

INTERACADEMY PANEL ON INTERNATIONAL ISSUES

THE ROLE OF ACADEMIES IN ADVISING NATIONAL GOVERNMENTS

Peter Collins¹

This paper discusses the experiences of IAP Academies in advising their national Governments. It is written at a time when many Academies around the world are making their advisory role an increasingly central part of their missions. It is written as background for a seminar on this advisory role, organised by the InterAcademy Panel and kindly hosted by the Caribbean Academy of Sciences in Trinidad on 27 September 1998.

The paper is based on a survey of IAP members, to which 29 responded (listed in the annex). I am most grateful to those who took time and trouble to provide me with information. I am conscious that the paper may contain errors of fact or interpretation, and should be grateful for corrections and comments.

I. DIVERSITY OF TYPES OF ACADEMY

The first, and obvious, point is that Academies vary greatly in their histories, scale and range of activities. Of the Academies responding, some have been busy for several hundred years but about half have been created or recreated since 1945. The youngest respondent to the survey, the Malaysian Academy², started work in 1995. Further Academies have emerged since then: the Thailand Academy was formed in 1997, the Vietnam Academy is currently being formed, the new UK Academy of Medical Sciences will hold its first Council meeting this autumn. The idea of the Academy as an institution active in public life has a long and honourable history, but it is evidently as pertinent now as it has ever been.

Almost all Academies are explicitly or implicitly recognised in national legislation. Indeed, many owe their existence to Government initiative. Others have secured the endorsement, and often the explicit patronage, of Government or Head of State along the way. The corollary is that Academies should work to the national, as well as to any merely private (or indeed global), good, and their statements of objectives often include phrases like 'contributing to the progress of the nation'; 'promote the development of natural knowledge in India including its practical application to problems of national welfare'; or 'pursuit of excellence for the development of the nation as well as for the benefit of mankind'.

Some Academies operate at a regional rather than national level: examples are the Caribbean Academy, Latin-American Academy, Academia Europaea, Third World Academy. For such Academies the advice function may be more diffuse, since there may be no regional policy-making body with which to interact.

Five of the Academies responding to the survey (Argentinian, Bolivian, Iranian, Lithuanian and Macedonian Academies) have fewer than 50 full members; most have a few hundred members. Four Academies in the survey have more than 1000 members: the Canadian, Mexican, UK and US Academies. Many also have

¹ Secretary, InterAcademy Panel Steering Committee; Director Science Policy, The Royal Society of London. The views expressed in this paper are not necessarily those either of the Royal Society or of the IAP Steering Committee.

² For ease of reading, I have used this form of nomenclature to describe virtually all respondents to this survey. The anglicised version of their full names is given in the annex.

various classes of associate or corresponding member, and most have a category of foreign member; in some cases these additional members outnumber the full members. Some elect a fixed number each year; others have a fixed number of members and elect new members only as vacancies appear. In some Academies the members receive various material benefits, including a salary or honorarium; in others, by contrast, the members have to pay a subscription.

Nearly all Academies employ administrative staff (as distinct from staff in research institutes owned by Academies). Very few employ more than 100 staff, but the US National Academy of Sciences employs 1200.³

About half the Academies in the survey cover only the natural sciences, while the others include both social sciences and humanities. A major role for some (eg Croatian, Hungarian, Lithuanian and Polish Academies) is or has been the preservation and enhancement of national language and culture.

Academies also vary in what they do. Most if not all operate both as national Academies (representing science in their countries to their own Governments and to the international scientific community) and as learned societies (promoting science by, for example, recognising and rewarding excellence in research, holding scientific meetings and lectures, publishing new research in journals and monographs, maintaining a library, supporting work on the history of science, addressing issues to do with education and training and with public understanding of science). Some Academies have private funds that they can use to support research directly, and many also have a role in managing publicly funded research within their countries.

