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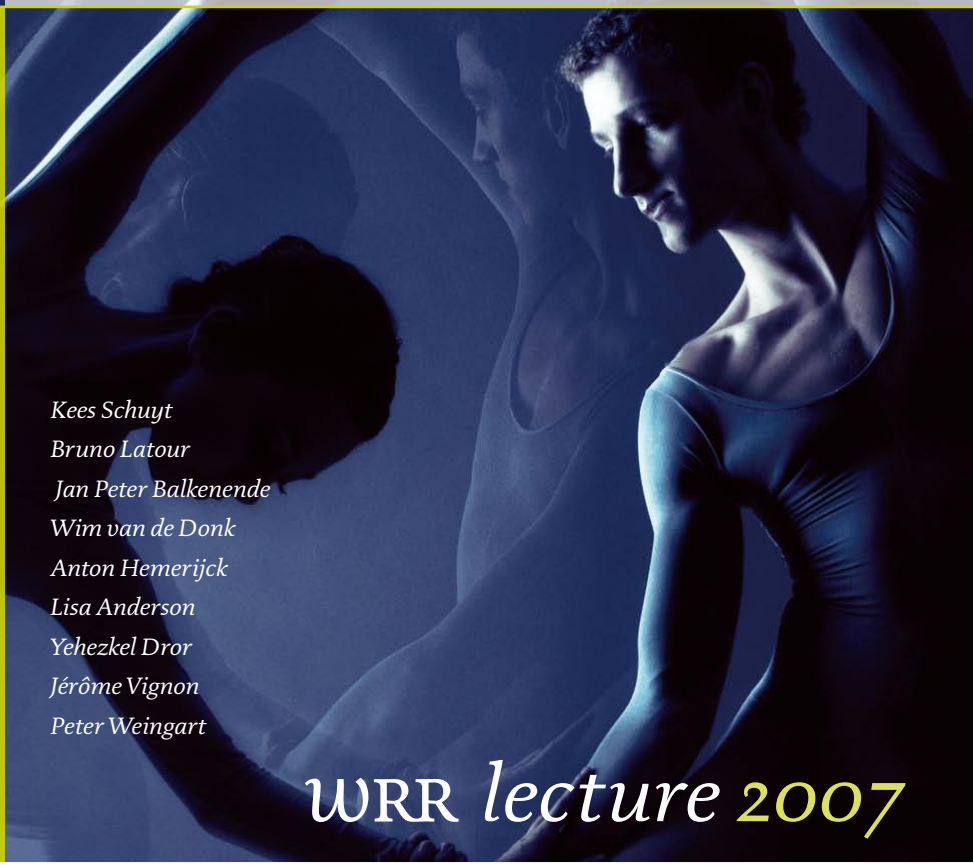
SCIENTIFIC COUNCIL FOR GOVERNMENT POLICY

The Thinking State?



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WRR *lecture* 2007

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Dr. Paul den Hoed and Her Majesty Queen Beatrix with *Op Steenworp Afstand*, published on the occasion of the 35th anniversary of the WRR

PREFACE

On 22 and 23 November 2007, the WRR celebrated its thirty-fifth anniversary by organising a two-day symposium on the relationship between science, policy and politics. The central questions were as follows. Is a state capable of thinking, and how can it be supported in doing so? Which developments in society and science influence the relationship between policy and politics? How can learning be encouraged in a democracy, and what do we really mean when we say that democracy cannot exist without learning? Finally, under which conditions can scientists contribute to the quality and future-proofing of government policy?

These are all questions that reach to the heart of the work of the WRR but also raise further questions; the mission of the WRR has not changed, but the circumstances within which it performs its task have. The Council therefore marked its anniversary by dedicating a symposium to these issues. At a time when there is once again discussion on the best configuration and functioning of an advisory and knowledge system, it seemed appropriate to address these questions in a fundamental way.

During the first afternoon session of the symposium, in the greatly esteemed presence of HM the Queen and the Prime Minister, speakers such as Bruno Latour and Kees Schuyt shed their illuminating light on these questions. During the second day, a selection of international experts were on hand to discuss these issues with the members and staff of the WRR and some eighty distinguished invitees. The lectures of some of these speakers that contributed are included in this booklet.

The WRR looks back with pleasure on both days, and is delighted to present you with the texts and a DVD recording of the first day of the symposium as a small supplement to the book[1] published on this theme to mark the WRR's anniversary.

Wim B.H.J van de Donk
Chairman WRR

1 *Op steenworp afstand. Op de brug tussen wetenschap en politiek*, Paul den Hoed and Anne-Greet Keizer (eds.)

Prof. Kees Schuyt

THE FATE OF KNOWLEDGE IN SCIENCE, POLITICS AND SOCIETY

Kees Schuyt

I

Two questions are very much at the forefront at this gathering. The first, as reflected in the title of this symposium, is: Can the state think? This question concerns the demand for knowledge in the formulation of government policy and more generally the demand for and usefulness of think tanks. The second question is one I have added myself: If advisory councils did not exist, would they have to be invented? To focus this on the WRR, if this body, established thirty-five years ago in a mood of academic and political optimism, had not existed, would it – or would it need to be – established at the present time, in the current political climate? This is the question concerning the right to exist of the WRR and in particular the objectifiable need for scientific advice in politics and governance. I should like to examine both these questions, in which regard the former question can be answered rather more easily than the latter.

Is a state able to think? No, of course not. No more than a city is able to write a poem or a neighbourhood a novel. One needs to be cautious when it comes to the personification of social systems. But the people who jointly make up the state – are they able to think? Can computers think? Can politicians and administrators reflect on future policy or their own policies? Seen in this light, the topic of this symposium throws up some exciting new questions. The Dutch psychologist Nico Frijda has compared the ability of computers to think with human intellectual capacity and his answer as to whether computers could think was a clear 'no'. Thinking implies self-reflection and creativity and opening up new, as-yet unexplored and no more than visualised pathways. In response to the question as to whether people could think he replied "yes, but only a little bit". That limited ability is, however, at the same time sufficient to influence society positively.

II

Optimism concerning the utilisation of scientific knowledge has also underpinned the formation of many think tanks and this truism

persists to this day. Political parties in many countries have their own think tanks. Ayaan Hirsi Ali went to America to work at the American Enterprise Institute in what is regarded worldwide as an important step in her career. Knowledge is power. Knowledge – especially scientific knowledge – has become an inseparable part of government policy. When foot and mouth disease broke out in Britain recently, a scientifically-based scenario was in place for limiting the epidemiological consequences as quickly and effectively as possible. In a comparable crisis situation in the Netherlands, after the Chernobyl disaster, former Minister Pieter Winsemius and his staff were in a position to make a swift and accurate appraisal of the ensuing risks, thereby helping gain acceptance for the emergency policy. Upon the outbreak of sars, scientists played a prominent role in the necessary decisions and policies. Scientific insights provide legitimacy for governance and policy.

At the same time, there was something special about the establishment of the WRR in comparison with other think tanks: The Council has no party affiliations, enjoys an independent status at some distance from its client and is able independently to select the topics on which advice is provided. In my own words, what is particularly characteristic of the WRR is the fact that it does not have anyone *above* it, in the way that civil servants always have a minister above them, of whom they need to take account in forming policy; nor does it have anyone *behind* it, in the way that politicians always have to look over their shoulders to make sure the electorate is prepared to follow them; and the WRR has almost no one *beneath* it, in the way that big research institutes are sometimes obliged to accept assignments in order to keep their staff employed. In short, the WRR is small and special. These characteristics give the WRR a unique position, and the question concerning the *raison d'être* of such an advisory body will need to take this far-reaching independence into account. My answer to the intriguing question as to whether the WRR would still be established in the present day is something I will return to later; first of all I should like to examine a number of changes that have taken place over the past thirty-five or so years, especially the changing fate of scientific knowledge in relation to politics and society.

III

The optimism with which science and scientific knowledge were approached in terms of policy or more broadly politics in 1972 cannot be divorced from the status of science at that time and the related idea of rational, systematic policy formation. There was among the scientific community at that time a widespread acceptance of neo-positivist attitudes, including those concerning the distinction between norms and facts and between normative statements and factual assertions. Scientific knowledge had an edge on everyday knowledge. Popper's demarcation line of falsifiable knowledge held out the prospect of scientific progress, and that progress was projected onto policy formulation for the future: Government policy too could be consistently improved and made more rational and effective with the aid of science. The so-called malleability of social processes was fed by science, in the same way that nowadays a different kind of malleability – that of individual behaviour – is once again being encouraged by all sorts of new discoveries in various areas of science. That such rational policy formation and surveys of the future would rapidly disappoint in practice was something that had still to be discovered from experience. The assignment to draw up surveys of the future also bore witness to this assumption of rationality. Anyone who now examines the WRR report of 1977 entitled *The Next Twenty-Five Years*, to which the cream of the Dutch scientific community at that time contributed in all sorts of areas, is forced to conclude that many social trends over the next twenty-five years were not foreseen and that much of what was predicted failed to come about. But that happens in the best of scientific families.

IV

Much has changed between 1972 and now, in both science and in politics and society. The changes in society are reflected in the changing topics on which the WRR has advised. I will say something in a moment about the changes in politics. With regard to the place and prestige of scientific knowledge not a great deal has changed, but much has changed when it comes to the concept of knowledge itself and attitudes concerning the formation of knowledge, and it is these latter changes that have directly affected the belief in the value of scientific advice for government policy.

First of all let us examine what has not changed greatly in relation to science. To me, it is notable how large and sustained the growth in scientific knowledge in virtually all areas of scholarship has been over the most recent period. And that train of increasing knowledge hurtles on, unimpeded by old cultural or new religious taboos. A significant increase in knowledge is taking place everywhere, finding its way into industrial products, the shaping of the landscape and urban development, all sorts of new technologies, the economy and ecology, dietary habits and health care. The optimism concerning scientific knowledge and its social relevance have not, in my view, changed greatly; what has changed is the optimism concerning the direct utilisation of that knowledge in policy. Despite ongoing social impact, the status of science has changed. The following factors have, in my view, played a role in this regard.

In the first place, the premises of the neo-positivist view of science came under fire from around 1970 onwards: Scientific progress is not something internal to science itself but also depends on a large number of social factors. Thomas Kuhn and other post-positivists put into perspective a number of sharp dichotomies, for example between nature and culture, between norms and the determination of facts and between detached scientific knowledge and perceived reality. This does not mean that those distinctions are entirely untenable, let alone unusable (the debate rumbles on to this day), but since the 1970s and 1980s, when the sociological turn became evident in the philosophy of science, science has become increasingly viewed as socially embedded and no longer rests on an unshakable pedestal. Science is regarded as the work of man. The investigations into the production of knowledge in various 'knowledge factories' have contributed towards this. This has made it easier for outsiders to criticise scientific knowledge, while the internal correctability of that knowledge has also become more problematical. The social sciences have proved particularly sensitive to these internal scientific changes: There are few matters in the sciences on which people are agreed.

As insight into the materialisation and maintenance of knowledge grows, that scientific knowledge also becomes viewed as part of social positions and interests. It also becomes more easily criticisable, not

on the basis of substantive arguments but on the grounds of more or less explicit *ad hominem* arguments. The characteristics of the maker of knowledge are scrutinised, and not the substantive reasoning and complexes of facts put forward. In my observation, the WRR has recently been less troubled by this than it was, for example, in its early days. It can of course be maintained that in previous times too, delivery of the scientific products was not value-free and that the producers of such knowledge also adopted social positions, but specification of the social embedding of knowledge production calls for a different attitude towards dealing with knowledge and science. Not everyone is used to doing so, which may explain why science is often subject to ambivalent and paradoxical expectations: Either there are still high expectations of science or it tends to be dismissed, particularly if the results do not correspond with existing and cherished beliefs. These comments refer not just to policy-oriented scientific research but also to academic research, which may similarly be regarded as much less absolute and value-free than assumed in the optimistic years of the 1970s and 1980s.

V

These changes were largely of an internal nature in science. External factors have also contributed towards the changes in attitude regarding knowledge. The concept of knowledge has been broadened with the introduction of information technology. Almost everything, or at least a great deal, is currently termed 'knowledge', ranging from a simple web page to the finest knowledge centres. I was recently invited to the opening of a brand-new knowledge centre for a law firm. It turned out to be the old library but which was now equipped with all sorts of new online connections. The use of the word 'knowledge', at least, has increased exponentially in a knowledge society, but in the process appreciation of knowledge itself has got somewhat lost. Is it still possible to distinguish knowledge from information? May information be termed knowledge if nothing is done with that information? Is it possible to make a pragmatic demarcation between knowledge and information, between scientific knowledge and knowledge held by appliances and smart robots, between tacit knowledge and explicit knowledge. 'Knowledge is in oneself,' I often hear captains of industry say, like veritable sages from

the east. Everyone is a knowledge carrier, and to a certain extent that is true. But in that case, everyone could also contribute towards the ongoing extension of knowledge and to the further scientific realisation of human society. Do we then in fact need think tanks, if everyone is able to feed on the tree of knowledge? I hope that you will by now have noticed that I have myself taken part in this loose definition of the concept of knowledge over the past five minutes, whereas you may in fact have expected from a scientific practitioner a clearly defined and demarcated concept, to make everything clear and distinct again.

In this way, the change in the concept of knowledge and the significance of knowledge contributes towards the delegitimation of scientific knowledge, except where it is at a great distance from the daily world of experience of the public, such as the remote fields of string theory or cell biology. The respect for 'higher' knowledge continues, while knowledge has also become more ordinary.

However, apart from the extension of the concept of knowledge I am also aware of a narrowing of this concept, one which has become incorporated into the discourse concerning the knowledge society. Knowledge is narrowed down to economically-useful knowledge. That applies especially to the knowledge society or the Lisbon agreements. In fact this is not particularly new; the emphasis on economically-usable knowledge goes back a long way. The difference now is that this usable knowledge is being detached from the traditional institutions of culture and science which, while they did not produce directly useful knowledge on call, did foster a scientifically-minded culture from which many new discoveries and other creative activities and undertakings could arise. The Lisbon targets are indeed at risk of becoming narrowed, for example into a target such as 60 per cent of the population aged between twenty-one and twenty-seven must at least obtain a higher vocational education certificate. If an IQ of approximately 110 – 120 is required in order to obtain such a certificate, it may even be calculated that standards in this form of tertiary education will need to come down if 60 per cent of the young generation is to qualify. In other words, an overly one-sided or too specific a target can nullify the attainment of a general improvement in the level of knowledge in our society. A conception of a knowledge centre as an

old, fairly autonomous university in which freedom and unfettered research remain possible may well contribute more towards the growth of knowledge than annual targets expressed in the number of certificates or other economically-determined indicators.

Finally, technology as an external driver of knowledge also plays a role in the changes to the knowledge landscape. One may seek to change or improve people's behaviour by means of a loud and clear moral appeal, but it may be that technologies are able to regulate behaviour more efficiently. If one wishes to enforce the 100-kilometre-per-hour speed limit on motorways more effectively for climate reasons, this can more easily be achieved by fitting smart speed governors in all vehicles than laboriously trying to persuade citizens to modify their behaviour by means of all sorts of norms and threats. It's better to have a car that refuses to start if the driver has drunk too much than to conduct three-monthly information campaigns.

VI

Reviewing all these changes in terms of this unduly brief account of the changing place of knowledge and science, it does not become any easier to answer the question concerning the need for scientific policy advice, for example in the form of a Scientific Council for Government Policy. The changing political climate is also not conducive: Partly in response to the media, politicians and administrators like to be in direct touch with the public. They take more notice of focus groups and the electorate than of the traditional frameworks of the state. In consequence, politicians also appear to be less interested in and have less need for solid scientific reports from an advisory Council seen as dating from some bygone age. The familiar associations aroused by reports are that they are too thick, unreadable, over people's heads. Something can of course be done about these negative perceptions, but the fundamental question remains: Do present-day politicians and administrators still have much to gain from scientific advice when it comes to their own policies and decisions? This appears to me to be the core issue of my question. But I shall wait a moment before giving my answer, as it is advisable first of all to provide a bird's eye view of the carryover of WRR reports into government policy or more widely in the scientific community and society.

VII

This topic is in fact too complex for my brief introduction. The knock-on effect of this particular kind of scientific advice, which is fairly unique in the world, is now itself the object of scientific investigation. Two Ph.D. studies are currently underway. For review purposes I am obliged to work on the basis of observations and personal participation. And when it comes to assessing the contribution made by the WRR it has always been and remains the case: Past results do not provide any guarantee for the future. At the same time, without any exaggeration or chauvinism, the WRR is able to look back on results in the past. It would not be feasible to characterise all the seventy-nine reports over those thirty-five years, together with the numerous working documents, preliminary and background studies, but a certain pattern does emerge if one looks at the recurrent topics that have been the subject of advisory reports:

- Hard economic analyses of industrial policy and the business climate, the changing attitudes towards economic growth, the recurrent or more accurately ongoing problems concerning the labour market and innovation, and labour force participation. A number of significant policy changes were made in response to these reports, in which regard the question still remains: Did the policy change come afterwards or was it a matter of the growing symbiosis between policy and science at a number of critical points in the course of government policy?
- Similarly hard analyses with regard to agriculture and environment, a field in which the WRR has not just exerted influence on government policy but has also built up a reputation in the academic world; spatial and urban developments may also be added under this heading.
- Repeated reports concerning the need to review social security; these reports, too, often contained an uncompromising message not followed up in concrete policy terms until several years later; the recommendations of 1999 concerning ageing remain current and the relevant scientific arguments and insights could help overcome the current political impasse in this area.
- Numerous reports on Europe and foreign policy, in which regard it should be noted that Europe and the rest of the world will always be unfinished business, meaning that this advisory area consisted

primarily of buttressing government policy and, in particular, clearly formulating the policy choices that were available and, in some cases, urgently required.

- Notable reports published every ten years or so on immigrant minorities, in which regard the awkward Dutch concept of '*allochtoon*' or non-indigenous person – originally used in 1938 for Brabant and Twente labour migrants who left the poor countryside for Rotterdam – was popularised by the WRR. The later in date these reports, the more controversy they arouse – which in itself raises all sorts of questions.
- Reports concerning the functioning of local government, as well as the governmental advisory structure; somewhat wider in scope, the functioning of the state and democracy under the rule of law; this too appears to be a never-ending story, although the sometimes carefully selected analyses – such as 'Safeguarding the Public Interest' – have assumed an influence and significance of their own.
- Education reports, from secondary to higher education; the WRR in the role of preparing the way for educational renewal, whereby the recommendations that were initially dismissed out of hand proved years later to have been a well-founded choice. I am thinking in particular of innovative college education.

