Good afternoon and welcome. It gives me great personal pleasure to introduce this evening's speaker, who is Professor Kenneth Shepsle who is a visiting centennial professor of the Department of Government. Professor Shepsle is the George Dickson Markham Professor of Government and outgoing Chair of the Department of Government at Harvard University, which some of you may have heard of.

Professor Shepsle is the author, co-author and co-editor of ten very distinguished books and of innumerable articles in the major political science journals. Professor Shepsle has a deeply suspect background if you are a normal political scientist. He has a First Degree in Mathematics which makes us feel methodologically incompetent and some of his best friends are economists which makes us feel deeply suspicious. Professor Shepsle indeed is one of the leading exponents of Rational Choice theory. Rational choice theory tends to produce polarising responses amongst political scientists. Some of the regard Rational Choice theory as the equivalent of a computer virus, destroying generations of accumulated wisdom. Others think of it as the software to the future. Professor Shepsle, I think, would probably belong to that category.

Professor Shepsle's range is as impressive as his methodological skill. His first book, Politics in Plural Societies, with Alvin Rabushka, is still required reading for those of us interested in the democratic stabilisation of bi-ethnic or multi-ethnic states. Whilst one of his most recent books, Making and Breaking Governments is known to all students of Comparative Politics and Rational Choice. Professor Shepsle is immensely distinguished, so distinguished that he is one of the very few political scientists ever to be elected to the National Academy of Sciences in the United States. Note that I said the National Academy of Sciences, not the National Academy of Social Sciences this is a serious person. It is therefore with great pleasure that I introduce him to you. His has kindly agreed to take questions afterwards.
KS: Thank you, Brendon and thank you, ladies and gentlemen for coming this afternoon.

There is a story that occurred during the 1960s. A philosophy professor was taking his normal walk through Central Park in New York City. The path passed an open field where on this particular Spring morning a large group of students was engaged in some sort of chaotic anarchic event. This was the 1960s after all and students were known to do such things. One of our professor's own students ran up to him and blurted out what was going on. 'It's a "be in" professor, a "be in". How do you like it?'. The professor paused to consider the question. Impatiently the student shouted, 'Professor, don't think about it, just do you own thing'. The professor paused again and then said to the student, 'But thinking is my thing.'

Well, I too am a professor and thinking is my thing. I've been privileged and honoured to do my own thing here at the LSE for the past six months as a visiting centennial professor. The institution has been especially hospitable in providing me with a place to do my work, surrounding me with interesting colleagues with whom to interact and placing all of London at my doorstep. It's enough to make a grown man cry with delight.

But the initials LSE symbolise what shall be my story for the remainder of this lecture. I'm a political scientist so I know that in fact it is the London School of Economics and Political Science. My story will be about how economists in their ardour to improve human welfare have, for many decades, dismissed politics altogether and, having discovered politics and the state recently, are inclined to insulate us from their effects as much as possible. I shall make a different sort of claim, namely that this is dead wrong and a doomed strategy.

I shall make my comments in the context where much of the debate occurs, namely that of development in the third world and the issue of reforming State Institutions there to make the third world economies more effective agents in the fight against poverty and inequality. But, in fact, I think my observations apply with some force to the first and second worlds as well. The second world, the former Soviet Union and its satellites, has exploded in the last decade and nation building is proceeding afoot there at least as rapidly as in the third world. Even the first world is not asleep at the switch. New Labour has come into power in the UK with a level of energy that has shaken the very foundations of the constitutional order. A newly independent Bank of England, relations with a more federal Europe, reform of the House of Lords, changes in electoral law perhaps. In short, a very impressive list of prospective reforms. But as I said, my remarks will mainly be about
the third world and the setting there. The reason for that is that the initial motivation for my
testing about these issues came from an invitation to present some remarks last April to
a group of distinguished bureaucrats and politicians in Bogota, Colombia. The Colombian
constitution of 1992 required its National Planning department to hold a conference within
a decade on the subject of State reform and I was one of its participants.

Only a professor of Political Science and indeed a specialist in theories of politics, like
myself, would have the audacity to address a subject, State reform, on which he has
intelligent opinions at best, and apply his views to State reform in a particular political
system, Columbia, about which he appreciates only its broadest contours at most. Yet,
this is the task Colombia's National Planning department set for me and this is what I
agreed to do. To no one's surprise I proceeded as a professor might, first laying out some
of my general views about the subject of political economy and only then turning my spot
light to illuminate the issue of State reform, not really touching the particulars of the
Colombian case at all.

As a political scientist working in a field that historically has been dominated by
economists I will be especially attentive in what follows here today to the political aspects
of political economy. Too often I am afraid economists treat topics and political economy
as applied economics reducing politics to a black box conceptually and regarding politics
as a genuine nuisance substantively. This is no more evident than in the World
Changing World', this elegant report is the product of highly intelligent bank economists
and technocrats who have a considerable disdain for politics. Their advice is to create
state institutions that are, as much as possible, purged of politics. Politics in this view is
something that distorts, even perverts noble objectives. Politics interferes with
mechanisms designed to foster economic investment, growth and fair distribution. If only
politics did not rear its ugly head, all would be, if not sweetness and light, then at least a
marked improvement over a world in which politics is pervasive. Politics, in short, is a
large part of the problem and certainly not part of the solution.

I'm not entirely naive but my own opinion differs from those of the World Development
report authors by a matter of degree 180 of them.

Politics is part of the problem for sure, but it must be part of the solution as well. State
institutions are inherently political, from their initial charters to their authority and annual
operating budgets, to the manner in which they go about the business of regulating, taxing
and spending, redistributing and producing public and private goods. Those engaged in State reform must take politicians and political motivations as a fixture and try to design institutional arrangements in light of these, not despite them.

I will arrive at this conclusion shortly, well maybe not so shortly, and suggest ways in which problematical political motivations can potentially be harnessed and constrained. But first I need to describe how to put the political back into political economy. I will do this by portraying two political economy approaches and four social science revolutions. This is mood music sung in decidedly academic octaves; what else would you expect from a professor? But it will give you some sense of how I arrived at my conclusions about State reform.

