

## ***Interaction between the arts and sciences*** **Use of knowledge from the humanities and the social sciences in the traditionally science dominated sectors**

### **Summary of advisory report 29**

Highly qualified people are confronted in their professional lives with a diversity of problems which are not readily solved by adopting an approach based on a single discipline or specialist subject. They are required to work together with specialists from their own and other disciplines in a team or otherwise. It is up to organisations to combine the knowledge of individual employees in such a way that the whole is more than the sum of the part. The degree to which public sector organisations and business and industry are able to exploit the added value of the whole, determines their effectiveness and competitiveness to a significant degree. And that whole involves not only an interaction between allied fields of knowledge, for instance between branches of a specialist technical subject, but above all the utilisation of knowledge across the boundaries of the arts, science and social science disciplines. In daily practice, the absorption of knowledge emanating from the sciences sector into the social or welfare sector would seem to proceed more easily than the absorption of knowledge from the arts and the social sciences into the technical and science sector. It is partly on the basis of this observation that the report focuses on the utilisation of knowledge deriving from the arts and the social sciences into sectors that have been traditionally science dominated.

The Council has spoken with more than a hundred people from business and industry, from the public sector and from research institutes and universities, to ascertain the problems emerging in practice in combining the full spectrum of knowledge. Those talked to were working in both the social and welfare sectors and disciplines as well as science and technology. The great majority of them saw the crux of the problem not as a lack of new knowledge being generated by the arts and social sciences, but failure to use existing knowledge to the full. One reason mentioned was the higher education system. Students develop little affinity for contributions from other than their own discipline and are not sufficiently trained to communicate with people outside their own specialist subject. Certain gaps in knowledge in the arts and social sciences were also spotted but these were thought on the whole to be subordinate to the shortcomings in the study programmes.

### *Education*

To help solve the diversity of problems arising in their daily working lives, people will be required to have skills which allow them to exchange their own knowledge with other specialists within their own discipline but, above all, outside it, as well as disposing of a sound knowledge of their own subject. And that is where the shoe pinches. During their training it is the development of those skills that gets least attention. Lack of communication skills applies generally to those who qualify in the higher education system. The shortcomings, however, are felt most keenly by people who have a university education. Not because they are trained more narrowly than people with a higher vocational training, but precisely because graduates are expected to be deployable in a wide range of situations.

While in the past the future for many graduates meant research, at the moment the great majority of students find work outside the research system. Despite this many university programmes are still highly geared to training researchers. The Council's conclusion is that reforms are needed in the universities. It is not the task of the government to give direction to the substance of such reforms; the universities themselves are responsible for this in the first instance. The role the government ought to lie in the financing of the universities. The Council

advocates basing the performance rating of the universities, and in turn their financing, partly on the quality of the labour market position of graduates. The more (the quality of) graduates' position on the labour market matters in making the assessments, the more universities will take their own initiatives to ensure that graduates can work in the combined domain of the arts, sciences and social sciences. Possible initiatives lie in the area of practical training and problem-driven courses according to the Council.

Assessment based on output must necessarily be complemented by the universities being given the freedom to gear their policies to this. The Council takes the view that this must result in (greater) freedom to regulate intake and decide on the duration of programmes.

### *Research*

The issue addressed in the present report is to what extent there are gaps in research in the humanities and the social sciences viewed from the requirements within the sectors that have been traditionally dominated by the sciences. The Council's analysis has led it to make three observations:

- there is a powerful need for knowledge of foreign cultures;
- there is a powerful need for knowledge of and insight into the way people make choices and the way people behave;
- within the arts and social sciences, interest in the role of the natural sciences and technology in society bears little relationship to the importance of that role and the questions of principle deriving from this.

The need for knowledge of foreign cultures is more in the consultancy domain than immediately in the domain of research. Much research has already been carried out in the field of foreign cultures and the government provides direct support to a number of institutes in this area. The Council argues that the government should make its direct financial backing partly dependent on the degree to which these institutes actually meet the social need for knowledge and qualified people.

In the case of the latter two points, the problem lies notably in fundamental and strategic research which is not sufficiently getting off the ground in the areas mentioned. The gaps in fundamental and strategic research are inextricably bound up with the organisation of the knowledge infrastructure. The state-funded institutions are too rigid in terms of the arts, sciences and social sciences, while much fundamental and strategic research geared to social problems demands a multi-disciplinary approach. That applies certainly to issues with an important arts and/or social science dimension. The universities do cover a wide range of disciplines but their individual research traditionally has been organised on mono-disciplinary lines. The Council proposes that the Dutch Research Council (NWO) should be given an explicit task here to ensure that the desired research is performed. NWO ought to develop into an agency for the fundamental and strategic research that is required for long-term solutions to social problems. In the first instance the Council is not asking for extra resources but for a different use of the resources that the individual ministries currently spend on research. A substantial part of the research that the ministries currently commission, would be better allocated via the agency of the NWO, according to the Council.