I do not intend to single out individual reports, but what is certainly noteworthy is that the demonstrable carryover into government policy of a large number of the reports has been characterised in particular by thorough scientific analysis, based on theories and theoretical insights developed in the disciplines in question in combination with a sound collection of empirical data. This in turn has allowed distinctive and in some cases idiosyncratic reflection concerning the relevance of these data for new policy opportunities and solutions to identified problems. If the reports were not well received or failed to give satisfaction, it was the WRR's fault; if by contrast they paved the way for successful policies the government or politicians could take the credit: Success in policy circles has many fathers and mothers. But that is of no account. Anyone unable to put up with that kind of thing should not become an adviser, but anyone who fails to heed serious advice should, in my opinion, not become a politician. If reports were too full of opin-

ion or were outside the scope of practical government policy, they would not cause any stir.

In this rather crude, broad-brush way, I am trying to find an objectifiable criterion in order to answer that awkward sixty-four thousand dollar question: If the WRR did not exist, would there still be a clear need for it within governmental and political circles? Before addressing this question, I should like to illustrate the search for a sound and objectifiable response by means of an example.

VIII

Over the past few years and once again very recently, a number of nasty violent incidents have taken place in Dutch secondary schools, in which pupils have wounded and even killed each other, with one pupil shooting a teacher dead in the dreadful year of 2003. I regard these incidents as at least as shocking for Dutch society as the two well-known political murders that changed the political climate in the Netherlands. Do politicians and administrators need scientific advice in order to determine their policy options?

Solid, interdisciplinary scientific analysis of the rise in violence among young people would designate the often neglected role of the widespread availability of small handguns and daggers and butterfly knives among young people and the price and growth market of these weapons as a compelling factor; anthropological knowledge would point to the sense of honour and codes of honour associated with the carrying of knives, and in general attention would be drawn to the market differences in the incidence of violence within and between states and within and between regions and urban areas. In brief, a great deal of knowledge is already available that is not being used at all. The same applies to all sorts of other subjects.

Important and, in my view, highly necessary analyses of key topics of government policy should in my view form a combination of:

(1) A careful collection and thorough analysis of data;
(2) plus carefully selected scientific theories and theoretical insights;
(3) plus the further specification of the urgent problem and relevant aspects on the basis of theory and the empirical data;

(4) plus a reflection on the whole with a view to policy options, including the parameters that need to be set for any policy;
(5) plus a well-selected policy communication drive.

If scientific policy advice possesses this combination of attributes – and in my view the best reports of the WRR do indeed display that combination – the WRR would then also be set up in rough and turbulent political times or, more pointedly, would have to be set up. And with these two statements – the hypothetical 'would be set up' and the normative 'would have to be set up' – I have touched on what is in fact the most difficult assignment for scientific policy advice of all: The symbiosis of knowing and wishing, of fact and norm, of science and harsh reality.

Prof. Bruno Latour

HOW TO THINK LIKE A STATE

Bruno Latour

Your Majesty, ladies and gentlemen, dear colleagues,

What even the great philosopher Plato failed to build, the Dutch have been able to create and to maintain: Namely a completely independent 'think tank', the 'Scientific Council for Government Policy', which has been able to provide the different branches of government with topical advice while simultaneously remaining part of the machinery of the State and yet able to draw as much as possible from the powers of thought. Philosophy in action, philosophy for action.

If it is true that the nature of what is the State and what it is to gain knowledge have always been connected, we should welcome the occasion provided by today's anniversary of this carefully-crafted institution to revisit the very notion of what is a 'think tank'. We often metaphorically say that States have 'Heads', but we rarely inquire as to what sort of cognitive equipment they should be endowed with, not to mention the neurophysiology of those artificial brains... This is why to honour this 'thought reservoir', I chose to examine the question of the sort of thinking the State is supposed to possess.

There is some (I hope unwanted) irony in having invited a Frenchman to participate in this celebration, since not only was France never able to fulfil such a Platonic dream as yours, but she is also a country where the cognitive functions of the State are very much in trouble. I won't go as far as saying that I am speaking to you as a representative of a *failed* State... but almost – at any rate of a State which has a lot to learn with respect to cognitive equipment, from yours.

Fortunately, I am myself a traitor to my own country, since I am not only a total *Dutchophile* (even though the term, I am told, does not exist) but also a *pragmatist* philosopher, namely a disciple of John Dewey.

'Pragmatism' in this lecture should not be understood as a synonym of 'worldly' or 'practical' (nor as the name of a political party) but

rather as the attempt made by John Dewey in the 1930s to redesign the tasks of democracy according to a *realistic* definition of what it is to know something scientifically.[1] As John Dewey said in *The Public and Its Problem* (a brilliant title for our present historical situation): "The State must always be rediscovered".[2] A French pragmatist is a *contradictio in terminis* and this is why I gathered the courage to address you on this serious but also feisty occasion.

How can we come about rediscovering the State this afternoon? First, we should leave aside the idea that the State will wither and become irrelevant through the advent of various transformations coming from the Left or from the Right: Revolution, communism, market forces, internationalism, networks of cities, regions, Europe or the internet. Contrary to all expectations of its progressive obsolescence, never was the rediscovery of the State more important than today. We all know the reason: Never was the State so busy, so overburdened than now. Every day we discover to our great dismay *more* elements to take into account and to throw into the melting pot of public life, instead of *less*.

Not only law and order, not only commerce and war, not only industry and class struggles, not only city life and health, but also, or so it seems, the entire environment; from the quality of the air to the redirection of rivers, from the quotas of herrings in the North Sea to the slow disappearance of bees and thus of pollinated flowers (can you imagine Holland without herrings and flowers?! Not to mention The Low Countries under the sea…). What the nightmares of the darkest totalitarianism could not even anticipate, that a day would come when the State would have to manipulate the climate itself, the unfortunate, the unprepared, the fragile democratic States of today now have to take in charge –in addition to all the rest. Because of the various ecological crises, the State is now burdened with the destiny of the entire *Umwelt*. The question of breathing freely into the atmospheres of democracy has simultaneously become a metaphor for freedom and the dire literal reality of climate control – to use a simile from Peter Sloterdijk (a great philosopher who, in spite of having the name of a Dutch train station, is actually German…).[3]

Fortunately for you, of all the nations on Earth which are struggling to rediscover how to redesign a State able to provide a breathable space for its citizens through 'climate control', the Dutch are well-advanced. How fortunate you are, you Low Countries who knew about the ecological crisis at least a good millennium before it came to the public consciousness of other lands; who have known all along that the most important branches of local governments were the ones in charge of dykes and polders, or pumps and mills, or floods and meanders; and that there was no distinction to be made between the government of people who could at any point riot and destroy and the government of seas and rivers which could at any point over flood and ravage the whole *common*wealth.

On all these questions of political ecology, the Dutch, for sure, are very much ahead of all the other States: It is in your blood to know, with a very mordant type of certainty, that a failed State would immediately mean a flooded land and a disappearing country. The contrast between *Good and Bad* government, a contrast so magnificently painted in Lorenzetti's fresco at the town hall of Sienna, is not for the Dutch a matter of metaphor, but is literal indeed.[4] A matter-oriented democracy is also, truly for you, the little finger that the little boy of the legend put in the dyke to make sure it did not burst. . . Is your Majesty not also in some really new and very old sense the Queen of an artificial *Umwelt*, for the fragility and resistance of which you are simultaneously seal, symbol and warrant?

For all those reasons, one thing is certain: The State is not about to disappear.
Rediscovering the State as something that is in charge of the whole *Umwelt* in its charge has one second important consequence: We might finally abandon the sterile and useless debates between a type of limited organisation, the State, and its 'fully rational' alternative, the Market. From a pragmatist point of view, in the twenty-first century, the violent struggles over the questions of finding an alternative to the State seem as remote as the discussions about the role of the Sacraments in the Low Countries during the Golden Age. It is amazing that such a dispute could have passed for so long as a serious intellectual endeavour, so obvious it is for us now that there

is no alternative to the State – on condition that we *rediscover* its realistic cognitive equipment.

The problem is to find what sort of knowledge the State is able to gather if we wish to rediscover it. To this search for the cognitive function of science *and* of the State, we give the name of 'political epistemology'. The idea is simple enough: Every change in our conception of knowledge-acquisition instruments must have huge effects on what we can expect from the State to envision and to foresee.[5] And vice versa, every inquiry into the limits of collective action must throw some light on what we may expect from the social and natural sciences.[6]

This is why John Dewey and his friend Walter Lippmann are so important for us today in rediscovering the *Liberal* State. For them, liberalism never meant the sterile opposition between State organisations and Market organisations (how can anyone deny that 'The Market' is nothing but a complex bundle of carefully devised and fragile organisations)? It is not State versus Market, but organisations in the plural (the State itself is not, of course, a single agent) on top of other organisations. True Liberalism consists in being freed from the Visible *and* from the Invisible Hands. In other words, the thinking State needs its right and its left hemispheres... We are, rather, faced with various modes of organisation at once both partially visible (that is, accountable) and partially invisible (that is, unaccountable). Rediscovering the State means replacing the obsolete quarrel between modes of organisation with another question altogether: What does it mean for any agent whose action has unforeseen consequences on other agents to be made *accountable*? And here I want you to be reminded of all the meanings of this word 'account': Accounts are intellectual technologies that make visible to the collective eye of the State what it is to envision any state of affairs.

Why has this mode of organisation so often failed, as James Scott has brilliantly shown in his book *Seeing like a State*?[7] For a reason the French, alas, know far too well: Because the 'common good', the 'public good', was not supposed to be produced by experimental and carefully accountable procedures of inquiries. The 'public', the

'common', the 'disinterested' is supposed to be, *by nature and once and for all*, radically different from the 'private', the 'commercial', the 'selfish', the 'interested'. There are people who claim, because they are in a position of surveying those accounts, that they know what is the public good without any additional empirical work of inquiry about the consequences of their remedies.

John Dewey's great insight is that, on the contrary, there is nothing more complex, nothing more susceptible of mistakes, nothing in greater need of specific and constantly-refreshed inquiries than to detect what, at any point, is the public's problem. I quote: "Observations of consequences are at least as subject to error and illusion as is perception of natural objects."[8] In this sentence, what is important is the word 'consequences'. Whatever has been planned, there are always unwanted consequences for a reason that has nothing to do with the quality of the research or with the precision of the plan, but with the very nature of action. It is never the case that you first know and then act; you first act tentatively and then begin to know a bit more before attempting again. It is this groping in the dark that is so difficult to map, especially when it is done by millions of people over the lives of millions of others.

What has ruined any Statist pretension to rule is not the necessity of the institution itself, but its specific way of devising its cognitive competence, its epistemology, its theory of knowledge acquisition. The State, to paraphrase Lippmann, is not allowed to think properly in a way in which it can learn anything about what it is to compose the common good.[9] The Heads of States, to pursue the metaphor, have never been furnished with any realistic knowledge-acquisition apparatus. They are portrayed either as seeing it all or as totally dumb. Political epistemology alternates between social engineering followed, when it fails, by a cheap version of Machiavellianism. The lessons of distributed cognition have never been learned.[10]

The multiplication of tentative mechanisms, on the other hand, has always been the forte of what passes, wrongly, for the rational alternative to the wasteful folly of the State, namely Markets. Naturally, there is nothing especially rational in market devices, but what are so

interesting, what are so lacking in claims of defining the public good, are precisely the *devices* themselves, which Michel Callon and his colleagues call for that reason "calculative devices".[11]

What is so great in the calculation of bottom lines is not their famed rationality, but the very simple effect of rendering calculable and thus partially accountable what it is to distribute roles and powers and to allocate resources. It is pure folly to imagine a macro-rationality that would cover the whole Earth and calculate the rational outcome of all the goods and services (this is an absurdity as criminal when it comes from the proponents of the Visible Hand – a totalitarian State of global proportions – as it is from the propagandists of the Invisible Hand – a single world market) but it would be even more foolish to imagine that we could do without any device to render accountable the exploration of the public good.

The Liberal State or the Pragmatist State is not the one that engages in the absurd attempt of 'limiting the State' – the State has no predictable limits known in advance, since the public is always a new problem – it is organisations that are able to escape from the totally implausible situation of being deprived of calculating devices. How implausible it would be to imagine that, though for calculations of goods we need instruments and devices, we don't need them for the calculation of the common good? For the allocation of wealth, we need bottom lines and accounts, but not for the allocation of the commonwealth? The search for the *res publica*, the public thing, could be done at no cost in equipment, in inquiry, in exploration?!

But the Liberal State is not only the one freed from the idea of a Visible Hand without any calculation equipment; it is also the State freed from the equally silly idea that calculation can *replace* politics. This is the heart of the matter, the one totally hidden behind the smokescreens of the obsolete debate between State versus Market. Accounts help in representing the state of affairs at time 't', not in deciding what to do at time 't+1', nor in predicting what will happen. No calculative device is a substitute for political decisions. The many catastrophes reviewed by James Scott in his book have all been caused

by this confusion between the map and the territory – give me the map, and I will reshape the territory!

What was put inside the thinking Heads of the State has always alternated between two equally improbable political epistemologies: First, the one I mentioned earlier, the one so much derided by Lippmann, that you could know the difference between private and public once and for all and without inquiry; but second, the equally bizarre cognitive notion that once you had calculating devices, you could simply calculate the optimum automatically… This idea of an automated calculation is not only wrong when applied to politics but also to the very history of mathematics (but this is another question that would lead us back to Plato's idea of geometry and his fatal application of geometry[11]). In one case, the Head of the Thinking State is a know-it-all deprived of any empirical knowledge; in the other, it is a moron who claims to replace the intelligence of the situation by a 'mere calculation'. In both cases, politics disappear.

In one case, when the people doubt its intelligence, the State says: "I know what is best because I represent the public good" (which is silly because in truth it has no representational tools of any sort); in the other case, when the people doubt the results of its calculation, it answers: "No one has calculated, the result on the bottom line is the best possible optimum" (which is equally silly because there is no one to be accountable just at the very moment when you need to accept the really hard political responsibilities). True liberalism, the one of the pragmatist, is when you are freed from the two injunctions: "The State says" (and no one knows) and "the Market said" (and no one is accountable).

To be accountable, on the other hand, is exactly this: To be able to give an account, and to be made responsible for what you conclude from it. Without calculative devices, politics is emptied; limited to calculations, politics is gutted.

To sum up this point, I could say that the State was never allowed to *think like a State* but always to think as if it had been struck by a stroke and left with only half of its brain intact. For this reason, it has always

been in need of a regent or a tutor of some sort, provided by one science or another. This is why the Pragmatist State – in Dewey's sense of the word – is so different from the Modernist State. The latter also believed in science, but with this crucial difference – that one of the sciences of the 'Whole' claimed to replace the progressive composition of the common good.[11] Law, sociology, economics, cybernetics, system theory: Everything has been attempted to replace its own original thinking by another that would deprive it of the burden of thinking *politically* like a State. . . Pragmatism links the cognitive abilities of the State not to Science with a capital 'S', but to *Research* – and, as any scientist knows all too well, this is not the same thing at all. Expertise and research are polar opposites.

By contrast, pragmatism wants to have the State become a grown-up at last, finally furnished with a plausible version of what it is to learn, to think, to provide accounts, and to decide. Pragmatists show the way: You need equipment, that is, calculating devices (and it is great that market organisations have invented so many of them) without which there is no way to inquire about what is the public's problem. But then you cannot escape from the burden of being accountable just at the crucial point when the public is to be composed. At this point, no science (construed, wrongly in my view, as an automatism of calculation) will help you. In other words, the 'Whole' has to be described, assembled and composed, not calculated. Such is the contrast I think that should be made between governance (a matter of organisation) and politics (a matter of composition). Those who believe that governance will replace politics are the enemies of the Liberal State. Nothing can replace politics.

This is even more important now than it was between the wars when pragmatism had its brief heyday: As I said earlier, the 'Whole' has now taken a meaning that neither Lippman nor Dewey could anticipate, that is, the *Umwelt* itself, the 'climate control' of the very thing that envelops our lives. It would be a catastrophe of major proportions if, just at the time when the *Umwelt* is to be granted a political expression, the State was being shrunk to nought and falling into disrepute (let me remind you that this year the Nobel Peace Prize was given not only to Al Gore but also to the IPCC, the body in charge of

detecting the link between climate change and human activity, a true 'hybrid forum' of science and diplomacy). But it would be equally as catastrophic if, because of the ecological crisis, another science, this time ecology, was to lord over the State and to claim that it again knew how to calculate the common (that is, the natural) good without any interference from politics.[13] The undisputable laws of nature would, this time, wish politics away; exactly as during the earlier period, the laws of the Market claimed to render the State obsolete. Ecology would destroy what economics had not totally obliterated, namely the task of composing the common good and rendering accountable those who do it.

To render the cognitive abilities of our State experimental (or pragmatist) is even more important now that even the former Nature has been included in the purview of our public existence. To put it maybe too bluntly, politics is always about the blind leading blind. To remind you of this might be a strange and slightly egregious way of celebrating the anniversary of your think tank, but I don't have the feeling that you believe in providing your government with the kind of knowledge that Plato claimed to possess, namely *foresight*. The cognitive landscape of today is much too different. Fumbling collectively in the dark through the multiple canals of feeders and sensors reflects more the ways in which a Pragmatist State may acquire knowledge today about what is the public and what are its problems. Which means, of course, a very lively and diverse set of social and natural sciences, new types of statistical instruments, a free press; but more importantly, the building of the core institutions of the politics of the future, namely the sites where the 'Whole' may be composed instead of simply calculated. What I invoked many years ago through a metaphor (but this was before the IPCC got a Nobel prize!), namely 'the Parliament of Things', is today precisely the site where nobody is allowed to deprive us all of the task of defining the 'We' that we form together, which is at the heart of political existence.[14]

But there is another reason why it is so important not to lose the politics of the whole. This time it is not because of the ecological crisis, but because of the claims of the 'globalisers' to already know for sure what is the 'Whole' –by which they usually mean a narrow provin-

cial idea of what the universal values should be. In every country of Europe, and also of course in France and Holland, a large part of the bad feelings regarding politics, the Markets and the State turn around the very simple idea that we have been 'abandoned by the State', this time construed as something able to provide us with a breathable and protective envelop (to use Sloterdijk again). The screams are the same everywhere: "We have been abandoned by the State, we are no longer protected." How can we doubt that those who scream in such a way are right? Is it not obvious that those who talk about the great winds of globalisation, of opening to the world, of taking risks, of abandoning the safe haven of Statism and nations, are always blatant hypocrites safely protected from any risk by golden parachutes and a fat reservoir of stock options on which is written: 'Take no risk ever'? Globalisers have a very provincial view of what the 'whole world' is: What they write about is not the global at all but a lot of 'globaloney'. A State that fails to protect is no longer legitimate. But it does not mean that we know what is a State and what sort of protective envelop it should be able to compose. It simply means that the alternative is certainly not between the archaic nationalist attachment to the land and the 'great winds' of the global imperium. Here too 'the State has to be rediscovered'.

