# Three Cheers for the 'Progressive State'

## Ben Friedman on the moral consequences of economic growth

*An interview with introduction by Brian Snowdon*

> All human progress, political, moral, or intellectual, is inseparable from material progression.
>
> Auguste Comte (1855)

> Economic growth—meaning a rising standard of living for the clear majority of citizens—more often than not fosters greater opportunity, tolerance of diversity, social mobility, commitment to fairness, and dedication to democracy.
>
> Benjamin Friedman (2005)

> I've been rich and I've been poor—and believe me, rich is better.
>
> Sophie Tucker[1]

### Introduction

Ben Friedman is widely recognised as one of the world's leading macroeconomists. His research and publications have focussed on monetary and fiscal policy, and the key role that financial markets play in influencing how macroeconomic policies impact on aggregate economic activity. To date Professor Friedman has authored/co-authored/edited ten books, and has also contributed over 100 scholarly articles in the leading academic

**Ben Friedman** is the William Joseph Maier Professor of Political Economy at the Department of Economics at Harvard University. **Brian Snowdon** is Professor of Economics and International Business at Newcastle Business School, Northumbria University.

[1] Quoted in Gintis, 2007.

journals in the fields of economics and finance. His research has investigated the impact of government deficits on interest rates, saving, business investment and exchange rates, the appropriate design, framework and strategy of monetary policy, the rationale and effectiveness of inflation targeting, as well as various issues relating to the operation and efficiency of financial markets, and the threat to monetary policy arising from the electronic revolution in banking.[2]

Professor Friedman studied Economics at Harvard University and graduated with an A.B. *summa cum laude* in 1966 before gaining his A.M. (1969), and PhD (1971) degrees in Economics, also from Harvard. In the period 1966–68 Professor Friedman was a Marshall Scholar at Cambridge University where he also graduated with an MSc in Economics and Politics (Kings College, Cambridge, 1970).

During his career Professor Friedman has been a Research Assistant at the Federal Reserve Bank of New York (1968), a Staff Consultant at the Federal Reserve Bank of Boston (1968–71), an Assistant to the Director of the Division of Research and Statistics for the Board of Governors of the Federal Reserve (1969) and an Economist at Morgan Stanley (1971–72), before becoming an Assistant Professor (1972–76), Associate Professor (1976–80), and Professor of Economics at Harvard University (1980–89). In 1989, Ben Friedman became the William Joseph Maier Professor of Political Economy at Harvard and was also Chair of the Department from 1991–94.

Professor Friedman has been an Advisor and Consultant to many organisations including the Federal Reserve Board of New York (1990–), the Congressional Budget Office (1990–96), and the Brookings Panel on Economic Activity. He is an Associate Editor of the *Journal of Monetary Economics* and a member of the Editorial Advisory Boards of the *Journal of Money, Credit and Banking* and *International Finance*. From 1977–93 Professor Friedman was Program Director at the National Bureau of Economic Research for Financial Markets and Monetary Economics.

Before discussing with Professor Friedman the main ideas developed in his recent book, *The Moral Consequences of Economic Growth*, I briefly discuss several issues relating to economic growth, and also to the issue of rising inequality in the United States.

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[2] Details of Professor Friedman's career history and publications can be found on his personal webpage, http://www.economics.harvard.edu/faculty/friedman

## 'Progressive' *v.* 'zero-sum' societies

Ever since the publication of Adam Smith's *Wealth of Nations* in 1776 economists have sought to provide a coherent and robust explanation of the dynamic process of economic growth. For one hundred years after the appearance of the *Wealth of Nations* the great classical economists, Thomas Malthus, David Ricardo, John Stuart Mill, and Karl Marx, all provided their own unique visions of the growth process and were at one with respect to the need to place the issue of economic growth and development at the centre of their evolving vision.[3] To understand how society can evolve from a stationary Malthusian subsistence economy, where life for the vast majority of citizens is 'solitary, poor, nasty, brutish and short',[4] to a 'progressive' state, where all citizens can enjoy a steady increase in real income and the comforts of life, was the Holy Grail for the classical economists. In Smith's words:[5]

> It is the progressive state, while society is advancing to further acquisition, rather than when it has acquired its full complement of riches, that the condition of the labouring poor, of the great body of people, seems to be the happiest and most comfortable. It is hard in the stationary state, and miserable in the declining state. The progressive state is in reality the cheerful and hearty state for all the different orders of society. The stationary is dull; the declining melancholy.

As this passage shows, Smith was not only concerned with the *causes* of economic growth, he also realised that a growing economy has moral as well as material benefits.

Adam Smith was the first economist to focus on productivity and intensive growth (output per head) rather than aggregate production (extensive growth) as the 'central criterion of development'.[6] Compared to the pessimism of Malthus and Ricardo, Smith was optimistic that an open market economy, with a strong but focussed role for government, could deliver increasing prosperity via capital accumulation, entrepreneurship, competition, the division of labour and trade.[7] The role of the state in economic activity remains at the centre of economic and political debate. For

[3] See Rostow, 1990; Skousen, 2001.
[4] Hobbes, 1651.
[5] Smith, 1776, Book I, chapter 8.
[6] Meier, 1994.
[7] Contrary to popular opinion, Adam Smith never used the term *laissez-faire*. See Skousen, 2001, p. 46.

example, in the concluding section of the introduction to the 2004 Council of Economic Advisor's (CEA) *Economic Report of the President* we find the following statement:

> As the Founding Fathers signed the Declaration of Independence the great economist Adam Smith wrote: 'Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism but peace, easy taxes, and tolerable administration of justice: all the rest being brought about by the natural course of things'. The economic analysis presented in this *Report* builds on the ideas of Adam Smith and his intellectual descendents by discussing the role of government in creating an environment that promotes and sustains economic growth.

The *Wealth of Nations* remains a hugely influential work and was a true product of the 'Intellectual Enlightenment' that preceded its conception.[8] The Baconian idea that human beings have it within their own power to construct a better society, where 'universal opulence' could be extended to 'the lowest ranks of the people', is embedded within the *Wealth of Nations*. In Andrew Carnegie's words, 'Capitalism is about turning luxuries into necessities'. In his great work Smith embodied the Enlightenment vision that 'science, reason, and economic individualism' should replace 'religious fanaticism, superstition, and aristocratic power'.[9]

During the last thirty years of the nineteenth century, attention was diverted away from the classical grand dynamics of long-run change as economists became increasingly influenced by the 'marginalist' micro-oriented revolution led by Alfred Marshall, Leon Walras, Stanley Jevons and Carl Menger.[10] The research interests of economists were increasingly directed towards static issues relating to the operation of competitive markets, consumer and producer optimisation, and the efficient allocation of given resources, and this trend continued until the Great Crash of October 1929. Thereafter, issues relating to the 'Great Depression' and Keynes's response to that event dominated discussion, at least up until the mid-1950s, as the new science of macroeconomics evolved.

In the period 1939–56, growth *theory* was dominated by the neo-Keynesian contributions of Roy Harrod and Evsey Domar, and the Harrod–Domar growth model played a hugely influential role in the early development

[8] See Mokyr, 2005, and the interview with Joel Mokyr in Snowdon, 2007a.
[9] Skousen, 2001.
[10] See Skousen, 2001. For a discussion of Marshall's contribution to growth analysis, see Rostow, 1990.

economics literature emphasising the importance for growth and development of capital accumulation, development planning, and foreign aid requirements.[11] In the years 1956–70, the seminal contributions of Nobel Laureate Robert Solow, established the neoclassical theory of growth as the workhorse model for growth analysis.[12] Despite recent developments in endogenous growth theory, the Solow model remains the essential starting point to any discussion of economic growth. As Greg Mankiw notes, 'whenever practical macroeconomists have to answer questions about long-run growth they usually begin with a simple neoclassical growth model'.[13]

The scholarly interest of economists in economic growth peaked in the early 1960s before waning substantially in the period 1965–85. However, since the mid-1980s there has been a remarkable resurgence of interest in the analysis of economic growth consisting of numerous innovative publications, both theoretical and empirical. There has also been a coming together of the fields of economic growth, economic development and economic history. This has led to several insightful political economy contributions to our understanding of the deeper (fundamental) determinants of long-run change. Key ideas here have been developed by scholars such as Douglass North, Joel Mokyr, David Landes, Dani Rodrik and Daron Acemoglu.[14]

The modern literature on economic growth has been dominated by models that attempt to explain the *causes* of economic growth and/or economic development. Various sources of growth have been highlighted by different scholars, and the chief suspects include, physical and human capital accumulation, technological progress and total factor productivity, entrepreneurship and innovation, geographical constraints and natural resource endowments, trade and globalisation, macroeconomic stability, culture, institutions, the quality of the microeconomic business environment, political systems and the quality of governance, and the choice of economic policies.[15] A reasoned survey of this burgeoning literature would

[11] See Snowdon and Vane, 2005, chapter 11; Snowdon, 2007b, chapter 2.
[12] For a survey of these contributions, and specific references, see Barro and Sala-i-Martin, 2003; Snowdon and Vane, 2005, chapter 11; and Acemoglu, 2008 (forthcoming).
[13] Mankiw, 1995.
[14] See North, 1990, 2005; North, Wallis and Weingast, 2006; Landes, 1998; Mokyr, 2005; Acemoglu and Robinson, 2006; and Rodrik, 2007.
[15] Helpman (2004). See Snowdon (2007b) for a discussion of these influences with eleven leading contributors to the literature on economic growth, transition, and development, namely, Professors Daron Acemoglu, Alberto Alesina, Padma Desai, Bill Easterly, Stanley Fischer, Janos Kornai, Michael Porter, Dani Rodrik, Jeffrey Sachs, Xavier Sala-i-Martin, and Jeffrey Williamson.

conclude that economists have not discovered a single-factor, or monocausal explanation of the origins of economic growth. There is no magic-bullet policy recommendation that growth analysts can provide to a policymaker who seeks to ignite, accelerate, or sustain economic growth. Rather, economists have identified the main building blocs that lay the foundations for sustained growth as well as the key binding constraints, although these may vary across time and space.[16]

Not surprisingly, the 'elusive quest' for achieving sustained growth arises from the perfectly reasonable assumption that the vast majority of people around the world wish to increase their material well-being and comforts.[17] The importance of Ben Friedman's recent book is that he has produced a persuasive, comprehensive, and historically based discussion, that reminds us of the substantial, and often neglected, broad-based 'moral' benefits that arise from living in a 'progressive' growing economy. In his *The Moral Consequences of Economic Growth*, described by the late John Kenneth Galbraith as 'a major contribution to social well-being', Ben Friedman, in the tradition of Adam Smith, demonstrates that economic growth will beneficially affect 'the moral character' of a society, providing that growth positively affects the material living standards of the vast *majority* of a country's population.

