

THE HALDANE PRINCIPLE



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In the Department for Innovation, Universities and Skills, the common rooms of our higher education institutions, in the meeting rooms of the Research Councils and in debates within science policy think-tanks, the term ‘Haldane principle’ has regularly been heard over the last few years. To a scientist such as myself, this is more than slightly odd, given that this ‘principle’ has never been formally written down, and derives from a Government report that was published a century ago. So where does the Haldane principle fit into the research policy landscape of the 21st century?

Richard Burdon Haldane, the author of the influential report on the machinery of Government published in 1918, was a liberal politician from a family with strong scientific connections. His brother was the physiologist John Scott Haldane, and he was uncle to the eminent geneticist and evolutionary biologist JBS Haldane. The Haldane report, written against the backdrop of the First World War, is wide ranging and research policy forms only a small part of it. But it is for what Haldane says about research or at least what he is believed to have said, that the report is best remembered. The Haldane principle, as it seems to

be understood by most people, states that decisions about the specific research topics to be pursued using public funding should be made by researchers and not by politicians. The report itself paints a rather different picture about the relationship between research and Government. On the one hand Haldane argues that Government departments should commission their own research to inform policy-making in their area of responsibility. On the other hand, the report says that ‘general research’ should be the responsibility of a specific ministerial department, but there is no recommendation for arms-length bodies within the report. And while Haldane is happy with the existence of bodies such as the Medical Research Committee (the predecessor of the present Medical Research Council), the report does not propose changes to membership of the committee which included 3 politicians at the time. Notwithstanding this difference of interpretation there is now a general, if somewhat loose, understanding of what the Haldane principle means but a debate about its implications.

The present administration’s interpretation of the Haldane principle was summarised in April 2008 by John Denham in a speech to the Royal Academy

of Engineering. He stated that “three fundamental elements remain entirely valid:

- That researchers are best placed to determine detailed priorities.
- That the government’s role is to set the over-arching strategy; and
- That the Research Councils are ‘guardians of the independence of science’”

The major policy consequence of the Haldane principle is the very existence of the Research Councils. Government determines what Research Councils should exist and the areas of research they should each cover in quite broad terms. Government also decides the overall level of public spending on research, and what fraction of that should be devoted to the Research Councils as well as the distribution among them. In this process it is guided by advice from its chosen Scientific Advisors. As independent, non-Departmental Public Bodies, each Council then decides which research to fund on the basis of excellence with the help of the research communities themselves through the process of peer review. This ensures that funding is channelled only to research that meets rigorous quality standards; standards that are derived and implemented by the researchers themselves. We should, of course, remember that there are limits to the ability of researchers to make decisions about research funding. This is especially obvious in the comparison of unrelated research areas. For example, it is

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hard to see how researchers, however eminent, could make a direct comparison of the quality of, say, projects in particle physics and mediaeval history. But within a single discipline or between closely related ones, researchers are clearly well placed to make these difficult assessments. It is this set of notions which provides legitimacy for the high-level set of strategic governmental decisions supported by detailed quality-based research judgements.

What this illustrates is that, valuable as the Haldane principle is in guiding the development and implementation of research policy, the principle is a means to an end not an end in itself. In considering the role and importance of the Haldane principle it is important to keep in mind the real objective – a vibrant and healthy research base, with its attendant benefits for society and the economy.

In conducting an in-depth review of the health of Physics, the Panel that I chaired examined thoroughly the operation of the Haldane principle, at least in relation to the funding of physics research. Our conclusions are reassuring. We found no evidence that there has been an erosion of the basic principle of independence on which the Research Councils are founded.

However, the real world is not as simple as we might like it to be. In practice the decisions about the expenditure on research are seldom divided neatly into those that are strategic and those based merely upon the quality of what is proposed; instead there is a continuum of types of decision. At one end of the spectrum are

decisions about the funding of specific research projects and programmes. These clearly fall on the Research Councils side of the decision making process and my Panel found no evidence of inappropriate Government interference here. At the other end of the spectrum there is the decision on the allocation of funding between the Research Councils. It is hard to see how the Councils themselves could make these decisions, and this is the proper role of Government in deciding the use to which taxpayer's money is put. But between these extremes there is inevitably a grey area. A few examples will serve to illustrate.

I argued above that allocation of funds between the Research Councils is a matter for Government, but what if Government sets conditions on the size of the allocation to one or more Councils, such as requiring them to engage in specific cross-Council research programmes, or to collaborate with specific external partners? There is evidence that both of these happened during the last allocation process, and some would argue that this contravenes Haldane in its strict sense. Another grey area, which exercised my review Panel, is the interface of research and regional economic policy. What criteria should be used to determine the geographic location of large scientific infrastructure, with the related high-value jobs and potential for economic regeneration? Is this a matter for scientific assessment alone, or is there a place for the wider perspective that Government can bring such as where in the country the greatest economic benefit may be gained?

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To enter into a debate about which side of some notional Haldane dividing line these decisions lie is, in my opinion, missing the point. Sticking to the Haldane principle, whatever that may mean, should not be our objective. Rather our aim should be to ensure that we have a productive economy and vibrant society for which a healthy research base is a requirement. The experience of the last 100 years supports the idea that application of the Haldane principle – independent Research Councils, and their reliance on peer review – has served the country well in facilitating the development of a research base that is, by some measures, the best in the world. The latest Research Assessment Exercise outcome would certainly support that claim as would our recent review of Physics specifically. But it does not follow that slavish adherence to the Haldane principle will always produce the best outcome. For example, will decision-making based on research-based criteria alone result in the critical mass of investment required to tackle

the major issues of our time such as climate change or energy security?

I think not; there must be a place for some strategic direction of the research effort both within the disciplines of a particular Research Council and between the Research Councils. This does most definitely not mean that research should only be conducted to meet short term economic goals, far from it, but rather that there must be a balance between the research areas in which there is a strategic need to conduct novel work and those areas which are driven by curiosity alone. So instead of arguing about the application of a century-old principle perhaps the energies of the research community, the Research Councils and Government would be better spent working together to ensure the best possible decisions on the spending of the limited resources available for research.