This funding role can take various forms. For example, the Swedish Academy has a long tradition of setting up research institutes, some which it runs long term and others of which, once firmly established, it moves into the public sector. Of its seven current institutes, three have been started within the last twenty years. The Royal Society does not employ any research scientists itself, but is responsible for channelling about 1.5% of the UK Science Budget to support excellent individuals irrespective of discipline, complementing the major UK Research Councils which promote research in particular fields. Academies operating in centrally planned economies or economies in transition to a free market basis often manage national research institutes, though this role has been extensively revised in many instances following the break-up of the former Soviet Union. Despite heavy cuts since 1989, the Bulgarian Academy runs most of its country's research laboratories, and staff in these laboratories produce 70% of Bulgaria's scientific publications and patents; and the Czech, Hungarian and Polish Academies also maintain large networks of research institutes. The dominant example of the public funding role is the Chinese Academy of Sciences, which runs 123 research institutes and 400 S&T enterprises employing more than 60 000 staff. The Australian, Canadian, French and Mexican Academies, by contrast, have no funding role.

Some Academies - eg the Royal Society of Canada - receive no regular funding from Government, but most receive significant sums. This may cover all their expenses, or only those directly related to the support of research. Other sources of income are members' subscriptions, commercial activities (eg publishing), income from investments, donations from charitable foundations and monies raised privately for specific projects. But, despite the often close legal and financial relation with the State, Academies are fiercely independent organisations. The nature of this independence is a crucial feature of the advice role, and I shall return to it later.

³ Most of these staff work in the National Research Council, which is the operating arm of the so-called 'Academy complex' [the National Academy of Sciences, the National Academy of Engineering and the Institute of Medicine]. The NRC produces about 200 substantial policy studies per year

II. THE ADVICE ROLE OF ACADEMIES

(i) How the mission to advise arose

When the Royal Society of London was founded in 1660, its business was described as 'To improve the knowledge of naturall things, and all useful Arts, Manufactures, Mechanick practices, Engines and Inventions by Experiments - (not meddling with Divinity, Metaphysics, Moralls, Politicks, Grammar, Rhetoric or Logick).'⁴ Nevertheless, throughout its history the Society has been called upon from time to time to engage in politics, or at least to advise on matters of national importance. It still takes great care not to 'meddle', but over the last 25 years it has increasingly taken upon itself, within its general mission of promoting excellence in science, the explicit objective 'to promote independent, authoritative advice, notably to UK Government, on science and engineering-related matters and to inform public debate'. The advice covers both policy for science and the scientific aspects of public policy: the latter is intended, not to lobby for a particular outcome to public policy, but to ensure that the decisions made by politicians and the views held by those who influence them so far as possible take on board scientific insights relevant to the matter in hand.

Other Academies have come to their advice roles more directly. The Act of Congress establishing the US National Academy of Sciences in 1863 stipulated that '... the Academy shall, whenever called upon by any department of the Government, investigate, examine, experiment, and report upon any subject of science or art ...'. Like the Royal Society, it is, nevertheless, in essence an independent, self-governing learned society which has certain national functions; but its advisory role is said to provide the rationale for its honorific role, rather than *vice versa*.

The law passed in 1994 concerning the Slovenian Academy requires it to 'give appraisals, proposals and opinions on the position, development and promotion of sciences and arts' and 'participate in discussions on common social and economic issues'. Similar requirements are written into the objectives of the Malaysian Academy, which also include, interestingly, the obligation 'to act as a forum for maintaining awareness on the part of the Government of the significance of the role of science, engineering and technology in the development needs'. The Italian Academy is, explicitly, the 'scientific consultant' of the President of the Italian Republic.

The advice role may change over time. For example, the Science Council of Japan, set up in 1949, was originally required to advise the Government on a wide range of issues. However, as additional advisory bodies were established both at Government level and within individual ministries, its advisory role was eroded until now it receives one formal request for advice each year. The Brazilian Academy's role has waxed and waned with changing attitudes of Government, but over the past decade has substantially recovered the ground lost under less friendly regimes.

Many Academies, whatever their origin, have a formal advisory role through the participation of senior members in high level bodies. For example, the President of the Australian Academy is an *ex officio* member of the Prime Minister's Science, Engineering and Innovation Council, and members of the Czech Academy Council serve on the Government Council for R&D and other senior advisory committees.

