

Science and Democracy: a Difficult Relationship^I

'An enlightened and elitist essay on an unresolvable problem'

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I

The ability to provide such inescapable answers in such penetrating and clear English to questions which the author himself says can barely be comprehended is given to but a few. Herman Philipse is one such, and I read his essay with great admiration and generally agreed with it, but sometimes also with a feeling of unease and even irritation. He resolves the typical 18th century contest question of the *Hollandsche Maatschappij* in a series of steps, ending in a notable *Wahlverwandschaft* of good politics, real democracy and modern science. That is almost too good to be true and leaves one feeling suspicious. The reality can only be less smooth than suggested here. Is what appears here as a perfect outcome of logical reasoning not in fact this infamous piece of soap that slips from one's grasp when one tries to get hold of it?

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The opening starts as an elegant bow to the long history of the *Maatschappij*, turns soon into a harsh blow to the Dutch self-esteem. When the *Hollandsche Maatschappij* was set up as a learned society, the Republic of the Seven United Provinces was still wealthy but no longer powerful. The economy was in a drawn-out recession, and Philipse establishes a link here with the failure of the Republic in the field of science policy. In contrast to Britain and France, no investment was made in research and devel-

opment. While that may be true, as an argument is it not an example of Whig history? In the Low Countries there was no question of a central government; science was the pastime of wealthy citizens, who in 1752 were not yet a leisure class in the traditional sense of the word. The first national institutions were established in French times by Louis Napoleon. Without him there would be no Rijksmuseum and no Royal Netherlands Academy of Arts and Sciences. What was missing in the 'Netherlands' was a powerful national government. I do not share Philipse's thesis that the Maatschappij was founded 100 years too late. In my opinion, it was the national state and a central government that was long overdue. Just how important the will and money of the government are was shown at the end of the 19th century when the Netherlands, thanks to the success of the HBS (former Dutch high school) system and the cautious modernisation of the universities, found its way back into the top ranks of the world academic community. The question of whether that step was also of major importance for the economy in a direct sense cannot be answered so readily. That strikes me as largely a 20th-century effect, especially in the form of technology and engineering. As far as I know, the link between the results of fundamental research and the development of a commercially successful technology remains to be properly established.

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I always become a bit nervous when I read the question 'What is science?' I feel we can more profitably ask 'Why is it science? When is it science? Whence is it science and to whom is it science?' To overcome any tendency to overvalue our activities we may even ask the question 'Who cares what you would like to call it? For whom is this of any importance?' On the other hand, the absolute relativism of 'science is what scientists do' is the sort of truth that gets in the way of interesting questions. Philipse does not fall into the trap of 'foundationalism', as he calls it, but pilots the reader firmly but gently with cogent arguments in the direction of A.D. de Groot's theory of the scientific forum and the minimum methodology required for the forum to work. The forum is 'democratic' in a fundamental sense of the word: only arguments count, and the best arguments – or the best argu-

mentation – win. Inevitably, this brings to mind the concept of the ‘herrschaftsfreie Kommunikation’ developed at the same time by Habermas, but the underlying line of reasoning is nevertheless very different. For Habermas the democratic consensus in ordinary life comes first – and he extends this practice normatively to scientific discourse. De Groot regards unanimity as the ideal of science – the best arguments should be recognised and acknowledged by all – and, if I understand that rightly, both he and Philipse are inclined to regard this unanimity rule as the political rule par excellence. Then I see Plato’s republic of the wise rearing its head again, and that’s something in which I have no confidence. I do, however, agree with Philipse’s ‘sceptical conclusion that there is not one simple answer to the question “what is science?”’ by saying that, at the same time, it becomes impossible to formulate the ‘universal characterisation of all branches of science and scholarship’ for which the competition asks so hopefully.

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‘Maximising the growth of science’ is the second subject of the essay. As nearly always happens, science is equated here with the natural sciences, and these in turn are taken as the model for all science. That takes place not just on paper; it is also the reality of scientific endeavour in the universities. In the same way that psychiatry around 1900 had created a kind of hospital travesty with a great display of white coats, gleaming equipment, sharp knives and starched bed linen, the present turn of the century finds itself dominated by imitation of the rules, rites and rituals of the natural sciences. Although it repeatedly turns out that this is possible on only a very limited scale and has only limited meaning, it simply goes on. The arts and social sciences are consequently largely robbed of their individuality – and hence also of their essential meaning; that also applies to technology and the clinical disciplines. This also happens in Philipse’s case, and with that the breadth that made the first part of his argument so attractive is lost. I always wonder why it is that natural scientists are so much more liberal in their attitude towards the best methodology for the sciences. Is it because they know from first hand how big the difference is with the prac-

tical methodology of actual empirical work or can they afford to be liberal because no one will even challenge how they do their work? Is it insight or confidence?