When the United States was becoming a new nation in the late 18th century the founding elites were very practical men. These men after all had led a revolution against the colonising power probably the most powerful nation in the world at the time. In a very unsettled period following their victory they sought to craft political arrangements that would preserve the liberties of the people while simultaneously allowing the citizenry to prosper. In retrospect what is truly remarkable to us today is not their practical wisdom, though that was surely impressive, rather it was their deep and subtle intellectual appreciation, almost a philosophical sensibility of alternative institutions for and strategies of governing. Two of these leaders, Alexander Hamilton and James Madison, participated in drafting the constitution and then led the campaign for its ratification in the States. Each was interested in governance and in the role of political and economic institutions in doing this. In effect each believed that the equilibrium of unregulated, uncoordinated political and economic life could be improved upon by institutional design, precisely the same belief shared by the economists and technocrats who drafted the World Bank's World Development report. By this they meant that through institutional design property rights could be made more secure, transaction costs in both private markets and public life could be reduced, that externalities could be better internalised and public goods production incentives made more attractive -- in effect, that the dividends of co-operation could be better secured and captured for its citizens. Of course, Hamilton and Madison did not think in precisely these terms, though both were products of the Scottish Enlightenment and the intellectual firmament then taking place on the European continent and thus were familiar with the writings of Adam Smith and David Hume as well as those of Condorcet and Montesquieu.
In short, each brought a prudent cynicism to considerations of human nature, but nevertheless were optimistic that 'political science', a term coined by Alexander Hamilton, could be utilised to design institutions to harness human nature for productive purposes. To us, Hamilton and Madison would be recognised as political economists, but there was a difference between them reflected today in two different types of political economy.

Many scholars at the LSE, students and faculty alike, are Hamiltonian political economists. At the end of the day they are economists primarily. As Hamiltonians they are interested in economic patterns and in providing explanations for them, but unlike their neo-classical brothers and sisters, they believe that political choices and political institutions are a significant part of the story. Explorations in Hamiltonian political economy for which there are large and impressive theoretical and empirical literatures include the analysis of patterns in inflation and unemployed influenced by the electoral calendar in democratic societies, the so called political business cycle, interest rate and money supply patterns affected by the degree of independence of a central bank and public expenditures financed by a mix of debt and taxes in proportions dependent upon political reputation mechanisms.

The Hamiltonian political economist, as these examples make evident, takes economic patterns and regularities as things to explain or forecast but believes that they are least partially the product of political incentives and structural arrangements. It is the product of interactions inside political institutions among politicians and bureaucrats; it is neither some exogenously stipulated condition nor the choice of a mythical social planner.

Alexander Hamilton was preoccupied primarily with jump starting the economy of a new nation. A statue of him was erected and still stands proudly on Wall Street, in front of the New York Stock Exchange. A political constitution that encouraged investment and development, secure property rights, and prudent fiscal, monetary and trade policy was seen by him as means to those ends. His famous Report on Manufactures as well as a number of essays authored by him earlier in The Federalist Papers emphasise a sound currency, the federal assumption of State revolutionary war debts, a balanced budget and a tariff and subsidy regime that would allow 'infant industries' to prosper. His schemes were early incarnations of what we have come to call 'industrial policies'. His interest in political institutions -- bicameralism, separation of the legislature from the executive, electoral arrangements, independent judiciary, independent central bank -- this interest was driven by instrumental and pragmatic concerns.
James Madison, on the other hand, was a political economist of a different stripe. He was not so preoccupied as Hamilton with economic performance. He shared with Hamilton, however, a view of human nature that some of his contemporaries, and some of ours, would characterise as cynical, but that modern social science is now described as rationality based. For a Madisonian political economist it is the economic approach that is central, quite apart from economic content. Processes of preference formation, preference revelation and preference aggregation follow a rationality based economic logic though they need not be described in terms of economic substance. Madison, something of a political philosopher and student of the ancients, sought to understand the working properties of political institutions populated by self interested politicians.

Madisonian political economists then use the apparatus of individualism, self-interest, maximising behaviour and rationality that formed the foundation of modern economics but adapts it to conduct political analysis. Explorations in Madisonian political economy also constitute large and impressive research literatures. This work, however, is probably more arcane and less familiar to this audience than the work of the Hamiltonians. It includes things like the spatial left to right formulation of political competition popularised by Anthony Downs and Duncan Black, displaying the centripetal tendencies of majority rule decision making and legislators in elections; the advantages that accrue to agenda setters in committee deliberations; the significance of rules of procedure and the division and specialisation of labour, especially those governing the power to propose and amend in committees and legislatures; the influence of bureaucrats both as repositories of expertise and as possessors of a last move advantage in the implementation of public policies.

The major interests of Madisonians as these examples illustrate is in the operating characteristics of institutions of government. Modern political economy consists of Hamiltonians and Madisonians, but in my view, it is not a horse race or a beauty contest between these two types. They should be thought of as complements not substitutes. If I were to provide a summary distinction it is that Hamiltonians have little use of politics per se except that they wisely realise it cannot be ignored whereas Madisonians have little intrinsic interest or pleasure in exploring the trucking and bartering of the market place except that they wisely concede the central significance of economics in defining the individual preferences that stimulate political action. Each needs the other and in the closing decades of the 20th century each has contributed to what we now recognise as the new political economy.
Having described two kinds of political economy I now turn, ever so briefly, to four revolutions that brought political economy to its present pre-eminence in political analysis. As I am a political economist of the Madisonian type, this brief bit of intellectual history will describe the evolution and present condition of more formal and even mathematical approaches to the study of political institutions but you were forewarned by Brendan.

As an aside, let me note that the next few minutes will consist of some intellectual history that allows me in my brief moment in the sun, to convey my sense of what political science is and how it can be done. Its importance may be merely academic but I believe these developments now permit us to think about matters like State reform in a richer, more sophisticated manner.

Before the Second World War political science consisted of two enterprises. Political theory, by which was meant the history of political thought and other forms of ancestor worship and political institutions, principally thickly descriptive and heavily historical discussions of political organisations and practices -- legislatures, bureaucracies, courts, law, diplomacy and so on. During and after the war the advent of survey research methodology, descriptive statistical methods, other enhancements in measurement and data collection and the growing dominance of social psychological approaches produced a virtual sea change in political studies known as the behavioural revolution. This first scientific revolution was a salutary one in the sense that it pushed political science away from a more essayistic, interpretative enterprise and toward empirically based social science, away from history writing and towards systematic description and middle range theorising. In its eagerness to reject the past, however, the behavioural revolution pitched overboard the treatment of institutions. The behavioural revolution in brief conceived a society as consisting of atomistic individuals without the social glue that we associate with institutions, norms and other social practices.