(ii) Customers and topics

Whom do Academies advise? One universal target is the national Government, for the obvious reason that Governments make policy. All Academies seek to nurture their relations with Government and with individual

⁴ Robert Hooke, quoted in Henry Lyons, *The Royal Society 1660-1940* (Cambridge, 1944)

Government Departments and to influence their thinking. Sometimes this is relatively straightforward, sometimes it is a bit of an uphill battle.

The Lithuanian Academy, for example, has the right to comment on draft laws. It evaluates many of the proposals of the Ministry of Education and Science, such as a new Law on Higher Education and the distribution of the annual science budget, before they are presented formally to Government. The Defence Ministry recently sought its views on defence-related research projects. Another important customer for the Lithuanian Academy's advice is Parliament and Parliamentary committees. The Hungarian Academy is required by law to prepare a review of the state of science in the country every two years and present it to Parliament; its latest presentation was broadcast live on the public television service. The Slovenian Academy has to produce an annual report on national science policy and technological development, for which the Government pays.

The USNAS works with virtually all Departments of Government and, sometimes, with individual States on issues having a federal dimension. It tackles only national or international issues involving science, technology, human health or environmental quality. The output is huge - 200 substantial reports per year, some narrowly technical and others wide-ranging and multidisciplinary - and covers topics in agriculture, education, health, engineering, environment, social issues, economics, national security, space, transportation and international issues.

The Royal Society also works closely with a wide range of Departments: recent examples include the Office of Science and Technology on matters affecting policy for science, and Departments such as Trade and Industry, Environment, Health, Education, Culture, Home Office, International Development and the Foreign Office on the scientific aspects of their responsibilities. It sometimes prepares statements addressed across Government, such as a statement published just ahead of the last General Election on key S&T issues facing the incoming Government. (The Swedish Academy is currently preparing an analogous document.) The Society devotes much effort to responding to inquiries by Parliamentary Committees scrutinising particular aspects of Government policy. It also gives advice to customers such as NIREX (the body charged with dealing with radioactive waste in the UK) on nationally important issues requiring the Society's unique combination of expertise and publicly recognised neutrality. Finally, and very importantly, the Society publishes statements addressed to a general audience setting out the science underpinning controversial public issues such as BSE, cloning, genetically modified organisms, energy and the environment, and sustainable consumption.

The Bolivian Academy advises Government, Parliament and a range of other customers. Recent examples include designing the short-term action plan of the National Council for Science and Technology, drafting a new institutional framework for national science and technology for the Senate S&T Commission, advising research institutes and universities on aspects of their strategies, and carrying out a self-initiated study on the role of SMEs in innovation.

The Jordanian Academy advises both public and private sectors and industrial organisations. The Czech Academy stresses the importance it attaches to its role of advising industry. The Australian Academy, too, lists industry among its customers, but describes this as more a matter of collaborating with industry through mechanisms such as its Science and Industry Forum. A similar mechanism, the Government-University-Industry Research Round Table, is operated by the USNAS. The Mexican Academy describes its linkages with industry as 'non-existent', but, through a collaborative agreement with the President's Science Advisory Committee and the National Council for Science and Technology, it runs programmes on university-industry-Government linkages, S&T databases and computing.

The Swedish Academy has a more restricted customer base: it gives advice to Government and Government Departments, but not to Parliament, industry and other organisations. The Science Council of Japan advises

just the Prime Minister. The Malaysian Academy has so far focused its advice activities solely on Government and Government agencies. The Brazilian Academy concentrates on Government and Congress.