Taking as his benchmark the concept of a 'moral society' identified by the Enlightenment thinkers of the seventeenth and eighteenth centuries, Friedman shows how a growing economy has beneficial effects on openness of opportunity, tolerance, economic and social mobility, fairness, the creation of liberal democratic institutions, and political stability. The disadvantage of living in a static, zero-sum economy, is that the material progress of one person or group depends on redistribution from other individuals or groups. Not surprisingly, this remains a recipe for conflict, as it has been throughout history.[18] The 'elusive quest' for growth really does have a moral as well as a material dimension.[19]

Of course, there are many social scientists who present a far less sanguine vision of the consequences of economic growth. For example, Avner

[16] See Rodrik, 2007, for an excellent discussion of these issues.
[17] Whether of not the rising material consumption associated with rising real GDP per capita leads to greater happiness is debateable. For a discussion of this issue see Layard, 2005; Komlos and Snowdon, 2005.
[18] See North, Wallis and Weingast (2006) for a superb analysis of issues relating to conflict, redistribution, institutional and political development, and economic growth.
[19] See Easterly, 2001.

Offer in his recent book, *The Challenge of Affluence*, argues that economic growth undermines well-being.[20] An obsession with material welfare induces in societies a tendency towards excessive myopic hyperbolic discounting and a dominating philosophy of consumerism that can be summed up as: 'I want it all now, so let's eat drink and be merry for tomorrow we may die'. The obesity epidemic in affluent (and many not-so-affluent) societies may be one manifest symptom of this lifestyle philosophy.[21] Other manifestations that reduce well-being include increasing crime, increasing divorce and family breakdown, increasing medical disorders relating to stress, reduced trust, resource depletion, environmental degradation, and global warming.

Relating to this latter point, Martin Wolf has recently reminded us that the threat of global warming could lead to a zero growth world if the pessimists and 'limits to growth' environmentalists win the policy debate on this issue, and that 'A zero-sum economy leads, inevitably, to repression at home and plunder abroad'.[22] To avoid a world 'characterised by catastrophic conflict and brutal repression', Wolf hopes that society will choose a pathway forward that recognises the need to tackle the environmental and resource challenges that will dominate the twenty-first century, but also to do this in the context of a positive-sum growing world economy, where a solution to environmental issues is sought in 'successful investment in human ingenuity'.

## Inequality in the US, 1980–2007: From 'Golden Age' to a new 'Gilded Age'?

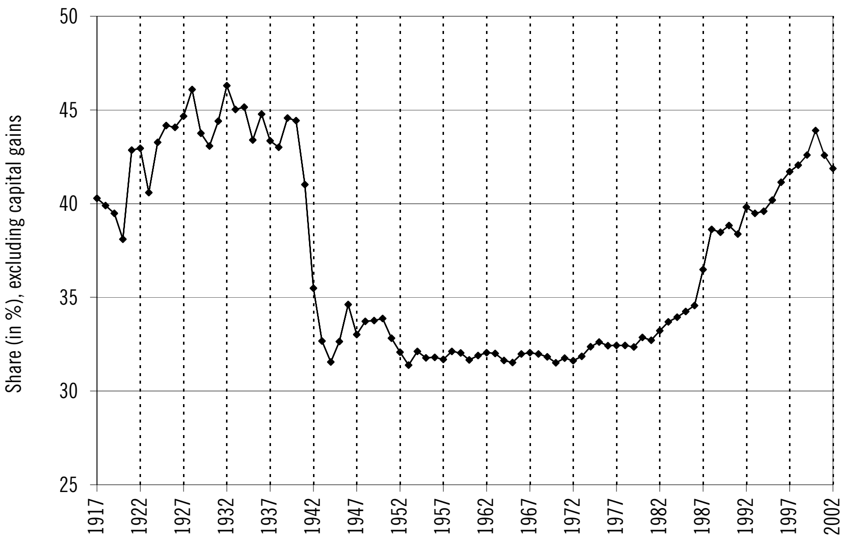
In the interview with Professor Friedman that follows, he emphasises that while US economic growth has increased on average by around 2.5 percent per year in recent decades, 'the fruits of that expansion are being distributed mostly to a relatively narrow group at the top. The majority of American families have had declining incomes. In the US, therefore,

[20] Offer, 2006.
[21] See Komlos and Snowdon, 2005; Oswald and Powdthavee, 2007.
[22] Wolf, 2007. As Friedman (2005, p. 39) notes, following Adam Smith, 'For the first time people now thought it possible for a nation to gain wealth without resorting to war, pillage, "tax farming", or any of the other morally objectionable means through which one people had historically improved their material well-being primarily by exploiting another. Through commerce, one country, entirely on its own, could continually raise its average standard of living. Or, if two countries engaged in trade, both could benefit'.

income inequality is a significant problem.'[23] As background to that comment let us examine the comprehensive evidence on US trends in inequality provided by Piketty and Saez for the period 1913–2002.[24]

Figure 1 shows the 'U shaped' pattern of income inequality over time as measured by the income share of the top decile, and Figure 2 reveals that a similar, if less pronounced, 'U shape' is also present in the data for the top decile wage income share. Figure 3 shows that the income share of the top 0.01 percent fluctuated considerably over the course of the twentieth century, but since around 1940, it too has also displayed a distinctive 'U shaped' pattern. By 2002, individuals in the top 0.01 percent earned around 300 times the average income, whereas in 1915 it was 400 times the average. In 1970 this had fallen to 50 times the average income.

**Figure 1: The top decile income share, US, 1917–2002**

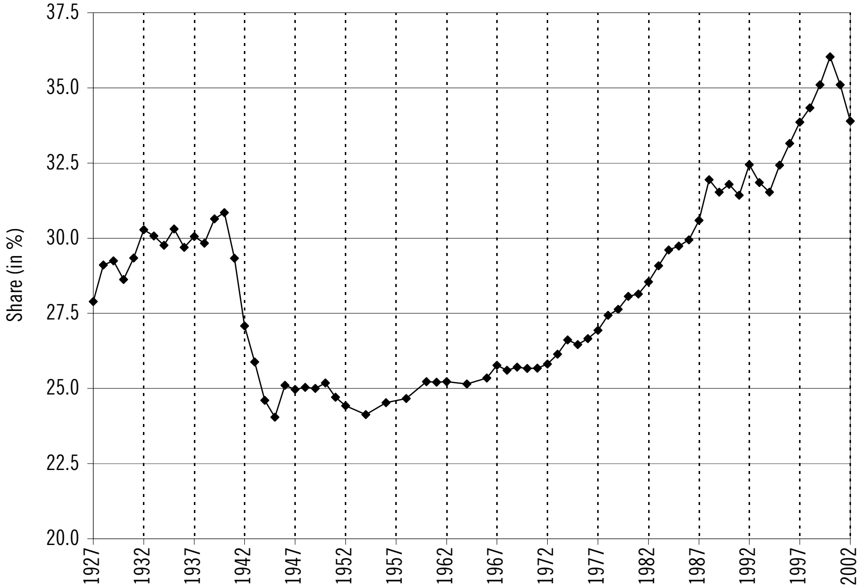



Source: Piketty and Saez, 2007

[23] On poverty in the United States see, Hoynes *et al.*, 2006; and Smeeding, 2006. A recent study from the Centre for Economic Performance shows that, in a comparison of eight European and North American countries, Britain and the US have the lowest social mobility. While social mobility in the US is stable, in Britain it has declined during the last thirty years. See Blanden *et al.*, 2007.

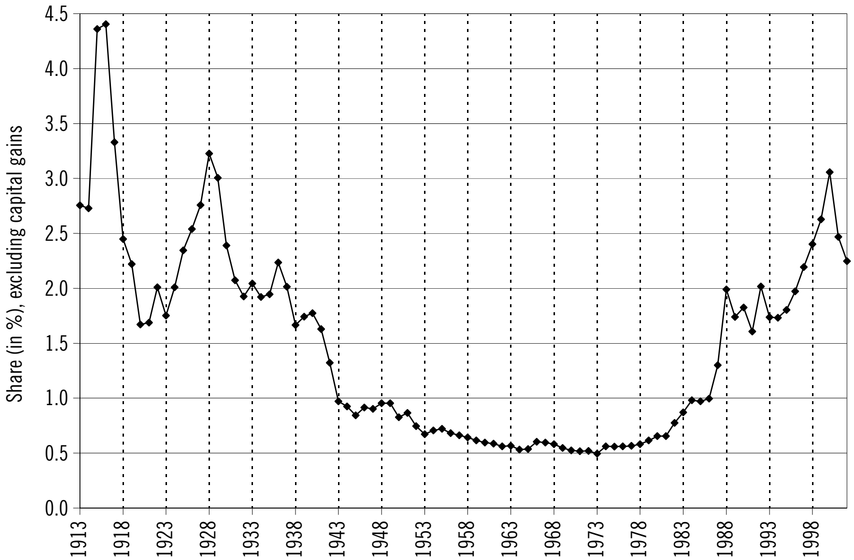
[24] See Piketty and Saez, 2003, 2004, 2006, 2007. The data used to construct these figures are available at the University of Berkeley homepage of Professor Emmanuel Saez: http://elsa.berkeley.edu/~saez/index.html. The author gratefully acknowledges permission from Professor Saez to reproduce these data for discussion.

