What will happen to science policy?

Harvard's celebration last week of a retired professor's birthday is a reminder that US academics have contributed powerfully to public policy.

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In the end, we never learned where Harvey Brooks stands on the prospect of global warming, but nobody doubts that he regards it as deserving of the serious attention he customarily pays to public issues of this kind — and that he will write about it very soon.

Brooks is the now-retired engineering professor at Harvard who has become a legend in the United States and elsewhere for his indefatigable concern with technical issues in public policy — and for his habit of taking detailed notes of all the meetings through which he sits, including that with which Harvard's Kennedy School of Government celebrated his 75th birthday at the weekend. The eventual fate of these documents, apparently well-preserved, is a matter of concern, and perhaps sometimes of anxiety, to his erstwhile fellow-committee members.

Harvard had gathered for last week's occasion more than a hundred of these, including two former science advisers to the US President (Donald Hornig and Guyford Stever), several past and present members of the National Science Board and a generous sprinkling of past members of the President's Science Advisory Committee (PSAC) from its heroic pre-Nixon days.

Brooks's claim on the attention of academic colleagues and government officials alike is, by common consent, remarkable. A necessary but not sufficient explanation is a precociously solid reputation as a researcher (in the field of the mobility of atomic vacancies in metals and the nature of the inter-grain matrix of polycrystalline materials). But most of the others are personal.

Even at seventy-five, Brooks retains a compelling boyishness, both in appearence and in his readiness to be surprised and stimulated by notions of which he has not previously heard.

Linked with that is a beguiling artless innocence: all interesting questions deserve a serious answer, which is a matter of carrying out whatever calculations may be necessary, of rehearsing the arguments on one side and the other and of providing a literate analysis of their relative weight. In the world of the sound-bite in which emphatic opinions tend to carry the day, and in a field in which language is perpetually at risk of corruption by sociologicese, Brooks stands out as a scholar who can write clearly.

But how, having come to a sound opinion of some issue of public policy, does one ensure that those who matter listen? Brooks's way is to join — or, as likely, to form — the right committee. One of his innovations of this kind was the Committee on Science and Public Policy, formed within the US National Academy of Sciences in the 1960s, which was the foundation of that organization's influence on the generality of technical public issues, not simply those on which the US Congress has commissioned a study.

His influence in that role, copiously illustrated by anecdote last week, seems to spring from his tenacity. He is the committee member who can always be counted on to have read the papers for the current meeting — as well as the previous minutes. The same diligence appears to stamp his function as an expert reviewer of about-to-be public documents: John H. Gibbons, director of the US Congressional Office of Technology Assessment, thanked him publicly at the meeting for 40 kbytes of comment on a document that has not yet seen the light of day. For what it is worth, Brooks was one of the midwives, nearly two decades ago, of Gibbons's own organization.

Although Brooks's reputation rests largely on his studies of domestic US policy in the fields of energy, environment and science policy, his influence overseas has been considerable. In the 1950s and early 1960s, for example, he was a regular member of the expert committees to which the Organization for Economic Cooperation and Development (OECD), then the Organization for European Cooperation and Development, entrusted the examination of science policy in particular countries. He argued the case, in the United States, in the early 1970s, for the creation of the International Institute for Applied Systems Analysis (at Vienna) and is now a regular member of the UN advisory committee on science and technology. Among other things, a willingness to catch an aircraft flight to almost anywhere seems to be an essential qualification for these pursuits.

So how does Harvard celebrate a career like this? First, with a more than decent dinner, at which Dr Derek Bok, the president of the university, raised the question whether it would be possible to replace Brooks's generation of policy advisors with new recruits of necessity innocent of the turmoil of the Second World War. Then, with the traditional symposium devised to cover the range of the birthday boy's interests at which, last week, the most arresting contribution was that of Dr Thomas Schelling, the iconoclast economist who is best known for his contributions (while at Harvard) to strategic studies, but who now (as professor of economics at the University of Maryland), is powerfully advocating a gloomy view of the prospects for a treaty on global warming.

Acknowledging that there is a "vast amount of enthusiasm" for some kind of international action in the field, Schelling says he is "profoundly sceptical" that anything will happen. And "that makes me both a pessimist and an optimist".

The pessimism is easily explained. Schelling believes that enthusiasts for a treaty on global warming have underestimated the difficulties, not least those of persuading democratically elected governments to shoulder the costs of abatement, even if these are as little as one or two per cent of the annual gross national product for the rest of time. And in any case, if there are sums of money of that kind to be spent in the interests of the global condition, who will not sympathize with the views of states such as Bangladesh that they would prefer to have the resources now, as cash for the support of development of some kind, than as an investment in the abatement of emissions and the uncertain benefits thereof?

Schelling's optimism rests on two foundations — the argument that the predictions of the computer models of climate are, for the time being, "not very clever" and, more cogently, that for countries such as the United States, where agriculture accounts for some 3 per cent of gross national product, the costs of adaptation to climate change, while still uncertain, cannot be very large. Developing countries are another matter.

Challenged, Schelling says he would invest a small proportion of gross national product in the abatement of emissions, but that — given the choice, which is unattainable — he would prefer to see the same resources spent on the containment of population growth. But, in any case, he sees no way in which "countries such as China and India" will accept constraints on their emissions "unless we pay them".

Will reasonable Harvey Brooks be content with that, or will he take Schelling's opinions as a challenge? **John Maddox**