heart of Isis charm offensive; 'I know that Nato are coming. They are welcome. We are ready'. p. 30. Monday July 7

Visit <http://en.wikipedia.org/wiki/Caliphate> and watch the world history of the Caliphate unfold and study the khilafa of Caliphates

- 1.1 Rashidun (632–661)
- 1.2 Umayyads (661–750)
 - 1.2.1 Umayyad Emirate of Córdoba (756–929) and Umayyad Caliphate of Córdoba (929–1031)
- 1.3 Abbasids (750–1258)
 - 1.3.1 Abbasid Caliphate of Cairo (1258–1517)
- 1.4 Fatimids (909–1171)
- 1.5 Ottomans (1453–1924)
- 1.6 Sokoto (1804–1903)
- 1.7 Ahmadiyya Caliphate (1908–Present)
- 1.8 Khilafat Movement (1920)
- 1.9 Abolition of the Ottoman Caliphate (1924)
- 1.10 21st Century ISIL Caliphate (2014-present)
- 1.11 Prophesied Caliphate of the Mahdî

Recent articles on the caliphate in *Middle Eastern Studies*:

2009, 45, 3, 373-391: <http://www.tandfonline.com/doi/full/10.1080/00263200902853355#.U77e0pRdVC4>

2012, 48, 1, 141-144: <http://www.tandfonline.com/doi/full/10.1080/00263206.2012.642698#.U77eipRdVC4>

2013, 49, 4, 672-673: <http://www.tandfonline.com/doi/full/10.1080/00263206.2013.785237#.U77eMpRdVC4>

The dynamic fractal structure of core-periphery relationships

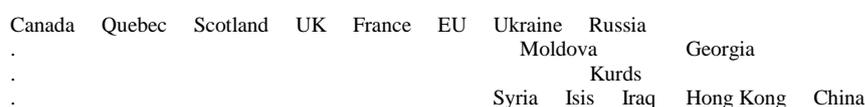
The rise and fall of the caliphate can be thought of in terms of the fractal core-periphery model of world history discussed in the March issue of *Commentary*. It was noted that core-periphery relationships have a fractal structure. Each core-periphery relationship, it was assumed, may be characterised by either independence or incorporation. It suggested that world history has exhibited a trend of increasing incorporation albeit with fluctuations. It discussed Ukraine, Western Europe, the UK, the European core, Western and Eastern Europe, amongst others. The last couple of

months have seen a number of events concerning these and other core-periphery relationships – see Table 1 and Figure 1 below.

Table 1 Core-periphery relationships in the news, May and June 2014

core	periphery
Syria and Iraq	Isis, Kurds
EU and Russia	Ukraine, Moldova, Georgia
Ukraine	Eastern Ukraine
EU	UK
UK	Scotland
Canada	Quebec
China	Hong Kong

Figure 1 Schematic map of locations in Table 1



‘Ukraine tied its future to the West yesterday when its new president signed a trade and political deal with the EU, seven months after his predecessor’s failure to do so plunged the country towards civil war and conflict with Russia ... [the deal] ends President Putin’s dreams of establishing a Eurasian Union, a free trade association widely seen as a first step by Moscow towards a 21st-century version of the Soviet Union reuniting Russia with Ukraine, Belarus and Kazakhstan President Poroshenko agreed to extend by three days, until Monday, a ceasefire in the fighting with pro-Russian separatists in the east of the country Two other former Soviet republics, Georgia and Moldova, also signed similar free trade deals [with the EU] , stoking Russian fears about its shrinking regional influence and that markets for its exports could be hit by cheap EU imports.’
 The Times (2014) Ukraine’s EU deal provokes warning from Moscow. Saturday June 28. p. 38.

‘Britain has moved closer to leaving the European Union, David Cameron said yesterday, as he declared his failure to block Jean-Claude Juncker from taking the top Brussels job a ‘sad day for Europe’’.
 The Times (2014) Britain nears EU exit. p. 1.

‘The immediate cost of separating Scotland from the United Kingdom will be £200 million, but the long-term bill is likely to be hundreds of millions of pounds more, according to an authoritative study [by] Professor Patrick Dunleavy of the London School of Economics ...’
 The Times (2014) Initial cost of separate Scotland ‘to be £200m’. Monday June 23. p. 1.

You Gov ‘Should Scotland be an independent country?’
 Yes 35%; No 54%; not voting 2%; Don’t Know 9%.
 Since December 2013 these figures have changed little with Yes in the range 33-37% and No in the range 51-54%.
 The Times (2014) Voters turn away from a Scottish nation state. Tuesday July 1. pp. 1, 10.

<http://yougov.co.uk/news/2014/06/18/scottish-independence-no-lead-17/>

The Quebec provincial elections on 7 April 2014 saw the ruling minority government, the separatist Parti Quebecois, share of the vote fall from 32.0% to 25.4% while the Liberal Party increased its share of the vote from 31.2% to 41.5%. Almost half a century ago, in his visit to Quebec in 1967 General de Gaulle had said ‘Vive le Quebec libre!’.

The Times (2014) Canada’s debate on a separate Quebec buoys fight for Union. Tuesday July 1. p. 11.

http://en.wikipedia.org/wiki/Vive_le_Qu%C3%A9bec_libre

3 The world economy: growth and inequality ... the Piketty debate

Previous issues of *Commentary* have discussed regional house price inequality in the UK (Issue 2, March 2014) and Piketty’s analysis of the growth of inequality in the West (Issue 3, April 2014, pp. 16-22). Issue 3 noted a number of criticisms of Piketty’s arguments and there has also been more recent debate. Shortly afterwards the Financial Times claimed that there were errors in Piketty’s data. They argued that ‘once the data is cleaned and simplified the European results do not show any tendency towards rising wealth inequality after 1970’. Piketty produced a detailed response and declared the debate over.