**Figure 2: Top decile wage income share, US, 1927–2002**




Source: Piketty and Saez, 2007

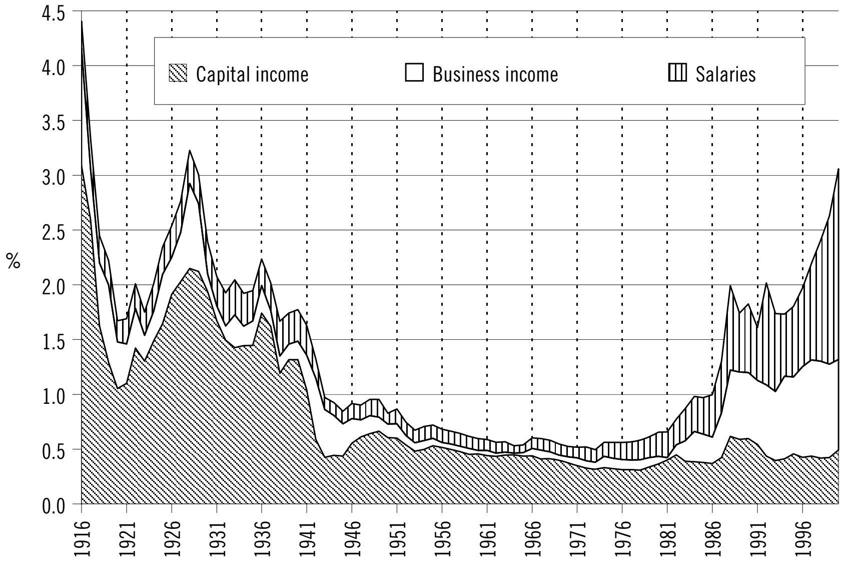
**Figure 3: The top 0.01% income share, US, 1913–2002**




Source: Piketty and Saez, 2007

Of significant interest is the finding of Piketty and Saez that up until 1970, capital income, consisting mainly of dividend income, was the major component of income for the top 0.01 percent. As Figure 4 highlights, the significant decline in top incomes during the period 1914–60 was mainly due to a decline in capital income. By the turn of the millennium, it was remuneration in the form of salaries that had become the main source of income of the top earners.[25]

**Figure 4: Top 0.01% income share and composition in the US, 1916–2000**



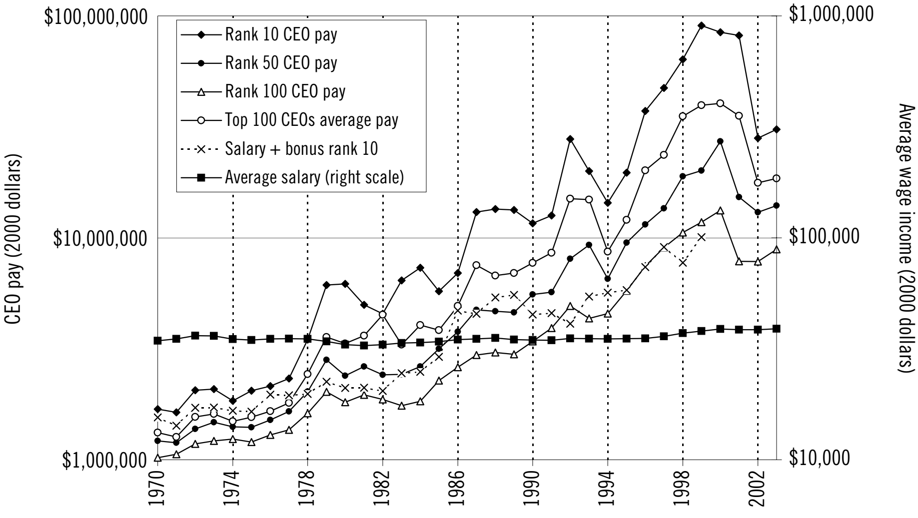

Source: Piketty and Saez, 2006

The data in Figure 5 compare CEO pay (inclusive of stock options) for the top 100 CEOs identified by *Forbes* magazine. As Piketty and Saez note, it is clear that the average compensation received by the top 100 CEOs 'has risen much faster than the average wage since the early 1970s'.

The sensitive political issue of rising inequality in America has been taken up by Paul Krugman in his latest book, *The Conscience of a Liberal*.[26]

[25] The dramatic rise in CEO pay in recent years has been the subject of considerable research. See, for example, Jensen and Murphy, 1990; Bebchuk and Fried, 2004; Gabaix and Landier, 2006; Frydman and Saks, 2007. See also, Rosen, 1981.
[26] Krugman, 2007.

**Figure 5: CEO pay versus average wage income, US, 1970–2003**

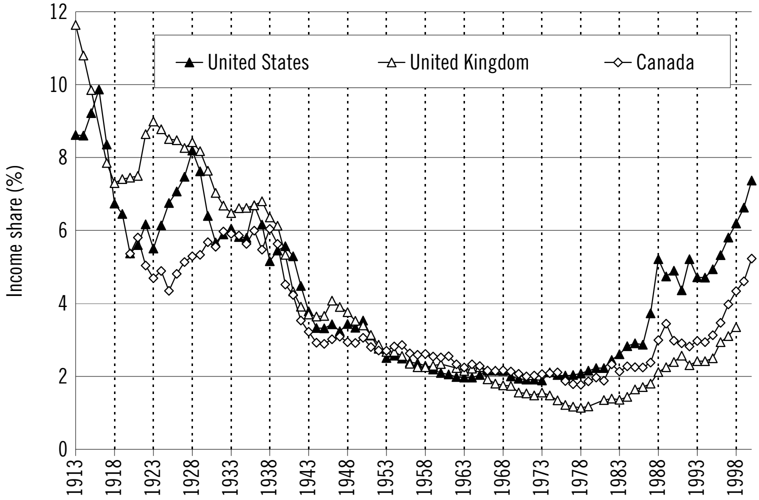



Source: Piketty and Saez, 2007

Krugman defines the period extending from the end of post-Civil War reconstruction in the 1870s, until Roosevelt's New Deal policies of the mid-1930s, as the 'Long Gilded Age', a period characterised by 'persistently high levels of income inequality'.[27] Krugman argues that since the early 1980s, the US economy has entered a new 'Gilded Age' of rising inequality. This is in contrast to the mid-twentieth century when the US witnessed a 'Great Compression', that is, a narrowing of income gaps between the rich and poor.[28] Furthermore, this rise in inequality cannot plausibly be explained as a by-product of the forces of globalisation and rapid technological change. Not only is the timing wrong, it is surely the case that if globalisation and technological progress were the true sources of rising US inequality, we would also expect to witness a similar rise in inequality in other high-income developed economies such as the European economies and Japan. As Figures 6 and 7 show, this has not been the case. While UK data on the income share of the top 0.1 percent exhibit a significant rise in inequality since the early 1980s, this rise is

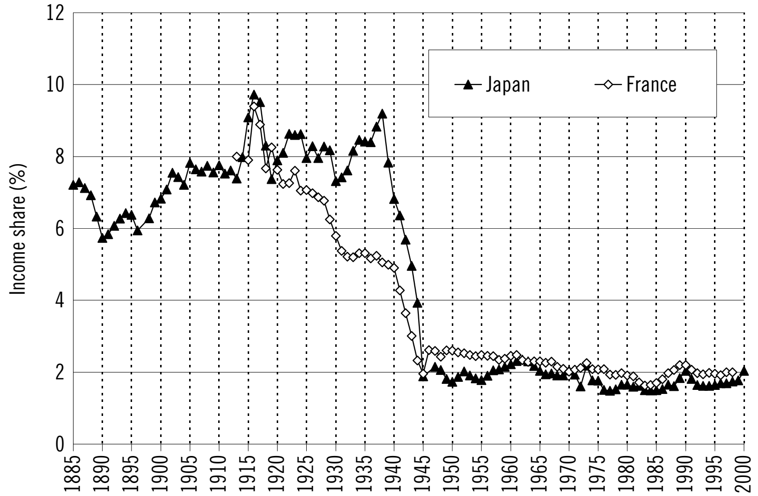
[27] This was the age of the infamous billionaire 'robber barons', for example, J. D. Rockerfeller, Andrew Carnegie, J. P. Morgan, Henry Ford, and Cornelius Vanderbilt.
[28] See Goldin and Margo, 1992.

**Figure 6: Top 0.1% income share in the US, Canada, and the UK, 1913–2000**




Source: Piketty and Saez, 2006

**Figure 7: Top 0.1% income share in Japan and France, 1885–2000**



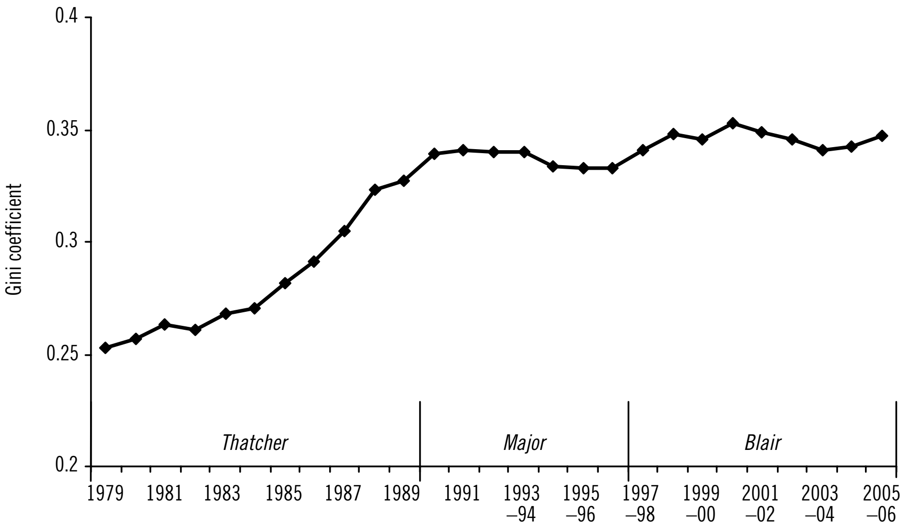

Source: Piketty and Saez, 2006

much less pronounced than in the US and Canada. In the case of France and Japan, the top 0.1 percent income share has remained relatively stable during the second half of the twentieth century.

In their recent comprehensive analysis of income inequality in Great Britain, Brewer Sibieta and Wren-Lewis show that income inequality, measured by the Gini co-efficient, rose 'dramatically' from 0.25 to 0.34 during the Thatcher era, 1979–1990. This rise in inequality was 'unparalleled both historically and compared with the changes taking place at the same time in most other countries'. As Figure 8 indicates, during the period 1990–97 inequality stabilised before rising again under the 'New Labour' government, 'reaching a new peak of 0.35 in 2000–01'. Between 2001 and 2003 the Gini coefficient fell, before rising again to 0.35 in 2006.

According to Brewer *et al.*, in 2004–05 there were some 47,000 'very, very rich individuals with incomes in excess of £350,000' living in Great Britain. These individuals are typically male, live in London and the South-East of England, and are in the age range 45–54. As is the case in the US, the top earners receive the largest proportion of their income from employment.