The behavioural revolution in political science was a triumph of empirical and theoretical sociology and psychology over a kinder, gentler historical and philosophical scholarship. During the same post-war period another revolution was occurring in economics, actually two revolutions. One associated with social choice theory and the other with game theory. The social choice revolution provided a methodology with which to study groups from a decidedly non-sociological, non-psychological perspective. In effect, it imported variants of the rational actor approach from economics to the study of group decision making in non-market settings. It was a flexible methodology that could reach out into non-economic
realms, enriching the study of bureaucracies, political parties, legislatures, clubs, even faculties as well as other non-market institutions.

In the context of group choice by methods that essentially involve voting, the most profound result of social choice theory, the Arrow impossibility theorem established that it is not possible to assure that otherwise well-behaved individual preferences will add up to a well behaved group preference. To a political scientist of the 1960s and perhaps still true today, it was genuine news that you could have rational man and irrational society -- that coherent individual preferences need not aggregate into coherent group or collective preferences. From this it became apparent that badly behaved group preferences meant that group choices need not be stable. Having just taken a choice, a group might well be disposed to revisit the issue because some decisive coalition of actors preferred a different choice. This latter choice in turn was similarly afflicted so that whatever the group decided was unstable and thus constantly vulnerable to revision. The theoretical results that are now impolitely referred to as chaos theorems strongly implied that social choices unlike individual choices were not decisive and because of this were always open to cabal and intrigue. As my mentor, the late William Riker, used to enjoy asserting, 'Politics, not economics, is the truly dismal science' and this is why technocrats like those at the World Bank so despise politics and politicians.

To the behavioural and social choice revolutions we may add a third revolution, one that is still on-going, the game theory revolution. Politics is not just about structure and not just about preference but about strategy as well. The early game theory of von Neumann and Morgenstern assumed that strategic actors have the capacity to make binding commitments -- once a deal was struck it stayed stuck. In effect this required that there were some exogenous enforcement institution that guaranteed all promises, a sort of 'cross my heart and hope I die' mechanism. This stipulation might be regarded as reasonable in an environment in which the rule of law existed and legal institutions smoothly conducting their business. Indeed, perhaps it did make sense as the stylised characterisation of the environment in which buyers and sellers interacted. If the nature of the exchange were simple, if contracts were unambiguous and inexpensive to implement and if the legal institution swiftly and cheaply punished those in breach of such contracts, then this stylisation might well lead to interesting insights. As we shall see shortly the issue of making credible and binding commitments is a central feature of politics.

There were, however, two serious objections to this formulation as it applied to political analysis. First, legal enforcement is an inherently political function and yet the game
theoretic approach just described treated it as exogenous and entirely unproblematical. As
the World Development report of the World Bank makes amply clear, issues of
lawlessness and highly corrupt and otherwise imperfectly functioning legal systems must
be regarded as essential feature of a political economy, not something that stands above
it. Moreover, given the essential role played by enforcement, it is necessary to analyse the
incentives facing the enforcer. Whether as a judge, a prosecutor, a sheriff or a godfather,
this enforcement agent does not work for free and unless one repairs to an assumption of
benevolence of the sort implausibly describing the social planner of welfare economics,
one must assume that even the enforcer has personal ambitions and objectives. So the
first point is that the proper study of making promises, threats and commitments requires
the analysis of enforcement institutions. We simply cannot assume that all such
commitments are self-enforcing. Second, so much of political life is conducted outside the
shadow of the law. Promises and commitments made between politicians, for example,
are not legally binding and therefore cannot rely upon official forms of enforcement even if
the latter were unproblematical. So much of politics, it seems to me, and by extension, so
much of political economy depends upon elements of self enforcement, upon trust,
reputation, commitment, the prospect of continuous dealings and so on. So we must
analyse each situation with an eye to whether self-enforcement features are present. Do
politicians have an incentive to keep their word? The answer will be 'not always'.
Nevertheless, there is honour among thieves and politicians aren't much different.

A more recent game theory revolution emerging in the 1970s has allowed strategic
behaviour to be accommodated in a natural way by making credibility its centre piece.
Because agents in the political economy often find themselves blessed with discretion and
unconstrained by the prospect of subsequent enforcement they also find themselves
cursed by this very same discretion. Promises they make they may have the discretion to
break. Discretion is not all that it is cracked up to be, for it prevents the deals that may be
mutually beneficial from ever occurring. What game theory highlights is the necessity
absent exogenous enforcement for political and economic agents to find devices through
which to bind themselves, to disable their discretion, much as Ulysses did in committing
not to be seduced by the Sirens' song. Some of these devices are individual as in the
economic agent's concern for reputational integrity to enable future dealings. Others are
social and institutional in nature and have the effect of disabling discretion.

Consider the closed rule. A closed rule in a legislative proceeding protects a bill against
amendment. Accordingly the bill drafters are effectively empowered with making a take it
or leave it offer to the legislature. A majority coalition's offer to a legislative committee of a
closed rule to protect its legislative recommendation serves as a credible commitment by
the legislature not to amend the committee's product. It therefore also serves as an
inducement for the committee actually to report a piece of legislation of prospective mutual
benefit to committee members as well as those of the majority coalition in the legislature
rather than to exercise its authority to keep the gates closed. Tying its hands as the
majority does when it grants a closed rule means that it will get some improvement over
the status quo rather than nothing at all. So tying one's hands is a form of credible
commitment that advantages the person who has suspended his or her discretion. Tying
his hands is exactly what Ulysses did.

To sum up this tour of revolutions the behavioural revolution put a premium on science
and a focus on the individual, the social choice revolution maintained the commitment to
science and the behavioural focus on the individual but imported rational choice methods
from economics and traced their implications for non-market collective decision-making
processes. The game theory revolution allowed strategic behaviour to be accommodated
emphasising the importance of discretion and credibility.

I have promised you a fourth revolution to which I now turn but need to emphasise here
that while all of the revolutions just described provide powerful tools and fundamental
building blocks they fail to allow for a full elaboration of the analytical feature in which
students and practitioners of reform are most interested, namely institutions. The next
revolution I describe takes this as its focal point.