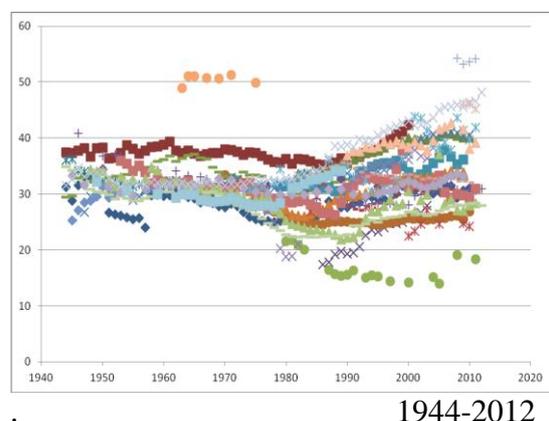
The Financial Times (2014) Piketty did his sums wrong in best seller that tapped into the inequality zeitgeist ... Flawed data on rich weaken Piketty’s main argument. FT Weekend. Saturday May 24, pp. 1, 5.

http://www.huffingtonpost.com/thomas-piketty/response-to-financial-times_b_5412853.html; June 1 2014.

http://www.huffingtonpost.com/2014/06/02/thomas-piketty-financial-times_n_5429255.html June 2 2014;

Leaving wealth aside, let us look at income. Figure 1 selects from the ‘The World Top Incomes Data Base’ created by Alvaredo, Atkinson, Piketty and Saez’s and presents the percentage of income earned by the top 10% in each of 28 countries over the period 1944 to 2012. (Eight of the countries have two incomplete time series in the data set.) Up till 1960 the income share of the top 10% is within a band between 30% and 40% (middle is 35%). This band declines and widens, being between 15% and 37% in 1985 (middle is 26%). Thereafter the band increases and widens further, being between 19% and 49% in 2012 (middle is 34%). The band has returned to where it was. These are all rather crude observations and a more sophisticated analysis would probably have more to say.

Figure 1 The percentage of income earned by the top 10% in each of 28 countries over the period 1944 to 2012



Source: The World Top Incomes Data Base [http://topincomes.g-mond.parisschoolofeconomics.eu/#Home](http://topincomes.g-mond.parisschoolofeconomics.eu/#Home;)::
<http://topincomes.g-mond.parisschoolofeconomics.eu/#Database>:: <http://topincomes.g-mond.parisschoolofeconomics.eu/>

Matt Ridley commented on the debate and drew attention to inequality in the world as a whole. His view on the debate was that UK wealth inequality had not changed much, and was now simply back at its level in the mid-1960s having been at a low in 1980. He noted government interventions not only the redistribution effect of taxation and benefits to the poor but also policies favouring the rich: 'the upper class has a welfare dependency policy as well as the underclass'. He suggested that there was economic turnover with the fortunes of individual people going up and down. His conclusion is that both wealth and income inequality in the UK has not changed much.

Ridley then turns to the world economy and notes that global inequality is declining. He also notes that absolute poverty is declining. He observes that 'people genuinely seem to mind about the unfairness of unequal income as much as or more than they mind about poverty'. He recommends growth and redistribution.

The Times (2014) Start spreading the good news on inequality. All over the world, the poor are getting less poor. In Britain, the tax system is doing its job in reining in the rich. Monday June 2. p. 25.
<http://www.rationaloptimist.com/blog/inequality-is-falling.-globally.aspx>

The world economy can be characterised in the following way:

There is absolute poverty.
There is great inequality between rich and poor.
Some countries have more inequality than others.
There is substantial economic growth.
The poorer regions have faster growth than the richer regions.
There is income stagnation for the poorer people in richer countries.
Ordinal inequality is constant ... occupancy turnover
Absolute poverty is declining ... or is it?
Global inequality is declining ... or is it?
Major redistribution: should we or shouldn't we?

There is absolute poverty. 'It has been estimated that in 2008, 1.4 billion people had consumption levels below US\$1.25 a day and 2.7 billion lived on less than \$2 a day.'
http://en.wikipedia.org/wiki/Measuring_poverty

There is great inequality of wealth between people. 'The bottom half of the world's population owns less than the richest 85 people in the world.'
<http://www.oxfam.org/sites/www.oxfam.org/files/bp-working-for-few-political-capture-economic-inequality-200114-en.pdf> ;
<http://policy-practice.oxfam.org.uk/publications/working-for-the-few-political-capture-and-economic-inequality-311312>;
<http://www.theatlantic.com/business/archive/2014/01/the-worlds-85-richest-people-are-as-wealthy-as-the-poorest-3-billion/283206/>;

There is great inequality between continents in nominal GDP per capita. See Table 2.

Some countries have more inequality than others. Least inequality is found in Europe, Canada and Australia. Greatest inequality is found in Africa and South America.

Middling levels of inequality are found in the USA, Russia and China.

http://en.wikipedia.org/wiki/Economic_inequality#mediaviewer/File:Gini_Coefficient_World_CIA_Report_2009.svg

The Observer (2014) Extravagant CEO pay doesn't reflect performance – it's all about status. The US and British economies are being run to deliver these lavish lifestyles. Will Hutton. 20 April 2014.

Table 2 Nominal GDP per capita, world and continents (US\$)

	IMF (2010)	World Bank (2010)	CIA (2010)
Oceania	39052	29909	39025
North America	32077	32296	32466
Europe	25434	25467	25476
World	18351	16837	18409
South America	9024	9254	9006
Asia	2941	2539	2902
Africa	1576	1560	1603

Source: [http://en.wikipedia.org/wiki/List_of_continents_by_GDP_\(nominal\)](http://en.wikipedia.org/wiki/List_of_continents_by_GDP_(nominal))

World GDP per capita is growing at around 3%. Index Mundi reports GDP real growth rate in the thirteen-year period 1999-2012 of between 3% and 5.3% with the exception of -0.7% in 2009. In the same period the population growth rate has declines from 1.3% to 1.1%. This population growth rate means that GDP per head real growth rate is somewhat below the GDP real growth rate – if the latter is 4% then the former is around 2.8%.

<http://www.indexmundi.com/g/g.aspx?c=xx&v=66;>
<http://www.indexmundi.com/>

Growth in the rich advanced economies is much lower than in the emerging market and developing economies. The IMF World Economic Outlook Update in January 2014 reported real and projected GDP growth in the period 2011 to 2014. The lowest growth rates over the period were 2% for the world overall, 0% for advanced economies and 4% for emerging market and developing economies. See Figure 2. ‘The British economy shrank 7.2% in the 15 months from April 2008, before suffering the slowest recovery on record. It has taken more than six years to claw back the lost ground, two years longer that after the Great Depression of the 1930s and the UK’s chronic recession a decade earlier.’

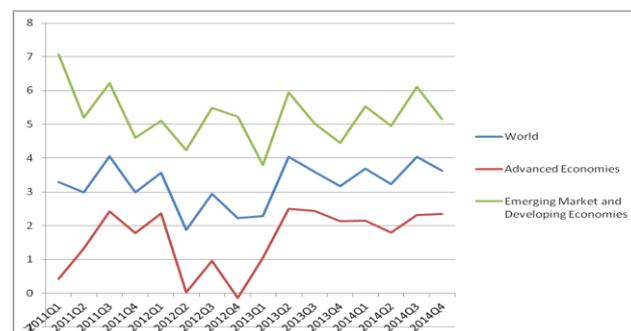
New York Times International Weekly [The Observer] (2014) Where poverty outlasted the cure. [West Virginia] Sunday 4 May. pp. 1,6.

The Times (2014) It’s official the Great recession has ended. Ground lost from recession has been recovered. Friday May 9. pp. 1, 4.