**Figure 8: The Gini Coefficient, 1979 to 2005–06, Great Britain**




Source: Brewer, Sibieta and Wren-Lewis, 2008

In Krugman's view, rising income inequality is a direct consequence of a decisive change in the political and institutional environment in America, involving a breakdown in the bipartisan political coalition that characterised the post-New Deal years.

> There have been two arcs in modern American history—an economic arc from high inequality to relative equality and back again, and a political arc from extreme polarisation to bipartisanship and back again. These two arcs move in parallel: The golden age of economic equality roughly corresponded to the golden age of political bipartisanship.[29]

Krugman's vision is supported by the recent research of Frank Levy and Peter Temin, who argue that US income distribution is 'strongly shaped by the set of economic institutions', and during the past twenty-five years, the dominance of 'Washington Consensus' public policy has weakened trade unions and reduced commitment to minimum-wage laws and progressive taxation.[30] In contrast, during the 'Golden Age', 1947–73, market outcomes were 'strongly moderated by institutional factors'.[31] Therefore, the impact on income distribution of skill-biased technological change and the competitive forces of globalisation needs to be interpreted within the changing institutional framework.

According to Krugman, the main factor in the US that is preventing the emergence of an effective 'progressive' political challenge to 'extreme economic inequality' is the presence of 'cultural and racial divisions among those with shared economic interests'. This conclusion receives support from the research of Alberto Alesina and Edward Glaeser[32] who, in their investigation of differences between European and US attitudes and policies towards redistribution, find that the main factors limiting the emergence of a European-style welfare state in the US are:

1. American majoritarianism-based political institutions;
2. federalism;
3. checks and balances;

[29] Krugman, 2007, pp. 7–8.
[30] Levy and Temin, 2007.
[31] Levy and Temin refer to the post-World War II institutional arrangements as 'The Treaty of Detroit', named after 'the famous labour–management agreement of that period'.
[32] See Alesina and Glaeser, 2004.

4. *American ethnic heterogeneity*;[33]
5. different attitudes and beliefs towards poverty in the US.

Some economists, whilst agreeing that *income* inequality has risen, note that *consumption* inequality has remained static.[34] Also, taking an even broader view of inequality that includes factors such as life expectancy, and techno-physical development, Fogel argues that, 'In every measure that we have bearing on the standard of living…the gains of the lower classes have been far greater than those experienced by the population as a whole'.[35] In a recent paper, Mark Aguiar and Erik Hurst (2007) document another interesting aspect of rising inequality in the US labour market. Analysing trends in the allocation of time over five decades, they find that:

1. the amount of leisure time enjoyed by the average American has 'increased substantially' since 1965;
2. men have increased their consumption of leisure time by 6–9 hours per week;
3. women have increased their consumption of leisure time by 4–8 hours per week;
4. there has been a growing inequality in the dispersion in time allocated to leisure *in favour of less educated lower income earners*.

Thus while highly educated and skilled workers have enjoyed substantial income gains in recent decades, they also appear to be working longer hours than their less educated and less skilled counterparts!

## America at the crossroads?

As we have seen, several economists have drawn attention to the rising inequality that has characterised American society during the last thirty years or so. Professor Friedman argues that America is at an 'economic

[33] On this issue, Alesina recently commented that: 'The white majority have never supported the development of a welfare state that would redistribute income to racial minorities. Ethnic and racial fractionalisation in the US made it virtually impossible to build up the Marxist idea of class consciousness and that is one major reason why a socialist or communist party never materialised in the US'. See Snowdon, 2007b. Alesina and Glaeser (2004) also note in their conclusion that the 'importance of ethnic fractionalisation cannot be overemphasised' in any explanation of American attitudes towards income redistribution.
[34] See, for example, Krueger and Perri, 2006.
[35] Fogel, 2004. See also related comments in *The Economist*, December 22, 2007, p. 122.

crossroads'. In concluding his analysis in his most recent book *The Moral Consequences of Economic Growth*, Friedman observes that:

> America's greatest need today is to restore the reality, and thereby over time the confident perception, that our people are moving ahead. If doing so will require public policy choices that are hard, so be it. Only with sustained economic growth, and a sense of confident progress that follows from the advance of living standards for most of its citizens, can even a great nation find the energy, the wherewithal, and most importantly the human attitudes that together sustain an open, tolerant, and democratic society.

Professor Friedman's book has received considerable critical acclaim, and in this election year in the US, the important issues he highlights are especially poignant.

In the interview that follows I discuss with him several issues relating to this influential volume, as well as his critical views on monetary policy strategies based on inflation targeting.

## INTERVIEW[36]

### Background information

*What was it that attracted you to become a student of economics, and later, choosing to spend your life as a professional economist?*

I had no idea what economics was before I went to college. I think an important influence was that I was an undergraduate during a period when lots of interesting economic problems and issues were under public discussion, both in the US and in the world—the early-to-mid 1960s—for example, the issue of cyclical unemployment and the business cycle. In the US we had experienced three recessions within a fairly short period under the Eisenhower Presidency.[37] Also much in the news was the problem of inflation and Federal Reserve policy. This was also a period when increasing numbers of people were becoming interested in the prevalence and persistence of poverty in the US; this problem affected the elderly as

[36] I interviewed Professor Friedman in his office at the Department of Economics, Harvard University, on May 31, 2007.

[37] The National Bureau of Economic Research dates these three recessions (peak to trough) as July 1953 (2)–May 1954 (2); August 1957 (3)–April 1958 (2); April 1960 (1)–February 1961 (1). In these three recessions, unemployment peaked at 5.5, 6.8, and 6.7 percent respectively (Source: Gordon, 2006).

well as particular areas of the country, including Kentucky where I grew up. Public discussion also focussed on the question of how to encourage the US economy to grow more rapidly; after initial fears of post-war secular stagnation proved unfounded, the first wave of enthusiasm and confidence that the US economy would experience rapid growth had also worn off.[38]

*Were you influenced by international issues?*

I suspect these were also influential. By this time the US was no longer running a balance of payments surplus, people were becoming increasingly concerned about poverty in developing countries, and the Cold War was at its height, with the Cuban missile crisis in October, 1962, just as I was a new college freshman. By the early 1960s, colonialism had come to an end in most parts of the world, and the newly independent countries wanted to know how to stimulate their growth rates and develop economically. So the world more broadly was also full of interesting and important issues that clearly, in large part, were economic issues. As a result, while I had entered college with the intention of becoming a lawyer, the more I learned about economics the more I realised that to be an economist would be an interesting and potentially productive way of engaging with what was going on in the world.

*You are best known as an economist who, for over thirty years, has made important and influential contributions to the macroeconomics, monetary, and financial economics literature.*[39] *I note from your CV that you spent two academic years, 1966–67 and 1967–68, at Cambridge University in the UK. At that time Cambridge UK was a hotbed of Keynesianism, dominated by people such as Nicolas Kaldor and Joan Robinson. Were there any particular economists who had an influence on you during this formative period of your life?*

I don't think I was particularly influenced by anyone at Cambridge, UK. At that time Nicolas Kaldor was away from Cambridge, working in

[38] See Fogel, 2005.
[39] See, for example, Friedman, 1972, 1975a, 1977a, 1978a, 1979a, 1979b, 1980a, 1980b, 1982, 1985a, 1986, 1992a; Friedman and Clarida, 1983; Friedman and Hahn, 1990; Friedman and Warshawsky, 1990; Friedman and Kuttner, 1992, 1996.

London for the Labour government, although I did meet and get to know him much later. Frank Hahn was also away. I never had any especially useful interactions with Joan Robinson, who at that time was a leading post-Keynesian and critic of mainstream neoclassical economics. This was the period when Joan was mostly active in promoting and supporting the dramatic changes going on in China under Mao's 'Cultural Revolution'. The two people with whom I worked most closely, Richard Stone and James Meade, were certainly not among the group at Cambridge to whom you're referring.

*What about influences in Cambridge, Massachusetts?*

I'm not sure how to be responsive to your question because the courses in economics that I took were predominantly macroeconomic from the very beginning. What dominated my interest were the kinds of problems that attracted me to the field of economics in the first place, those I mentioned earlier: business cycles, inflation, unemployment, and budgetary and monetary policy issues.[40] For example, in my second year at Harvard I took Otto Eckstein's macro policy course. Although basically Keynesian, the macroeconomics taught at Harvard then was sharply different from what I was exposed to later on in my two years at Cambridge, England. But from the very beginning macroeconomics was what attracted me. I think if I had been exposed only to studying the micro behaviour of consumers and firms I might well have gone ahead and become a lawyer.

*You have been critical in your writings of monetarism, new classical, and supply-side ideas.*[41] *Would you describe yourself as a Keynesian economist or do you prefer not to be labelled?*

I don't like labels. I see myself simply as a macroeconomist.[42]

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[40] Friedman (1995), in discussing the core 'Principles' of what makes for good economics, recommends the following: 'Have an agenda, and know why it's important. Be awake; look around. Be ambitious but not over-ambitious. Have staying power. Decide who is the audience, and learn how to reach it. Keep things in perspective'.

[41] See, for example, Friedman, 1975b, 1976; 1977b, 1977c, 1977d, 1978b, 1979a, 1984, 1988a, 1992b

[42] For a discussion of 'Keynesian Economics at Harvard', see Friedman, 1988b. In this paper Friedman observes: 'Call it Keynesian or not. Harvard's world view includes central roles for aggregate demand, sticky prices and wages, slow-moving equilibrium processes, important effects of monetary and fiscal policies, and institutional environments'.

## The moral consequences of growth

*Your recent book,* The Moral Consequences of Economic Growth, *seems to be a departure from the focus of your previous academic work.*[43] *What inspired you to write a book about economic growth, and in particular, the moral consequences of economic growth?*

Until about ten years ago I had spent virtually my entire professional career, which by then was more than half of my lifetime, studying questions of how to use public policy to enable our economy to perform better. More specifically, my emphasis was mostly on the United States. Then, about ten years ago, I gradually began to entertain the question, Why does all that matter, including in particular economic growth? If I were living in Pakistan, or Bolivia, or Mali, the answer to why the economy needed growth would be obvious. For countries like that, increasing per capita incomes translate pretty directly into people living longer, suffering fewer diseases, and other improvements in the most elementary human basics. But why does economic growth matter in a country like the United States, in which these relationships have mostly already played out? The average American at the beginning of the twenty-first century has a standard of living way beyond the dreams of our ancestors of two hundred and fifty years ago.