The range of topics covered reflects the circumstances of each Academy. The Bosnian Academy, for example, has tackled issues such as peace and reconciliation, inter-religious dialogue and multicultural society as well as more directly scientific and technical issues. The Kenyan Academy has focused on the environment, water, cities, drought and desertification, sea level rise and biodiversity. The Malaysian Academy has worked on management of natural resources and the technological needs of South East Asia, as well as on more general issues such as cloning. The Bulgarian Academy tackles a wide range, but, drawing on its experience during the cold war, warns about the need to avoid 'political biased arguments, assumptions, conceptions, etc'. The Brazilian and Jordanian Academies avoid military issues, but most Academies are willing in principle to tackle any issue that lies within their technical expertise. The Royal Society has established a mechanism for collaborating with the three other national Academies in the UK (which cover humanities and social science, medical science, and engineering) to deal with issues that demand a wider range of expertise.

(iii) How advice is funded

Funding is, obviously, an important consideration. It is needed to cover staff and/or consultancy costs, the incidental expenses of volunteers working on the preparation of advice and the costs of dissemination. Without adequate funding, an Academy is not going to be able to mount a sustained programme of work. But with the wrong kind of funding, an Academy's independence, on which so much of its perceived credibility as a source of authoritative and disinterested advice depends, may be impugned. It can be a difficult balance to achieve. One common thread is that Academies seek to cover their costs but not to make a profit; those established under laws governing the work of charities would, anyway, be prevented from making profits.

The experience of the USNAS is valuable in this respect. Much of its work arises in response to requests from Government agencies or from Congress (though these requests may often be prompted by approaches from the NAS itself). Correspondingly, about 85% of the funding comes from the federal Government; the rest comes from State Governments, private foundations, industrial organisations and the Academy's own private sources. Where a project is requested by Government, Government pays the full cost; in other cases, a mixture of sources is used so as to dilute the potential influence of any one source. The NAS has built up a substantial private fund which it can use to pay for self-initiated studies in sensitive areas where external funding would be deemed to be inappropriate.

The Royal Society has a modest budget from public funds for advice work, but increasingly uses private sources - either its own endowment income or monies raised from appropriate sources for specific projects. In the latter case, it uses several sources for a given project in order to preserve independence. In instances like the NIREX project mentioned earlier, it charges the customer full costs. Responding to requests from Government, Parliament and other bodies will always be a major part of the Society's advice work, but self-initiated projects allow greater freedom to set the agenda and often achieve greater impact.

There is considerable variation among Academies as to how much of their advice work is undertaken in response to external requests and how much is self-initiated. For example, all of the Kenyan Academy's advice is initiated by the Academy and funded by external donors [incidentally, it sees this as impediment and would 'very much like to see' some of its advice supported by the Government through contracts]. The Bulgarian Academy worked solely in self-initiated mode until last year and ascribes to this the observation that its advice was often neglected; it is now 'gratified' that the President, Government, Parliament and other bodies are increasingly making the first move. Most of the Argentinian Academy's advice is self-initiated; the same is true for the Croatian, Hungarian, Mexican and Swedish Academies (the latter sometimes with money from the

European Union). About 80% of the Jordanian Academy's advice work is self-initiated; its responsive advice is charged to the customer. The French Academy initiates and funds about two thirds of its advice activities itself; the rest is usually charged to the organisations requesting the advice. Half the Bolivian Academy's advice is responsive, funded by Government grants to the regional and international development organisations that request the work; typically, work on policy for science is mostly responsive, and work on the scientific aspects of public policy is mostly self-initiated.

The great majority of the Canadian Academy's advice work, on the other hand, is given in response to external requests and funded on contract by the federal Government, and all the Macedonian Academy's advice is initiated and funded by Government. The Canadian Academy identifies lack of funds to initiate its own projects as its major impediment to success in the advice business. Most of the Brazilian Academy's advice, too, is done on request and funded through specific grants. The Australian Academy reports that 80% of its advice is responsive; it would like to initiate more itself, but its resources are stretched keeping up with the volume of requests from Government. Self-initiated projects, such as those on the impact of Australian science and major disciplinary reviews, are funded by the Research Council; others are funded from the core budget.

(iv) How advice is formulated

The interesting questions here concern the quality assurance process and the steps taken to maximise impact.