The Observer (2014) Moment of truth for man with the power to restore EU prosperity. June 1. pp. 40-41.

New York Times International Weekly [The Observer] (2014) Weak and bumpy recovery plagues Euro Zone. Sunday 1 June. p. 7.

Figure 2 Global GDP growth (percent; quarter over quarter annualized)
 Actual, 2011/Q1 to 2013/Q3; Projected, 2013/Q4 to 2014/Q4



Source: IMF, <http://www.imf.org/external/pubs/ft/weo/2014/update/01/>

There is evidence that income has stagnated for certain groups in the USA.

<http://www.pewresearch.org/fact-tank/2013/09/18/four-takeaways-from-tuesdays-census-income-and-poverty-release/>

Ordinal inequality is constant ... occupancy turnover. Ranking labels – assuming there are no ties – never change: they always run from first to last with everything in between. The only change is the occupancy of the rank. Mean income in the US is still top but US median income has now fallen into second place and now Canada is the country with the highest median income.

New York Times International Weekly [The Observer] (2014) U.S. wages from fall from the top spot. Sunday 4 May. pp. 1,6.

Absolute poverty is declining ... or is it? ‘The proportion of the **developing world**’s population living in extreme economic poverty has fallen from 28 percent in 1990 to 21 percent in 2001. Much of the improvement has occurred in East and South Asia. In Sub-Saharan Africa GDP/capita shrank with 14 percent, and extreme poverty increased from 41 percent in 1981 to 46 percent in 2001. Other regions have seen little or no change. In the early 1990s the transition economies of Europe and Central Asia experienced a sharp drop in income. Poverty rates rose to 6 percent at the end of the decade before beginning to recede.^[6] There are criticisms of these measurements.^{[7][8]}

http://en.wikipedia.org/wiki/Measuring_poverty

Global inequality is declining ... or is it? ‘Sala i Martin has constructed an estimate of the World Distribution of Income,^[7] which he has then used to estimate poverty rates and measures of inequality. The conclusions of this study offered a new point of view for two reasons. First, the **United Nations** and the **World Bank** used to believe that, although poverty rates were falling, the total number of poor people was increasing. Sala-i-Martin claimed that both were falling. Second, the United Nations and the World Bank used to (and still do) believe that individual income inequalities were on the rise. Sala-i-Martin claimed they were not.^[8]

http://en.wikipedia.org/wiki/Xavier_Sala-i-Martin

Does capitalism work? Major redistribution: should we or shouldn’t we? Lyons argues that we will all benefit from the global economy. In contrast Piketty’s analysis leads him to believe we are heading for a grossly unequal society. In order to prevent this Piketty considers a global wealth tax and 80 per cent top income tax – but feels this is not very ‘realistic’. Daniel Finkelstein takes him to task for this: ‘if Thomas Pinketty thinks that today’s capitalism has failed he needs to explain what he is going to replace it with’. He continues ‘in the 150 years or so since Marx’s Capital, every single attempt at an alternative to capitalism has been a growth-destroying, liberty-crushing, dictator-producing, starvation-creating, murderous disaster’. He gives the examples of Mobutu’s Zaire, Mao’s Great Leap Forward and the Kims in North Korea. He quotes a friend who says that all politics is autobiography: Finkelstein’s family owned ironworks in Poland which were confiscated by Stalin, the family moved to a labour camp and to Siberia, finally arriving in London and put on national assistance. It is a powerful argument but not perhaps the whole story ...

... see the section, ‘Predicting the world: economy ...’

... to be continued in future issues of *Commentary*!

The Times (2014) My contender for the stupid socialist award. Daniel Finkelstein. Wednesday 7 May. p. 27.

The Observer (2014) We can avoid a race to the bottom with globalisation. Sunday 29 June. p. 42.

Lyons, G. (2014) The consolations of economics. How we will all benefit from the New World Order.

<http://www.waterstones.com/waterstonesweb/products/gerard+lyons/the+consolations+of+economics/9828209/>

A simple model conceptualising growth and inequality

Consider a world economy consisting of a rich region and a poor region – see Table 3 above - with the two regions having the same population size. Within each region there are the richer half of the people and the poorer half of the people. (This gives rise to four groups of people. The groups are of equal size and so GDP and GDP per capita are in proportion.) Let the GDP for the four groups at time t be:

- PP, poorer people in the poor region have $GDP=1$.
- RP, richer people in the poor region have $GDP=a$.
- PR, poorer people in the rich region have $GDP=b$.
- RR, richer people in the rich region have $GDP=ab$.

Here we define the inequality between any two groups as the ratio of their GDP, the richer divided by the poorer. Associated with this situation is a variety of inequality concepts. The first column gives the measures of inequality at time t . Consider how these inequality measures are affected by different patterns of growth. Constant growth ‘ cg ’ leaves the measures unaffected – see second column.

Table 3 A variety of inequality concepts. How growth can affect inequality.

inequality concept	time t	time $t+1$	ddg
.		cg	rg	
<u>People inequality</u>				
the inequality in the poor region	a	a	a	a
the inequality in the rich region	a	a	a	$ag+g-1$
the inequality between rich and poor in the world	a	a	a	$[b(ag+g-1)+aG]/(G+b)$
<u>Regional inequality</u>				
the inequality between regions	b	b	bg/G	bg/G
the regional inequality between poorer people	b	b	bg/G	b/G
the regional inequality between richer people	b	b	bg/G	$b(ag+g-1)/aG$

Note: the overall GDP of the richer region is still $(abg+bg)$. So the rich people in the rich region have $GDP (abg+bg-b)$.

We now suppose that growth G in the poor region is greater than growth g in the rich region. People inequality is unaffected and regional inequality is reduced by a factor g/G . In other words the greater growth rate of the poorer region reduces the regional inequality – the case in Figure 2 above. See the third column ‘ rg ’ – regional growth - in Table 3 above.

Suppose instead that the GDP of the poorer half in richer countries remains at b – but still with regional growth rates of G and g . (The Piketty debate focuses on the rich region and considers whether or not inequality is increasing within the rich region - there is evidence of income stagnation for the poorer half in richer countries.) This gives rise to the inequalities displayed in the fourth column in Table 3.

4 Predicting the world: economy, politics and football ... The World Cup 2014 ... rampage killing

This month the OECD has predicted the next 50 years of the world economy:

... ‘Shifting gear: policy challenges for the next 50 years.

Growth will slow and economic activity will shift, with skills being crucial and wage inequality rising

Sustaining growth while addressing rising inequality will be a major policy challenge

More international cooperation will be needed in an increasingly multipolar world’ ...