The neo-institutional revolution is of recent vintage, an older institutional tradition in
economics and political science, more historical and descriptive than analytical, had been
rejected 50 years ago. Behaviourists in political science and sociology focused almost
entirely on individuals treating them as disembodied roles or statuses or attitudes;
economists, whether social choice theorists, game theorists or plain vanilla neo-
classicists, treated individuals as disembodied preference ordering or utility functions;
nearly all of the social sciences, save perhaps the anthropologists, had chucked
overboard any role for institutions. Neither pro-active, maximising, rational man nor
reactive, pre-programmed sociological man is any more than a free floating atom in these
theories, unconnected to others, not to speak of any broader social or institutional
structure. The economist James Duesenbury got it about right when he quipped that
'economics is all about how people make choices; sociology is all about how they don't
have any choices to make'. Neither approach models the structure of a broader society. I
call this broader structure, institutions.
In the late 1970s a number of rational choice orientated political scientists, myself included, grew frustrated with these overly atomised conceptions of political and social life. Politics takes place in context, often formal and official as in a legislature or a bureaucracy or a judicial proceeding, but often informal as well, as in a club or a faculty meeting. Though committed to the rational actor methodology we felt that explanations and understandings based only on individual maximising behaviour were unnecessarily impoverished. In my own case this conviction came from studying real social choices, namely those that took place in the legislative process of the United States Congress. There I was struck by the importance that scholars placed on structural features, like the division and specialisation of labour committee system, on leadership, on party groupings. I was also struck by the emphasis on procedures, like rules regulating debate, amendment activity and other features of daily institutional life.

The neo-institutional revolution exploited this structure, while at the same time, redressing the diminished attention to historical and descriptive detail of institutional processes that had been the result of prior scientific neglect.

I conclude the story here not because I've done justice to the neo-institutional revolution that is upon us but rather because this revolution is still working itself out and further assessment will require some distance from these on-going events. From the flurry of research activity currently underway I believe it is increasingly evident that this approach, essentially the working out of the Madisonian programme in political economy will provide us with insights and direction for tackling questions of institutional design that are uppermost in the minds of those concerned with State reform.

You have kindly and patiently permitted me to indulge myself, in effect I've tried to give you a sense of how political economists, especially Madisonians, think analytically about politics and governing. Permit me one last bit of throat clearing. It will, I promise, lead directly to the main topic of the lecture.

Consider the following parable. There was once a farmer who owned a goose that laid golden eggs. The farmer and his family lived well off the goose’s issue. The farmer, moreover, enjoyed special privileges as head of household. There came a time in this story when the farmer, now quite old, was tempted to kill the goose that golden eggs, in order to enjoy a delicious meal it would provide him. The farmer, after all, had little time left so that all those golden eggs that might have been brought forth in the future were of
little value to him. The prospect of indulging in a feast of glorious proportions on the other hand was a matter of immediate and immense gratification.

Should the farmer killed the goose that laid golden eggs? Would he? Since I've said this is a parable it must stand for something more profound than a mere farmer and his goose. Before turning to that let's develop the parable a bit more by examining exactly who has what at stake. We have already noted that the farmer with only the faintest shadow of the future to influence his thinking is disposed to consume now at the cost of a stream of future golden eggs, a cost that the farmer heavily discounts. And we need not dwell much on the obvious fact that the goose herself has an interest in all this. A life of continued service to the family is not heaven on Earth, but it's considerably better than the option of consuming now, since the goose would be the consumee. The farmer's children and heirs clearly have a stake as well. They are denied their birthright and the eldest son in particular will eventually be elevated to the head of a considerably poorer household. Others would likely take an interest, animal rights activists, for example, who would hardly approve of having the goose's neck wrung. Nevertheless, as head of household it is the farmer's choice to make. As a rational man he would weigh the utility of a sumptuous feast of roast goose against the present value of the stream of benefits derived from the flow of golden eggs on into the future. Being broad of mind, he is an enlightened leader, a term used by the World Bank authors, he might well give weight to matters in addition to his own narrowly defined welfare. The present value of the not consuming alternative thus will impound such things as dowry, bride wealth and inheritance for his children, the political and ideological nuisance of alienating activists and his own future welfare, even if it does not stretch very far in time.

The question is, how much weight will he give to these other factors? He could live at least for a brief moment like a king. Will he forgo that pleasure to ensure the future welfare of his people? More generally must families depend upon enlightened heads of household for their welfare and failing that will theirs be a life of perpetual misery?

The point of the parable should be clear, but just in case it isn't, let me illustrate with a real case from a distant land. On July 1 1997, the relationship between the Crown colony of Hong Kong and Great Britain came to an end and authority over the island was transferred to the People's Republic of China. Speculation was rampant during the several years of run up to the transfer, and remains so to this day, about the intentions of the PRC leadership. Would the Chinese leaders, it was asked, kill the goose that lays golden eggs? They are old men it was observed and there is no telling whether they are disposed to
behave in an enlightened manner, preserving the vibrancy of the Hong Kong economy into the distant future, or turning it to present needs of which there were many. As in the parable above, assuming rationality on the part of the PRC leadership and even allowing for limited enlightenment the magnitude of pressing current needs on the one hand and the age and hence foreshortened time horizons of the leadership on the other hand are not a promising basis for the goose to get its hopes up.

The same question, I should mention as an aside, was reportedly asked by Shanghai businessmen of the intentions of newly victorious Mao and the communists in 1949. It was mainly asked rhetorically, however, for the businessmen were certain that the communists would not kill the goose that laid golden eggs -- in this case the thriving international business community in Shanghai. It is wildly inaccurate forecasts like this one that give force to the aphorism that hindsight is better than foresight by a damn-sight.

The parable of the farmer has several messages. The politics in the parable is minimal, but issues of leadership and of succession nevertheless play a role and in a moment I will elaborate on this. Secondly, the politics unfolds over time and the time horizons and valuations of the future may not be well synchronised among the actors in a political situation. The presently powerful, for example, may discount the future more heavily that younger followers, moving benefits up to the present and pushing all costs to the future, because they do not expect to bear the consequences of these otherwise ill-advised choices. The PRC leadership, as we just saw, may be too consumed by present requirements including their own well-being to give much weight to the longer term in their actions towards Hong Kong. The same may be said for the farmer, in which case, his family's goose is cooked. Third, enlightened leadership is one mechanism for synchronising the present with the future but it is a weak reed. Here synchronising the present with the future should be taken as an inelegant way of describing a path of economic and social development that if not optimal in some sense is at least respectable. The implication from this parable having significance for the issue of state reform and development is the necessity of arranging institutional features to accomplish appropriate intertemporal synchronisation. This is an institutional design question that is pure Madisonian political economy. But, first let me add one complication to the parable.