To conclude, I'd venture to say that the name for the politics of the future is clearly that of cosmopolitics, not only in the banal sense of being cosmopolitan (that is, culturally diverse and international) but in the sense of being a politics of the cosmos, that is of a good disposition of people and things.[15] The Dutch have always been pragmatist and CC (I did not say PC), that is, *cosmopolitically* correct, since they had the immense chance of beginning the building of their State, literally, from the ground up; first by the 'Waterschappen' and then by the water bureaux, the 'Rijkswaterstaat', from the land itself, by pumping the sea and the salt away. The Dutch will not be surprised by this sudden extension of the duties of the State to encompass their daily natural existence as well as their overcrowded and populous multicultural cities. When the sea can flood your house while fanatic mobs threaten your MPS, you gain of political life a truly realistic picture…

I wish I were Dutch: Not only would I be the subject of a most gracious Queen but I would also have friends in the Scientific Council for Government Policy… this think tank that Plato would have envied, and which to function even better should simply turn its political epistemology from Platonism to Pragmatism.

Notes

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9 W. Lippmann, *The Phantom Public*, New Brunswick, Transactions Publishers, 1927 [1993] and the commentary by N. Marres, *No Issue, No Public. Democratic Deficits after the Displacement of Politics*, Amsterdam, Phd in Philosophy, 2005.

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11 M. Callon, and F. Muniesa, *Market Devices*, Oxford, Blackwell Publishers, 2005.

12 R. Netz, *The Shaping of Deduction in Greek Mathematics: A Study in Cognitive History*, Cambridge, Cambridge University Press, 2003 and my commentary in Social Studies of Science (in press).

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Prime-minister Balkende

SPEECH OF THE PRIME MINISTER TO MARK THE 35TH ANNIVERSARY OF THE SCIENTIFIC COUNCIL FOR GOVERNMENT POLICY (WRR)

Jan Peter Balkenende

Your Majesty, Professor Van de Donk, Ladies and gentlemen,

I should like to begin my contribution to this celebration of the 35th anniversary of the WRR by quoting the German statesman Otto von Bismarck:

"Die Politik ist keine Wissenschaft - wie viele der Herren Professoren sich einbilden - sondern eine Kunst".

And indeed: Politics is not science. There is a clear difference between the two. We see that difference clearly on the two sides of the Hofvijver lake in the centre of The Hague.

On one side of the lake are the gently rustling trees and softly crunching gravel of Lange Vijverberg, where academic discourse is able to unfold in a relatively calm atmosphere behind stately porticos. On the other side is the hectic world of Parliament in the Binnenhof, where journalists, citizens and administrators jostle for a place on the hard flagstones and where society pounds on the door day and night with its dreams, its needs, its worries and its opinions.

The world of politics and policy is a pressure cooker in which emotions can run high. The world of science is more of a slow cooker, in which insights are able to come to fulfilment in a gradual and controlled way. "Where there is shouting, there is no true knowledge," said Leonardo da Vinci.

And yet... and yet it is not good to separate the worlds of politics and science from each other completely.

Because is politics in reality not about much more than just the issues of the day? In fact I would go further: Is politics not precisely about the longer view? The careful weighing of facts and interests? The focus on the future?

And is science not at its strongest when it is able to exert an influence on society? When it is helping to mark out the course? When, whilst retaining its critical impartiality, it feels a shared responsibility? Science is free, but it is not free from responsibility.

Precisely at this point in time there is a need for an alliance between politics and science. The great issues that face the Netherlands today are characterised by the strong emotions surrounding the issues of the day intermingled and interacting with visions for the long term.

Take the issue of globalisation. The Netherlands is number seven on the Globalisation Index. That means that we are one of the most open, internationally-oriented countries in the world. That orientation has brought us success. But there is also a downside. More and more people feel they have been cast adrift in this international environment and do everything in their power to seek an anchor-point to hold on to. How can we increase our dynamism whilst at the same time giving people more certainty within that context? That is a fundamental question for our time, a question to which politicians and scientists can only formulate answers together.

Another fundamental question: How can we connect with each other in a country whose people are so different? Here again, everyday emotions understandably play a key role. Here again, a reasoned long-term vision is indispensable.

What we need is a political system that is open to the well-considered thoughts and insights of the world of science. And a world of science which takes into account the challenges facing politics and which also takes into account the questions, developments and emotions in society. We must have respect for each other's roles and find each other in our commitment to the public cause.

Take the highly innovative way in which we have created the physical infrastructure in our water-rich country. It is an achievement of world class. And it is an achievement brought about by the efforts of administrators and scientists acting together, in close collaboration with the world of business and others.

We benefit today from the sound choices made in the past. And it is now our task to contribute to a better future for our children.

I am firmly convinced that, in a time so full of emotions, fragmentary forces and new developments which follow on from each other at a dizzying pace, courage is needed for this. Courage to forge a link between the world of politics and the world of science. With each retaining its independence, critical capacity and responsibility; but with the will to work together in a targeted way to achieve solutions – solutions based on facts, arguments and a focus on the future.

Take the energy issue, and the related need to bring climate change to a halt. The Secretary-General of the United Nations, Ban Ki-Moon, last week referred to this issue as "the defining challenge of our age".

The Netherlands has the capability to play a leading role in the necessary transition towards sustainable energy management. But in order to achieve this, we will have to make a supreme effort together.

The same applies when it comes to guaranteeing the quality and accessibility of health care for an ageing population. Here again, we have a common task.

The Netherlands accounts for 2.5 per cent of global knowledge output – a formidable achievement for a country with only 16 million inhabitants! But there is still progress to be made in the way in which we as a society put scientific knowledge to use. And that again is something that demands the combined efforts of us all.

The WRR is one of the key instruments we have at our disposal to establish links between science and politics.

That is laid down in the WRR Act of Establishment. There we read that your task is "to supply for Government Policy scientifically sound information on developments which may affect society in the long term and draw timely attention to anomalies and bottlenecks to be anticipated."

Therein lie the two elements about which I have spoken - thorough scientific analysis focused on the longer term, but also an eye for the difficulties and problems which occur in social reality.

The WRR has been acquitting itself of this task for thirty-five years now. And it is your wish to be a learning organisation in fulfilling that task.

Professor Van de Donk, in your programme for the period 2005-2007 you wrote that your ambition was to secure a better connection between the WRR and the living world of policy, and also to see your reports reflected more clearly in that policy.

You gave your programme the title *Ripples on the Hofvijver Lake*[1]. And if that title expresses your ambition accurately, I must compliment you. You have indeed succeeded in causing ripples on the Hofvijver Lake. In fact I would go further: At times, looking out over the lake from the window of the little tower that is my office, I can actually see small waves on the surface.

The WRR has built up a solid position over the last thirty-five years in the political and social debate, under a series of chairmen: Kremers, Quené, Albeda, Donner, Scheltema and now Van de Donk.

Your reports have regularly helped smooth the way for a new approach, fitting for the challenges of the day.

I am thinking, for example, of the report *Industry in the Netherlands: Its Place and Future*[2] from 1980. At a time when many approached industry with distrust, the WRR called for a positive attitude to entrepreneurship. And indeed, the recovery of our economy in the 1980s was only made possible by an improvement in the business climate. In 1993 the WRR drew attention to the consequences of the approaching

population ageing for solidarity between generations, and called for the abolition of early retirement. Ten years later that became government policy.

More recently – in 2004 – you published the report *Proofs of Good Service Provision*[3]. That report contained a call for more scope to be given to professionals in fields such as healthcare and education. You called on politicians not to smother the creativity of professionals in a plethora of regulatory and accountability obligations. Those ideas are now clearly reflected in our policy programme.

The same applies when it comes to utilising the positive forces of people in their immediate residential setting. The report *Trust in the Neighbourhood*[4] from 2005 issues that call from every page. In our *Forceful Neighbourhoods* action plan, this approach is given tangible form.

Your Majesty, ladies and gentlemen, the WRR has an important role to play in the new knowledge and advisory system envisaged by the government. This underlines the trust that has been built up over the last thirty-five years. It is also a reflection of the great responsibility that the WRR carries in contributing to the future of the Netherlands; on the basis of scientific insights and with an eye for what moves society at any given time.

We live in a time when we are surrounded by a cacophony of voices. We live in a free, open society whose citizens are emancipated and who are able to express their views without restriction thanks to modern means of communication. That is a great good. But it also places great demands on the government.

The government is watched critically by everyone, and a very great deal is expected of it. On the one hand, the government has to be responsive to people's emotions; to listen carefully. On the other hand, the government has to weigh complex interests against each other and mark out a properly thought-out course which helps our country to move forwards.
Fortunately, we do not have to do that completely unaided. We are

able to use our values, experiences and ideals as a compass to guide us. And we have science to light the dark path and, in the best of cases, to reveal unexpected vistas to us.

"Politik ist keine Wissenschaft." Politics is not science. That is true. But we are travelling companions. Our journey will be the most fruitful if we allow ourselves to be inspired by the *Erasmian* tradition of substantiated factuality, seeing each other's point of view, argumentation, discussion, level-headedness and engagement.
If we are able to do this, we will rise above the issues of the day and continue to see the long-term view. That is our best way of serving the public cause and contributing to a future in which dynamism and certainty go hand in hand.

I offer the Scientific Council for Government Policy my heartiest congratulations on this anniversary. You are thirty-five years young, and that is something to be celebrated.
I wish all members and staff of the Council every success with their highly relevant work. And I look forward to continuing our shared journey.

Thank you for your attention.

Notes

1 *Rimpels in de Hofvijver*, WRR-werkprogramma 2003-2007.

2 *Plaats en toekomst van de Nederlandse industrie*, WRR-report no. 18.

3 *Bewijzen van goede dienstverlening*, WRR-report no. 70.

4 *Vertrouwen in de Buurt*, WRR-report no. 72.

Prof. Wim van de Donk

ON GOVERNING AND THINKING AHEAD AS A SERVICE TO DEMOCRACY

Wim van de Donk

Introduction

The Thinking State... The title of the WRR lecture this year might indeed be regarded as a reification of the state that is equally as misplaced as it is impossible. A state that thinks – can there be such a thing? Well, no, that's inconceivable. At least... not in that way.

On the other hand, anyone regarding the state as a representation of a political community will notice that, precisely in our age, a number of interesting developments do emerge that strongly invite us to have a close look at the thinking about the thinking state.

I am referring to a democratic community, in which the state is seen and recognised by the members of that community as an important – albeit not the only – way of shaping their common destiny in a forward-looking way.

The fact that practical politics and administrative affairs benefit from and are prepared by careful thinking strikes me as a significant achievement of modern society.

That is so even in a democracy under the rule of law, in which science may be an important and independent institution but one that is also aware of the fact that its truth cannot necessarily count on majority support. Political democracy and science could, indeed, be regarded as two competing mechanisms for learning and finding truth.

Nevertheless, the political system decided democratically almost thirty-five years ago to the day to set up the Scientific Council for Government Policy (WRR).

The Council was even given a law of its own: The ultimate symbol

of democratic legitimacy. That act in turn explicitly underlines the importance of independent scientific knowledge for the formation of government policy.

The fact that this concerns an important long-term interest is something you probably endorse. This does not, however, provide an answer to the question as to by whom and how that interest can best be served in the future. In an age in which both the political and the scientific environments are undergoing radical change, that question is certainly in its place.

By way of introduction to the conversation to be conducted with the keynote speakers at this special WRR lecture and with one of the editors of the book[1] written to mark this anniversary, I would like to refer to some of those changes. In addition, I shall seek to indicate the potential significance of those changes for the WRR's mission and position. Inevitably this will need to be brief; a more detailed text may be found in the chapter I have co-authored with Anton Hemerijck in the aforementioned book.

Substantive changes

Globalisation, transnationalisation, digitisation
One of the changes that goes to the heart of the nature of the topics chosen by and the working methods of the WRR is the accelerating internationalisation of collective affairs. It has become increasingly difficult to confine the tasks of a democratic state to the physical boundaries of a single national jurisdiction.

The reason is obvious enough. The common destiny to which I referred a moment ago has become increasingly evident and more inevitably global in nature in all sorts of areas of human endeavour.

Whether these are the physical aspects of the global climate problem which Bruno Latour has already mentioned, or the cultural and financial interdependencies that have been exposed by the mortgage crisis that began in the United States (which we indeed might refer to as both a cultural and financial 'climate' crisis), a deepening and

exhilarating globalisation provides the both inevitable and dynamic decor against the background of which we are today celebrating the thirty-fifth anniversary of the Netherlands Scientific Council for Government Policy.

At the same time, we need to guard against chronocentrism: At the time the WRR was set up, globalisation was also in evidence, as reflected for example in the work of the Club of Rome, which saw the light of day at the same time as the WRR. One of the members of the first Council, Professor Böttcher, was a member of both clubs.

In terms of choice of topic and also method of work, the Club of Rome was a precursor of a development that has become increasingly important over the past three decades. I am referring to the international context of the production, diffusion and use of scientific knowledge.

The Club of Rome was ahead of its time and consequently ran into surprises that also bedevilled the WRR in forecasting the future. This is because people react to forecasts: Social and political realities behave in a different way from that of the more molecular world. This is something that my teacher Ig Snellen taught me. Thinking about the future is a matter of twofold anticipation: The anticipation of developments, as well as anticipation of the reactions. That does not make the task any easier.

Furthermore, the way in which science is practised is changing. In recent decades the internationalisation of scientific endeavour has been driven in particular by new technologies: The Wikipedia revolution has only just begun. Scientific knowledge is no longer bound in calfskin but is developed, shared and distributed in virtual networks. A think tank that does not join in will find itself sealed off and hence excluded and disconnected.

The position of science

When the WRR was established it was one of the first governmental organisations to make use of computers. While that was useful, it was also of symbolic importance. Already at that point computers

were associated with scientific optimism and computer models were often based on the implicit assumption of an all-knowing central actor who was capable of pushing the social buttons.

Reflection increasingly became a matter of calculation and recalculation. In many countries –I would refer here to the international comparison made by Anne-Greet Keizer in the book noted before – the optimism that scientific knowledge could provide the answer to the decidedly pessimistic diagnoses presented to the world by the Club of Rome led to the establishment of institutes that were more or less comparable with the WRR. More or less, for in terms of its independence and multidisciplinary composition (reflecting the interdisciplinary nature of the research), the WRR was in fact comparatively unique.

In particular, the optimism was rooted in the emergence of the social sciences, inspired as they are to this day by the success of their colleagues in the natural sciences. Economics and the social sciences also began to build their models.

The social sciences were expected to show society the way by instructing the political system. The task of supporting democracy by identifying the truth accordingly tended to take the form of a somewhat technocratic paternalism. The sciences sometimes acted as an arrogant teacher, while the political system rapidly proved to be a recalcitrant pupil.

That time came to an end when it became evident on further consideration that a number of problematic assumptions underlay this traditional, positivist scientific view. At the risk of cutting corners, let me sum it up in this way: 'The' truth proved unfindable, or at least was the subject of dispute and debate. This often gave rise to a plurality of schools and paradigmatic views which, in terms of rivalry and power games, often matched anything to be found in politics.

Relativisation of political capacity

Later, doubts arose concerning what had previously been held as a self-evident belief in the capacity of national politics to turn society to its hand, not least thanks to and with the aid of scientific knowledge.

Anticyclical budgetary policy and the calculation of an accurate orbit around the earth: The optimism of management and control took shape in the most divergent fields of policy-making. It provided science with a formidable status and contributed towards the high expectations concerning the state's capacity for thought. Knowledge concerning the future amounted to the forecasting of the future. The WRR owes its birth certificate to that modernist optimism and status: A certificate that was signed in terms of the realisation that the relationship between science and politics was certainly no zero-sum game.

How different all this looked just a few years later. In fact, the first signs of doubt concerning both the scope for and ability of an objective and neutral science were evident during the years of preparation and ultimate formation of the WRR. It is not without reason that there were all sorts of doubts within the council concerning the feasibility of its terms of reference to outline the future for the next twenty-five years.

Kees Schuyt rightly referred in his contribution to this symposium to the insight already gaining ground at that time of the way in which the scientific production and diffusion of knowledge in fact had a strong social embedding. The relationship between normative and factual orientations in the analysis of social problems, it rapidly turned out, was far more complex and ambiguous than had been assumed by certain (especially positivist) scientists.

That rapidly overtaken assumption was, in particular, based around an independent and detached position on the part of one party – science – in relation to the other, namely policy. These stood at a safe distance from one another. Their relationship was clear and distinct, but still marked by an often implicit competition: Scientists sought to direct the political system along the lines of the truth they had brought to light, while politicians sought to instrumentalise and even domesticate science for their democratic purposes.

Reactions and the future of the WRR

The WRR's activities rapidly made it clear that this was not in fact a productive approach. The complicated relationship between normative and cognitive dimensions of social problems became evident right from the initial surveys of the future the Council undertook. It was clear that independence pursued in isolation would be at the expense of the governmental part of the WRR's terms of reference. For the WRR, scientific knowledge was not a goal in itself but an essential element in arriving at a more informed and well-founded policy debate.

The WRR is called upon to establish links with the world of government policy, and rapidly came to the realisation that the worlds of thinking and doing both stood to benefit from active and mutual interaction.

As reflected in the interviews conducted by Jan Buevink and Paul den Hoed with former Council members, the WRR is consequently very much a bridge-builder that is required to lay firm foundations on both sides of the river.

Dynamics and connection

The image of the bridge is a good one, but it is also rather too static for what I would like to say – particularly given the changing nature of the future – concerning the relationship between the WRR and the world of politics and administration. It was for this reason that you saw two dancers before the tea-break. They also appear frequently in the book.