OECD Economics Department, Policy Note no. 24. July 2014

<http://www.oecd.org/eco/growth/Shifting%20gear.pdf>

Whether writing about politics or football Daniel Finkelstein’s writings always give me something to reflect on. Here he is on Bruce Bueno de Mesquita’s political predictioning:

‘A senior US State Department official recently explained to me how the department uses computer modelling to help it to understand and potentially resolve intractable international disputes. Bruce Bueno de Mesquita, professor of politics at New York University, describes in his book *Prediction* the use to which he has been put by successive administrations and the CIA. He employs game theory and computer simulations to help, for instance, to forecast the outcomes of foreign elections and predict the next moves of international terrorists.

The use of such methods will only grow. ...’

The Times (2014) Do we really need MPS now we have Twitter? Politics, like the legal profession, could soon be turned upside down. Westminster must embrace change or be doomed. Daniel Finkelstein. Wednesday July 2. p. 23.

http://en.wikipedia.org/wiki/Bruce_Bueno_de_Mesquita

<http://www.predictioneersgame.com/>

Not to be confused with Ethan?: <http://home.uchicago.edu/bdm/>

http://decision-making.moshe-online.com/criticism_of_bueno_de_mesquita.html

In recent weeks I have been paying attention to Finkelstein’s probabilistic predictions of The World Cup. See this month’s *Commentary Special Supplement*:

The World Cup 2014: probability, prediction and outcome

‘The problem with statistics is that while they demonstrate clearly that there will be surprises, it is logically impossible to identify which ones they will be. Otherwise they wouldn’t be a surprise.’

The Times (2014) Fink Tank. The Game. Daniel Finkelstein. Saturday 28 June, p. 10.

In a later section I discuss the life of Rodgers, a rampage killer. The statistics for such killings provide a probabilistic prediction of what might happen in any particular such event.

The FBI reports on active shooter and mass casualty incidents. Statistics are given in *. The attackers are 94% male and their age ranges from 13 to 88. There has been an increase in such incidents with under 10 per year in the period 2000-2008, to over 10 per year in the period 2009-2012. Figure 7 on event resolution is useful: whether or not the event ends before the police arrive (51 events) or after (53); whether the attacker stops (55) ... or is stopped by the victims (17) or by the police (32); whether

the attacker commits suicide (44), leaves (5), is subdued (23), surrenders (6) or is shot (26). In 23 of these 26 cases the attacker is shot by the police.

<http://www.fbi.gov/about-us/cirg/active-shooter-and-mass-casualty-incidents>;

* <http://leb.fbi.gov/2014/january/active-shooter-events-from-2000-to-2012>;

http://en.wikipedia.org/wiki/List_of_rampage_killers;

The USA age-based homicide rate jumps from the 10-17 year range to the 18 to 24 year range but this age range constitutes the peak and there is substantial decline in subsequent age groups. The age-based suicide rate has a similar jump from the 10-17 year range to the 18 to 24 year range continuing to increase and reach a peak in the 45-54 age range after which there is a gradual decline. During 2009–2010, a total of 22,571 firearm homicides and 38,126 firearm suicides occurred among U.S. residents. Men are four times more likely to commit suicide than are women.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6128a8.htm>

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6230a1.htm>

http://en.wikipedia.org/wiki/Suicide_in_the_United_States; http://en.wikipedia.org/wiki/Sex_differences_in_crime

5 Predicting the universe: ‘speed of light may be slower than we thought’?

This was the headline in The Times for an item referring to an article by James Franson in the *New Journal of Physics*: ‘including the gravitational potential energy of massive particles in the Hamiltonian of quantum electrodynamics results in a predicted correction to the speed of light ... [which is] in reasonable agreement with experimental observations from Supernova 1987a’ (p. 1). Neutrinos and photons from the collapse of the supernova did not reach Earth at the same time. In fact the photons were 7.7 hours late. Franson suggests there was a delay of 3 hours in the production of the photons. There was then a further delay of 4.7 hours due to gravitational potential. This value is more than double, but of the same order of magnitude as, the lower bound of 1.9 hours predicted by the equation:

$$\Delta c / c_0 = (9/64) \alpha \Phi_G / c^2$$

where c is the velocity of light as measured in a global reference frame, c_0 is the velocity of light as measured in a local freely-falling reference frame, Δc is the correction to c , α is the fine structure constant and Φ_G is the gravitational potential in the Hamiltonian.

‘It should be emphasized that the model described in this paper is only intended to provide an alternative and approximate description of the propagation of photons in a gravitational potential; it is not intended to represent a complete or consistent theory.’ (p. 21). The ‘may be’ in the newspaper headline is well chosen!

The Times (2014) Speed of light may be slower than we thought. Saturday 5 July. p. 3.

Franson (2014) Apparent correction to the speed of light in a gravitational potential. *New Journal of Physics*. Vol. 16. June 2014.

<http://iopscience.iop.org/1367-2630/16/6/065008/article>

I don’t really understand very much of all of this – but I thought it might be fun to try to understand a little more! I have set myself the task of working my way through Roger Penrose’s ‘*The Road to Reality*’. This month I shall look at Chapters 2 to 4, where he sets up some of the basic mathematics:

(2) Parallel lines never meet; the angles of a triangle add up to 180 degrees; and in a right-angled triangle the square on the hypotenuse equals the sum of the squares on the other two sides. But all that is only true for a certain type of space – Euclidean space. It’s not true for hyperbolic space. So which space do we live in? Not sure.

(3) ‘... at about the age of 11, I was somewhat taken aback when the teacher asked the class what a fraction (such as $\frac{3}{8}$) actually is!’ (p. xvii). Are all numbers fractions? ‘It would indeed be catastrophic for geometry if there were no actual number that could describe the length of the diagonal of a square’ (p. 51). We need irrational numbers like $\sqrt{2}$.

(4) The quadratic equation $x^2-1=0$ has two solutions $x=1$ and $x=-1$. What are the solutions of the quadratic equation $x^2+1=0$? There are none. Or at least there are none unless one allows complex numbers such as the square root of -1 , $i=\sqrt{-1}$. So $i^2=-1$. We then get $x^2+1=(x+i)(x-i)=0$ and so $x=i$ or $x=-i$.

The complex number $2+5i$ can be represented by the point $(2,5)$.

The sum of the series $1+1/2+1/3+1/4+\dots$ approaches infinity. The sum of the series $1+1/2+1/4+1/8+\dots$ approaches the finite number 2. How do we know if a series approaches infinity or some finite number? There is a general result: any power series of a complex number z will approach a finite number as long as z lies within a certain circle.

This is a good point to stop: the notions of geometry (Chapter 2) and complex number (Chapter 4) are in Roger Penrose’s view of central importance. We’ve a long way to go: James Franson refers to the Hamiltonian – the subject of Penrose’s Chapter 20! And that’s just the mathematics, not the physics!