Let us revisit the parable of the farmer and the goose that lays golden eggs. As before we have a farmer with the authority to decide whether to eat the goose or let it remain a family asset. I now introduce a second political actor, the eldest son. According to tradition and practice in the village in which the farmer household resides, the eldest son succeeds to
the head of household upon the death of the father and while the father lives the son is his deputy. As deputy the son does more than just pass time. In any executive decision by the head of household to depart from customary practice the head requires the acquiescence and assistance of his deputy. You might think of the son as the agent of bureaucratic implementation. Thus, if the head allows the goose to live and like any piece of productive capital, continue producing for his family’s welfare then this policy is automatically implemented. Everyone in effect keeps doing what they have been doing. If on the other hand, the head determines to depart from the status quo he requires the assistance of his deputy to consume the capital. The deputy enjoys none of the consumption, not even a drumstick, but his collaboration is required to kill the goose that lays golden eggs.

Although this revised parable depends upon custom and tradition in the village we could imagine a slightly more general story in which the household had a constitution which specifies the institutional arrangements I’ve just described. Uber-officials determine policy changes but they require the assistance of unter-officials for their implementation. If, for example the PRC leadership determined to spend down the capital windfall represented by the transfer of Hong Kong to their authority and if such a policy departure require the implementation services of lower level officials, officials who aspire to become leaders at some point in their future, then the discretion of the leaders, like the discretion of the farmer, is qualified. The outcome will depend upon the willingness of ambitious deputies like the eldest son in the household to serve the wishes of their leaders but then risk a depleted cupboard when it is their turn to lead.

Early in this lecture I eluded to the antipathy planners often have toward politics and politicians. I briefly mentioned indications of this found sprinkled throughout the World Development report of the World Bank. In that report its authors seek to isolate politics and insulate the reform process from it unless a political leader is enlightened as was the possibility in the parable just told. They reserved their praise for reform orientated leaders and elites describing them ‘as far sighted political leaders who gave greater voice to often silent beneficiaries and spelled out a longer term vision for their society allowing people to see beyond the immediate pain of adjustment’.

In effect planners appreciate that the temporal path for successful economic development requires short-term pain for longer term gain. Investment, whether in infrastructure, currency reform, budgetary balancing, trade liberalisation, or human capital requires a political fortitude that is typically in short supply among political leaders. With this view I have little disagreement. Politicians may be intrinsically committed to development,
prosperity and fair distribution of income and wealth. Most politicians, however, are professionals and like those in other professions are mainly concerned with their personal survival and advancement. In democracies the electoral connection is never very far from their minds. Those that are uber-officials wish to remain so and those that are unter-officials are eager to advance and become uber-officials. The press of attention to short-term requirements, surely an important feature of political systems that rely upon regular and frequent popular elections means that most politicians are only incidentally enlightened. The World Bank planners are absolutely correct to applaud enlightenment when they find it, but not to bet on it.

I find fault, however, with the views of the World Bank planners in two respects. First, I believe it is essential to accord legitimacy to popularly elected politicians and leaders and to respect their professional aspirations. Accountability requires a modicum of responsiveness and properly arranged systems of representation provide this by rewarding officials that respond to the desires of their constituents. Because of this the time horizon of popularly elected officials is bound to be short. That is the way the responsiveness mechanism in most successful democracies is designed. And professionals political officials are guided by this design feature, just as professional managers of firms are guided by design features that encourage responsiveness to the interests of employees, customers and shareholders. Wringing one's hands about this aspect of political life and seeking ways around it by trying to insulate policy making from political influence undermines the legitimacy required by representative systems.

A second problem inherent in the World Development Report and commonly articulated by social planners elsewhere is to believe that enlightenment is the only asset available to mitigate the perverse incentives associated with the short time horizon of officials. Successful development, non-corrupt performance and credible commitment, it is true, requires some politicians to resist short-term temptations some of the time and it is also true that their own aspirations often dispose them in the opposite direction. The general solution, however, is not enlightened leadership, for if this were generally available, there would not be a problem in the first place. The solution is to channel private aspirations in more constructive ways. This is the classic Madisonian problem of institutional design as I noted. In crafting a constitution for a new nation Madison took for granted that men were not angels, but rather were ambitious and self-interested. Through institutional design he sought to, in his expression, 'pit ambition against ambition'. He did not depend upon enlightenment nor upon insulating policy making from politics as planners sometimes suggest. Successfully designed institutional arrangements, it appears to me, as it did to
Madison, may serve as a substitute for enlightenment and is essential in a world in which the latter is in short supply.

I have just made much of the importance for policy of time horizons and attitudes toward the future of elected officials. Indeed, a short-term orientation is not unique to representative systems, for leaders of all complexions, democratic or otherwise have a tendency to discount heavily events occurring beyond their service. I've also suggested that even in the presence of this bias toward the short-term and a concomitant absence of enlightened leadership intertemporally balanced public policy making might emerge from appropriately designed institutional arrangements. This may be called Madison's hypothesis. I cannot claim here to have a silver bullet that will set everything right. I will however nail my colours to the mast and hope to obtain Madison's approval by suggesting some potentially fruitful ideas.

By way of preview, there are two stylised features of political life that come into play in my formulation. First, politicians are not all of the same age or rank. This distribution means that not all politicians have coterminous careers and thus do not share precisely the same futures. Because their horizons differ so to will the weight they accord the future. One politician's short-term perspective may differ from that of another's. Second, even though politicians may be regarded as short lived players on the political scene and may be assumed to focus disproportionately on their own personal short-time horizon they are not the only players on the scene. These other, mainly collective players, some from the political class and others from the broader civil society are longer lived entities and this factor may temper the short-termitis of politicians.

In a nutshell my claim is that the condition of most political orders is an officialdom that has powerful incentives that focus on the short term and to discount the future heavily. The solution resides in designing institutional arrangements in the spirit of Madison that exploit the different ages and different horizons of political actors. Consider first the distribution of political ages and ranks. In the variations of the parable described earlier there was a head of household and his eldest son serving as deputy. Changes in household policy required the implementation assistance of the deputy. Suppose the head were in his last period, the time of maximum temptation to kill the goose. The reason, of course, is that the head has no future after the present period and therefore has no future to worry about. He might as well cook the goose and add a sumptuous feast to his last period's enjoyment. But this is precisely the time that the eldest son is least disposed to assist. His future as head of household with the goose that lays golden eggs as a family
asset is rosy indeed. A future without the goose is too unpleasant to contemplate. The present head, despite his temptation, will anticipate the resistance he will encounter from his eldest son and this may well deter him from proposing to kill the goose that lays golden eggs. To the preverbal visitor from Mars, or more aptly, to the itinerant anthropologist who appears in the village to conduct field research, the present head of household will appear irrationally to give weight to a future in which he will not participate. Indeed, the anthropologist's research paper will undoubtedly document the strange local custom of providing inheritance for one's progeny, or possibly offer the alternative hypothesis that humans are hard wired genetically to behave altruistically towards their off-springs. In reality, however, it was an institutional arrangement of political rank within the family structure that did the trick.