When you look at these dancers, you see subtle and mutually interrelated moves, the confusion from time to time as to who is leading and who is being led, the mutual dependence and the beauty of the at once inevitable and interlinked movement. Continual connection and enticement: The dance is an excellent metaphor for the factual relationship between science and politics.

Thinking in terms of connections and seeing the relationship between scientific research and political decision-making as an elegant dance is also a way of thinking that provides opportunities if we look towards the future. In the first place, the image of a dynamic dance offers more scope than does the image of a static bridge connecting up two solid banks for taking account of the processes of internationalisation and digitisation outlined briefly above, together with the changes in the sphere of science and politics.

On top of this, the image of the dance allows critical examination of the way in which the knowledge infrastructure of the future should be organised in the interests of administration and politics. Let me conclude on this point.

There is, for example, a misunderstanding that the relationship between the dancers is one of demand and supply, along the lines of 'you ask, I turn'. But matters are not quite as simple as that. It is a misunderstanding that rapidly leads to the idea that one of the partners in the dance must have a directing role, and that the other must simply follow mechanically.

Another misunderstanding could be that the dance will only be successful given a central choreography. Now, a dance certainly does call for a certain degree of coordination and harmonisation. By no means all the steps, however, can be precisely determined in advance, and the quality of the dance will also benefit if the dancers lose themselves in the experience and have the freedom to play with new ideas. There will always be a need for spontaneous and mutual adjustment.

Dancing in a democracy also calls for space and for the recognition of and space for a multiplicity of dancers, as well as a variety of choreographic traditions. Only bureaucracies don't like variety. But bureaucracies don't dance. This means a multiplicity of viewpoints and approaches and a variety of movements. In a democracy a multiplicity of (both ideological and scientific) schools of thought will be in evidence, while there will also need to be room for folk-dancing.

Let me be somewhat more precise. Extensive consideration is being given at the present time to reforming the system of advisory bodies. As chairman of the WRR I can, on the one hand, be grateful that the WRR appears to have had a lucky escape from the dance (to stay with that metaphor for the moment) and that upon the occasion of its thirty-fifth anniversary it can in fact be sure of reaching its fortieth birthday as well. I understand that for many other advisory bodies the prospects are highly uncertain, even though these may have more visible and stable grassroots support than the WRR.

The question is whether the present plans for the severe pruning of independent advisory bodies are in fact sensible. In this regard let me say the following, in the spirit of a constructive contribution towards thinking about learning in the service of democracy.

As I see it, the design principles – call them 'choreography', if you like – for an effective knowledge infrastructure should not stray too far from the principles required for an effective democracy. Democracies need variety and difference, not streamlining and uniformities. Secondly, these principles should take account of the knock-on effects of the developments referred to above. What should a knowledge infrastructure for a democracy look like? Let me name a few points, to which we might pay further attention in the discussion that is coming up.

A future-oriented knowledge infrastructure geared towards a productive and inspiring connection with the world of science and politics should take account of:

- The insight that the application of scientific knowledge in politics and policy calls for an open and an on-going active connection between thinking and doing. Bruno Latour has already mentioned that in a democracy these two are mutually reinforcing and interdependent. I would like to stress that the relationship between scientifically-based advice and politics should be viewed more in terms of a complex ecology than that of a sterile hierarchy.
- The fact that these connections need to be established in an ever more open, competitive and international network calling for ad-

equate mechanisms to guarantee both variety and quality of input and innovation and sharing. Not just authority but, in particular, nodality is also important. In addition, there will be far greater competition and we will see the development of a multiplicity of new nodal points in the network of thinking by which democratic institutions are embraced.

- The insight that we need therefore to view the future for policy thinking in terms of open networks rather than closed think tanks. In this regard it is significant that what is of interest is not that Al Gore, as already mentioned by Bruno Latour, has been awarded the Nobel Prize; but that the greatest scientific honour was conferred jointly on the Intergovernmental Panel on Climate Change. The IPCC is an open network of thought par excellence. Needless to say that is not an unqualified compliment: Everyone is aware of the dangers arising from a relatively closed network that is only too apt to become inward-looking. Introversion can also arise from the dominance of one particular discipline; the importance of interdisciplinarity should certainly not be underestimated.
- The insight that dynamism and a certain degree of complexity and difference are inevitable and even attractive, and that precisely for this reason there must be a series of independent places in which every opportunity is provided for taking unhurried stock of the latest research and that provide space for sifting out hasty argumentation based purely on self-interest from contributions that have the general interest in mind.
- The fact that the relationship between politics and science is not a matter of imperative instruction but of mutual learning. The Prime Minister rightly referred just now to the importance of an alliance in which each of the partners have their own role. That means straight away that the conditions for an optimal advisory system cannot be sought unilaterally among one of the partners involved: It takes two to tango. Scientists who wish to develop knowledge and deploy it in the public arena must learn to present their knowledge in such a way that it can be heeded. That will not always mean a thick report, but calls for investments in an entirely new repertoire of scientific communication. Politicians and administrators may be expected to take scientifically-founded advice seriously, and actively to protect the separate place and responsibility of scientists.

In essence, my contribution to this symposion comes down to a plea not to separate democracy and science from one another but to recognise that the one inherently assumes the other. And also to recognise that the reverse applies. Science, learning and democracy all go together, and are not in fact attainable on their own: Science is not possible without freedom, while a democracy taking itself seriously will acknowledge the importance of a permanent process of learning. As defined by the well-known American political scientist Karl Deutsch, "power is the ability to afford not to learn" based on "the ability to talk instead of listen", which science can in turn foster.[2]

The importance of such learning and of a system that genuinely makes learning possible should, in my view, also not be underestimated in the new realities in which the WRR finds itself after thirty-five years of loyal service. In an assessment of that system we need to guard against the false friends of politics: The technocrats and the accountants whose orientations undermine the essence of the task and challenge of democratic politics. The technocrats are dangerous because they envisage democracy without science; and the accountants because they have a dangerously limited focus on costs and especially on the benefits of thinking. In that connection I think it is appropriate and useful to conclude with a quote from Polly van Leer who, together with her husband, invested a substantial proportion of their private wealth in a scientific think tank which, like the WRR, sees fundamental research as a form of public service to democracy. Her words have particular resonance in these days of cutbacks and reform:

> *"Before we are really prepared to concentrate on our thinking, we must free ourselves from the mistaken idea that 'thinking about our thinking' is a superfluous luxury. We must see clearly that our thinking is the unseen foundation upon which our society rests, and that how we think today will determine what the morrow will bring" (van Leer).*[3]

Notes

1 *Op steenworp afstand. Op de brug tussen wetenschap en politiek*, Paul den Hoed and Anne-Greet Keizer (eds.)

2 Deutsch, K.W. (1963) *The Nerves of Government: Models of Political Communication and Control*, New York: The Free Press.

3 Leer, P. van (s.a.) *Reflections upon Her Thoughts*, Jeruzalem: Van Leer Foundation.

Pas de deux by Wendline Wijkstra and Benji Soerel
of the Royal Conservatoire of The Hague

Introduction by prof. Anton Hemerijck

INTRODUCTION TO THE WORKSHOPS HELD ON 23 NOVEMBER 2007

Anton Hemerijck

Welcome to the invitational workshop part of the celebratory conference on account of the WRR's 35th anniversary. This morning professor Lisa Anderson will give the keynote lecture. Lisa Anderson is professor of international relations at the department of political science, Columbia University, New York. In 2003 she published an influential volume on the core theme of our conference entitled *Pursuing Truth, Exercising Power: Social Science and Public Policy in the Twenty First Century*. I picked up the book at the 2003 annual conference of the American Political Science Association, read it on the flight back to Amsterdam, and then gave it to everybody, involved in the organisation of our anniversary conference, to read. I truly hope that Lisa in her lecture will continue to reflect upon the evolutionary contingencies of the relationship between science and policy, as she did so perceptively in her slim 2003 volume.

After Lisa's lecture we will go our separate ways in special workshops on, respectively, the politics of policy advice, the challenges for futures' strategic studies, the role of the media in the science-politics nexus, the expanding reach and scope of private think tanks in an age of globalisation, and, last but not least on the manner and extent the EU, with its small administrative center, seeks knowledge and advice and engages European academics on questions of EU policy and governance. We are very happy and honored to also welcome the distinguished Professors, Yehezkel Dror from Hebrew University Jerusalem, Member of the Club of Rome, Peter Weingart from the University of Bieleveld, Rudy Rabbinge, former member of our Council, from Wageningen University, Jerome Vignon, founder of the Forward Studies Unit of the EU under Jacques Delors, and Geoff Mulgan, director of the Young foundation, founder of DEMOS, who was a key policy advisor in different positions for the Blair government. All of these special guests will kick of the discussion in our different workshops, after Lisa Anderson's keynote introduction.

Yesterday Professor Wim van de Donk coined the engagement of science and politics in terms of the metaphor of a dance. He was criticised by Professor Latour and Professor Schuyt for having a too benign understanding of the problematic character of the interaction of science and policy in modern liberal democracies. The image that came to my mind was one of tough politicians coming from Mars and serious academics from Venus. Although most politicians today confidently argue that they engage in evidence based strategic policy-making, we know better. In reality politicians seem more often than not led by ideological beliefs and vested interests, alongside of course immense time pressures. On the other hand, serious researchers are known to be more than happy to spend years on a path-breaking study or series of articles, without bothering to put much energy into advocating the implications of their findings to those responsible for making informed political decisions. This increasingly so because of peer, publish or perish pressures in academia. As a consequence, intelligence, research evidence and academic insight, may fail to find their way into public policy.

But is bringing the world of policy and politics and the world of academic intelligence together really like mixing oil and water? Or is a productive and engaged choreography still possible? I am today most inclined to think of such a choreography in terms of suite, a succession of dances, with slow and fast movements, preludes and sarabandes, within which politics and academia, dancing to different rhythms, take turns in responding to one another in large and fairly transparent public spaces. A key question is whether or not we should somehow need to constitutionalise the choreography of the suite-like engagement of the spheres of politics and academia at a time when there are clear signes that they are increasingly growing apart.

But let me begin with a personal anecdote. One of my study friends from MIT is David Miliband, now minister of Foreign Affairs in the Brown Government of the UK. I visited him in London, when he was Minister of Schools in the Blair government. I had just changed jobs from academia to the WRR. David wanted to know what "exactly" the relationship was between the WRR and the government as implied in the name Scientific Council for Government Policy. I said: "David it is very simple. We don't have to listen to the Prime Minister, but the

Prime Minister has to listen to us!" He immediately replied: "That cannot be true!" and I said, "it's written into Law." Indeed our mandate is to convert independent academic expertise into political capital. Dangerous for short-run politics, as yesterday the Cabinet Ministers Hirsch Ballin and Donner underlined, but also for us at the WRR. It is not per se an easy mandate to be obliged to advice the government on issues it may want to hear about, and this on sound academic grounds. We are continually judged in the media on these both counts: How usable are ideas for public policy and politics; and to what extent are these ideas anchored in academic mores of scientific inquiry. In these politically charged and academically envious times, we often receive flack from both sides, most recently on our report on processes of national identity and identification. On the other hand, if we stay away from political fire, while remaining firmly tied to traditions of methods of academic inference, in the long run, things are even worse.
In any event, David Miliband believed that scientific expertise should be clearly separated from the authoritative allocation of values, which is the primacy of politics. Later he became Cabinet Minister of the Environment under Blair, and I saw him on television one evening in a BBC World service program called *Hard Talk*. He strongly defended the Stern Rapport on the cost of climate change and he knew every detail of the empirical findings and academic conjectures. I felt myself wondering whether the Stern Rapport is a political document or a scientific study? But does it really matter, one way or the other? What I was seeing was the central part of the dance suite of the engagement of policy and science, where academic intelligence was selected for political capital.

The world of politics, it is often argued in the academic literature, hardly satisfies the ideal conditions of a 'learner friendly environment' for which the haven of academia is best known for. The normative nature of politics, the institutional density of public decision making, the complexity and ambiguity of policy issues, power asymmetries, and dispersed accountabilities, to be sure, create serious problems for self-corrective policy learning.

Fundamental to the idea of learning is information feedback on performance and impending policy problems. From this perspective, I believe, liberal democracy is critically endowed by strong incen-

tives to mobilise its learning capacities, much better than alternative political systems. First of all, strong electoral competition contributes to social learning. Although the indicators of success and failure are often ambiguous and variable, elections are important mechanisms that enforce public responsiveness. Moreover, since most judgments of politicians by voters are retrospective – evaluation of how things have gone while they are in office – elected leaders have a strong motive to solve problems before they grow to crisis conditions. And proponents of rival policies are always self-interestedly motivated to find fault with existing policies and proposals. And the media, especially investigative reporting, reinforce the need and incentives for political learning.

Fundamental to democracy is the idea to hold the state responsible for policy consequences. However unrealistic and implausible the conception of the state as a unitary actor with clear purposes, definite powers to direct policy is, in modern political systems it is often judged by citizens as if it were a single collective actor. This has concrete political consequences, stimulating public officials of the modern state, whether appointed or elected, to pay attention to the worries of important constituencies.

Because re-election is always an uncertain business, politicians also have an incentive to pay attention, not only to media coverage and the last opinion poll, but also to expert 'policy analysis' and reports from strategic 'think tanks'. The French government has its Centre d'Analyse Stratégique and its Swedish counterpart has its Institute for Futures Studies. While the German government receives official forecasts on the economy from five competing wizards, the Netherlands has, alongside the WRR, separate forecasting institutions for economic, social and cultural, and demographic affairs. Policy analysis takes pride of place in the routine operations of international organisations like the OECD or the World Bank. The liberalization of the international market of policy ideas, particularly in the 1990s, I believe is largely attributable to the intensification of economic internationalisation and the related expansion of global communication. In the wake of the alleged decline of the national state, this has led to a real growth industry of private think tanks, also in the wake more or of the alleged decline of the state.

The growing importance of the European Union can no longer be ignored as ideational resources inspiring not only European but also national policy redirection. As a relatively small organisation, the EU habitually works with *ad hoc* expert committees and so-called High-Level Groups in order to analyze particular policy problems and recommend solutions. Typical innovations in European policy learning, concern problem situations in the face of which actors are convinced of the need to respond to pressing problems without per se having to agree on deep values about liberty and solidarities or broad political strategies like privatisation and state intervention. In the process of EU policy making, domestic political actors have begun to rethink national policies in the light of 'common problems' and redefine public decision making in terms of 'common concerns', allowing for a broad scope of implementation repertoires.

Participation of international networks, like the EU, OECD, ILO, and the un, bring about a considerable extension of learning methods and horizons. This is no surprise. For the more similar the problem loads of national states become in the face of economic internationalisation, the more policy makers believe they can learn from the experience of others. Moreover, in an external policy environment which has become ever more competitive, policy makers also *want* to learn from others. Effective policies, able to muster political legitimacy, I contend, come with a competitive advantage.

Underlying every policy choice necessarily lies a precarious judgment. Some judgments are essentially about the causes and effects of policy interventions. A second form of judgment is essentially normative. Most political understanding is based both on insight into values and assessments of causality. Much of the shifts in judgment and policy is a matter of changing causal beliefs. But some policy changes, whether or not in consequence of such changes in causal beliefs, are inherently bound up with shifts in the assessment of normative plausibility. This becomes more apparent when the practical defense of old policy paradigm becomes increasingly furtive and their normative charm threadbare. The attempt to analytically separate causal and normative judgment from one another, to segregate science from political opinion, is therefore fraught. To be sure, policy

experts can never displace citizens as decision makers, even when issues are complex and policy questions highly technical. Expertise facilitates judgment, independent academic intelligence can even bring new political capital to the public arena. In short, we are not living in a world of a safe distance between politics and science, policy and research - if we ever were? The relationship between policy and research does not abide by many of the often-formulated clichés, like 'science speaking truth to power' or, by contrast, 'politics on top, science on tap'. Even Max Weber was not true to his own principles, with scientific inquiry as a mere service to policies based on politically set goals and values, external to the policy process. By participating in the *Verein für Sozialpolitik* he also ventured to create political capital on the basis of his research, expertise and normative dispositions.

This is not to say that the choreography of the suite of policy and science is effectively and intelligently structured in liberal democracies. On the contrary, it requires an appreciation of different musics, diverse rhythms, and improvisation talents, much like jazz musicians, on the part of the leading dancers. From this perspective, I would like to end with a quote from Hugh Heclo, who introduced me to the importance of looking at the intellectual properties of the policy process:

> "Politics finds it sources not only in power but also in uncertainty – men collectively wondering what to do. Finding feasible courses of action includes, but is more than, locating which way the vectors of political pressure are pushing. Governments not only 'power' (or whatever the verb form of that approach might be): They also puzzle. Policy-making is a form of collective puzzlement on society's behalf; it entails both deciding and knowing" (Heclo 1974:305).[1]

From Hugh Heclo, without further ado, I would now like to give the floor to Professor Lisa Anderson.

Thank you.

Notes

1 Heclo, H. (1974) *Modern Social Politics in Britain and Sweden: From Relief to Income Maintenance*, New haven: Yale University Press.

Prof. Lisa Anderson

TRUTH, AUTHORITY AND POLICY IN THE TWENTY-FIRST CENTURY

Lisa Anderson

I wish to thank the organisers of the WRR jubilee symposium for providing the opportunity to consider some of the most vexing questions we face as social scientists and policy analysts at the dawn of the twenty-first century. The terrain before us is murky and sometimes bewildering but, if we are to realise our aspirations to serve the public good, we must consider the challenges and opportunities it is likely to present. I congratulate the WRR for having organised a symposium that permits such reflection.

In retrospect, it is apparent that the mid-twentieth century marked the high-water mark of the industrial welfare state, and with it, the authority of 'scientific' knowledge. Skepticism about the capacity of the modern state to formulate and implement just and effective policy grew during the second half of the century and the state gave way to the market, to what were known as 'faith-based communities' and to the novel social networks provoked by the technology associated with the Web 2.0, as sources of welfare and community. The erosion of the authority of the state revealed its intimate connections with – indeed, reliance upon – knowledge grounded in science as a method of investigation and assessment of truth. At the same time, the dependence of science on elements of the modern state – particularly its characteristic ways of organising and conferring authority – left the status of science itself uncertain.

Today, the conventions of science as a guide for policy are increasingly confronting skepticism, impatience and doubt. On many issues of public moment – from stel cell research and genetically modified foods to climate change and race-baced pharmaceuticals – scholarly consensus seems to be weak or nonexistent. Yet we ask: How are we to understand evidence in the absence of such consensus? How will we make policy in the absence of scientific certainty? How will we reconcile democratic participation and newly defined sources of expertise? These are the dilemmas that policymakers face in the twenty-first century, as the growth of available information, the expansion of global access

to that information, and the increase of 'user-generated authority' reshape the relationship between the governed and their governments.