6 The modern novel ... the world history of narrative ... Pavel (2013)

Literature is one of the disciplines discussed in the *Omnidisciplinarity* section of *Steven Pinker sets an exciting agenda*. Pinker notes that ‘the philosophes of the Enlightenment extolled the way novels engaged a reader’s identification with and sympathetic concern for others’ (Pinker, 2011, p. 176). In similar vein, Eaglestone (2013) extols Pavel’s *The lives of the novel: a history*: ‘the philosophical approach Pavel takes puts him into dialogue with Martha Nussbaum, Alasdair Macintyre and Robert Pippin, who find in narrative fiction powerful resources for understanding and questioning ethics’. Stanford University’s Joshua Landy says of Pavel: ‘an extraordinary accomplishment ... a work of intellectual and literary history, literary theory, and moral philosophy’.

<https://sites.google.com/site/gordonburtmathsocsci/home/5-what-s-new/spa-stein-pinker-book-sets-an-exciting-agenda>

Pavel, T. G. (2013) *The lives of the novel: a history*. Princeton University Press.

http://en.wikipedia.org/wiki/Thomas_Pavel

Joshua Landy (2013) Stanford University [dust-jacket of Pavel]

Eaglestone, R. (2013) We just couldn’t put it down. [A review of Pavel, 2013] *The Times Higher Education*. 26 September – 2 October. pp. 52-53.

http://en.wikipedia.org/wiki/Martha_Nussbaum; http://en.wikipedia.org/wiki/Alasdair_MacIntyre;

http://en.wikipedia.org/wiki/Robert_B._Pippin. <http://shc.stanford.edu/news/experts-bureau/joshua-landy>

Here I shall limit my attention to the *Introduction*, pp. 1-20, of Pavel’s book. He starts by contrasting two views: ‘there is a widespread view that the novel emerged relatively late in history, as a literary expression of modernity’; and there is the view that notes ‘the worldwide wealth of narratives that, from ancient Egypt to ancient China and Japan, made the rise of the novel possible’ (p. 1, p. 2). In this way the

specific geographical and historical location of the novel is located in the geographical and historical entirety of narratives.

His view is that although literary genres are linked to their geographical and historical location – ‘the social and intellectual life of their times’ – ‘they also enjoy a qualified autonomy’. This is one of the four core beliefs which give the book direction (p. 19).

Pavel views the history as the evolution of competing cultural forms, looking at its development as in natural histories of the novel; looking at it – like social historians of literature do - in a wider cultural perspective. He starts:

‘The evolution of the novel is an astonishing success story. From its humble beginnings onward, it has shown an unparalleled ability to adapt, innovate, spread, and prevail. At almost every turn, it has found the most intelligent, effective ways to reassert its place in the broader culture ...

... the ‘European acceleration’ of the novel ... began as a long-term rivalry between various kinds ... of prose narrative’ (pp. 1, 2, 16).

His view of the evolution of literature is that ‘although individual play an important role ... [the history] does not consist in great writers relentlessly pushing the genre forward’. This is one of the four core beliefs which give the book direction (pp. 17, 19).

Prose narratives can be classified in terms of content and form: ‘each kind of story portrayed a different aspect of the human condition ... subgenres formed two large groups, one of which promoted a celebratory, idealist view of human life and behaviour, while the other developed a derogatory, anti-idealist view of human life’. The former included the heroically chaste love of the ancient Greek novel and the individual valor in chivalric tales. The latter gentle sentiments in the pastoral, deceit in the picaresque, sudden, surprising action in the novellas. (p. 2)

His view is that ‘novels portray individuals in different ways, as strong souls, sensitive hearts, or enigmatic psyches’ ... as well as these idealised characters lesser perfection is displayed by skewed souls, hesitant hearts, incautious psyches ... and sometimes anti-idealist types such as scoundrels, cold hearts, incomprehensible psyches. This is one of the four core beliefs which give the book direction (pp. 17-19).

The first core belief though is that ‘narratives are about human beings [characters or types], the ideals and norms that guide their lives, the passions that drive them, and the action they take’ ... about their links with the world, the community they live in. There can be a tension between the individual and their surroundings. ‘By separating the protagonists from their environment, the novel, as the young Lukacs saw, was the first genre to consider individuality one of the highest goods and to reflect on the individual’s connections with the life of the community. There can be a tension between social morals, ideals and norms on the one hand and individual passions that makes individual action problematic. ‘As the young Lukacs knew, the novel asks whether human beings can ever be morally reconciled with the world in which they are born, and *feel at home* in it’. (pp. 17, 18).

7 Not feeling at home in the world ...

... Dustin Hoffman and Emma Thompson

Just before half-time in the Holland v. Costa Rica match, Catherine and I switched channels. It was a wrinkly romance: Dustin Hoffman did not feel at home in the world; Emma Thompson did not feel at home in the world; their paths crossed ...

‘Romantic drama

Last Chance Harvey (2008)

One of the worst titles of recent years strapped to one of the most unexpectedly charming films., Last Chance Harvey traces the fall and rise of a failed jazz musician turned advertising ‘jingle’ man, Harvey Shine (Dustin Hoffman). The film first encounters New York native Harvey in London for his daughter’s wedding, where he is humiliated by his ex-wife, rejected by his daughter in favour of her stepfather and fired from his job. Enter eh equally luckless, but ever hopeful, Kate Walker (Emma Thompson ...) and the stage is set for a so-called ‘wrinkly romance’ that’s perfectly judged, deftly performed (this is Hoffman and Thompson, after all) and contains but the one, chaste and sweetly delivered kiss.’

The Times (2014) Film choice by Kevin Maher. Saturday Review, Saturday July 5, p. 24.

... a football-unfeeling mother

Janice Turner does not feel at home in the football world of her family:

‘I watched Germany beat Brazil 7-1, listened to the apocalyptic commentary, saw weeping children and praying players and felt ... nothing.

... Oh to be fluent in the international language that enabled my younger son and husband to befriend villagers in rural Burma. ‘Manchester United!’ (smiling nods). ‘Wayne Rooney!’ (shaken hands). ‘Stevie Gerard!’ (invitation to join in a game of Burmese keepy-uppy, *chinlone*).

... I know boys who have deliberately taught themselves to like football, swotted up on players, found a team to follow. They fake it, just to fit in. I too have tried. I appreciate the humour, hairstyles, chants, crowds, kits, the carnival of it al. But the game itself, even one with eight goals, is meaningless, I realise it is my loss.’

The Times (2014) It’s 7-1 and I still can’t see what the fuss is about. Thursday July 10. p. 22.