To my great surprise, when I started to look at the relevant literature I could not find much about why growth matters for already-rich countries. In macroeconomics, for example, we work on the short run problem which is all about using public policy to keep the economy as close as possible to whatever is the existing frontier of production possibilities at any given time, and we also work on the long run problem which is all about what factors are mainly responsible for enabling that frontier to expand over longer periods of time, and what, if any, role there is for public policy in getting the growth rate to be faster. But when I looked in the growth literature for the reasons why growth mattered, in the context of countries that already have high material standards of living, there was very little, and I did not think that the few people who had looked at this issue had dealt with it adequately. Eventually this line of inquiry led me into the work that came out as *The Moral Consequences of Growth*.

[43] Friedman, 2005. See also, Friedman, 2006.

*You mention the obvious importance of growth to the developing countries. Did this have any influence on your decision to write about growth?*

There is a section in the book about developing countries, but that is not what motivated me, and it is not what I take to be the core of the book. The core ideas address the issue of growth from the perspective of countries that already have a high income per capita, like the United States, or Western Europe, or Japan.

*Much has been written about the material positives of growth relating to income per capita and other broader measures of progress such as life expectancy and the Human Development Index.*[44] *Much has also been written about the moral negatives of growth, in particular the consequences of growth for the environment. In your book, you begin by arguing that the 'familiar balancing of material positives against moral negatives when we discuss economic growth is a false choice'. In other words, the conventional discussions of growth are far too narrow in focussing on the material gains from growth, versus several negative effects from growth. What is neglected from these discussions are the 'moral positives that arise from growth'. What are the moral positives that are generated in an expanding economy?*

I argue, and I firmly believe, that economic growth has the potential not only to increase material living standards but also to shape the moral character of people and society. When economic growth increases material living standards *for a majority of the population*, it also tends to promote social and political progress. A growing economy is much more likely to foster realization of central Enlightenment values that I think all of us take to be very important.[45] These values, which provide a benchmark for what I take to be a 'moral society' (in the book I repeatedly use this notion in a self-consciously eighteenth-century sense) include fairness, tolerance, economic and social mobility, equality of opportunity, and democracy. And, conversely, there is also strong evidence that, in societies where living standards are stagnant or declining, progress toward these enlightenment values is at best slow and often there is retrenchment or retreat. By neglecting these positive moral consequences that arise from growth, con-

[44] See Komlos and Snowdon, 2005, for a survey and discussion of various measures of progress.
[45] For a fascinating discussion of the importance of Enlightenment values as a major intellectual source of origins of economic growth and the Industrial Revolution, see Mokyr, 2005, 2007. See also, Evensky, 2005.

ventional discussions fail to appreciate fully the beneficial impact of growth on society. So long as the benefits of economic growth are widespread among the population, there will be a positive influence on people's attitudes and behaviour such that the moral character of society is changed for the better.

*Presumably sufficient individuals within society need to feel that they are progressing in order for these values to take hold. How do individuals within society assess their own progress?*

The behavioural model at the core of my book has three elements, for two of which we have substantial evidence while the third is purely an assumption. The two elements for which we have a lot of evidence both spring from the well documented fact that when people consider how well off they are, they mostly do so in some kind of *relative* terms. First, the empirical evidence amassed by both economists and psychologists shows that people think of how well off they are by comparing their current situation to what they, or their family, have known in the past. The current technical phrase for this is 'habit formation' and the literature is full of models based on this idea.[46] Second, there is also a lot of evidence showing that people assess how well off they are by comparing their situation with that of others around them. This is the familiar phenomenon more popularly known as 'keeping up with the Joneses'. In other words, relativities matter a lot. Incidentally, it is worth pointing out, as I do in my recent book, that Adam Smith had a clear appreciation of both of these ideas, although he obviously did not have the evidence or technical apparatus that we can bring to bear today. So, my analysis proceeds on the basis that the typical person has two benchmarks by which to judge whether he or she is well off or not.

Now here comes the assumption. If we have two elements in the utility function (along with others), they can be either complements or substitutes. My assumption is that the two on which I focus are substitutes in the classical consumer demand sense. This means that the better people are doing on one standard, the smaller is the marginal value they attach to the other standard; in other words, the cross derivative is negative.

[46] See Kahneman, Diener, and Schwartz, 1999.

It's important to be clear, however, that I am not suggesting that there are only two elements in the utility function. For example, in the United States, data confirm that the biggest determinant of personal wellbeing is not economic, but rather whether a person is married. This is not always true for other countries, but it is true for the United States. I recently read a new paper, still unpublished, reporting the results of cross section regressions with one of the standard 'happiness' measures on the left and the usual array of other familiar factors on the right. The $t$ statistics on all of the other variables were anywhere from zero to four in absolute value. The $t$ statistic on the marriage variable was twenty-five! But while economic factors may not be the most important ones, they matter to people nonetheless, and since I'm an economist they're naturally what I focus on in my work on this subject.

*By definition we cannot live in a world where, simultaneously, everybody lives better than everybody else.*

Yes, but economic growth allows everyone in the current generation to live, on average, better in material terms than previous generations. As I mentioned earlier, and perhaps I should re-emphasise, my definition of growth is not whether GDP per capita is expanding, but that the broad cross section of a population is experiencing an improvement in their material living standards. Now if a person, or family, experiences a steady increase in material living standards compared to what they, or their family, had in the past, and especially if they expect this improvement to continue, then, by my substitutability assumption this diminishes the strength of the interpersonal aspects of comparison that I believe underlie a lot of negative features of society, such as racial or religious prejudice and ethnic conflict.

A further important element in my model, drawn from political science, is that we live in a representative democracy, not a direct democracy. This matters in the following way. Consider an issue that is currently important in the United States today, attitudes towards immigrants. My argument is not that when people are doing well economically they necessarily become less xenophobic and more friendly toward immigrants. My argument is that the importance they attach to their xenophobia declines relative to other matters. If we lived in a direct democracy and we just had a straight up and down vote on the immigration issue—Do you want more immigration or not?—I do not think people would vary their position very much. But we live in a representative democracy. We each vote for one president, one senator at a time, and one representative, and politicians come with packages of positions. If you are voting at a time when your xenophobia is dominating your thoughts, then that drives your vote in a certain way. In a different economic situation you might still be a xenophobic person, but immigration as an issue drops down the list of your set of priorities to perhaps number four or five. Economic growth affects the intensity of people's attitudes to what they support and what they oppose.

## Happiness and the 'Easterlin paradox'

*There has been a huge expansion of the literature on the economics of happiness during the last few years.*[47] *The well-known 'Easterlin paradox' highlights that at a point in time, happiness and income are positively associated, but over the life cycle there appears to be no relationship. Easterlin's conjecture is that rising material aspirations over the life cycle offset the impact on well-being of rising income, that is, utility functions shift inversely with material aspirations. This idea is linked to the 'relative income hypothesis', that is, once individuals escape from high levels of physical deprivation, their subjective well-being, as you pointed out earlier, is heavily influenced by their relative position in society. As a consequence, as Fred Hirsch argued many years ago, there may be 'social limits to growth'.*[48] *When I interviewed Joel Mokyr in January this year, he argued that economic growth is not really about increasing happiness, it is much more about improving material comforts.*[49] *What are your thoughts on the relationship between economic growth and happiness?*

The 'Easterlin paradox' relates very closely to what I said earlier. It is clear that most people in *developed* countries do not judge how well off they are by any kind of absolute standard. Of course, if people in, for example, Ethiopia, had twice as much income and a lower starvation rate, then they

[47] See, for example, Easterlin, 2001; Frey and Stutzer, 2002; Layard, 2005.
[48] Hirsch, 1977. Keyes also pointed out the importance of what Hirsch called 'positional goods'. In his famous essay, 'Economic Possibilities For Our Grandchildren' (1930), he classified human needs into two classes, 'those which are absolute in the sense that we feel them whatever the situation of our fellow human beings may be, and those that are relative in the sense that we feel them only if their satisfaction lifts us above, makes us feel superior to, our fellows. Needs of the second class, those that satisfy the need for superiority, may indeed be insatiable'.
[49] See Snowdon, 2007a.

would be happier and feel better off. I do not believe that in the US today we live in a way that makes us happier than was the case when my grandparents were adults, the better part of a century ago. We clearly live in a different way, and knowing something about both I prefer how we live now. But am I happier in a fundamental way compared to my grandfather? I don't think so. But it does matter that we live in a world that is moving forward rather than stagnant. The central argument that I am making, which is a very eighteenth-century argument, is that there is something about forward progress that lends a different character to the society in which it is taking place.[50] Societies that are moving forward economically are fundamentally different than societies that are stagnant or regressing. You could say that growth delivers happiness, but not because of material progress, but rather in ways related to changes in the character of society that people do appreciate. In a growing society there are more opportunities, less discrimination, and more tolerance.

*Joel Mokyr suggests that people would perhaps have a greater appreciation of their current well-being if they studied history and realised what it was like to visit the dentist, or have an operation, in 1860.*

People do compare their current position with their position in the past. But how far back do they go? Few people compare their position with their distant ancestors of some hundreds of years ago. This is a question that I pose to my students when I teach on these matters: Are we better off today, in a fundamental sense, than our ancestors were five hundred years ago? The answer I get is always yes. Then I ask, Are we *happier* than those ancestors? People have trouble answering the second question. Let me give you another example using historical comparisons, taken from Milton Friedman. As I understand it, Milton would often hand his students a reprint of the 1902 Sears and Roebuck catalogue and he would say, 'Suppose you have the same income that you have today, but in 1902 dollars, and you have to choose to spend your income only on what is available in the Sears and Roebuck catalogue'. Milton would then ask his students if they felt better off today, with today's choices, than if they had

[50] As Adam Smith (1776) commented, 'No society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable'.

lived in 1902. Most people of course choose today. So the widening of choice is an important positive consequence of economic growth.

*The one place where it seems obvious to us that things have improved, and where we should be happier as a result, is in the field of medicine and medical advances. During the last one hundred years or so we have witnessed dramatic improvements in health, mortality and life expectancy.*[51]

Absolutely. For example, it just has to be the case that people are made unhappy when their children die in infancy. As a parent I cannot imagine living in a world of high infant and child mortality. But some people might argue that if I had lived five hundred years ago I would have had a different attitude towards infant and child mortality. Interestingly, in the Bible a human being does not become a moral person until thirty days after birth. Nobody knows for sure why this was the case, but I suspect that, because neo-natal mortality was so high in those days, there was a presumption that a person had to live beyond thirty days before you thought about him or her as a human being in the full sense. I guess this somehow eased the pain of loss.