It is to these issues that I wish to draw your attention today. My observations build upon a slim volume I published five years ago – which seems fully a generation ago in light of how much has changed since then – called *Pursuing Truth, Exercising Power: Social Science and Public Policy in the Twentieth Century*.[1] Before I go directly to the issues I think are again reshaping the relationship between social science and public policy, or more broadly, between truth, authority and policy, I want to remind you that I bring greetings from New Amsterdam, and I do so in order to evoke the long pedigree of the intimate connections of technology, wealth, power and knowledge. The famous Dutch voyages of discovery, which contributed to the establishment of my own city of New York, may have been animated by the search for spices, but even that kind of novelty proved to be an important impetus to learning. As the historian Harold Cook has put it:

> "The new trading ventures helped to foster a kind of early information economy. Economic historians have pointed out that knowledge is a 'durable possession', like capital, and just as important to business... The accumulation not just of things but of information – accurate, exacting information – was therefore essential to commerce... The masters of the trading companies even found *new ways to imagine time and space*".[2]

We are once again at a moment in which we are afforded the opportunity – and, indeed, required – to find new ways to imagine time and space. Today we speak more and more often about politics on local and global scales precisely because the state which grew to dominate the organisation of human societies in the centuries that followed this early globalisation is once again confronting competitors, as people increasingly attach themselves to societies as varied as tiny bands of militants and world-wide social networks. The state is no longer the sole or even the principal interface between the particular and the universal, the individual and society. Alternative locations of authority and innovation are springing up all around us, from the mountain redoubts of Afghanistan to the virtual communities of the World Wide Web.

For social scientists, the fading role of the state is a profound challenge to the enterprise as they know it, creating multiple sites of public policy and multiple definitions of the public good, and – not incidentally – multiple sources of anxiety about the purposes and power of the social scientist. The crowded marketplace of claims, of audiences and patrons, is further complicated by the fact that it now extends, like markets in so many other things, across the globe.

To illustrate my claims and to explore the dilemmas that confront policy analysts and policy makers today, I will look particularly at issues that attend the growing attention to what is called sustainable development, although I believe that many other policy domains would exhibit similar characteristics. I do so deliberately, however, knowing that the challenges of sustainability are not trivial issues here in the Netherlands, where, according to the Netherlands Environmental Assessment Agency, the anticipated rise of the sea level may lead to "serious problems. . .in particular in the low-lying areas of the country." Indeed, we are told, "it is questionable whether conventional techniques can be used to maintain the current level of safety." The Agency assures us that:

> "To respond adequately to these projected influences, climate change has, to a certain extent, already been taken into account in various policies in the Netherlands. . . Technical measures include raising the height of dykes, expanding the capacity of pumping stations and intensifying beach nourishment to maintain sand levels along the coast. Spatial planning measures include accommodating flood storage areas". [3]

These are expensive measures, not to be undertaken lightly, and they presume high levels of confidence in the scientific bases of claims about global warming and climate change. That confidence may be merited, and I will return to this question. But first I wish to remind you that these kinds of measures also presume that spatial planning can actually be accomplished in geographically circumscribed domains. This, at least, we know to be false. For the first time in human history, we are aware of the extent to which we are all entirely at the mercy of people and policies not only in our own communities and

countries but around the world. Holland cannot mitigate the effects of climate change alone, even in Dutch territory, simply by raising the height of dykes or expanding the capacity of pumping stations. Nor can the United States, Brazil or China. So, as we did several centuries ago, we must again find new ways to imagine *space*.

And we are beginning to do so. As Partha Dasgupta points out:

> "Economists have moved steadily away from seeing location as a determinant of human experience. Indeed, economic progress is seen as a release from location's grip on our lives. Economists stress that investment and growth in knowledge have reduced transport costs over the centuries. They observe, too, the role of industrialisation in ironing out the effects on societies of geographical difference, such as differences in climate, soil quality, distance from navigable water and, concomitantly, local ecosystems. Modern theories of economic development dismiss geography as a negligible factor in progress. The term 'globalisation' is itself a sign that location per se doesn't matter..."[4]

If economists are acknowledging the extent to which we must think in new ways about space, however, we have barely recognized that we must also find new ways to imagine time. How else are we to know exactly what will happen in fifty or a hundred years if average world temperatures rise several degrees or, more importantly, what those who are alive then would prefer we had done now? We have imposed upon ourselves an obligation to plan for sustainability and to pursue what the Brundtland Commission Report of 1987, *Our Common Future*, called "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[5] Yet, as Dasgupta asks, "how is a generation to judge whether it is leaving behind an adequate productive base for its successor?" The future is, as he reminds us, "translucent at best."

I want to treat the questions implied by the changing dimensions of space and time in the twenty-first century from three perspectives: How we think about uncertainty and risk, how we respond to the changing availability of information, and how we establish and assess authority to make decisions for the public good.

Risk and Uncertainty

Considerable behavioral research suggests that the further away in both space and time a prospective risk seems to be, the less likely we are to take action to address or mitigate the risk itself. As Elke Weber puts it, "Personal evidence of global warming and its potentially devastating consequences can be counted on to be an extremely effective teacher and motivator. Unfortunately, such lessons may arrive too late for corrective action."[6] And even if they arrive early, we are resistant to learning. From Nassim Taleb's observation that highly improbable events have disproportionate impact, making risk and uncertainty very difficult to calculate, to Philip Tetlock's studies showing that social science experts are no better at prediction than their ignorant peers,[7] there is ample and increasing evidence that even disciplined, scientifically trained human minds are deeply biased. We believe what others believe, what confirms our prejudices, what lies between two more extreme choices. We prefer what is more easily available – we really do prefer the bird in the hand over the two in the tree – and we are more reluctant to surrender what we have than to acquire what we don't have. We penalise action more than inaction, even when the results are the same.[8] We are, in other words, deeply and irredeemably human.

And this is before we have added politics to the mix. Before we have taken at all seriously the impact of group dynamics, political competition, collective identities and interests, institutional structures, the rules of the game and much more that shapes, perhaps distorts, public discourse and debate.

Yet public policy – that is, decisions made by governments on behalf of (and, let it be remembered, at the expense of) their constituents – require transcending the increasingly evident human frailties associated with risk and uncertainty. We cannot discount the risk of improbable but catastrophic developments, yet even the best data and most sophisticated models have yet to provide correctives for our human frailties. The future is translucent in part because we systematically cloud the lens through which we peer at it.

The scientific community knows this all too well, and it reacts to calls for clear and unequivocal prediction with characteristic diffidence. Glaciologist Robert Thomas has observed that "most scientists don't want to, but I think we need a way to explore the extreme end of the range of possibilities." In the absence of scientific consensus about both the facts and their social meaning, Michael Oppenheimer, the geoscientist who directs Princeton University's Program in Science, Technology and Environmental Policy points out that experts typically "give a different view of the probability of various outcomes" of climate change impacts, further confusing the general public and the policymakers who are responsible for designing responses.[9] The continuing doubt and uncertainty regarding the science of climate change may have been, as Corbett and Durfee suggest, "a deliberate, well-financed tactic by oil and coal companies and conservative politicians in an attempt to undermine public confidence in science and thereby defer action against global warming" but it is also a reflection of the challenge that policy making confronts in an era when frail human judgment collides with virtually unlimited information.[10]

The Growth of Information and the Decline of Knowledge

What do I mean in saying that information is virtually unlimited? Presumably there are no more data – raw facts – than there ever were, since the absolute number of facts must be infinite. But there is a case to be made that there is more information, understood as data organised systematically and, more radically that there is less knowledge – acquired and useful information – than in the past.

Thanks to the development of the new communications – or, tellingly, new information – technologies, we have access to endless amounts of systematically organised data. This alone revolutionises the scientific enterprise, once built upon the assumption that information is a scarce resource, to be painstakingly developed and carefully husbanded. As Jensen points out "when the system of scholarly communication was dependent on the physical movement of information goods, we did business in an era of information scarcity(…) Web 2.0 presumes the majority of users will have broadband, with unlimited, always-on access, and few barriers to participation(…) Its

fundamental presumption is one of endless information abundance. That abundance changes greatly both the habits and business imperatives of the online environment. The lessons(…) include a general user impatience with any impediments [and] a fracturing of markets into micro markets." [11]

In this context, the uncertainty that is necessarily a part of the scientific enterprise takes on a different significance. Information is no longer scarce, but the capacity to acquire and use it effectively is compromised. Knowledge becomes increasingly specialised and the realms in which practitioners are considered – and consider themselves – authoritative become increasingly circumscribed. As Sheldon Ungar puts it, because "rapid developments in the quantity and complexity of information have occurred in practically every field of human endeavor" the *proportion* of relevant knowledge that an individual can expect to master is rapidly declining in virtually all fields.[12] Mastery is therefore constricted to smaller and smaller areas of specialisation.

Ironically, this, in turn, contributes to the growth of uncertainty. We once believed that what we did not know was either unknowable or known by someone else whom we viewed as authoritative. Now, not only do we know little beyond our own specialisation, we know of and acknowledge fewer authorities in other fields. The privileging of constant information flows has not only implications for the organisation of information and knowledge, but for its production and use. Traditionally organised universities, privileging the classical disciplines, have difficulty fostering research that addresses issues that cross or transcend the largely arbitrary boundaries between such disciplines. This creates challenges to with I will return momentarily. For now, we need to note that new kinds of organisations that are less invested in training the next generation of disciplinary scholars and scientists thrive in this environment:

> "The advent of the *24/7* media and the internet have helped raise the profile of think tanks, enabled them to reach a larger more diverse audience and disseminate their publications more cheaply. The proliferation of organisations has facilitated greater coopera-

> tion between think tanks and other NGO's at the local, state, and international levels. This networking allows for the utilisation of new mechanisms to effectively influence policy and to reach larger audiences." [13]

And these 'larger audiences' are not merely more numerous, they are scattered around the world, overlapping and transcending geopolitical units. Livingston points out that our capacity to broadcast "live from anywhere on Earth" has a significant but unpredictable effect on policy, sometimes acting as an accelerant and sometimes as an impediment or an agenda setting agent.[14] And the 'CNN effect' is being superseded by what might be called the 'Google effect' – not merely exposure to events around the world but deliberate pursuit of information about such events – and soon enough the 'Friendster effect' – active participation in the lives of people we neither expect nor aspire ever to meet directly.

In these circumstances, who do we trust and why? How do these developments shape our sense of authority – scientific or political?

From Peers to Users: Generating Authority

If the new information technologies mean we know more about less, they also reorganise how political and social communities confer membership and authority. With unlimited information, we necessarily develop sorting mechanisms to filter what we want to be exposed to and what we want to know. The translation of systematically organised data, or information, into the acquired and useful information we consider knowledge, becomes a crucial function.

In the distant past, when information was scarce, human societies assigned the functions of its preservation and translation into knowledge for the community to individuals with experience and what would be known as wisdom, typically acquired over the course of time. Hence our reverence for our elders. More recently, we have attributed responsibility both for assessing the validity of information and for converting it into useful knowledge to professionals trained to do so – teachers and preachers – and still more recently to social groups responsible for generating new information and creating new

knowledge: Scholars and scientists. Authority was established less through age than through education, both for individuals, whose disciplined outlook would reflect their exposure to the canons and methods of scholarship, and for institutions, like churches and universities, which were acknowledged sources of specialised education.

Ultimately these authorities and the institutions that produced them parted ways, scholars and universities to become sites of scientific research and producers of new knowledge and religious authorities and religious establishments to serve as sources of succor and solace in the face of the existential dilemmas of risk and uncertainty. In both scientific enterprises and faith-based communities, however, authority was conferred by communities of peers: The religious establishment designated new priests and acknowledged new ayatollahs just as established scholars and scientists credentialed new professors and validated new research programs.

Today, when information is abundant – indeed, overabundant – we increasingly operate in virtual realms populated largely by the algorithmically generated 'people like you' who recommend books, or shoes or appliances to buy on Amazon.com or blogs to read in the diaries on the Dailykos.com or the National Review Online's 'blog row.' In the last several weeks I have gotten email invitations from colleagues in Egypt and Pakistan inviting me to join Shelfari, a website that describes itself as making "it easy to see what your friends are reading, what others with similar tastes have enjoyed, and even get and give book recommendations." There are groups on the site devoted to romance novels, seventeenth century British history, the publications of the American presidential candidates, to medicine, vampires, readers in Mumbai and books in Farsi.[15] Within special interest communities like these, whether marketplaces like Amazon, political sites like the Dailykos, or social networks like Shelfari, consensus arises from open, often heated, debate – one only needs to read the comments posted to political blogs to see the remarkably caustic and often crude tone in which these discussions are commonly conducted – about the preferred espresso machine, the favored political candidate, the 'best' books.

This phenomenon is known as 'user-generated authority,' and it empowers the ordinary diarist and the ordinary reader, or customer, or citizen, in ways unimaginable only a few decades ago. In some ways, it mirrors the classical model of the scientific enterprise. As James Surowiecki has argued, the practice of scientific research has long been a communal proposition, reflecting what he calls "the wisdom of crowds." Authority is conferred by a community at once competitive and collaborative. Surowiecki reminds us of what Robert Merton observed decades ago: "there is no such thing as a scientific truth believed by one person and disbelieved by the rest of the scientific community; an idea becomes a truth only when a vast majority of scientists accept it without question."[16]
And so it may be in the new virtual communities. The wisdom of crowds may produce truth, or at least the authority to designate truth. As Jensen has observed,

> "MySpace, Friendster, Facebook, and other social networking sites are, so far, mostly about self-expression, and the key metrics include: How many friends do you have? Who pays attention to you? Who comments on your comments? Are you selective or not? Such systems have not been framed to confer authority, but as they devise means to deal with predators, scum, and weirdos wanting to be a 'friend,' they are likely to expand into 'trust' or 'value' or 'vouching for my friend' metrics – something close to authority – in the coming years." [17]

And this will quickly be taken up in scientific communities, as what Jensen calls "Authority 3.0" will be constructed from features like the percentage of a document that is quoted in other documents, the numbers of links it has to other documents and how often it draws comments in blogs. Today's Web of Science index, for example is an early precursor of this world, designed to provide "seamless access to current and retrospective multidisciplinary information from approximately 8,700 of the most prestigious, high impact research journals in the world," with which "users can navigate forward, backward, and through the literature, searching all disciplines and time spans to uncover all the information relevant to their research."[18]
This is, however remarkable it may be, merely the leading edge of

an avalanche of change. As Jensen suggests, "Many of the values of the scholarship are not well served yet by the Web: Contemplation, abstract synthesis, construction of argument. Traditional models will probably hold sway for 10 to 15 years, while we work out the ways in which scholarly engagement and significance can be measured in new kinds of participatory spaces. But make no mistake: The new metrics of authority will be on the rise."[19]

Daunting as the prospect may be, for many, a world which joins the reach of the new technologies across time and space with "contemplation, abstract synthesis, construction of argument" sounds like a veritable scientific utopia. Yet, as Cass Sunstein has warned, in serving to filter information and provide members with useful knowledge, these virtual communities can also create "the pervasive risk that discussion among like-minded people will breed excessive confidence, extremism, contempt for others, and sometimes even violence."[20] We will read what our 'friends' read, buy what they buy, and support the policies they support, all without even knowing what the range of choice might be. In the face of the cosmopolitan temptations of unlimited information from all quarters of the world, we will grow steadily more insular and narrow-minded.

This is, of course, antithetical to liberal democracy and that is what worries Sunstein. As he puts it, "the system of free expression must do far more than avoid censorship: It must ensure that people are exposed to competing perspectives. Members of a democratic public will not do well if they are unable to appreciate the views of their fellow citizens, or if they see one another as enemies or adversaries in some kind of war."[21]

In this context the fact that there are communities for whom expansive imaginings of time and space are hardly new, and for whom these new technologies seem to be exceptionally well-suited – communities of faith – may not be reassuring. The decline of the industrial welfare state in the late twentieth century, and of the associated authority of government and science, not only privileged the market as allocator of resources, but gave new opportunities to the religious communities of the world as institutions devoted to the welfare of

believers. When modern states around the world abdicated responsibilities to provide for the well-being of their citizens, it was rarely the market that filled the gap, certainly for the poor and disenfranchised. Instead, temples, churches and mosques everywhere because sanctuaries in an often, and increasingly, uncertain world.

The new technologies have served to further enhance the importance of religious community. The heightened sense of risk and uncertainty produced by limitless information creates anxiety for which religious faith is a comfort and a consolation. The apparently inexorable replacement of neighborhoods by networks, of physical locations by virtual sites, permits religious communities to transcend the limits of time and space to reach, to teach and to comfort believers everywhere. The authority of the traditional religious hierarchies may be weakening, as self-proclaimed televangelists and internet preachers bypass the traditional establishments to testify on television and issue fatwahs on line, but the importance of religious identity and community is only amplified by the weakening of the state and the growth of new communications and social-networking technologies. Whether these communities will prove to be Sunstein's insular enemies or instead are reinvigorated in their commitment to the universalist virtues and values of faith – justice, humility, courage, generosity – remains an open question.

Democracy, Risk, Authority and Policy

For those of us for whom witnessing the power of the Lord or issuing religious ruling are at best only partial responses to pressing public policy challenges like climate change and economic development, the demands of the twenty-first century are daunting. We have ample evidence – indeed unlimited information – about the miserable poverty of many, many of our fellow humans in distant and once invisible reaches of the world. We have ample evidence about the impact of today's carbon emissions on the health and wellbeing of many, many of our fellow humans in the distant and still only translucent future. This knowledge makes demands on us; we cannot ignore it.

Yet the same forces that impose this knowledge on us equip us poorly

to address it. The conventions of science as a guide for policy, notably the reliance on consensus within an authoritative community, are a weak support in the face of increasing skepticism, impatience and doubt. On many issues of public moment, scientific knowledge seems narrowly specialised, scholarly consensus weak or nonexistent, and academic authority diminished. Yet we make policy, with or without the data, the information, the knowledge we have come to expect from our scientific communities.
Right now, we have substituted a sort of ideological 'balance' or what in the United States is often called 'bipartisanship' for the truth our scientific communities are reluctant to certify. Having concluded that there is no certain truth independent of the wisdom of the crowd, we have declared, as Whiteside puts it, that the claim that "regulatory policy [should] be lifted above politics" is "illusory" and argue instead that "*all* risk management is political."[22] And if it is all "merely" politics, policy can best be produced by balancing opinions, however well or ill-informed.