... the life of a Jihadist

Abdul Raqib Amin from Aberdeen did not feel at home in the world of non-believers. He was recruited through the internet and urged western Muslims to join the fight with Isis:

‘I left the UK to fight for the sake of Allah, to give everything I have for the sake of Allah. One of the happiest moments of my life was when the plane took off from Gatwick airport. I was so happy, as a Muslim you cannot live in the country of kuffars [non-believers]. ... I left the house with the intention not to go back, I’m going to stay and fight until Khilafah [rule of Islam] is established or I die.’

The Guardian (2014) Threat from Isis exaggerated and distorted, says ex-MI6 chief. Tuesday 8 July. p. 4.

... *My Twisted Life*, 137 pages by a rampage killer

A substantial part of what follows is direct quotation from the following:

The Times (2014) Angry loner posted plans online before California killing spree. Monday May 26. p. 3.

The Times (2014) Killer hailed as hero on internet hate site. Wednesday May 28. p. 32.

The Times (2014) Young. Male. Gun owner. Socially awkward. Secret virtual life. Portrait of a mass killer. Magazine. Saturday 28 June. pp. 54-58.

Elliot Rodger, 22, stabbed three men to death in his flat in the small university town of Isla Vista in California, Friday 23 May 2014. He entered a female students' dormitory and pounded on doors, apparently looking for victims. He then shot dead Katie Cooper, 22, and Veronika Weiss, 19, as they stood outside. Then he gunned down another student, Christopher Martinez, 20, in a delicatessen. Driving the BMW his mother had given him, Rodger fired at random at passers-by, injuring 13 people, as the police gave chase. He was found dead after crashing into a cyclist. He had apparently committed suicide.

He was born in London but moved to an affluent Los Angeles neighbourhood at the age of five. His father is a British film-maker and his mother is Malaysian. His parents divorced shortly after the move. In the divorce case the mother argued that he was a high-functioning autistic child (7 years old) and she needed more money to support him. His father hired a doctor to dispute that. The divorce hit the boy hard. The hate and resentment are likely to have been developing at that time.

His father spent his time trying to get him well. Elliot's problems were dominant in the father's life. His parents hired more psychiatrists. They paid other youngsters to befriend him and to coach him on how to socialise. Nothing worked. His parents worried that he might kill himself, but never that he might harm others. Elliot had been so adept a liar that his father had believed his son was incapable of deceit [I am not sure what this refers to]. He was prescribed the antipsychotic drug Risperidone (but did not take it?).

<http://en.wikipedia.org/wiki/Risperidone>.

He was at a succession of schools. He'd been marginalised and felt alienated at school when he was just four years old. He complained he'd been bullied at school. He suffered a paralysing panic attack in a corridor. He went to a school for troubled youngsters. He was always separate ... frozen by fear that he would say the wrong thing, be rejected. He was the quietest boy she'd met in 37 years of working with troubled kids. He longed for friendship but was frozen by fear of rejection ... disquietingly distant ... He never displayed anger or seemed a threat. Everybody worried he could be an easy target. 'We looked after him.' He was currently staying at a facility that offers 'living skills instruction to help adults with disabilities to live more independently in their communities'.

<http://lanterman.ca.networkofcare.org/dd/services/subcategory.aspx?tax=LR-3200>

He retreated into computers and video such as Game of Thrones and World of Warcraft and made video diaries about girls ignoring him. His father, Peter Rodger, was an assistant director on the first Hunger Games movie; his grandfather was George Rodger, a renowned British war photographer who co-founded the Magnum Agency.

http://en.wikipedia.org/wiki/Game_of_Thrones; http://en.wikipedia.org/wiki/World_of_Warcraft

http://en.wikipedia.org/wiki/The_Hunger_Games ; http://en.wikipedia.org/wiki/Magnum_Photos;

Elliott Rodger drove a BMW, he wore \$300 sunglasses and \$500 sweaters ... family connections got him into Hollywood premieres. However the Rodgers were struggling. Peter Rodgers sank into debt after *Oh My God* flopped. Elliot's mother, Li Chin, made just \$40,000 a year as a researcher for a film company.

He legally bought his first gun in December 2012 and in his room there were three handguns and hundreds of rounds of ammunition. A month beforehand the family had been alarmed by YouTube videos regarding suicide and the killing of people and his mother had contacted the local police. The police chatted with him on his doorstep and found him courteous and charming. 'If they had demanded to search my room ... That would have ended everything. For a few horrible seconds I thought it was all over.'

Rodger wrote a 137-page manifesto, *My Twisted Life*, with links to YouTube videos and a Facebook account.

He named a gym worker as his first crush and claimed she had teased him when they were children and 'wounded me deeply ... I started to hate all girls because of this. I saw them as mean, cruel, and heartless creatures that took pleasure in my suffering.' Regarding himself as a perfect man he could not understand why women spurned him. 'I'm 22 years old and I'm still a virgin. I've never even kissed a girl. I've been through college for 2½ years and I'm still a virgin.'

'Tomorrow is the day of retribution, the day in which I shall have my revenge against humanity ... If I can't have you girls, I will destroy you. You deserve to be annihilated and I will give that to you ... by silently killing as many people as I can around Isla Vista by luring them into my apartment through some form of trickery.' 'I will be a god ... I will slaughter you like animals ... for the crime of living a better life than me'.

PUA-hate.com is an online message board that harbours a toxic culture of male entitlement. It is linked to the so-called Men's Rights Movement, a nebulous group of male supremacists who frequently lament that they are not noticed by women and who believe that those who spurn them deserve retribution. They often identify themselves as 'incels' – short for 'involuntary celibate'. At least six months beforehand he had become an active member of and found kinship in these misogynistic internet groups. He viewed himself as something of an incel revolutionary. He reacted angrily to a suggestion that lucid dreaming might be an acceptable substitute for sex: 'if all incels were to start getting sedated by lucid dreaming incels will become docile and there will be no revolution. If we can't solve our problems we must destroy our problems'. He became a hero by promising to craft a world in which women lived in fear.

Later he dreamt of building concentration camps to exterminate women. He wanted to abolish sex: it is the only way to purify the world. He had plans to turn his apartment into a personal torture and killing chamber. He planned his attack for months ... his thoughts were ordered ... he was adept at keeping secrets. It was a Friday night in a town with a reputation for hard partying ... His flat was in a fashionable gated complex, festooned with an advertising banner that shows a group of beautiful young

people frolicking arm-in-arm on a beach at sunset. He attacked the sorority house where he believed the hottest girls in town were: 'I will slaughter every single spoilt stuck-up blonde slut I see inside there'.

[In fact four of the six people Elliot Rodger killed were men.]

'Why did Chris die? Chris died because of craven, irresponsible politicians and the NRA (National Rifle Association). They talk about gun rights. What about Chris's right to live? When will this insanity stop? ...