Quality assurance begins with the decision to undertake a given project. This is not done lightly. At the Royal Society it requires, formally, a decision by Council, usually on the recommendation of an Officer or standing committee; where this is impractical within available timescales, the decision is taken by an Officer and reported to the next meeting of Council. Similar arrangements operate at the Australian Academy. The Swedish Academy in pleno reviews proposals; so does the Bolivian Academy, at its weekly plenary meetings, which also set the general guidelines for the execution of the task. At the Brazilian Academy, proposals must be approved by the Board of Directors. At the Science Council of Japan, they go the General Assembly.

Of the Academies responding to the survey, the USNAS/NRC has the biggest management challenge because of the sheer volume of proposals that must be processed. This is far too great for Council to review all the output. So, in addition to an elaborate system of peer review of draft reports conducted away from Council, there is a strong emphasis on *process*, with checks and balances at all key stages. For example, proposals, written where possible to a standard format, have to pass through successively more senior committees before finally going to the Governing Board or Governing Board Executive Committee for approval.

Membership of NRC working groups is regarded as a central element in quality assurance and is taken as seriously as the project proposal itself. This arises not only from the need to have an appropriately skilled and balanced group but also from the need to be able to demonstrate publicly that every step has been taken to achieve this. The process is analogous to project approval and involves an initial set of proposals, wide consultation, input from successively more senior committees and individuals and, finally, the approval of the NRC Chairman or Vice-Chairman. Apart from technical competence, the criteria for selection are overall balance within the committee and, at the personal level, absence of bias and absence of conflict of interest. Names and brief biographical details are posted on the Academy's Web site for public comment before being finalised.

The USNAS model, for both project approval and report review (see below), has been adopted and adapted by the Canadian Academy among others.

All Academies appoint special groups to draft advice. These generally comprise whatever mixture of inside and outside experts is necessary to get the job done; the Brazilian Academy has an explicit practice that at least half the members of a project group must be Academy Members. In the Bulgarian Academy, the Executive Council and Board deal with relatively general issues, and the Academy's institutes handle the more technical ones. The Argentinian Academy has a permanent committee on science policy which carries out studies.

Practice on reviewing drafts varies. For the Bulgarian Academy, technical accuracy is the responsibility of the group involved, and only the tricky cases go the Executive Council or Board for approval. For the Hungarian Academy, committee reports do not become official Academy reports unless approved by the Presidium or the General Assembly. In the Bolivian Academy, drafts are reviewed both by an Academy panel and by the funding agency. In the Croatian Academy, working group drafts are circulated to all disciplinary sections, though the response rate is not always high. Draft reports of the Argentinian Academy are submitted for approval to all members of the Academy in their monthly meeting. Council must endorse all Malaysian Academy reports before they can be released. The French Academy puts all drafts to a special review committee of senior Members, whose approval is needed before publication. Royal Society reports are peer reviewed before being submitted to Council for approval. All NRC drafts are subjected to an extensive peer review procedure, which may take 3 to 4 months and is overseen by a special Report Review Committee. When the process is complete, the RRC Chairman signs off the report. This signing off is the NRC's imprimatur: reports do not go back to Council for approval.

(v) Impact

Academies are not in the business of writing reports: they are in the business of informing and influencing policy debate. Reports are a means, they are not an end in themselves. Success in this context means that a report makes a discernible difference. Academies have developed various strategies to increase the chances of their reports having a positive impact.

The Kenyan Academy presents its reports at public lectures to which Government officials are invited, as well as disseminating them through print and electronic media. The Bulgarian and Swedish Academies stress the value of direct follow-up contacts with Government employees to assure that their views are considered. The Australian Academy comments that reaching the target audience is not hard: 'the problem is to get them to read and attend to it.' They have some sound practical suggestions on how to do this: 'keep it as short as possible ... avoid like the plague any special pleading for sectional interests, and not boring the audience with too strident appeals for more resources ... try to establish good relations of confidence with key players like Ministers and Shadow Ministers, and try to educate them in the nature of basic research and its needs before they are faced with the need to make any important decisions.'