This not only absolves the policy maker from any obligation to assess the merits of the policy – to weigh instead simply of balancing competing perspectives – it also serves the purposes of the media professionals who are daily assaulted by the demands of the *24/7* new cycle of the limitless world wide web. As Zehr points out, "On occasion, journalists may develop controversy where none previously existed, or sustain it by soliciting opposing arguments by expert scientists."[23] This does not inform the public but it gratifies the partisans and sells newspapers, or perhaps more to the point, drives traffic to websites.

Robert Reischauer, of the Urban Institute in Washington, reflected several years ago on the substitution of the conviction of communities of like-minded people, of "interest-based communities," for the evidence of sober social scientific research.

> "Public policy in the United States in recent years has increasingly been conceived, debated, and evaluated through the lenses of politics and ideology – policies are Democratic or Republican, liberal or conservative, free market or government controlled. Discussion surrounding even much-vaunted bipartisan initiatives

> focuses on the politics of the compromise instead of the substance or impact of the policy. The fundamental question – will the policy work? – too often gets short shrift or is ignored altogether."

As Reischauer points out, the knowledge produced by scholarship and science does not create policy or guarantee its success – it merely frames the choices and identifies the costs of various alternatives. In its absence, however, policies are, as he put it, "likely to fail because they may not be grounded in the economic, institutional and social reality of a problem(…) Politically acceptable doesn't necessarily mean effective, affordable, or otherwise viable."[24]

Precisely because politically acceptable does not necessarily mean viable, this system of policy formulation and implementation is not sustainable. Ultimately, policy-makers will resort again to information and knowledge generated by people with special expertise. How will that happen? Increasingly scientific and social scientific research is communicated online, on large-scale social networking platforms, and institutions like the US-based Social Science Research Council are exploring the potential of web-based policy research 'auctions.' Clients – typically public sector policy units – would advertise for research they need. Providers – typically research scholars and scientists at universities or research centers around the world – would either provide citations for existing work in the area or submit proposals for conducting the research.[25]

Early experiments suggest that this mechanism will quickly overtake the 'think tanks' that have been providing research, for both government agencies and non-governmental advocacy organisations, for the last fifty years in all but the most sensitive proprietary or classified research domains. As the think tanks – both those based in universities and those which are independent or attached to private sector enterprises, like Bell Labs or Xerox PARC, or to government agencies, like the American RAND Corporation or our hosts today – are superseded by virtual communities of research collaboration, hierarchies of authority will begin to resolve into networks of expertise. Scientific uncertainty will give way to a revival of the scientific commons, since as many viewers as want will be able to examine the raw data

upon which the information is based and the knowledge developed to inform the policy choices. Indeed, the Intergovernmental Panel on Climate Change represents an early effort –what would probably be called a beta version – of this new mechanism. They describe their mandate this way:

> "The IPCC was established to provide the decision-makers and others interested in climate change with an objective source of information about climate change. The IPCC does not conduct any research nor does it monitor climate related data or parameters. Its role is to assess on a comprehensive, objective, open and transparent basis the latest scientific, technical and socio-economic literature produced worldwide relevant to the understanding of the risk of human-induced climate change, its observed and projected impacts and options for adaptation and mitigation. IPCC reports should be neutral with respect to policy, although they need to deal objectively with policy relevant scientific, technical and socio-economic factors. They should be of high scientific and technical standards, and aim to reflect a range of views, expertise and wide geographical coverage."

Interestingly, they describe 'who we are' as the governments of the member countries of the World Meteorological Organisation and the United Nations Environment Programme; the hundreds of scientists all over the world who have contributed to the work of the IPCC as authors, contributors and reviewers and "the people" since, "as a United Nations body, the IPCC work aims at the promotion of the United Nations human development goals."

And indeed, in many ways, this novel organisational structure for organising scientific policy research will both reflect and foster the transformation of the relationship between the governed and the government in the twentieth century. No longer will the arbitrary assignment of citizenship limit the access of governments to information and knowledge or the claims of individuals to just and equitable policy. Indeed, Sunstein's worrisome anticipation of a world in which "discussion among like-minded people will breed excessive confidence, extremism, contempt for others, and sometimes even

violence"[20] must be measured against a past and a present in which differentials in social status and economic property rather than knowledge bred exactly those ills. We live at a moment and in a world in which, once again, the very meaning of wealth is being redefined as knowledge – you have heard of the 'knowledge economy,' no doubt but recall the seventeenth century – and where the ability to navigate the limitless information to which we have access becomes an increasingly important element of individual well-being and collective security.

This moment and this world demands new imaginings of time and space, as the scale, the constituencies and the logics of politics shift around us. In a similar time, in 1662, a Dutch economist, Pieter de la Court, wrote a treatise in which he tried to explain why Amsterdam was a richer city, and Holland a richer country, than had ever been seen before in the world. As Cook reports it, he observed that

> "there were few landed assets, no noble ores, not much but peat and cows. Listing the usual kind of resources that brought wealth seemed pointless. His answer therefore instead addressed a unique quality possessed by Netherlanders, he thought: Freedom – freedom of conscience and freedom to work without the constraints of gilds or monopoly companies: In other words, freedom for people to follow their own passions and interests."[26]

Today, as three and a half centuries ago, there is good reason to believe that people following their own passions and interests will produce not only the "confidence, extremism and violence of competition" but the collaboration, knowledge and empathy that produces well-being, and will represent the building blocks of policy that ensures sustainable development.

Clearly, the historical relationship between social science and public policy will not govern their relationship in the twenty-first century. The retreat of the state, the expansion of the arena of policy beyond the public sector, indeed, beyond the here and now, have fundamentally reshaped both the supply and the demand for social science research. There is still a role for government, for governments will knit together interest communities, and regulate the research auctions,

and provide the well-regulated legal environment Pieter de la Court thought essential to freedom. As Craig Calhoun has suggested,

> "A public, including the public for social science, is not a category of essentially similar people. It is a differentiated body joined, at least in part, by the capacity of its members to sustain a common discourse across their lines of difference."[27]

In the twenty-first century, power is more widely distributed and more openly contested than it was in the 1660s, or indeed in the 1960s. The demands that we take account of the many people for who we now feel what the United Nations has called, in a different context but in an evocative expression, the "responsibility to protect" – the poor and disenfranchised outside our local communities as well as future generations whose live we can barely imagine – represent both that width and that contest.

The changing in the purposes and parameters of social science and public policy will permit – indeed, require – the reconstitution of their relationship. Universities and research centers around the world will play an important role in this re-engagement, representing as they do, not only significant sites for innovation and education in technical research and evaluation but important arenas of intellectual contestation, for the elaboration and testing of ideas about the public good. But they will do so not as freestanding institutions of research providers for local clients but as nodes in increasingly complex and dense networks of information, knowledge and research.

At the beginning of the twenty-first century, in most places around the world, in both their choices of the problems deemed to require a policy response and the solutions they devise to address them, policymakers must think self-consciously about the links between their tools and techniques and their values and aspirations. In doing so, they will redefine a universal common good and, in transcending specific locales and private interests, they will both demand and reward these new commitments in ways at once profoundly different from their seventeenth century forbearers and yet remarkably similar to the world in the age of discovey.

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Prof. Yehezkel Dror

CRAFTING THE PAST ON THE FUTURE: REALISTIC VISIONS AND FUTURISTIC NIGHTMARES?

Introduction to workshop by Yehezkel Dror

I Fundamental problematic

Humanity is passing through rapid and radical change processes, cascading towards an uncertain and in part inconceivable future. However, a deeper look reveals that the change processes include three layers changing at different rates and in different forms, producing significant tensions and also contradictions and resulting in harsh problems.

The most rapid layer includes, for instance, changes in science and especially technology, fashions and impacts of mass media and new information technologies including internet. Somewhat slower but still pronounced in terms of one generation are some changes, for instance, in geo-strategy, demography, social mores and globalisation.

The slowest layer includes invariants, the most important of which are human and social features that change very slowly on time scales ranging from several centuries to evolutionary periods. These include critical innate characteristics and propensities apparently hard-wired into our neurological and biological structures. Also crucial are basic characteristics of human societies, in part also found among higher primates, such as mixes between conflict and cooperation, significance of leaders and emotional roles of small groups.

The third layer is in-between, with significant change usually requiring a few generations. It includes main features of self-identity, of culture in a broad sense of that term, and of social institutions such as belief systems, power structures, knowledge levels, hierarchies, world views and so on. While the speed of change of some important components of this layer is accelerated, core features change more slowly though perceptible. This layer as a whole is in part conditioned and perhaps programmed by innate human propensities on one hand and in part influenced by the surface layer on the other, while shaping the latter.

Looked at from another perspective, change processes are in part Darwinian in nature, hardly changing within human time scales, and in part Lamarckian, with constant change and accumulating innovations which are transmitted from generation to generation.

Researchers differ in their opinion on the degree to which various human characteristics are more innate or more susceptible to cultural influences, including deliberate interventions by human agency such as education, and in the foreseeable future genetic engineering.[1] But for our purposes a simplified differentiation between processes which are rigid within policy-relevant time horizons, say up to a century at most, and those which are rapidly changing within it, is enough. It provides the concepts which enable formulation of the following proposed paradigm:

> *While major processes posing critical problems to humanity and its sub-parts are changing rapidly, capacities essential for coping with the critical problems are changing very slowly. This leads to a growing capacity deficit of human problem-coping abilities.*

To illustrate the first part of the paradigm, it is enough to mention climate, security, migration and bio-technology uses, though many more examples abound, such as globalisation failures, aging populations, tensions and also clashes between civilisations, public involvement and solidarity displacement by radical individualism, and much more.

Concerning the second part of the paradigm, clearly present political institutions, value systems, power structures and mass opinions are increasingly inadequate for coping with the escalating problems. Thus, to elaborate just one example: Increasingly critical issues can only be coped with on a global scale while the future of individual states, including the more powerful ones, is increasingly shaped by dynamic variables over which they exercise less and less control. However, present and emerging political and social institutions and processes are grossly inadequate for effective global action, while being very slow to change in ways meeting requirements.

To go one step deeper, without elaborating and evaluating here the various propositions of evolutionary psychology on hard-wired human features which were very useful and indeed essential for human survival in the remote past but are increasingly dangerous under modern conditions, one example will demonstrate the point: As clearly demonstrated by experimental psychology and decision studies alike, human beings as individuals, in small groups and in social structures suffer from inbuilt incapacities to cope well with uncertainty. This is dangerous for policy making, which always faces uncertainty, and becomes potentially catastrophic when future-shaping grand-policies are being crafted and adopter. It follows that upgrading 'fuzzy policy gambling' capacities in ways overcoming many blind spots and illusionary perceptions as well as fallacious reasoning is an urgent requirement for grand-policy crafting, to which I will return.

To balance the estimation provided above, the many advancements of large parts of humanity in terms of 'human welfare' as defined by UNDP and in humanitarian values must be emphasized. However, if the paradigm proposed above is at least partly correct, much of this progress must be viewed as surface phenomena which are largely out of tune with deeper processes and are likely to be disrupted by the latter unless ongoing processes are reset into other trajectories into the future.

II Existential Capacity Deficit

The analysis above can be radicalized by contrasting the core feature of the most radical and important ongoing transformations with the more rigid invariants in problem-coping factors.

The most radical deep change driver of our epoch is science and technology. Thanks largely to them, for the first time in human history human agency has the ability to radically change the future of humanity including for better or worse. Illustrations include fatal ecological impacts of aggregate human action; doomsday effects of nuclear and biological devices, and making homo sapient obsolete thanks to bio-technological creation of a different and more powerful neo-human being.

The latter possibility also illustrates a result which can be viewed as desirable or as a catastrophic sin, depending on one's values and beliefs. Further to balance the outlook, it should be noted that the unprecedented future-shaping power given humanity by science and technology can also leap humanity onto a higher level of development in material terms which can perhaps serve as a platform for higher spiritual development. But my studies of human history lead me to give low probability to such visions making them less realistic than various futuristic nightmares – unless a breakthrough occurs in human problem – coping capacities.

If we could trust historic processes to result in desirable futures on their own, in line with various teleological views, whether religious or secular, such as Hegel's philosophy of history – then there would be no existential problem. This would also be the case if we could rely on societal institutions and processes, such as free markets or civic societies, to bring about good or at least non-disastrous futures. However, this is very doubtful, the opposite being not less likely in the longer run.

On a deeper level, the fateful question is whether innate or very slowly changing main attributes of human beings and societies have the potential to provide the cognitive, ethical and institutional qualities needed for using the increasing power of humanity to shape and even 'make' its futures for the better.

This question by its very nature cannot be answered scientifically, being one for philosophical contemplation. But, from a human action perspective, this does not matter: Given that we cannot be sure that we are doomed, it is our task, morally and practically, to do out very best to overcome tyrannies of the status quo which prevent us from coping well with the unprecedented challenges facing humanity and its various sub-structures.

However, as a mental background for taking up some relevant proposals, and to sum up my discourse till here, let me suggest a radicalised version of the paradigm above leading to an action imperative.

Radicalised paradigm:

> *It may well be that there is an inherent 'self-destruct' flaw in human history, leading to rapid increases of human power to shape its futures while leaving human cognitive, moral and institutional capacities on how to use that power stable. To put it into a neo-Malthusian form: While human power to shape its futures increases geometrically, human capacities to use that power for the better improve algebraically at best. This differential produces an increasing incapacity to prevent wrong uses of human power to shape its futures, resulting at best in catastrophes followed by human learning, and at worst the by end of humanity.*

Action imperative:

> *Morally and utilitarian alike it is imperative for humanity, its institutions and leaders, to make a maximum effort to overcome this existential capacity deficit and to develop the qualities essential for using human powers to shape the future for the better, with the meanings of 'better' themselves requiring revision.*

III Grand-Policies for Shaping the Future

Incremental policy improvements are by definition inadequate for coping with the mega-problems posed by ongoing historic processes combining cascading transformations with rigidities – which in part are essential for maintaining collective and individual self-identity and psychological stability but prevent necessary learning and innovation. Instead, in respect to major issues such as ecology, migration, security and prevention misuses of dangerous technologies, needed are 'grand-policies'.[2]

Crafting high-quality grand-policies is a very demanding ambition, requiring significant and in part radical redesign of main features of policy-making systems. However, before indicating some of the main redesign requirements a fundamental paradox must be solved, otherwise grand-policies suffer from a congenital contradiction making the very idea of future-shaping grand-policies nonviable. The paradox is posed by the need to base policies on knowledge derived from the past, while facing ruptures in historic

continuity and aiming at influencing unknown and in large part unknowable futures.

The starting point for understanding and then trying to resolve, at least partly and pragmatically, this paradox is the fundamental epistemological fact that all our knowledge is either hard-wired into our brain in the form of some type of a-priories, or based directly or indirectly on the past as processed by our minds with the help of intuitive or explicit methodologies.

This applies fully to 'knowing' the future. The future cannot be 'studied' as it does not exit, but some outlook on possible or likely futures can be derived from our understanding of the past with the help of three main families of approaches, namely extrapolation, theories, and tacit expert knowledge. All refinements, such as Delphi, scenarios, alternative futures, sensitivity testing, cross-impact analysis and so on are but secondary techniques of the main three approaches and their fundamental epistemological problems.

To be added is 'imagination' – which is an ill-understood facility of the mind which may include also 'wild' mental processes in addition to unavoidable grounding in the past and in now-time. Surely, imagination can help us think on the future, but not foresee it. True, there are examples of outstanding prediction of future developments by a few individuals. There is no way to judge whether this is the product of an unusual capacity to perceive meta-patterns of historic change, or of luck, or of some unknown 'black box' processes. But we cannot know in advance who are the very few of many self-proclaimed 'future seers' may perhaps be right. We can be stimulated in our thinking by various 'wild' outlooks, but basing policies on them is completely reckless.

To sharpen my point, let me return to so-called 'future studies'. This and related endeavors are an oxymoron, as what does not exist cannot be studied in any truesense of that term, only thought, estimated, guesses and speculated about. However, in-so-far as we map and understand future-shaping processes and their drivers on the basis of processing the past, outlook has an epistemological basis

and can serve as a main grounding for deliberate future-influencing endeavors, including primarily grand-policy crafting, by permitting exploration of the future range of impacts of various present action options – which, together with option creation – is at the core of all future-directed choice.
Albeit, when there is no causal chain which we can recognise between what we do now and the future, than policy making is an exercise in self-delusion. But, luckily, this is often not the case, not even in our epoch with all its cascading through part-ruptures in historic continuity into what is sure to be a very different future.

IV Understanding long-term historic processes

Let me pose an extreme test case: Assuming we move through what to our mind are chaotic future-shaping processes in which we cannot recognise any pattern and where we have no clue to identify causal chains between our action now and the emerging futures. In such a situation, living in now-time while building up elastic resources for coping with the unknowable, however perhaps futile, is the only open course. However, luckily, we are not in such a situation. We know or are able to know quite a lot on patterns of historic dynamics and on future-shaping drivers, thus having a basis, however in part shaky, for engaging in crafting of grand-policies which have a positive expected value, that is a better chance of having positive than negative outcomes.

However, one critical feature characterising the core nature of all grand-policies, and indeed of a vast majority of all policies and decisions, must be re-emphasised, without going into details which require separate treatment: They are in essence 'fuzzy gambles' for high stakes, without fixed probabilities and facing qualitative deep uncertainty.[3]

Looking on future-shaping historic processes as a whole, according to present understanding their patterns and meta-patterns constitute a dynamically changing combination between necessity, contingency, chance and deliberate human shaping. The importance of the latter is increasing. However, human choice on intervening with historic

processes itself is shaped by a dynamic mixture between necessity, as determined by relatively fixed features of the human brain and rather rigid social structures and cultures, by contingency and chance factors – and 'free human choice', including choice on reshaping action-constraining societal institutions and human abilities themselves.