5

At the academic and organisational level, the introduction of the system of the research school into the Dutch university system was the most important innovation in the final decade of the last century. Not everyone is enthusiastic about this, and Philipse also very clearly points out some of the anomalies that have been associated with the introduction of the research schools. I do not agree with him when he says 'it is debatable whether they have contributed positively to the quality and output of research'. Less than 20 years ago the number of PhDs awarded by Dutch universities was very low. This has now trebled to nearly 2500 a year. Not all of them are of course brilliant, but they are nevertheless of a good standard and methodologically certainly much more sophisticated than they used to be. In certain disciplines there was in fact no question whatsoever of serious independent scientific endeavour in the form of systematic research. The university was of course always the centre of study and learning, but it is only in recent times that scientific research has become the distinguishing feature of Dutch universities. In the social sciences, that did not take place until after the 1970s and in the arts, even later. The number of PhDs awarded in the legal sciences as well as in the arts and in philosophy remains exceptionally small. Nevertheless, the dominant image of the university is now that of a centre of scientific research, even though the number of students is now so much higher than in the days the university was mainly an institute of learning and teaching.

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I agree with Philipse: the universities must raise their standards and become more internationally competitive and also more exclusive from the Master's stage onwards. Privatisation is not the best or only path to that

end, but can in certain circumstances be a good solution. The resistance in the Lower House of Parliament towards the introduction of a relatively expensive top-class Master's Degree determined in part by the students themselves is a rearguard action. Virtually all vocational training is now conducted outside the universities or at the postgraduate level and has long since ceased to be free of charge. That trend is continuing. This is not of major importance for scientific work, but it is for the future of universities. The same applies to the internationalisation of scientific activity. As a result of the introduction of the Bachelor's/Master's system throughout Europe, the already extensive international exchange of students will be strongly stepped up. The Dutch research assistant system is attracting increasing numbers of graduates from other countries, and not just because there are places to spare for want of Dutch interest. The international orientation has been programmed in and the comparatively good funding of Ph.D. Projects through the AIO/OIO-system of research assistantships did the rest.

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Yes, more money should be made available for fundamental scientific research. The Netherlands is seeking to be a knowledge economy and a knowledge country. That calls for good education as well as a good scientific infrastructure and thriving scientific activity. This is not solely a task for government; the problem is that all the major companies in the Netherlands have greatly reduced (or in some cases closed down) their scientific laboratories and made them more application-oriented. In part, this has involved the pooling of laboratories at the international level, while in part a gamble has been taken that interesting new research results will be procurable in the free market. That has, however, turned out to be disappointing, and noises can now be heard that would suggest a strengthening of independent scientific activity within the realms of industry. Since the Netherlands hardly has a pharmaceutical industry of its own and brings up the rear in the field of gene technology, it has become difficult to keep in touch with these two highly prominent areas of research-based economic activity. The smaller companies have never played a role of any significance in the scientific field in the Netherlands.

The essay concludes with a notable attack on religion and politics. Above all – according to Philipse – these are areas in which the scientist encounters a great deal of stupidity and narrow-mindedness. However, scorn for science is not productive. It is mostly seen as a sign of extreme arrogance. Furthermore, it has been shown many times that science is not generally a good promoter of its own interests. The scientific community is also much too fragmented. A minister of science is not a solution for all ills, as this will always be a minister without portfolio, lacking authority in the Cabinet and having few possibilities for stimulating scientific research in practice. It must be an ominous sign for every scientist that the call for more resources for research and science is made so infrequently by others apart from scientists. One point of light as far as that is concerned is the joint call for a greater effort to be made in this field by employers and employees together with the universities, the Netherlands Organisation for Scientific Research (NWO) and the Royal Netherlands Academy of Arts and Sciences (KNAW). It is now a matter of waiting for a new coalition agreement.

NOTE

- I Comments on *Science and Democracy*, by Herman Philipse.