It does not require a large leap to apply this logic to the explicitly political settings of the institutionalised state. Ambition to rise within hierarchical organisations, whether the military, a public bureaucracy or a party organisation implies that the ambitious will want to preserve the privileges, authority and capital assets associated with the higher offices to which they aspire. They would oppose actions by the current incumbents of those positions that would deplete these things. They would, in short, not be keen to participate in killing the goose that lays golden eggs. What is required as it applies to state reform, it seems to me, is an institutional structure in which seniors are dependant on juniors to implement policy and in which there is sufficient assurance to juniors that adequate performance in their present capacity will all go well for advancement to the next rung on the career ladder. In these circumstances, and there undoubtedly other conditions that I have failed to identify, incumbent office holders, though temperamentally inclined to focus on the short term, will act as if they have a much longer time horizon. This it seems to me is an almost magical consequence of institutionalising ambition and embracing politics rather than constraining or isolating either of them.

The political world is filled with short lived politicians with short time horizons. But short time oriented politicians are not the only players on the scene. For one thing, the interests to whom they are beholden for their political survival, labour unions, farm groups, corporations, religious associations and so on, are long lived, on-going entities. Even though a politician may not look past the next election the interests whose support he requires do. Though not a perfect mechanism it nevertheless has the affect of effectively lengthening the time horizon of the otherwise short-term oriented politician and increasing the weight he gives to the future, even a future beyond his own political career. The important implication of this line of thought is that civil society, as characterised by long
lived voluntary associations, must be thoroughly integrated into political life. The same may be claimed for the political parties to which politicians attach themselves. Individual politicians come and go, win elections and lose them, run or retire, but the political parties that sponsor them are long lived on going operations. The next election certainly matters to them, but so does the one after that. The key here is that while the individual politician may not give much weight to the future after his or her own defeat or retirement, the party to which he belongs does.

The important implication of this line of thought is that political society, as characterised by long lived and vibrant political organisations, must possess long term viability, legal recognition and protection and must be objects of respect, not contempt.

This presentation has been a long winded way of saying something that very possibly is trivial and obvious, but very frequently seems to have been overlooked in our general thinking about the structure of the state and reforms to it, certainly by technocrats and economists. Asserted boldly and easily fitted onto a campaign button or a bumper sticker it is 'embrace the political'. Professional politicians in a properly organised democracy will be ambitious for themselves and given well designed accountability mechanisms, they will be responsive to local and short term matters. This democratic impulse has the potential as planners and technocrats have observed to distort public policies, indeed distort them perversely. Too frequently it encourages eating the seed corn, killing the goose that lays golden eggs and otherwise over consuming and under investing in long lived capital assets that provide a foundation for prosperity and liberty. The blame is placed squarely at the feet of politics and politicians and the proposed solution is typically some variation on the theme of suppressing politics and insulating policy making from it, or relying on enlightened leadership. This I believe is a doomed strategy.

Madison's hypothesis which I have taken to heart here, is equally cynical about human nature but provides a more constructive and promising approach. Rather than some form of democratic disconnect favoured by planners and technocrats, Madison's approach takes political motivations as universal, pervasive and highly resistant to quarantine. Making the best of an unpleasant reality, Madison puts ambition to work. In my rendering of it here it takes the form of exploiting the fact that a snapshot of political life at any point in time reveals a hierarchy of political roles, overlapping generations of politicians and both short lived and long lived political actors. These temporal properties may permit the possibility of constraining short term political orientations and channelling them productively. But they will require institutional arrangements that offer political
advancement on the one hand but always make the more senior officials with the shortest
futures dependant upon those more junior officials with longer time horizons. They also
require institutional arrangements that attach short horizon politicians to longer horizon
collective actors, many of which are found in the broader civil society. These very political
features are the ones that need to be given prominence in any discussion of state reform.
Technocrats and international organisations therefore should encourage, not discourage,
a rich political life in the developing countries.

Clearly, this is no more than a general principle and a partial approach to issues of state
reform. It certainly is not a well worked out or fully operational plan, but I believe that it in
his reluctant embrace of politics, Madison mostly got things right. The style of political
economy that I have named after him represents the intellectual’s effort to grapple with
issues of governance. It is my hope that there are lessons for practitioners of governance
here as well.

Thank you.

[APPLAUSE]

BL: Thank you very much, Professor Shepsle for that elegant and distinguished
lecture. He’s kindly agreed to answer questions. I’m going to identify somebody with a
mike. I’ll identify you first, then I’ll identify the man with the mike to come and find you. So
if you want to ask a question please raise your hands. I will look up and down.

AQ1: It was clear to me why the person, the deputy, would not want the goose to be
slaughtered. It wasn’t quite clear to me how you stop the head of the household to kill not
just the goose but also the deputy and in many of the countries that the World Bank deals
with, aren’t we precisely in such situation, namely that the executive power is quite
unrestrained? Now you say, you know, it would be desirable to design a system where
that wasn't the case, but how do you get actually from a situation where executive power
is more or less unconstrained by all the factors that you mentioned, political parties, civil
society, constitutional regulations to a situation where that kind of regulatory framework is
in place? How do you get from a situation, in other words, where power is highly
concentrated, in very extensive, where you can kill both the goose and the deputy to a
situation where that isn't the case?
KS: I'm reminded of the definition of pornography which is 'I can't define it but I know it when I see it'. In a sense I know the kind of institutional arrangements I'm looking for when I see it but it would be presumptuous of me to make myself into a modern day Hamilton or Madison and actually draft the constitution that produced those results. But I think, to know what one is looking for gives some insight. I'm a real fan, though not a careful student, of the United States Senate. The feature I most appreciate about the United States Senate -- it is an upper chamber which will be undoubtedly studied by institutional reformers in this country as well -- is that of overlapping generations of politicians. A senator is elected for six years, but not all senators are elected coterminously. There are three classes of senators, one class having just been elected has a six year term ahead of him or her, another class having been elected two years earlier has four years left in their term, and of course, class three is the set of politicians in the Senate who only have two years left. Now, in contrast the United States House of Representatives consists of 435 people with a two year term, all of whom are elected coterminously. So, at any particular point in time, we have a lower chamber with members on a very short leash, with a very short time horizon before their next election, but we have an upper chamber, a majority of which, two thirds of which in fact, do not have that short leash. Only one third of them behave much like members of the Lower House, as the Upper House likes to call them, and so senators pride themselves in being able to be as they put it, 'statesmen for four years and politicians for two years'. But this feature of overlapping or rolling membership introduces an institutional constraint in which it is simply not possible for the one third of the senate up for re-election this next time who would like to spend the Gross National Product on their respective districts in the next two years, they can be restrained by a majority in the senate that would have to pay the bills for that at the time they are up for re-election. So it's a nice incentive-compatible arrangement that discourages the kind of short term behaviour that is so destructive.