This preliminary look at long-term future-shaping historic processes together with the diagnosis of our epoch as characterized by radical changes in many of these processes, including significant ruptures in their continuity, together with major invariants, leads to three main action recommendations:

1. We must try and arrive at better and deeper understanding of future-shaping deep processes, including recognition of the limits of such understanding;
2. we must try and increase the scope of 'free choice' of future-shaping policies, by reducing various societal constraints which hinder development and implementation of innovative policies capable of resetting trajectories into the future so as to reduce the probably of the 'bad' and increase the ability to approximate the 'good', as the two latter are pluralistically understood and themselves changing in time – in part thanks to deliberate value architecture directed at reducing future-endangering value systems;
3. we must redesign main social action processes and institutions, with special attention to political and governmental ones, so as to increase the probability of arriving at high quality grand-policies and implementing them.

Helping in meeting these daunting requirements are a number of features and possibilities, such as:

- The already mentioned importance of invariants, which on one hand makes crafting of grand-policies more feasible because of recognizable causal chains between present action and future realty. But, at the same time, many of these invariants limit freedom of choice and inhibit acceptance of necessary but counter-conventional policies.
- The adequacy of policy time-horizons of, say, twenty to fifty up to a maximum of one hundred years, for achieving impacts – this

being a time span within which even radical shifts in historic processes can be recognised before reaching mature and, if necessary, intervened with.

- The availability of various useful approaches for coping with uncertainty, including surprise events, thus making grand-policy crafting useful also under conditions of much turbulence. These include, for instance:
  1) Inbuilt elasticity, making policies more robust;
  2) inbuilt learning, facilitating adjustment to the unforeseen;
  3) crisis management systems, permitting coping with massive unforeseen radical events, with grand-policies serving as a cognitive base but not a rigid commitment to a particular policy direction.

Still, the difficulties of the task are immense and there is little hope to overcoming them without radical institutional redesigns. But, before discussing them however briefly, let me provide some examples to clarify and illustrate what has been suggested.

V Some illustrations

Let me illustrate grand-policy option crafting possibilities and difficulties in respect to four selected policy spaces:

Mass migration to the European Union of 'others' in terms of culture

Main grand-policy options include, among others: Forceful limitation of such migration; facilitated and in part enforced acculturate; and moving societies towards multi-culturism with unavoidable dilution of historically produced national identities and traditions.

Less radical policies, such as trying to reduce motivation to migrate by improving economic and political conditions in countries of origin, are of very doubtful effectiveness. Various mixtures of the grand-policy options are possible, but without a massive critical mass of a carefully considered synthesis between these and other options, migration will stay out of control with the probably result being very painful sliding towards non necessarily harmonious multi-culturism. However, adoption of any grand-policy mix achieving a critical mass

so as to achieve real impact requires radical changes in widely accepted values which is very hard to achieve by contemporary democratic processes. Also essential is intense cooperation by all European Union countries despite divergent interests; and strong implementation capacities including more than a little enforcement.

Climate change

Incremental policies, such as adopted in the Kyoto process and to be discussed at the Bali conference, are better than nothing, but clearly inadequate. However, really effective grand-policies are very costly now without fully guaranteed future benefits. They depend on radical value shifts on distribution of the costs between various countries. And global action without any 'free riders'.

Present global governance is not equipped to meet these requirements and reliance on a 'coalition of the willing' has little chance of success before major calamities perhaps bring about effective global governance.

Global security

The challenges posed to global security by the increasing power of fewer and fewer to slay more and more, together with proliferation of weapons of mass killing and prevalence of various forms of aggressive fundamentalism, up to the specter of doomsday devised in the hands of fanatics, constitute the most ominous rupture in history. Probably it cannot be coped with without grand-policies imposing a strict global regime of arms limitation and inhibition of violent action, including control of dangerous knowledge and containment of aggressive believers. All these require supervisory measures contradiction much of presently accepted principles of international public law as well as some presently accepted humanitarian rules and human rights.

Controlling 'dangerous' knowledge, such as in bio-engineering

The most challenging choices which are likely to face humanity in the foreseeable future, some features of which are already with us, are posed by the potential provided by life sciences to 're-engineer' main features of human beings.

This poses moral dilemmas and practical difficulties far beyond present human moral and cognitive capacities, while being extremely controversial in terms of ethical and theological belief systems and various material interests alike. Even more difficult will be enforcement of any grand-policy adopted in this matter, requiring as it does strict control of access to and use of 'dangerous knowledge', including limitations on scientific enquiry.

I think these illustrations fully bring out the need for both radically improved cognitive, institutional and moral capacities and very painful constructive-destruction widely resisted by powerful actors.

VI Relevant lessons from rise and decline experiences and theories

One way to explore ways to make the nearly impossible possible is to turn to experiences and theories of rise and decline and some general lessons that can be drawn from them. Basing myself in part on the work of Dr. Salomon Wald,[4] who is processing main rise and decline theories for policy lessons, main requirements for avoiding decline and facilitating rise when faced with serious challenges, as our generation is, include:

1) Radical rethinking of accepted policy orthodoxies, institutions and values, by top quality thinkers, professionals and rulers, with quality time partly protected from current issue overloads and 'political correctness' taboos;
2) high quality decision making elites and of governance institutions, with understanding of what is happening, rapid learning capacity and much policy creativity;
3) societal choice and action capacities based on a large measure of social cohesion;
4) willingness and capacity to cope with very painful tragic choices including giving up deeply held values for assuring realization of even higher ones. Widely accepted spiritual leaders are critical for doing so;
5) power concentrations and willingness to use them, if necessary forcefully, for implementing novel policies involving overcoming vested interests, thinking inertia, political theologies and other tyrannies of the status quo.

All these, together with other required governance redesigns[5] and societal architecture, return us to the 'Learning State' issue central to this Symposium. Clearly some of the requirements are related to the idea of a learning state. But, while being a learning state is essential for long-term thriving under conditions of rapid and radical change with much potential for the worse, given the growing power to shape the future of human action this is not enough: The state must also be a Decisive State and a Strong State. And, taking into account the global nature of most of the critical issues facing humanity, thinking, decisive and strong states must be closely integrated into thinking, decisive and strong global governance. Needless to say, reality is very far from this.

To conclude, let me return to the grand-policy crafting components of a thinking state. To engage in high-quality grand-policy crafting quite new paradigms, approaches and methods are needed, to be applies by a new type of grand-policy professionals. This new type of policy professional is not being developed by any of the university programs that I know about, though some emerge on their own. They must be able, among many other demanding qualities, to think in deep history as one of the essential bases for coping with mutating futures without being caged by it, that is: Their profession is to crafting the past on the future while crafting the future on the past.

However, developing such professionals is child play, however difficult, in comparison with the paramount need for a new breed of top level politicians without which the future looks dim indeed. Therefore, to finish with an unasked-for suggestion: Perhaps WRR would like to take up the critical but sensitive problems of improving politicians as one of its pioneering initiatives.

Notes

1 For a good introduction to this controversial subject see Daniel Lord Smail, *On Deep History and the Brain* (Berkeley: University of California Press), 2008.

2 The concept in analogous to "grand-strategy", but I prefer to limit the latter to foreign policy and security domains.

3 For an extensive treatment, see Yehezkel Dror, *The Capacity to Govern: A Report to the Club of Rome* (London: Frank Cass), 2002, ch. 15.

4 His study on rise and decline theories and their lessons for crafting grand-policies for the Jewish People will be published in 2008 by the Jewish People Policy Planning Institute, Jerusalem.

5 As discussed in *The Capacity to Govern*, op.cit.

Jérôme Vignon

HOW THE EUROPEAN COMMISSION DEALS WITH IDEAS AND KNOWLEDGE

Introduction to workshop by Jérôme Vignon[1]

The aim of my presentation will be twofold: First to reflect an insider view on how the European Commission deals with knowledge, as a sort of indispensable energy source for its engine. Secondly, I shall attempt to draw some lessons from my personal experience as an adviser to policy makers. From a Commission perspective this began in 1987; but it had started much earlier in the context of the now foregone tradition of French policy planning.

Knowledge and ideas are intrinsically linked with the history of Europe and of the European Union.

From the outset, Europe has been a product of inspiration and ideas. In a famous work publicised after the Second World War, Denis de Rougemont, a forefather of European integration, demonstrated that the idea of 'Europe' has been mooted for at least twenty-eight centuries.[2] The mythological notion of Europe originates in its very name and is alleged to be that of the daughter of King Agenor, who sent his son abroad to search for his lost sister: He went to the west, and never found her. But searching for Europe is part and parcel of the making of Europe: Europe is a search, a never-ending quest for achieving unity and common purpose.

For the ancient Greek fishermen, Europe was a westward mountainous island, from which emanated a broad embracing vision. Europe therefore is the materialisation of a dream of universality, born from the monotheistic traditions, Greek philosophy and the Roman legal order. And later on, through the various centuries, Europe has been imagined and conceptualised by bold philosophers or rulers, such as the Bohemian King Podiebrad, or peace-orientated Protestant thinkers like Altusius, Grotius, Erasmus, Sully, and later by the visionary sons of enlightenment, Rousseau, Kant, Heine, Fourrier, Victor Hugo, and Salvador de Madariaga. Those lawyers, philosophers and mathematicians paved the way to the remarkable breakthrough which took place during the Second World War, where ideas of

non-discrimination and equality of rights were finally translated into a robust, dynamic mechanism for change, called initially the ECSC, later on the EEC, then the EC and finally the EU.[3]

The enduring achievement of the Enlightenment meant that ideas could no longer be disassociated from knowledge and evidence: Such a concept has become an integral part of fully-fledged democratic institutions. In a democracy, ideas and orientations cannot be imposed; they have to convince and make their case through shared evidence. The task of constructing arguments on the basis of evidence is never-ending; therefore dispute is also inherent to democracy; but dispute is also a way of strengthening and improving ideas.

An amazing flourishing of think tanks.

The intrinsic connection between the progress of the idea of Europe, the development of ideas and the underpinning of democracy with evidence-based policy, helps us to understand why in recent years – driven by the rebirth of the European integration process – an amazing flourishing of European think tanks has occurred. In a recently publicised piece of research,[4] the think tank Notre Europe, founded by Jacques Delors, has identified no less than 149 European think tanks across twenty-five Member States, where about 3,000 researchers actively promote the use of expert knowledge in order to distil and channel ideas to policymakers and the media on what the EU should be or what it should do. Only 5 per cent of those think tanks are in Brussels. Remarkably, the famous WRR, which we celebrate today, has not been identified as a European think tank, and nor has the BEPA[5] as they don't meet the criteria of being an institution… The same study also argues that those think tanks make a significant contribution to the democratisation of the EU and provides a rationale for their rapid development.

Knowledge is the energy source of the European Commission.

I mention this connection between knowledge and the EU to set the scene for the topic I wish to focus on today, which is an institution – namely the European Commission – which can be seen as a sort of

government, or executive body, in order to draw the analogy between the WRR and its relation to the Dutch government.

The synthesis between the Commission and knowledge is even closer than the connection of ideas with the concept of the EU in general. If the Commission is sometimes depicted as the engine of the EU, then to take the metaphor further, knowledge would be the engine's fuel. Why is this so? I believe that it derives from the tasks and unique role that the European Commission occupies:

1. The Commission enjoys the monopoly of initiative within the institutional triangle;
2. its main task is to identify the common interest of the Member States;
3. its central position in Brussels can make it very remote from the realities on the ground; and
4. this can also contribute to remoteness from the citizens of the Union.

To fulfil its mission, it is essential that the EC[3] receives an input of extensive expert knowledge and clear evidence in order to shape and monitor initiatives according to the common interest. The common interest can be defined as follows: Firstly, accurate, timely and appropriate initiatives, consistent with the challenges that Europe as a whole faces; secondly, in order for initiatives to be valued and trusted they must be based on knowledge and facts which incorporate the wisdom and experience of the various national stakeholders.

We can see that the purpose of the collection of knowledge and the way that knowledge is utilised by the Commission provides legitimacy in two ways: Effective and legitimate outcomes or outputs are achieved when the right actions are taken; and the success of these outcomes can only be based on legitimate inputs which are secured by the effective involvement of those who have access to facts and realities.

Input, output legitimacy and processing of knowledge

If we look at the various tools used by the Commission to collect knowledge, opinions and expertise (see the inventory which was undertaken at the occasion of the preparation of the White Book on European governance),[6] the components of input and output legitimacy are always mixed. But it is also true that the relative weight of both components has changed over time, and that this has had an impact on the mandate given by successive presidents of the European Commission to our very own 'think tank' embedded within the Commission. This is the experience which I would like to share with you now.

When the Forward Studies Unit (FSU) was created by Jacques Delors at the beginning of 1989, there was no talk of a legitimacy crisis. However, in the midst of an apparently brilliant performance, President Delors was in fact pessimistic. He felt that the achievement of a single market, even when completed by the Euro, would not suffice to promote an ever closer Union – what he described as the making of an *affectio societatis* of Europe. He felt that there was a need to look for further motivations and grounds for deepening the European integration process. Exploring new avenues and approaches for that deepening was the precise content of the FSU's initial mandate.

Those years have been some of the most fascinating times of my life. The FSU was formed as an interdisciplinary, multinational team, with the aim of identifying common causes beyond the important but ultimately functionalist goal of achieving a single market. Some of the themes investigated were the demographic challenge facing Europe; the challenge of European sustainable development; *Europe 2010* (an attempt to map out the situation of various industrial sectors confronted with globalisation and the dual perspective of competition and cooperation in imperfect markets); the future of North-South relations; the future of employment in Europe; and also geopolitical uncertainties, such as the future prospects of China or Russia. The FSU draws simultaneously from its own resources, from the pooling of knowledge with other DGs,[7] and of course from external studies. Making use of individuals drawn from different disciplines was a de-

cisive component of the progress made, and the added dimension of individuals from different cultures and even religions[8] was a further contributory factor. This work, of a rather global and forward looking nature, was complementary to the work of the DGs which helped foster alliances across the Commission as a whole and to disseminate the influence of the president.

I remember well an intriguing theme, formulated by Jacques Delors himself, about why it came about that more and more issues were being required to be dealt with by the European internal market – resulting from a huge increase of new technologies in the areas of ICTs and bio-tech – rather than drawing on existing national jurisprudence. This was the beginning of a reflection on ethics and politics. In general, the mandates given by Jacques Delors were broad and it was up to us to interpret their meaning. It therefore often happened that we totally failed in providing the expected input in policy thinking.

This was especially the case in the area of foreign policy. In one particular instance, close to the adoption of the Maastricht Treaty, we were asked to think about the concept of a common European policy. The whole team's efforts had been focused on this and we were somewhat proud of the results. However at the seminar where we presented our thinking, Delors expressed considerable dissatisfaction. As it turns out, the proposals made were quite close to the policies present in a recent communication[9] of the Commission issued for the Lisbon Council. But basically the FSU had missed in that situation the first rule of any political advice – namely the understanding of the context in which the decision-maker operates.

The turning point of the BSE crisis

Delors left the Commission in 1994, and until that moment we had not realised the extent to which the Commission itself, as an institution, was relying upon the input of external knowledge and expertise. For this to happen, we had to wait until the BSE crisis, which took place during the Santer era, in 1996. For most of our colleagues in the Commission, this crisis was just a confirmation that excessive weight and power had been given to the Common Agricultural Policy (CAP),

a sort '*d'Etat dans l'Etat*', inside the Commission. Therefore the immediate reaction was to split responsibilities between two DGs, one in charge of managing the cap, the other of protecting consumer health and rights.

But for the FSU this signalled a more general condition of imbalance, calling into question the legitimacy of the Commission itself. We came to this conclusion after being alerted by Philippe Lenoble, head of the Department of the Philosophy of Law at Louvain la Neuve, to the notions of procedural governance, dealing with the 'Habermassian' concept of the 'deliberative public sphere'. This appeared to have relevance for the observation of a general democratic crisis across the EU. Furthermore, it appeared particularly relevant for the EU itself. In a nutshell, Lenoble convinced us that representative democracy should be complemented with participatory democracy. When developing legislation the 'ballistic approach'[10] had become obsolete: Lenoble made us realise that law-making should be seen as a continuous and circular process, starting with the identification of obstacles, challenges and expectations in society and culminating with a close observation of implementation and monitoring elements of the process, which in turn feeds into questioning and modernising existing rules. At each stage of this circular process, the input of outsiders' opinions, advice or expertise was decisive. Process became as important as objectives.

We had started this research work in early 1995. The BSE crisis was for us a perfect illustration of a governance failure in the way the Commission was dealing with knowledge. At the time, the Commission's aim was to keep full control of a sensitive issue, whereas we were entering in an era of collectively-constructed knowledge, active involvement of civil society and expertise that could and should be challenged. The Cresson crisis contributed to blur the internal vision of the Commission. It was wrongly interpreted as further evidence of the absence of accountable internal mechanisms of control and associated with 'malfunctions' like those which had led to the BSE crisis. Many felt that that this was just an example of insufficient accountability exercised by the European Parliament, or an unchecked growth of administrative bureaucracy. For those of us in the FSU, this did not

indicate an excessive development of 'tertiary legislation'[11] (the so-called 'comitology procedures'), but insufficient attention toward the quality of implementation provisions of EU legislation, rooted in the lack of attention given to the full process of law-making, considered from the view point of collecting and assembling knowledge for that purpose.

An understanding that the origin of the EU legitimacy crisis was a complex matter only became apparent with the arrival of the newly elected President Prodi. At this time, 'governance' had become a popular concept in the higher spheres of government, though not many understood what it was all really about. It became apparent that that the FSU had accumulated some experience in this field and I was called back to Brussels to lead an operational team, with the aim of producing an European White Paper on Governance.[12] Completion of this work took a year and the WP was issued in 2001. It was again a formidable experience, not least because:

- On the one hand, the outcomes remained very controversial, as many proponents of traditional visions of the European integration process felt challenged by the idea of participative democracy; they also felt that the very fact of questioning the legitimacy of the Commission was endangering the so-called 'Community method';
- On the other hand, many of the 'procedural innovations' which have taken place in the last five years have been connected with the proposals of the WP on governance, along the three phases of law-making:
    1. Preparatory work (standards for the quality of consultation, guidelines for using expertise, rules for impact assessment);
    2. policy options (application of the proportionality principles, while considering a variety of instruments, including soft instruments, like co-regulation, partnership agreements, OMC); and
    3. quality of implementation, through specifying the responsibilities of regulatory agencies, clarifying the role of committees, reviewing the infringement procedures and developing joint action with national courts.

Today the thrust of what is called 'better legislation' still derives from the broad investigation of the 'Governance White Paper'. It is clear that further developments are still required, most notably in the field of impact assessments, or developing the role of regional authorities in the implementation of EU legislation.