The Royal Society makes great efforts to nurture the personal contacts that are crucial to influence. Sending copies to key individuals ahead of publication is important, as is wide dissemination through print and the Web, good press coverage and seminars to debate key recommendations. All reports now have a summary which can be printed separately and distributed widely at low cost. As the USNAS emphasises, resources must be allocated so that committee members and staff can put in time to briefing the full range of target audiences on the Academy's views.

Few Academies have found a way of systematically evaluating the impact of their advice activities. As the Danish Academy points out, 'It is very complicated to judge whether an initiative is successful or the opposite.' The Bosnian Academy comments that, although there may be clear evidence at times, 'most are covered by fluid and foggy atmosphere. However, there is a strong belief that the influence is real, positive and important and that it should be continued.' The Jordanian and Kenyan Academies mention feedback

from clients and target groups, while the Argentinian and Bolivian Academies look for evidence in the decisions of policy-makers. The Science Council of Japan has a more direct approach: 'recommendations are usually easily accepted because JSC often has consulted with concerned Ministries and Agencies to secure perfect enforcement before making recommendations.'

Reports are not the only output. An Academy recognised as independent and disinterested can play a valuable role as a neutral convenor, bringing together disparate parties to seek common ground. A good example here is the Government-University-Industry Research Roundtable which meets at the initiative and under the auspices of the USNAS. One-off meetings can also be very valuable. When the UK Government was thinking of privatising a high proportion of publicly owned laboratories, the Royal Society used its position and facilities (a well located and equipped building is a huge asset!) to call together the heads of all the laboratories concerned so that they could compare strategies. This was the first time many of them had met each other, and the occasion proved pivotal in the process that eventually led to a reversal of Government policy.

For many Academies, a direct link between giving advice and a particular subsequent policy initiative may be relatively rare. Most policy initiatives build on inputs from many sources, not always acknowledged.

Aggressive and persistent follow-up is central to making a mark. Quite often, we have to be content with indirect influence: what we do helps to shape the climate of opinion so that some decisions become more likely and others less likely. Over time this builds up to an important contribution to public life, in the form of a visible commitment to the notion that patient, rational thought is relevant to policy-making.

(vi) Factors for success

The first requirement is that an Academy should want to be engaged in public life, dealing both with policy for science and, more controversially, with the scientific aspects of other areas of public policy. This will be obvious to all Academies responding to the survey - indeed, almost by definition, it will be obvious to all IAP members - but it has not always been so. Academies elect members on the basis of their personal contributions to the advancement of knowledge, and high achievement in that area does not necessarily imply willingness or competence to get involved in public affairs; it is not self-evident that Academies will be outward-looking institutions.

The Brazilian Academy comments that, whatever the wishes of the Academy leadership, it can be difficult to get Academy Members to commit time and effort to advice projects and that some projects have been unable to get off the ground because of this. However, 'when a crisis develops, as for example the present situation of public universities in Brazil, the Members usually get deeply involved in the debate, since the solutions that may be adopted by the Government will directly affect their scientific activities.'

The USNAS is, by law, prohibited from competing with other organisations for publicly funded advice projects. However, most Academies find that, in giving advice, they are in a competitive business. In order to be effective, they have to pay attention to their unique strengths. All sorts of people and organisations want to give advice - why should the Government listen to an Academy rather than someone else?

The most obvious unique strength of an Academy is its scientific expertise. If members are elected on the basis of their outstanding contributions to science, then an Academy is in principle able to harness the best scientific skills in the country. This is specially true if the Members are in touch with the scientific community and can exploit their national and international networks. A formalised example of this is the Hungarian Academy: qualified Hungarian scientists elect 200 representatives to the General Assembly who have the right to vote on all issues except election to the Academy. In many countries, non-Members are very willing to participate in Academy projects. This is important not only for getting the work done but also for substantiating the Academy's claim to speak for its national scientific community as a whole. However, if the

Members are regarded as out of touch, then the Academy will lack authority both among the scientific community and among policy-makers. The process for electing Members is crucial here.