... I've talked to kids just like Elliot Rodger – people who refuse to accept they're ill. They can be very smart. That was this kid. This boy thought women owed him certain things – he acted in a very elaborate way. And once he was an adult his parents ran out of options. It was impossible to give him counselling or medication. We [Richard Martinez, Chris's father, and Peter Rodger, Elliot's father] have agreed to work together so other families will not have to suffer as ours have. [Asked whether to work with Rodger he has had to forgive ...] It didn't require forgiveness. It required my understanding of the limits of the power of parents.'

[Richard Martinez, father of Chris, is an attorney who has had mentally ill clients.]

Let us now reflect on all of this. First consider the world Elliot lived in. There were a lot of people devoting a lot of energy seeking to guide Elliot's life in a positive direction: his parents and wider family, family friends and neighbours, his schools and colleges, doctors, community social workers, police and the community as a whole. His parents were divorced. How were relations between husband and wife and what did Elliot feel about that? There were other groups and sub-cultures in society contributing to a negative direction: the gun culture in the USA and a misogynist culture online. There was a theme of violence in the popular culture he engaged with. There was local affluence. How did Elliot feel about his parents struggling finances? There was a local 'hard partying' youth culture: 'a town with a reputation for hard partying ... an advertising banner that shows a group of beautiful young people frolicking arm-in-arm on a beach at sunset ... the hottest girls in town'. His family was British and Malaysian – what were their attitudes to USA, Los Angeles and Hollywood culture?

Secondly Elliot's psychological state. He was a high-functioning autistic who had been prescribed anti-psychotic drugs. He aspired to the sort of life he saw around him ... he wanted friends, girl friends, sexual relationships. But he was not successful at achieving this. He formed a view of other people, a view which blamed people for his situation. He imagined revenge and took revenge.

Mass murderers are 'injustice collectors' – they simmer in resentment, and tend to obsess over social slights. The world is against them, they believe, and to nurture their wounded narcissism they retreat into fantasies of violent revenge. 'A world view dominated by hatred grows like a cancer' says Dr Mary Ellen O'Toole, a former FBI psychological profiler and an expert on mass shootings.

<http://maryellenotoole.com/>

The Times (2014) Young. Male. Gun owner. Socially awkward. Secret virtual life. Portrait of a mass killer. Magazine. Saturday 28 June. pp. 54-58.

Display 1 summarises some of the key features of the thoughts of and (imagined) actions by Elliot ('self') and others. I have characterised them according to the three

dimensions of emotion: valence, positive or negative; strength, strong or weak; and activation, active or passive (*Commentary* No. 3, Section 2.1, April 2014).

Display 1 Key features of the thoughts and actions by Elliot ('self') and others

Self-perception: positive (but), strong
perfect man, god; incel; supremacist; revolutionary; narcissism

Identification of other: girls, humanity

Perception of other: negative, strong, active
mean, cruel, heartless, took pleasure in his suffering; living a better life, spoilt, stuck-up, blonde, slut

Self action: negative, weak, passive ...
frozen by fear, paralysed by panic, quiet, separate, distant, fear of saying the wrong thing, never anger or threat – but one reported recent aggression
[liar?, incapable of deceit?], thoughts were ordered, adept at keeping secrets

Action by other: negative, strong, active
ignored, marginalised, teased, bullied, wounded, spurned, denied, not noticed

Self mental reaction: negative, strong ...
alienated, hatred, misogynistic, men's rights, male entitlement, injustice, obsess over social slights, simmer
in resentment

Self planned action: negative, strong, active
revenge, retribution - instil fear, lure, torture, kill, slaughter, annihilate, destroy; revolution; fantasies, plans, actions

What are we to make of this system of ideas? Consider the creation of these ideas in the first place. People are extremely creative in the ideas they produce – large number of ideas, extraordinary ideas, sophisticated structures of ideas (Koestler). For example Elliot dreamt of building concentration camps to exterminate women. The ideas of our dreams are often extraordinary – in Freudian psychology they are the creation of the id.

http://en.wikipedia.org/wiki/Id,_ego_and_super-ego

Sometimes these ideas are brilliant and sometimes they are appalling. The ideas need to be evaluated. According to Freud this was the role of the ego and the super-ego. I prefer mathematical social science and value analysis: well-formed concepts, well-formed statements and reasoned arguments and empirical verification. Is 'slut' a well-formed concept? Is 'all girls are mean' an empirically verified statement? Is 'my gym worker teased me and so all girls are mean' a valid inference? In general do the ideas entertained by people involved in conflict stand up to careful scrutiny by mathematical social science?

8 Conceptualising: our exceptional values ... not feeling at home in the world

Prompted by Pavel's question of 'whether human beings can ever be morally reconciled with the world in which they are born, and *feel at home* in it,' we have now looked at several examples: Dustin Hoffman and Emma Thompson; a football-unfeeling mother; the life of a Jihadist; and the life of a rampage killer. I now want to place this alongside the theme discussed in last month's commentary: 'our exceptional values are threatened'.

Let us start with a very simple model. Consider an individual in a world with two possible states: state A is consistent with the individual's exceptional values; and state

B is not. In other words the individual would feel at home in A; and would not feel at home in B. We now consider two successive states of the world:

AA: the individual continues to feel at home;

BB: the individual continues to feel not at home;

AB: the individual feels at home in the first state but can look ahead to the second state and see that they will not feel at home; so they feel their exceptional values are threatened;

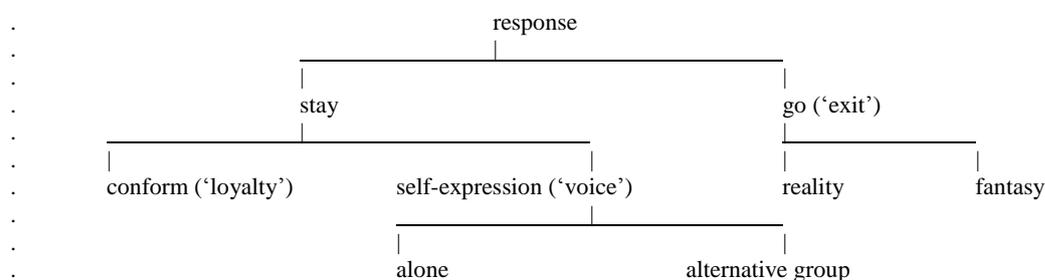
BA: the individual does not feel at home in the first state but can look ahead to the second state and see that they will feel at home; so they feel hope that their exceptional values will be satisfied; and are happy when that happens.

It seems that throughout his life the rampage killer experienced BB. Likewise Janice Turner continues to be in a footballing BB state. Dustin Hoffman and Emma Thompson experienced the ‘happy ending’ story BA. The Jihadist hoped he was in a ‘happy ending’ story BA: ‘one of the happiest moments of my life was when the plane took off from Gatwick airport’. As discussed in last month’s *Commentary*, some UK Christians feel threatened, feeling they are experiencing AB.