*What is the link between the ideas expressed in your book and Amartya Sen's argument that economic development and progress is about raising people's capabilities?* [52]

The idea of developing capabilities is very appealing, but I don't think I am simply expressing Amartya's ideas in different language. Amartya and I have talked about this at length and I have certainly read his work on capabilities. My approach is more about the character of *society* than the enhanced capability or functioning of individuals. My book is about the character of society in the sense of matters like openness of opportunity and tolerance.

## Democracy and economic growth

*You talk a lot about growth and democracy in your book. The literature on the links between economic growth and democracy has also attracted the interest of many*

[51] See Komlos and Snowdon, 2005.
[52] See Sen, 1999, 2001.

*other economists in recent years, in particular Robert Barro, Daron Acemoglu, and James Robinson.*[53] *The Lipset hypothesis suggests that prosperity promotes democracy.*[54] *Since economic growth promotes prosperity, it would seem that growth should be good for democracy.*

The part of Lipset's hypothesis that is consistent with the growth rate effect in which I'm interested is a line of argument whereby growth provides legitimacy and thereby helps to preserve new democracies. Where there is a new democracy in a developing country that has no tradition of democracy, part of its challenge is to earn legitimacy from the population. Lipset argued that in most circumstances delivering material benefits via economic growth is the best way of achieving this. Take the case of South Korea. Fifty years ago it was a very poor and predominantly agricultural country. Following a sustained period of rapid growth beginning by the early 1960s, South Korea evolved from political dictatorship to an electoral democracy by 1988.

*What about China?*

Since the reforms introduced by Deng Xiaoping in 1978, China has experienced the world's highest sustained rate of growth of per capita income. If my overall hypothesis is correct, then we should also observe powerful democratic forces emerging in China. This doesn't mean that China will evolve into a liberal democracy that looks exactly like ours. But I do think that if the growth continues, and if it's widely shared among the Chinese population, liberalization and democratisation will follow.

*The research of Douglass North and Daron Acemoglu, Simon Johnson and James Robinson lends theoretical and empirical support to the idea that democracy is good for growth.*[55] *Both North and Acemoglu* et al. *emphasise the importance of clearly defined property rights as an important determinant of economic performance, and there is greater security of property rights in democracies compared to dictatorships.*

[53] See Barro, 1996, 1997, 1999; Acemoglu and Robinson, 2006; Snowdon, 2007b.
[54] Lipset, 1959, notes that 'From Aristotle down to the present, men have argued that only in a wealthy society in which relatively few citizens lived in real poverty could a situation exist in which the mass of the population could intelligently participate in politics and could develop the self restraint necessary to avoid succumbing to the appeals of irresponsible demagogues'.
[55] See North, 1990; Acemoglu, Johnson and Robinson, 2005a, 2005b.

*While in your book you argue that growth is good for democracy, do you also think that democracy is good for growth?*

Yes, I am very sympathetic to the notion that democracy is good for growth. What most economists do is study the *causes* of economic phenomena, in this case the causes of economic growth; the economic variable we are trying to explain is on the left in terms of a conceptual equation. Part of what is unusual about my work in this area is that I am not interested in the *causes* of economic growth, but in the *consequences* of economic growth. Of course, causes and consequences can run both ways and I think that in this case they do. Therefore, not only do I not resist the idea that democracy promotes growth, I also think it makes my thesis more powerful. When causes and consequences are mutual it sets up opportunities for virtuous or vicious circles. Incidentally, Robert Barro's work suggests that the relationship between democracy as the causal factor, and growth as the outcome, is non-linear. When a country moves from zero democracy to a level of democracy that is somewhere in the middle of the Freedom House scale, you are likely to observe a sizeable improvement in growth.[56] However, once moderate political freedom is established, as you move towards greater freedom the growth rate declines.[57]

One can imagine various factors that contribute to this slowdown of growth at higher levels of democracy, including increasing litigiousness, and an increasing preference within democracies to allocate resources towards consumption rather than investment. But a key implication, in the context now of causation also from growth to democracy, is that vicious circles (no growth, no democracy) are more likely than virtuous ones.

*How important was the establishment of the US Constitution, in 1789, for the subsequent success of the US economy?*

That's a very interesting question. I would regard the two-hundred-year experience of the US as one big virtuous circle, in the sense we've just been discussing, with democracy promoting growth and growth promoting democracy. At the beginning, the US was a very limited democracy. Only free white males with a certain amount of property could vote in most

[56] See: http://www.freedomhouse.org
[57] See Barro, 1997, pp. 59–61.

states. But at the time, even this limited democracy was way ahead of most of the rest of the world. But over the next two hundred years US society has been democratised in all sorts of ways. Racial, gender, and religious discrimination have been eliminated with respect to voting. In the place where we are now sitting, in the early days, I would not have been allowed to vote because I would not have been a member of the Puritan church! Massachusetts was an established theocracy when the US was founded. The United States has come a long way, both politically and economically.

## Culture, religion and economics

*Let us come back to the issue of culture. There seems to have been a renaissance of interest among economists in the importance of culture and religion, for example the recent contributions of Guiso, Sapienza and Zingales, and of course Barro and McCleary.*[58] *What significance to you attach to the importance of culture and religion as determinants of economic performance?*

Let me first of all distinguish religion and culture. I think cultural influences on economic growth are very profound. Here I should highlight the contribution of my colleague David Landes, whose book, *The Wealth and Poverty of Nations*, is not just about democracy or specific institutions but the entire role of cultural attitudes in fostering economic growth.[59] I often suggest to students that if they want to pair my book on the *consequences* of growth, with one book on the *causes* of growth, then it should be Landes's book. What about religion? This subject is actually the focus of my current work. However, my interest here is not in the relationship between religion and economic performance. My interest is instead in the way in which religion has historically affected the development of economic ideas.

I will give you two examples, one of which is in the *Moral Consequences* book, the other not. The idea that I discuss in the book relates to the famous 'four stages' theory associated with Adam Smith and also the French philosophe Turgot.[60] Their dynamic theory was that economic

[58] Guiso, Sapienza and Zingales, 2003, 2006; Barro and McCleary, 2006.
[59] Landes, 1998.
[60] See Friedman, 2005, pp. 27–31.

scarcity, together with expanding knowledge, drove society forward through a series of stages. Each stage is characterised by a particular economic activity. Initially we had hunting and gathering. This was followed by shepherding, then settled agriculture, and finally commercial activities. Each of these activities in turn produced changes in social and political institutions. I argue that this line of thought about economics and politics has deep roots in Christian religious thinking, in particular, a line of thinking about the millennium that began in 1545 with the elderly Martin Luther. It then continued in the English-speaking world right up until when Adam Smith was a young man. I have in mind thinkers like Joseph Mede and Thomas Burnett, both Cambridge University theological scholars, and Jonathon Edwards, the Massachusetts preacher who led the 'Great Awakening' in the 1740s. This particular connection is interesting because we know that Adam Smith was not a religious man. But Smith lived in a world in which religion was both more central and more important in intellectual circles than it is in our era. As a young man he would have grown up with this discussion in the air, and I think of the 'four stages' theory as resonating closely with the notion that human progress is inevitable, is endogenous, driven by expanding knowledge, and represents moral progress.

For Smith and Turgot the causal mechanism runs from scientific change to economic change, then to moral change. Each stage of society involves different human arrangements that are in part material, but also represent aspects of society that Smith would certainly have considered 'moral', for example, governance arrangements. And all this was taking place, not through divine intervention, but through human agency—which is exactly what Luther, Mede, Baxter and Edwards were working on in the religious realm.

Another example, not in my recent book, is that virtually all of the founders of the American Economic Association in the 1880s came out of the Social Gospel movement in the US. I have in mind people like John Bates Clark and Richard T. Ely, and, later still, John R. Commons, the founder of institutional economics. In many cases these people wrote articles and even books about the role of the church in society before they got into economics. Is it an accident that economics took the direction that it did? This is the focus of my current research.

## Growth and the environment

*One of the important negatives associated with economic growth is the impact that growth can have on the environment. Going back to the 'Club of Rome Report' in 1972 this has become an increasing concern of many people. In Britain we had the publication last year of the 'Stern Report' on global warming, and this raised quite a stir.*[61] *If all of the developing world begins to experience growth rates similar to China and India, the impact on the environment could be catastrophic if we are to believe those who argue that global warming is the by product of human activities. While we know that growth rates of the magnitude experienced in China will tend to slow down in time, in your view, can the whole world sustain growth rates of even 2–3 percent? Can the price mechanism be relied upon to save the world from potential catastrophe?*

There are three quite separate issues that we need to consider with respect to the environment. These issues are distinct both analytically and in terms of their practical implications. First we have the problem of *environmental degradation* in the sense of human economic activities polluting the air and dirtying the water. Here I find the evidence on the so-called 'environmental Kuznets curve' quite persuasive.[62] In most countries the contamination of either water or the air seems to turn around at a per capita income living standard somewhere between $2,000 and $8,000. It is very clear that the worst pollution is not in the rich countries but in the poor countries. The worst pollution I have ever seen is on my travels to the developing world. The pollution in the cities of China and India is incredible to a Westerner. I find it interesting that China with a per capita income, $PPP basis, of around $6,000–$7,000 is already starting to require cars to be fitted with catalytic converters, which after all are not cheap to buy and install. I am optimistic that in ten years the smog in Beijing will be much less than it is now. India, with a per capita income, $PPP basis, of around $3,000 to $4,000 is not yet doing this. This kind of problem will not take care of itself, but it will be taken care of. Specifically, I am not looking to the price mechanism to solve this problem, but rather to enlightened

[61] The 'Stern Report' on climate change is available on the UK Treasury webpage, http://www.hm-treasury.gov.uk/. See also, Meadows *et al.*, 1972; Carter *et al.*, 2006; Stern 2006; Stern *et al.*, 2007; Stern, 2008.
[62] The environmental Kuznets curve shows an 'inverted U' shaped relationship between income per capita and pollution. See Dasgupta *et al.*, 2002.

public policy. We have relatively clean air here in Boston precisely because we do not leave it up to each individual to decide whether or not to pay the $900 needed to have a catalytic converter fitted to his or her car. This is a decision we make collectively through public policy.