If an Academy argues that it should be listened to because of its scientific expertise, then it has to make sure that it restricts what it says to its areas of expertise. Different Academies have different areas - for example, some cover natural science only, while others include social science and humanities. An Academy with natural scientists only must be careful about speaking on, for example, economic or social issues. Ethics presents a difficult borderline issue.

Expertise in itself is not enough - a policy adviser needs a sophisticated understanding of the political process. Political decisions are rarely made solely on the basis of scientific analysis: all sorts of judgements and compromises are involved. So, in presenting a scientific perspective on an issue, one has to recognise that politicians must pay attention also to many other perspectives. For example, a politician will see risk very differently from a scientist. Scientists tend to reach conclusions only when they have all the necessary data; politicians must often make decisions without all the data to hand. They must all also deal with the expectations and concerns of public opinion. Success in giving scientific advice involves recognising the limits as well as the strengths of what an Academy can offer.

Independence is a central theme for all Academies responding to this survey. This can mean independence from Government - though, as described above, Academies tend to have financial and often legal links with Government which must therefore be handled very carefully if both the fact and the appearance of independence are to be preserved. It can mean independence from disciplinary interests - though this can be weakened if Members operating in disciplinary groups within the Academy start to press their own disciplinary concerns. It can mean independence from the interests of particular scientific groups - though that in turn can be weakened if an Academy is directly responsible for managing part of the national science base.

The value of independence is that an Academy can say what it thinks without being accused of lobbying for its own self-interest and without having to pay undue attention to the prevailing political currents. The corollary is that an independent Academy stands outside the inner circle of Government thinking and has to work extra hard to get high quality information about impending policy shifts and to make its voice heard. This is not necessarily a bad thing: advisers tied too closely to the Government generally disappear when the Government changes, whereas Academies plan to stay in business for the long term.

Independence does not mean ignoring Government concerns: if advice fails to address matters high on the Government agenda, it is unlikely to cut much ice. Relevance, and therefore timing, matter a great deal. But independence does allow an Academy to raise issues that it thinks should be on the Government agenda. Hence the significance, discussed earlier, of achieving the right balance between responsive and self-initiated projects.

Independence is more easily preserved if an Academy publishes all its advice, so that everyone knows where it stands. Confidential advice can create suspicion among outsiders. Moreover, it is easier for a Minister to ignore inconvenient advice if s/he is the only person who knows what an Academy has said and therefore does not have to explain publicly why s/he is ignoring it.

Reputation is also important. It takes a long time to build up, but if an Academy is generally seen as speaking carefully and wisely, then its next piece of advice is more likely to be taken seriously. People tend to pay at least as much attention to who is speaking as to what they say. People are more likely to quote an Academy's opinion if the Academy is accepted as wise.

Reputation is easily lost. Academies must therefore be scrupulous in every public statement they make. This means that all statements must be subjected to rigorous quality review processes, as discussed above. This adds to the time needed to produce statements, which can be frustrating, but that is too bad. You have to think long-term.

PMDC 25.ix.98

ANNEX: LIST OF ACADEMIES RESPONDING TO SURVEY

National Academy of Exact, Physical and Natural Sciences, Argentina
Australian Academy of Science
Brazilian Academy of Sciences
National Academy of Sciences of Bolivia
Academy of Sciences and Arts of Bosnia and Herzegovina
Bulgarian Academy of Sciences
Royal Society of Canada
Caribbean Academy of Sciences
Chinese Academy of Sciences
Croatian Academy of Sciences and Arts
Academy of Sciences of the Czech Republic
Royal Danish Academy of Sciences and Letters
Academie des Sciences, France
Hungarian Academy of Sciences
Indian National Science Academy
Academy of Sciences of the Islamic Republic of Iran
Accademia Nazionale dei Lincei, Italy
Science Council of Japan
Royal Scientific Society of Jordan
Kenya National Academy of Sciences
Lithuanian Academy of Sciences
Macedonian Academy of Sciences and Arts
Academy of Sciences, Malaysia
Mexican Academy of Sciences
Polish Academy of Sciences
Slovenian Academy of Sciences and Arts
Royal Swedish Academy of Sciences
Royal Society of London
US National Academy of Sciences