We now consider a population of individuals, composed of two groups: group A feel at home in A; and group B feel at home in B. If the state of the world is A, then group A feel at home; and group B do not. If the state of the world is B, then group A do not feel at home; but group B do.

What can a person do who does not feel at home in the world? They can stay or they can go. The Jihadist decided to go. If they stay they can either conform with the world or they can act in accordance with their own values, self-expression. The self-expression can be alone or in an alternative group. Until they met Dustin Hoffman and Emma Thompson were alone. The Jihadist had his group of fellow Jihadists. The rampage killer had his internet group of ‘incels’. A person can ‘go’ in reality as teh Jihadist did or go in fantasy to a virtual world like the rampage killer did. See Figure 3. The three options portrayed correspond to Hirschman’s (1970) exit, voice or loyalty. The inner tension involved in the loyalty option is discussed in Kuran’s (1997) *Private truths, public lies*. For example boys (or mothers) who fake an interest in football are engaged in the ‘preference falsification’ of Kuran’s sub-title.

Figure 3 Responses to not feeling at home



The emotional character of these responses can be characterised in terms of the three dimensions: valence, positive or negative; strength, strong or weak; and activation, active or passive. Display 1 for the rampage killer exemplifies a negative, strong and

active response. Display 2 below is based on the account of the system of ideas in play in the debate about whether UK is Christian – as discussed last month (*Commentary* 5, Section 3, June 2014). As portrayed here some aspects of it have a more positive emotional character – although there are negative aspects too, not unrelated to the negative aspects in Display 1.

Display 2 The system of ideas in play in the debate about whether UK is Christian

The self-nation-religion value triangle; Positive values; A set of different groups and different views; Consensus; Distinctiveness (exceptionalism); Positive tension; Superiority and intolerance ... and their repudiation; Feeling threatened; Response, defensiveness or assertiveness?; Reciprocated criticism, alleged defects of the other viewpoint; Reciprocated action

9 Journals: JTP, AJPS, ISQ ... sets, spaces and functions

Research is often about the equation $y=f(x)$ for some set S of cases. This suggests four basic questions:

- What is the nature of the x -space?
- What is the nature of the y -space?
- What is the nature of the function f ?
- What is the nature of the set S ?

In simple models the space may have only one or perhaps two dimensions and the function may be linear or perhaps quadratic. More complex models consider higher dimensions and more complex functions. The set S may be simply just a set, or it may have some structure.

What is the function f ? The spatial value model is used extensively in studies of voting behaviour. Singh (2014) looks at data on voting behaviour and presents evidence that the linear model outperforms the quadratic model, noting that this is in agreement with findings from other research.

Singh, S. (2014) Linear and quadratic utility loss functions in voting behavior research. *Journal of Theoretical Politics*. 26, 1. January pp. 35-3
<http://jtp.sagepub.com/content/26/1/35.abstract>

What is the y -space? What is the set S ? Lauderdale and Clark (2014) note the contrast between qualitative studies which suggest many dimensions and quantitative studies which suggest only a few, perhaps just one. They look at roll-call votes and opinion texts from the US Supreme Court. Using data on the votes only it is possible to identify judges as having ideal points on a one-dimensional left-right political continuum. However this ignores the question: which issue dimension is a vote about? The authors use ‘latent Dirichlet allocation to discover the extent to which different issues were at stake in different cases’. They then analyse roll-call votes to estimate justice preferences within each of those issues. For example two major issues are economic and criminal procedure. The issue space is multidimensional and a judge’s ideal point is an ideal point in this space.

Lauderdale, B. E. and Clark, T. S. (2014) Scaling politically meaningful dimensions using texts and votes. *American Journal of Political Science*, 58, 3, July, 754-771.
<http://onlinelibrary.wiley.com/doi/10.1111/ajps.12085/abstract>

What is the x-space? What is the y-space? What is the set S? Buhaug, Cederman and Gleditsch (2014) say: ‘Much of the recent research on civil war treats explanations rooted in political and economic grievances with considerable suspicion and claims that there is little empirical evidence of any relationship between ethnicity or inequality and political violence. We argue that common indicators used in previous research, such as the ethno-linguistic fractionalization (ELF) and the Gini coefficient for income dispersion, fail to capture fundamental aspects of political exclusion and economic inequality that can motivate conflict.’ Instead they develop new indices which are ‘much better predictors of civil war onset’. The following and other variables are included in the set of regressors: ethnic fractionalisation index ELF, Gini, largest discriminated ethnic group LDG, positive horizontal inequality PHI, and negative horizontal inequality NHI. In a model using just ELF and Gini, ELF is significant. In a model using all predictors, the following are significant: ELF, LDG, NHI and Downgrade. The authors then consider different types of civil war and find NHI significantly predicts ethnic territorial conflict (55 cases); LDG significantly predicts ethnic governmental conflict war (42 cases); and Gini significantly predicts government non-ethnic conflict (86 cases). Population and GDP per capita are also significant in all models.

Buhaug, H., Cederman, L.-E. and Gleditsch, K. S. (2014) Square pegs in round holes: inequalities, grievances and civil war? *International Studies Quarterly*, 58, 2, June, 418-431.
<http://onlinelibrary.wiley.com/doi/10.1111/isqu.12068/full>

The second and third of these studies address my question, ‘what is the nature of the set S?’. In both studies the answer is that the set S of cases consists of substantively distinct subsets of cases. Moreover each subset of cases has its own distinct equation. The classification of cases can be carried out either ‘statistically’ using the given data set or ‘substantively’ by using some other data set, both studies using the latter approach.

10 Books: Blumenfeld, Bueno de Mesquita, Hirschman, Koestler, Kuran, Pavel, Penrose, Piketty

Blumenfeld, L. (2002) *Revenge. A story of hope*. Basing stoke: Picador.

Bueno de Mesquita, B. (2009) *The predictioneer’s game: using the logic of brazen self-interest to see and shape the future*. Random House

Hirschman, A. O. (1970) *Exit, voice or loyalty: responses to decline in firms, organizations, and states*. Cambridge, MA: Harvard University Press.

Koestler, A. (1964) *The act of creation*. New York: Penguin Books.

Kuran, T. (1997) *Private truths, public lies. The social consequences of preference falsification*. Cambridge, MA: Harvard University Press.

Pavel, T. G. (2013) *The lives of the novel: a history*. Princeton University Press.

Penrose, R. (2009) *The road to reality. A complete guide to the laws of the universe*. London: Jonathan Cape.

Piketty, T. (2014) *Capital in the twenty-first century*. Cambridge, MA: Belknap Press.