The second element of the environmental problem is one where I do look to the price mechanism as well as public policy for a solution. This problem is *resource depletion*, that is, running out of scarce resources. Here we are, sitting in Cambridge, Massachusetts. People in Massachusetts having a conversation about resource depletion a hundred and fifty years ago would, like many people today, have been talking about running out of oil. But what they would have meant by this was that the whalers in Nantucket and New Bedford were running out of whales to catch! As of 1857 nobody had yet thought of pumping oil out of the ground. Somebody did eventually think of doing that, and consequently we no longer hunt whales for oil. If we think about the issue of running out of key resources within a time frame sufficiently short that we can assume that our production technology is fixed, we are not going to run out of things because in the short run the price mechanism will take care of the problem. If we extend the time frame far enough so that we (or our descendents) actually will run out of key resources, then we must look to technological change for a solution. Are we really going to keep finding enough oil for the next two hundred and fifty years to keep on using it in the way we now do? No, presumably not. But by two hundred and fifty years from now we are going to know how to liquefy coal, perhaps how to get energy from fusion, and how to make solar cells vastly more efficient than today's model. So, for a combination of reasons that are in part due to the working of the price mechanism and in part due to technological progress, I do not think that running out of important resources is a big problem.

Now we come to the third part of the environmental issue, which I do think is genuinely problematic, namely *global warming*. In this case the price mechanism is not going to provide a solution because global warming is an externality. Just as we need to address the problem of pollution through public policy, we also need public policy intervention to tackle the problem of carbon emissions and other greenhouse gasses. But an important principle of political economy is that you need to address externalities with policy mechanisms conforming to the scope on which the externalities exist. Some externalities can be dealt with merely here in the city of

Boston, for example. Some can be dealt with on a regional basis. For example, here in Massachusetts we are adversely affected by being located downwind from all those utility plants in Ohio and Michigan. It takes a regional agreement to solve this kind of problem. Some problems can be dealt with at the level of the nation state. But global warming is global and by definition needs a global solution. However, the world is not well equipped with well functioning global political institutions. Hence there is a mismatch between the global scope of this particular externality and the institutions currently in place to deal with it. This does not mean the situation is hopeless. We do have some international agreements that seem to work well—for example, the Law of the Sea and policies to deal with endangered species. They don't work perfectly but they do pretty well.

*What about the Kyoto Protocol?*

The Kyoto agreement was a start, although it is very flawed for all of the reasons that many economists have highlighted. I think the current Bush administration made a terrible mistake by simply rejecting the Kyoto Protocol and walking away. What they should have said was, 'This is a start…It is flawed in the following ways…Here are our constructive suggestions of how to change and improve it'. But they did none of this and just walked away.

*Are you an optimist or a pessimist on the issue of global warming?*

I am a technological optimist, perhaps as a result of studying history. The last time I heard a paper presented on carbon dioxide recapture and sequestration, the answer provided was that, with today's technology in the US, we would need to add between thirty and fifty percent to the delivered price of electricity to take care of this problem. I don't think that's a lot. The typical family might spend three to four percent of its income on electricity. So adding thirty percent to the price of electricity is not going to be a disaster for most people. This is like having the oil price go up. People absorb these kinds of changes all the time. Moreover, if that is the cost of recapture and sequestration using today's technology, you know that the cost is going to come down over time.

*What can solar technology contribute as a solution to the global warming problem?*

Here in New England, which climatically is not the most favourable place for solar technology, the delivered average cost of the electricity that we generate through a combination of oil and nuclear power is about sixteen or seventeen cents per kilowatt hour. The current cost of solar generation is nearly double that, but it is coming down. The other great feature of solar power is that you don't have line costs. You generate the solar energy right there on the premises. The other day I was at a relatively new building at the Harvard Business School and I happened to look up at a TV screen that displayed the information that there were 192 solar panels on the roof of this building and it also displayed the amount of power being generated by those panels. There are many parts of the United States where you can easily heat houses using solar technology, although this is not so in New England. I also notice that when I drive around the northern parts of New Hampshire and Vermont I now see street lamps out in the countryside with solar panels on the top. I also see road signs with solar panels. In all of these applications there is a significant saving from not having to run a power line to the place where the energy is needed. But most importantly, if the cost today of solar power in New England is now thirty-four cents per kilowatt hour, you know that this cost is also going to be coming down over time.

*So to sum up, at the root of the global warming problem is an externality, and once you say the word externality it should be clear that the price mechanism is not going to address this problem successfully on its own.*

Exactly. In the presence of externalities there is a positive need for public policy, and in this case the policy is going to have to be globally negotiated. Let me say one final thing in response to your previous question relating to whether I am an optimist or a pessimist regarding global warming. Many people know about, but have not read, the famous Garrett Hardin paper, 'The Tragedy of the Commons'.[63] It is one of those papers that are more frequently quoted than read. If you look at that paper, in the conclusion there are a couple of paragraphs in which Hardin explains that the toughest

[63] See Hardin, 1968.

problem of all will be persuading people in rich societies to forgo the luxury of having large families. He says that this will require public policy that will be viewed as highly distasteful since it will involve an abrogation of fundamental freedoms. Hardin's paper came out in 1968, and reading it now is shocking because what one realises is that in most of the developed countries we do not see rapid population growth. In fact, apart from immigration, the populations of many rich countries today are actually shrinking.[64] So this critical problem, highlighted by Hardin in 1968 as the thorniest issue in his paper, simply disappeared over the next thirty years.[65] This just shows how the passage of time can have a huge effect on what appears to be the key problem facing society.

*The classic example of this is perhaps Malthus's theory of population. I always find it interesting to note that Malthus's pessimistic theory was published just at the time in history when sustained growth in per capita income in Western Europe was beginning take off. He provided a brilliant explanation of human history prior to 1800, but his model no longer applies universally after 1800.*[66]

Malthus was so convinced by his population theory that he even opposed smallpox vaccinations, after it was proved that they were effective, on the grounds that if there were no smallpox to kill people then population growth would get out of hand!

## Growth, poverty, and inequality

*As well as the environmental Kuznet's curve, there is of course the original Kuznets curve that shows an inverted U shaped relationship between inequality and per capita income, with inequality rising during the process of development, before falling as a country becomes richer.*[67] *When I interviewed Xavier Sala-i-Martin I asked him if he thought that it mattered if inequality is rising so long as poverty is*

[64] See United Nations, 2007. According to UN projections, the populations of 46 countries or areas are expected to decline by 2050. These include Germany, Italy, Japan, South Korea, and most of the successor states of the Soviet Union. See also, Fogel (2007), who estimates that by 2040, the European Union (15) share of world population will have fallen to four percent, from six percent in 2000.
[65] Ehrlich (1968) raised similar fears relating to rapid population growth.
[66] For an excellent discussion of Malthusian population growth theory see Galor, 2005; Clark, 2007.
[67] See Kuznets, 1955.

*falling, and he said, 'No'.*[68] *Given your definition of growth, that the benefits need to be spread across the majority of the population, do you take a different view about poverty and inequality than Sala-i-Martin?*

My argument is that what matters for issues like fairness, tolerance and democracy is whether the broad mass of the population is getting ahead. It does not follow from this that inequality does not also matter. In my work to date, inequality doesn't matter *per se*, but the interaction between the growth of total output and how the fruits of that incremental output are being distributed is what determines whether the broad bulk of the population is getting ahead.

Consider China, which has achieved an incredible growth record over the last twenty-five years but has also experienced sharply widening income inequalities. Not so long ago China had a more equal income distribution by far than we do here in the US. Today, even though US income inequality has been increasing, China has more income inequality than we do using the standard measures.[69] But because the growth of total output in China has been so rapid, even with widening inequality the majority of Chinese have been participating in the improvement of material living standards. By contrast, look at the US. Here we have been experiencing widening inequalities, although less so than in China. But because our growth of total output has been much slower than China's, the bulk of the population here has not been enjoying an increase in material living standards. On the latest available data, the median income in inflation-adjusted dollars is lower than it was at the beginning of the decade. This is not because the GDP has not grown. It has increased by something like 2.5 percent plus, on average during this period, which included a recession in 2001. For a mature economy like the US, a growth rate of around 2.5 percent is pretty good. The problem is that the fruits of that expansion are being distributed mostly to a relatively narrow group at the top. The majority of American families have had declining incomes. In the US, therefore, income inequality is a significant problem. In the model that underlies my *Moral Consequences* book, widening income inequality does not matter *per se*, but it does matter if, as in the US today, it is sufficient to

[68] See Snowdon, 2007b.
[69] See Dollar, 2007.

prevent the majority of citizens from enjoying a material increase in living standards.[70]

*Do you think that people are prepared to tolerate an increase in inequality in the short run, but not in the longer term, if they fail to see their own situation improving? Albert Hirschman called this problem the 'tunnel effect'.*[71]

I think that's right. It's about expectations. Hirschman's idea was that as people see others in their society moving forward, for a while they are prepared to believe that this is an economy-wide change and that their turn for improvement will soon come. If that expectation turns out to be wrong, their tolerance for growing inequality evaporates. Incidentally, Hirschman was here at Harvard when he wrote that paper. The reason he called it the 'tunnel effect' is obvious to those of us living in the Boston area. For many years we had only one tunnel to the airport, with resulting congestion and a great deal of anger and frustration for those caught up in the traffic jams.

*How would you respond to people who might make the following kind of observation: 'Look at all that is going wrong with American society today. Since the economy is growing nicely, doesn't that contradict your general hypothesis in* The Moral Consequences of Economic Growth*'?*

No, that gets the point backward. Remember that what matters in my model is not just the growth of GDP but that the majority of families experience an improvement in their material living standards. On that definition of growth, the current decade in the United States is not a period of growth, but of stagnation and even decline. As I mentioned a moment ago, most families' real incomes are lower now than they were at the beginning of the decade. The resurfacing of various pathologies, like anti-immigrant agitation, are therefore the predictable consequences of a situation in which the bulk of the population is experiencing material stagnation or decline—just what the model predicts.

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[70] To avoid a backlash against globalisation, which many perceive to be the cause of increasing inequality, Scheve and Slaughter (2007) recommend US policymakers to implement a 'New Deal' in support of globalisation that involves a 'substantial redistribution of income' by adopting a 'fundamentally more progressive tax system'.
[71] Hirschman, 1973. See also Milanovic, 2007.