I think the reality even in highly concentrated regimes is that there are ambitious people up and down the age grade and even a highly concentrated executive must attend in one way or another to his or her lower level officials and it clearly varies from country to country and from regime to regime. But it's pretty rare I suspect even in the most concentrated of regimes for this to be absent altogether and my advice and my intuition is to exploit that demographic feature of politics, that politicians not only walk around with Ls and Cs on their forehead, or Ds and Rs in the United States on their forehead, but they are age-graded, there is an age marker on them as well that gives some sense of where in their careers they are and where in the pecking order they are and I think it is this temporal feature that is worth thinking about.
I had promised myself on my leave this year here at the LSE, I actually brought with me from the States a copy of The Federalist Papers because I wanted to read through to see if Madison, Hamilton and Jay, its authors, had at all taken this on board and I hoped against hope that they hadn't because then I have myself a research project to pursue. I don't think they have but I spent too much time going to the theatre in London and did not The Federalist Papers as I had intended, but my sense is that this is a dimension of political life that is given very little attention and so I don't know how far one can run with it, but I think it's worth looking at.

AQ2: Mine was a sort of related question. Surely the problem is getting the institutions designed in the first place. How can you actually establish an environment in which institutions will be designed in a sort of deliberative enlightened manner themselves? Surely the design of institutions game is the same as any other political game as so those people designing institutions will design institutions in their own interest and not for the distant future.

KS: The issue of institutional design is always a tricky one. You're quite right that the incumbent regime and the incumbent powers that be will not sit on their hands while all kinds of things are going on that might undermine them. Nevertheless, opportunities occasionally present themselves and if one has a plan on the shelf one can pull it off. The 70 or 80 founding fathers of the American constitution met in Philadelphia in that hot July of 1787 and they were simply presented with an opportunity, namely a regime, the Articles of Confederation, that simply was failing and so they had an opportunity and Ben Franklin was quite right when he insisted upon secrecy at that constitutional convention with the expression 'we have to hang together or we all hang separately'. That is, they knew that they were engaging in something that bordered on treason, but nevertheless, as the famous New York politician, Boss Plunklett of Tammany Hall said, 'I've seen my opportunities and I took 'em'. I think that, in a sense, one can't write down a programme for how these things get done. It's kind of interesting_

[TAPE ENDED]

[SIDE TWO]

KS: To take another example, the Colombian Constitution of 1992 actually had a clause requiring a 'conference' on State reform, at least laying out the possibility that these
issues could be discussed and particular plans could be formulated, perhaps to be implemented if an opportunity arises but I can't write the script however in which that opportunity is produced, so I don't think we know a lot about how things get going, but certainly even in the absence of that we ought to know what we're looking for, you know, just in case an opportunity presents itself and so that's really my side of the block, that's the side that I work and I think that's the side that Madison worked.

AQ3: That was a very Madisonian presentation because it was actually, quintessentially, a sort of an American presentation representing as being a kind of general political economy presentation and I think listening to it from a sort of Eurocentric perspective, people might be puzzled about two things. The first one was evidence that short-termism is the crippling political problem that you think it is and maybe the World Bank think it is and if we thinking of it from an European perspective where virtually no political party has every disappeared, except the Christian Democrat Party and maybe a couple of parties in Greece, where we have life long bureaucracies with career plans that are very insulated, where parties can, you know, change leaders and substitute people who look in danger of behaving in a way that will endanger the long run position and reputation of the party. It all seems a bit problematic to focus on short-termism as the sort of key political problem and even if we were to go to the USA and think about what are the key political problems in USA, what are the things that the US political system for all its many great qualities that you're justifiably proud of, it has a fundamental problem with not being about control guns, it has a fundamental problem with locking up with 1 million people in jails because of political responses and those are very long term problems, they endure absolutely unchanged and some people would say things like the gun control thing is never ever going to be changed in the US political system. Now is that just a small scale problem on the margins or is that a large scale institutional design defect and doesn't it suggest really that the sort of economical short-term thing is a sort of front of house problem but it's not really a big problem in political design.

KS: Let me disagree with your premise. I am not the US ambassador to Great Britain, I am not here to represent the United States, I have come neither to praise nor to bury it. It's just a data point to me and James Madison, when he was doing all this wonderful work, was also not a citizen of the United States of America, indeed he was constructing that new nation. Alexander Hamilton actually was purely British, by birth, having been born outside the American colonies. But the point is I'm not interested in arguing for replicating American institutions everywhere and I would also not claim that only American institutions like the United States senate have institutional design features that discourage
or deflect or reduce the problem of short-term orientated professional politicians. There may be lots of other institutional arrangements for accomplishing that and lots of other places in the world that have experimented with institutional arrangements that fair better or worse. What bothers me and I will actually not so much put it back to you, Patrick, but just to have others of you out there ponder this, my inclination, my intuition when I began thinking about this was to reject the view of social planners and technocrats to purge planning of as much of politics as you can, that just rubbed me wrong and so, again, I concluded my lecture by saying 'embrace the political' as my message. But, I'm not a pure embrace the political type. There are some things that I rather think ought to be insulated from politics, quite apart from private lives and all of that. One is the administration of justice and indeed, in the United States and in many other democracies justice is administered in a manner which reduces, if not entirely purges, the process of politics. Political authorities are involved in the appointment of judges and the writing of law but the actual administration of justice is protected from political meddling.