In tandem with the change in nature of the legitimacy question, the role of the think tank attached to the Commission's president has evolved into a body that is less forward-looking and more orientated towards an improvement in results and delivery and pays closer attention towards the expectations of Europe's citizens.

Some practical lessons from the point of view of public policy advice

It is now time to try to look at this experience from the point of view of those responsible for running a team of advisors to a public authority:

- First, it is important to rely on a clear relationship with the public authority in question: Any mandate given by the authority – whether it is given broadly or occasionally – should be as clear as possible, and where the public authority has expectations, these are clearly spelt out.
- Second, the personal involvement of the public authority when assessing results is also important for the credibility of the advisory body. Endorsement or rejection of results is equally important.
- When an important task has been entrusted by the political authority, then at the mid-term point of the study or report it might be wise to provide a menu of policy options. This helps to avoid significant misunderstandings and contributes towards a strengthening of ownership for the final outcomes.
- The overall political context in which the proposals are to be presented within the public domain is decisive. Journalists or colleagues with a communication background are all too often neglected within an advisory team.
- Ownership of proposals or new policy directions by the mandating authority, or by its audience, should be a fundamental aim. It

is far more important than the labelling of those ideas or proposals by the advisory body.
- The best results are achieved through a partnership of insider and outsider expertise in a policy field. Both are essential.
- Similarly, teams of a cross-disciplinary nature are essential. Economic science is excellent when considering resource constraints and limits to proposals; it obliges the team to consider many options. But it also tends to narrow the perspective, exaggerating some of the costs and neglecting some of the benefits, because of the tendency to restrict the analysis to measurable outputs (the so-called evidence-based approach).
- The contribution of all those who have participated in a study, or a report, should by no means be kept secret. Their acknowledgement is vital, also from the point of view of a requirement of a plurality of opinions.
- Studies and reports should be made available to the general public and subjected to debate.
- It is always good to assess the relevance of studies and make public any findings after a period of time consistent with their scope.

It is now time, having reached the conclusions of this presentation, to return to the roots of politics. If it is true that the European political integration process – in contrast with previous historical experiences of the foundation of nation-states – draws much of its strength from a rational analysis that has demonstrated the benefits from economies of scale in a globalised world. Experience of the last decade has also shown that emotions, dreams and passions are still the real origins of politics. In that sense, European think tanks, within or outside the European Institutions, are supporting the European purpose only to the extent that they serve a true political process which supports ideas in an unpredictable world and captures both the emotions and imaginations of the people to add not just value – but also sense.

Notes

1 Former Head of the Forward Studies Unit at the European Commission; at present Director for Social Protection and Social Integration in DG Employment, Social Affairs and Equal Opportunities.

2 Denis de Rougemont, *28 siècles d'Europe* (Ed. C. Bartillat, ISBN: 9782905563323).

3 European Coal and Steel Community (ECSC); European Economic Community (EEC); European Community (EC); European Union (EU); the last two based upon the Maastricht Treaty.

4 Study published for 'Notre Europe' in 2004. *L'Europe et ses think-tanks: un potentiel inaccompli*, Ed. Stephan Boucher.

5 The Bureau of Economic Policy Advisors (BEPA) is the present successor of the Group of Policy Advisors (GOPA). As think tanks attached to the President of the European Commission, BEPA then GOPA are the successors of the Forward Studies Unit launched by Jacques Delors in 1989.

6 c.f. 'Rapport du Groupe de Travail consacré à l'usage de l'expertise scientifique et présidé par R. Gerhold'; Annexes au *Livre Blanc sur la Gouvernance Européenne*, COM(2001), 428.

7 'DG': an acronym for Directorate Generals, which form the main administrative pillars of the European Commission's staff.

8 The main outcomes of the European 'Carrefours for science and culture', chaired by Jacques Delors himself, have been summarised in two books.

9 *A Common European Interest*, COM (2007), 581.

10 A 'ballistic approach' to policy-making cares mainly about the target of its action. It is not concerned by the way of reaching the target.

11 Legally binding acts of the EU are sometimes categorised along three layers: primary legislation (the Treaty); secondary legislation (Acts adopted by the Council and the Parliament on the basis of the Treaty); tertiary legislation (complementary rules adopted in general by the Commission, under the security of committees in which Member States are represented).

12 *White Paper on European Governance*, adopted in June 2001 by the European Commission, COM(2001), 428.

Prof. Peter Weingart with prof. Pauline Meurs

TRUTH AND TRUST: IRREDUCIBLE DILEMMAS OF SCIENTIFIC ADVICE TO POLICYMAKING[1]

Introduction to workshop by Peter Weingart

I Scientific knowledge as a resource and object of conflict

The slogan of the wealthy 'association of foundations', the German Stifterverband, in promoting science reads: "Who does not know anything has to believe everything". For the better part of the nineteenth and twentieth centuries this may not even have been regarded as particularly threatening. Science was, and incidentally still is, the most trusted institution in all Western societies, next to the respective Constitutional Courts. Science is supposed to produce true knowledge, to be a neutral arbiter in conflicts over parochial interests due to its universalistic values, and for that reason it is also supposed to operate for the common good. Of course, the Stifterverband's slogan appeals to young students who are thereby agitated not to remain passive victims of false promises but to take an active interest in the acquisition of knowledge, to develop their critical capacities. This is the enlightenment aspect which plays on the critical and superior power of scientific knowledge over all other knowledge systems in modern societies.

Because of its centrality as knowledge system (thanks to its differentiation from religion belief and knowledge based on critical scrutiny can now exist side by side) science has become involved in policymaking on a larger scale than ever before. However, it may only play a role in an advisory function. Any involvement in decision-making proper would conflict with the principles of democratic representation, i.e. with democratic legitimacy.

The centrality of science, its augmented importance and its proximity to political power have a price. While trust in science as an institution is still high, especially highly educated and well to do societies (in Northern, Western and Central Europe) have differentiated reactions to particular scientific advances, the belief in true knowledge is no longer unconditional. Two kinds of reasons appear to be responsible: 1) structural reasons, and 2) developments of the past half century.

Structurally, the influence of certified knowledge on policymaking as a legitimating resource contradicts principles of democratic representation. Thus, the more scientific experts are consulted by policymakers the more dramatic will be the conflict over their legitimation. The pertinent developments refer to the complexity of managing modern societies which is taken as a reason for the growing importance of scientific knowledge. Issues such as the regulation of industrial risks or the direction of the labor markets and pension systems etc. have not only confronted governments with the need to enlist ever more experts. They have also confronted scientists and social scientists with questions they are unable to answer because of the complexities and the value implications involved. One side effect is the revelation of uncertainties and lack of knowledge. Another side effect is the erosion of science's neutrality. Not only are malfunctions of the system (due to coupling with economic and political interests) becoming apparent (most obvious in the publicised cases of fraud) but science is attributed self-interests (science appears as its own lobby). This clearly diminishes trust in science. Even though the decline of trust is not so much visible in the public's responses to questionnaires it is manifest in the political drive for accountability and evaluation of science which signals that governments no longer trust the internal mechanisms of quality control.

The role of science in advisory contexts is not new nor is the structural conflict between knowledge and power. But this conflict is dramatised as the political mood has become participatory, especially with respect to the shaping of technologies and the regulation of risks, i.e. as the coupling of science with politics and the economy has become tighter in general.

This points to an apparent paradox. Scientific knowledge has gained enormously in social, political and economic relevance, and at the same time it has lost its unquestioned authority, it has become subject to debate and conflict and is an object of intense contention. Three examples in recent public debates may serve to illustrate this point:

1) Climate change research: climate models which are at the basis of all scenarios of the future development of the global climate, have assumed a great agenda setting power for political and pu-

blic debate. At the same time the models have a great uncertainty due to the sheer complexity of modeling climate on a global scale. The media play a crucial role in communicating this uncertainty to the public. The foremost German newsmagazine, *Der Spiegel,* moved from one week to the next from announcing publication of the recent IPCC report and taking it seriously to a cover headline: "the great climate hysteria". Incidentally the same shift had already occurred once before, in the mid-1990s. And invariably, the media attribute self-interest – in this case that climate researchers are creating a hype in order to obtain more funds and to push their political agenda – as a reason to be skeptical.
Political conflict over the interpretation of climate change research findings is vicious as debates between the community of climate researchers and the us President George W. Bush demonstrate.

2) Models of pandemics: Again, the models predicting the spread of viruses such as H5N1 (bird flu) have great dread potential. During the bird flu alarm in the early months of 2006 health officials in the who and a number of eu countries warned of a pandemic like the Spanish Flu in 1918 and predicted loss of life reaching into the hundreds of thousands in Europe. Governments were called on to stock medication (Tamiflu) in great quantities, and sales figures for the available pharmaceutics rose significantly. Added to the difficulty of scientific experts was the fact that they had to tread a thin line. On the one hand withholding or manipulating the facts bear the risk of being discovered later and would then create a serious crisis of credibility, as the bse crisis has taught. On the other hand publication of the exact figures, according to the norm of transparency, could easily be abused by the media and lead to panic reactions.
This dilemma is exacerbated by the fact that the models of pandemics are about as uncertain as the climate models.

II The organisation of scientific advice to policymaking as a reflection of conflict over knowledge

It is commonly accepted that scientific advice has to meet the needs of policymakers, and that therefore it is not identical with science. The

expertise communicated between adviser and advised is an intermediate type of knowledge (production). This is reflected in the duality of the reference of knowledge and of its quality criteria that appears in dichotomies like usable versus reliable knowledge – or political vs. epistemic robustness.
The different functions of the advisory bodies can be traced in the organisational structures, i.e. rules and procedures, of the advisory bodies. The crucial criterion according to which these bodies can be judged is the above mentioned duality of epistemic quality and political acceptability of the advice that they produce. This translates into an organisational duality, that of the independence or dependence of the advisers. The crucial problem in organising scientific advice is if the advisers (and to what degree) should be independent or controlled by the political side, i.e. if their political loyalty or their utility can be assured. Of course, the dichotomy is a simplification but it serves the purpose to highlight the analytical distinction between two different systems with different operating codes.

The thesis is that the relevance of scientific knowledge to policymaking and its potential impact on political decisions introduces a conflict into the advisory processes between scientific experts and policymakers over the interpretation and use of knowledge. Policymakers have an interest in controlling the flow and the interpretation of knowledge because of its potential utility as a resource for the solution of their problems and, at the same time, because of its potential threat to their power and legitimacy. Scientific experts, on the other hand, are interested in having their advice taken seriously because it gains them reputation in their respective communities and influence in the political arena. The scientist – in the role of an adviser – thus, has an interest that is peculiar to this role. We will probably see this role of the professional adviser be more clearly delineated in the future.

Thus, in contradiction to the self-perception of scientific advisers and policymakers alike the basic assumption is not that scientific advice takes place between a neutral, disinterested scientist whose advice may be trusted, and a policymaker who represents his constituency's interests. In that traditional model of 'truth speaks to power' true knowledge appears neutral with respect to societal interests. Instead

it is assumed that knowledge is a resource in the political context, and therefore that it is an object of conflict.
This thesis helps to better understand the different configurations of advisory bodies, their effects on the communication between scientists and policymakers, on the uses and misuses of knowledge, and on the conflicts and frustrations arising in the process. In contrast to the simplified dichotomy of autonomy versus political dependence of advice the reality of scientific advice is characterised by an ongoing process of strategic manoeuvres on both sides.

The input of scientific knowledge into the political process takes place at different stages of the policy cycle and has different functions. One can distinguish the following functions of advice: Analysis; early warning; information; conceptualisation; monitoring; normative setting of standards. These problem oriented functions inadvertently have political functions as well, such as: Agenda setting; legitimation; moderation, and symbolic politics. Many attempts have been made to delineate these functions, some more convincing than others. There is no ultimate agreement on this exercise. For the present purpose the basis are the actual advisory organisations and their functions. Thus, first of all one can distinguish types of advisory organisations. Here the German system of scientific advice to policymaking is taken as the example.

Type of advisory body	Function
Statutory ministerial advisory councils (Wissenschaftliche Beiräte)	Permanent critical Monitoring [Controlfunction]
Regulatory commissions (zkbs; ssk) (Sachverständigenkommissionen)	Regulation, setting of standards, risk assessment
Statutory high-level inter-ministerial advisory councils (Sachverständigenräte)	Monitoring and analysis of policy
Ad-hoc Commissions	Preparation and Legitimation of decisions
Enquête-Commissions	Information + Deliberation (in Parliament) [Agenda-Formation]

We look at the factual functions of the following set of organisational features, mostly procedural rules: Mandate; recruitment and selection of advisors; formal relationship to constituent; mode of opera-

tion; rules of dissemination and use of advice.

For each one can identify formal and factual functions.
Here a few examples must serve as illustrations for the functions of these features under the condition of conflict over expert knowledge.

Mandate:
A broad mandate tends to favour the primary orientation of the advisory body to scientific standards, thus improving the validity of the expertise but at the same time limiting the potential relevance of the advice to the policymakers (cf. statutory ministerial advisory councils where this is most pronounced).
A narrow mandate tends to increase the relevance of the expertise to the solution of the problem at hand and may also strengthen the authority of an advisory body because of clearly defined professional responsibilities (such as in risk regulating bodies). On the other hand it favours premature positioning of members and subsequent hardening of conflicting factions (cf. *ad hoc* commissions).

Recruitment and selection of advisors:
Obviously the recruitment of advisers has an influence on the advice to be expected. Thus it is highly contested. The two solutions, self-cooptation and recruitment by political clients, are extremes. Cooptation strengthens adherence to academic standards and internal debate but favours conservatism of advice, distance to the addressee and actual problems (particularly pronounced in the *Beiräte*).
Recruitment by the political client may compromise scientific quality standards and increase the danger of politicization but may strengthen the commitment of the advisory body to the goals and problems of the political client (cf. *ad hoc* commissions).
The representation of disciplines, on the one hand, and societal interests on the other are crucial features. Depending, of course, on the problem at hand choice of disciplines can determine the answer. A broader spectrum of disciplines can contribute to the political relevance of the advice. The representation of stakeholders, on the other hand, while strengthening the acceptance of advice may compromise scientific standards (This pertains to risk regulation and *ad hoc* commissions in particular).

Formal relationship to constituent
It seems obvious that advice must be given by an autonomous body of experts. However, the degree of autonomy is highly contested between scientific experts and policymakers. If the body is completely autonomous its advice may be disregarded entirely. If it is subject to some kind of control – usually as a narrow mandate but also informally as the attempt to direct the deliberations of the advisory body – the expertise may be more acceptable by the political actors but may, at the same time lose credibility on scientific grounds. Here one has to distinguish between formal and informal control. Formal control by mandate may delineate the problem in an inadequate but politically acceptable way. Informal control can intervene into the process of expert deliberation itself.

Mode of operation
Most advisory committees try to reach a consensus. Obviously that increases their authority vis à vis the policymakers but it also signals a false unity of opinion where it actually does not exist. In risk regulation it hides value conflicts among members. Some statues stipulate that a minority vote is possible. Minority votes give the client a better idea of the breadth of opinions among experts, of a variety of options to take. Thus, they strengthen the autonomy of decision-making on the political side.

Rules of dissemination and use of advice
Apart from the recruitment of experts the rules of dissemination and use of advice are crucial in the relationship between advisory bodies and policymakers. If the right to publish the report of an advisory body rests solely with the political client it limits the political risk of receiving advice that contradicts a government's policy and programmatic objectives. Advice may thus be accepted selectively or kept secret altogether. Conversely if the right to publish rests with the advisory body this may protect its integrity and that of the advice but it may also pose a risk for the policymakers because the advisers may push hidden agendas and bind the politicians' hands. An example for the attempt to balance these contradicting functions is the *Council of Economic Experts* (SVR) whose annual report has to be published as it is handed over to the government, and the

government has to react to it. At the same time the report must not include any recommendations.

This small selection of rules and procedures of the formal advisory bodies illustrates how each of them may work in favour either of the experts' or of the policymakers' autonomy, and thus, either allowing for epistemic robustness or for political robustness of the advice. There is *no exact fit* between function and type of organisation, both are too fuzzy. But it is nevertheless possible to differentiate between several categories. Two 'extreme' cases can serve as an illustration. Regulatory commissions usually deal with scientific issues (e.g. emission standards). Their members are scientists (and possibly stakeholders). They mostly address the operational level of ministries and often have a direct impact on political decisions. Yet, mostly their deliberations are not politicised (although there are notable exceptions, e.g. in the case of risk assessment of GM corn). For these bodies the intensity of conflicting interests is relatively low. On the other end of the spectrum is the Council of Economic Experts (SVR). Although economists think of themselves as exact scientists in fact they are not. Their advice depends to varying degrees on 'schools of opinion' (e.g Keynesianism versus neo-liberalism). Their predictions are rarely precise. They address the head of government, and their advice pertains to a highly sensitive policy area. Thus, it is invariably politicised with more or less intensity, depending on whether it comes out in support of or opposition to current policy.

The effects of the organisational features of advisory bodies enumerated above in moderating the conflicting interests between policymakers and advisers differ among these types of advisory bodies, among policy arenas and among disciplines involved. But in no case is the conflict absent, are the scientific advisers not involved in value issues and political judgements. As advisers or 'experts' they are subject to conflicts over knowledge.

III Conclusion

Given the complexity and variety of advisory contexts, the divergence of functions and the impossibility to balance epistemic and political robustness there are no ideal, let alone simple rules for

the organisation of scientific advice to policy making. This may be translated into the truth/trust framework. The power of knowledge (truth) over interested interpretation is constantly challenging but never complete. Political power is in a constant dilemma of having to trust scientific knowledge (and thus, scientists) at the risk of losing credibility, on the one hand, and to control it at the risk of losing autonomy of decision-making. The dilemma cannot be solved no matter which schemes to moderate between truth and power may be invented, which concepts are coined to bridge the hiatus. Thus, the relation between policymakers and their advisers will always be a negotiated one in which rationality and acceptability will gain the upper hand interchangeably.

Notes

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The Netherlands Scientific Council for Government Policy (Wetenschappelijke Raad voor het Regeringsbeleid, WRR) is an independent advisory body for Dutch government policy. The Council focuses on policy issues with long term social, economic, technological and political significance, which, as a consequence, transcend the policy domains of the various ministries. Members of the Council are highly qualified academics, appointed by the government for a period of five years. The WRR is an independent think tank; it directs its own research programme, which is funded from the budget of the Prime Minister's Office.

The annual WRR lecture offers policy makers and academics a high profile opportunity to discuss current policy issues with long term relevance for Dutch society.

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