## Market failure, public policy, and growth

*In your book you argue that the market determined rate of growth is less than the socially optimal rate of growth due to market failure relating to the externalities that arise from the moral positives generated by economic growth. In this case there is a role for public policy. In order to design and recommend policies that are likely to raise the growth rate, we need a theory of growth. What does economic theory tell us about the kinds of policies that are likely to be most successful in promoting economic growth?*

Basically, economic analysis shows that an economy can produce more output in three ways: first, make better use, in terms of efficiency and full utilisation, of existing resources; second, create and accumulate more resources; finally, develop new technology. In my recent book I emphasise the second of these, in particular two elements that are crucial for fostering economic growth: the accumulation of human and physical capital. In my book I do not analyse in detail the contribution of technological change and innovation.[72] These are very important factors, to be sure, but that is not what my book is about. Instead I emphasise policies to boost the rate of human and physical capital formation. The role and importance of physical capital accumulation has been recognised by economists at least as far back as the Industrial Revolution. It was certainly recognised by Adam Smith. The experience of many countries, including China, Singapore and Japan, confirms the importance of capital accumulation for productivity growth. Unfortunately, in the US the last thirty years have been a period of low investment. This is the result of both the rise in consumption spending and corresponding decline in private saving, and the absorption of that saving by large-scale government borrowing.[73] Since the mid-1990s American families and businesses combined have had a net saving rate of only about 5 percent of national income. Human capital formation is also crucial, but it too has been inadequate in the US during recent decades. A more educated labour force is more likely to be a more productive labour force. Now if we lived in a society in which the only mechanisms that we had at our disposal to spur human and physical capital formation were ones that were somehow inimical to fairness, tolerance

[72] For a discussion of these issues, see Baumol, 2002; Baumol, Litan and Schramm, 2007.
[73] See Friedman, 1985b, 1991, 1992b.

and democracy, it would clearly make no sense to say that we are trying to spur the growth rate in order to enhance those values but we are doing so by means of policies which themselves undermine those values. But I argue, and believe quite firmly, that this is not a description of the world in which we live. In the US we have plenty of policy devices at our disposal that would spur aggregate growth *and,* at the very least, would be congruent with a fair, tolerant and democratic society.[74] In many cases there are win-win policies that would stimulate growth and simultaneously make the society fairer.

*Could you give an example?*

The most obvious example in this country is 'Project Head Start'. This is a programme of quite intensive early intervention for pre-school children who are at risk of not doing well at school.[75] Think about what happens if we take those children who are likely to occupy the extreme left tail of the distribution of abilities when they enter the labour force and shift them to somewhere around the middle of the distribution. What does this do? It shifts the entire centre of gravity of the distribution to the right and makes the labour force, on average, more productive. And it also makes the distribution of opportunities in society fairer by helping pre-schoolers to overcome disadvantages that no one would suggest are their own fault. I am aware, of course, of all the various studies that show that Project Head Start does not have much lasting impact on student test scores. But this debate ought to be about more than test scores. We have lots of evidence to show that when these children go through this programme, then, compared to otherwise comparable children who did not, they have a greater probability of finishing high school and of going on to college. They also have a greater probability of having a stable labour force attachment after finishing their education. They have less probability of getting arrested, and, if female, of becoming pregnant. These are surely good outcomes. Although the program is expensive, I believe it is very worthwhile.

[74] Education and human capital formation are also likely to promote democracy as well as economic growth. See Cohen and Soto, 2007; Glaeser, Ponzetto, and Shleifer, 2007.
[75] See Ludwig and Miller, 2007.

## Inflation targeting and the 'dual mandate'

*Most economists agree that macroeconomic stability is an important prerequisite for sustained economic growth. Therefore, a low and stable rate of inflation is a key policy objective. In September 1992, the UK adopted explicit inflation targeting, and in May 1997, Tony Blair's 'New Labour' government announced operational independence for the Bank of England. To many commentators this latter move was something of a surprise. However, anyone who had read Alberto Alesina's work on partisan theories of the business cycle should not have been surprised, as he points out that left-of-centre governments will have a problem in establishing anti-inflation credibility.*[76] *One way of establishing greater anti-inflation credibility was for the incoming Blair government to give the Bank of England operational independence. During the past fifteen years or so the UK has experienced its most prolonged period of macroeconomic stability and growth, probably in its history. In an interview that I did with Ben Bernanke, he said how much he admired the UK system, and he clearly is in favour of the United States adopting an explicit inflation target rather than staying with the current implicit inflation targeting regime.*[77] *You have been one of the most prominent critics of inflation targeting.*[78] *What are the main reasons why you oppose inflation targeting?*

Before I discuss inflation targeting, let me make a comment on your first point about inflation being more of a problem for left-of-centre governments. I very much admire Alberto's work (I'm proud to say he was my student), but at least in the US it is a frequently repeated falsehood among some economists that Democratic administrations have a worse record on inflation, and on interfering with Federal Reserve monetary policymaking, than Republican administrations. Some economists even try to blame the entire inflation problem of the 1970s and 1980s on the brief period when William Miller was Chairman of the Federal Reserve, not the eight full years under Arthur Burns.[79] People also ignore the fact that the administration that mounted the greatest attack on the Federal Reserve for being too tight on monetary policy was Ronald Reagan's! This criticism

[76] See Alesina, 1989; Snowdon, 1997; Snowdon and Vane, 2005, chapter, 10; Snowdon, 2007c.
[77] Snowdon, 2002. See also Bernanke and Mishkin, 1997; Bernanke and Woodford, 2004.
[78] See Friedman and Kuttner, 1996; Friedman, 1999, 2003, 2004.
[79] William Miller was Fed. Chair from March, 1978 until August 1979, while Arthur Burns was Fed. Chair from February, 1970 until January, 1978.

did not come from the President personally, but from the radical supply-siders in the Reagan Treasury Department who tried to put the blame for the failure of their supply-side policies on the Federal Reserve's stringent monetary policy.[80]

With respect to your question about inflation targeting in the US, the place to begin is to recognise that in the United States the Federal Reserve is charged by law to have responsibility for pursuing *both* price stability *and* stability in the real economy, as measured by indicators such as employment. This is the so-called 'dual mandate', and I happen to believe that the dual mandate is a good idea. Now, given that our central bank has this dual mandate, I think that its having an explicit inflation target, without having some comparable quantitative measure on the real side of the mandate, is not conducive to transparency, and therefore accountability, but actually subversive of transparency and accountability. The reason is that to have two objectives, and to be quantitatively explicit about one but not the other, is a way of forcing the central bank, internally in its own deliberations, and also externally in its communication with the public, to talk about one objective and neglect the other. This is very important because most of the advocates of inflation targeting have described inflation targeting as a way of communicating with the public and have held out the alleged improvement in transparency, and therefore accountability, as a reason for doing that. But you are not being transparent in a practical sense if you have two objectives but hold out a specific numerical benchmark for inflation while saying only vague, qualitative things about the real side of the economy.

I well remember the monetary targeting period in the US under Federal Reserve Chairman Paul Volcker, in 1979–82. Because I am interested in Federal Reserve policy, and I have done a fair amount of work on how policy works through the financial markets,[81] I often visit various trading floors of security firms in New York. I remember that during the Volcker period, when it got near to 4 p.m. on a Thursday, the market would come to a dead stop. No trading would take place. A hush used to fall over the trading floor because everyone was waiting for the announcement of last week's monetary statistics. Why were the traders so interested? Because everybody knew that the central bank was targeting money supply

[80] See Friedman, 1988c.
[81] See, for example, Friedman, 1979b, 1980b; Friedman and Clarida, 1983; Friedman and Kuttner, 1998.

growth. I think if we go the route of an explicit inflation target, the same kind of thing is going to happen. The Federal Reserve's chosen inflation measure is the core Personal Consumption Expenditure (PCE) deflator, which comes out once a month. Every month the entire financial market would be glued on that statistic. In the setting of our dual mandate in the United States, where the central bank is also responsible for real outcomes, this is not transparency but the inverse of transparency. And if we think about accountability, it is very clear that the central bank is more accountable for objectives that have a specific benchmark. With an explicit inflation target I believe that the central bank's accountability with respect to the real side of its mandate will wither. Therefore, over time, the practical force of the real side of the mandate will atrophy. Indeed, I suspect that that is precisely what some advocates of inflation targeting have in mind.

The argument over whether the central bank should be responsible for real outcomes is a debate that has gone on for one hundred and fifty years. For some advocates of inflation targeting, setting an explicit target is a way of achieving a single target nominal objective for the central bank without having to go and ask Congress to legislate it. I support the dual mandate, and I oppose such a move. At least for the United States, the case for inflation targeting fails on the very grounds that advocates advertise as its strength, namely transparency and accountability.

## Current research

*You mentioned earlier that you are doing some research into the influence of religion on economic ideas. Could you tell me more about this work?*

In my research I continue to be interested in macroeconomic, monetary, budgetary and financial issues, but in so far as there is a single project that represents my current efforts it is the historical influences of religious thinking on economic ideas. I am looking at the ways in which religion has affected economic thinking, but not in the sense that everyone presumably thinks about economic issues. I am not interested in, for example, whether an individual's attitude to poverty is influenced by whether or not that person goes to church. That is not the issue. What I am after is instead whether the ideas of economists about economics, as we as professional economists understand the term, have been shaped either consciously, or, as was the case with Adam Smith in the argument I outlined earlier, subconsciously, by religious ideas. Schumpeter had this marvellous phrase, 'pre-analytic vision', which he used to describe the underlying notions that can influence a scholar's ideas; that's what I have in mind.

Here is another example. Why are economists so averse to models that are knife-edge equilibrium? In other words, why are economists so averse to models in which initial conditions are determinative of final outcomes? For example, in one situation there is a high level, or good equilibrium, in another situation there is a low level, or bad equilibrium. The US, say, has a good equilibrium whereas Pakistan, for example, is caught in a bad equilibrium. Why are economists so averse to that kind of idea? Is it because in many strands of religious thinking no individual is ever beyond salvation? In this case my research is seeking to find out how this aversion by economists to having initial conditions being determinative arose, and what was going on in various lines of religious thought at the time. This is quite different from the more familiar kind of research that has economic growth on the left-hand side of a regression equation and the number of people who believe in the afterlife on the right. If I come up with enough interesting findings, this research may form the basis of my next book. But that's still a long way to go.

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