A second area in which there is a growing consensus that the activities should be removed from the workaday lives of politicians is monetary policy and the Bundesbank is held out as an exemplary instance of it, the US Federal Reserve System similarly and the new Labour government has as one of its very first acts liberated the Bank of England from political control. There can be a question mark put after that. The term of bank governors I understand is only three years which means that their political futures can still be controlled by the incumbent government, so it's not quite as liberated as the very long-term governors of the Federal Reserve System, for example. But again, monetary policy and the administration of justice seem to be two areas in which intuitively I think it's a good thing to limit the inclinations of politicians in their workaday lives to meddle too much and indeed, Ulysses like, American and German and now British governments have chosen to tie their hands, at least wrap them loosely, if not tie them firmly with the administration of monetary policy. So there clearly are some advantages in which politicians have disabled their own discretion and these are areas in which for reasons I cannot personally identify I agree with. So, it's quite clear that there are some problems that yield well to the solution of insulation from politics but I don't know how to quite draw a box around policies and say it's this set of policies that ought to be more or less protected from political intrusion but not that set of policies. But I do think that it is political meddling with mostly short-term things in mind that tend to distort the sorts of things that the World Bank types are all upset about.
AQ4: I am neither an economist or a politician so I apologise if this is a very nave question, but to me what's more likely to happen to the goose is that it will be pumped up with chemicals so that it will produce as many golden eggs as possible with the possibility that in the third generation it will cease to be able to reproduce at all. So my question, [microphone went off here] some of the institutions in society that I think are most worth preserving are things that are gradually eroded and so the generations that are alive now or who have the power, the younger generations to lobby against what the powers that be are doing won't be alive to see the worst effects of it, a manufacturing base that's eroded, an environment that's destroyed, a welfare state that's undermined. How does one motivate people who even they won't be directly affected to take this position against short-termism?

KS: That's a wonderful question because it is my research programme, my research question for the next three years.

AQ4: I should have been a professor

KS: I won't launch into my second lecture. But let me disabuse others a little bit and it came as surprise to me as well. It comes from looking at the data about how different age cohorts respond to public policy issues. There is a romantic notion that the older generation, and indeed older generations of politicians as well, care about the future. They care about how the future will perceive them, their place in history if you will and are very far-sighted and it is the younger types that are much more focused on themselves and short-term concerns. There is considerable time series data on public opinion in the United States broken down by generational cohorts and what one finds is, perhaps not surprising, if you ask seniors, sort of 65 and older, what the most pressing problems are that face, in this case, the United States, it tends to be, healthcare for the elderly, crime and pensions. If you ask people 'would you be willing to have your taxes raised to spend more for education, or the environment' two very long-term focused things the elderly are the most resistant. Most oppose to spending additional tax dollars on education or the environment. If you look at younger cohorts, by younger cohorts I mean those from say 25-50, they are much more focused and much more willing to spend money on education and the environment, and surprisingly very willing to spend money on social security pensions, on healthcare for the elderly and on crime reduction. That is there is asymmetry and the asymmetry runs in exactly the opposite way from our more romantic notion. It is the elderly who are most self-interested, self-focused, self-centred and it is the young that are much more open minded. Now it's not all sweetness and light on the part of the young,
the young are saying, 'you know, if social security disappears I'm going to have to take care of granny. If they don't fund nursing homes she's going to live with me'. But also it's this notion that I'm not merely subsidising this generation of elderly, I am supporting a system that in principle will be there when I am elderly and so it is seen as something of an inter-generational deal and if there is any shortcoming to this inter-generational deal it is on the one hand the fact that the elderly are not reciprocating and on the other hand we have a problem in the United States and in most of the western economies of a great big generation. My year was the leading year of that generation, the baby boom generation, that is the big mouse going through the snake's body that will impose tremendous hardships on my children and grandchildren unless some alternative to the pay as you go pensions schemes is found. So, it is both the narrow mindedness and self-centredness of the older generation relative to other generations and the contemporary problem of a big generation, the baby boomers followed by a small generation, the baby dearthers that has unbalanced this intertemporal deal, but I think, you know, the idea of an intertemporal deal can sometimes be sustained despite these problems but I was surprised by the fact that we found that it is seniors not juniors who are most self-centred, short-sighted and self-focused.

BL: Sounds to me like an argument for killing the elderly.

[Laughter]

BL: Keith.

KS: There have been some proposals to take their vote away.

[Laughter]

AQ5: In sort of institution analysis there's often a distinction made between kind of external solutions and internal solutions to political problems. External ones would be institutions which are chosen, designed in some sense and internal ones would be ones which are evolve, might be conventional behaviour. Now, you entirely talking about external institutions, indeed you suggested that anthropologists that believe that, you know, behaviour of the head of the family hard-wired, it might be wrong, it might be an institution but you seem to be for an external institution. But, of course, in that case it could be an internal institution, it could be a convention which has been chosen over time. Now, you might say, okay, you know, you are talking about politics and the state and
external institutions are your main concern even if I might object that in your parable let there be less <INAUDIBLE>, but the question really is a very general question. Do you not feel that particularly we might think of kind of elite interactions or interactions between politicians and their bureaucrats, internal solutions conventions which have evolved over time might well provide solutions to your source of problems rather than redesigning some what role, I mean did you have any role for these internal_?

KS: Well, I have not gone so far as genetically modified human beings but, of course, any circumstance is going to be governed not only by externally imposed constraints or incentives but also by the internal practices of groups of individuals or even inside the heads of individuals and what might, at one period in the history of a group, been the result of an external imposition in subsequent history might well be forgotten and it will become a form of conventional behaviour that everyone thinks of as normal and appropriate and there's rarely any deviation from it without pulling out the club behind the door that might have been there in the first instance. So, I think clearly there are combinations of these two things but I think for constitution writers and a World Bank and other international organisation do-gooders it is wise to be somewhat cynical about these conventional forms of behaviour and, at least, to ask what happens if they fail? What happens if they don't evolve? What happens if we can't depend upon them? That is, is there some design that is absolutely artificial, is there some design that will induce at least a modicum of good behaviour despite the absence of altruism, for example, or a bequest motivation on the part of individuals to take care of their progeny. Can we encourage that kind of behaviour nevertheless and again the data that I referred to suggests that on average the elderly tend not to be concerned about their progeny relative to their concern about meeting very, very pressing needs and concerns of their own at the moment. So, I think we have to ask how to artificially extend the time horizon of people who may not be naturally disposed to do so. So, that's not to say there's no place at all for conventional behaviour or norms or cultural practices or even religious practices but in fact the question, I mean I think Madison's hypothesis was 'men are not angels' and let's start with that premise and work ahead.

BL: Thank you very much, Ken. I think you've been very generous with your time horizon and in consequence I think you should be liberated and permitted to go. Thank you very much indeed for a very stimulating and provocative lecture.

[Applause]