

An International Comparison of Boundary Work Between Science and Policy:

Research Proposal for the Preparation of an International Research Project.¹

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July 2003

1 Conceptual approach: patterns in boundary work

1.1 Policy and scientific expertise: a lot of work

Policy and scientific expertise do not match each other automatically. Both policy makers and experts know from experience how much *work* goes into the construction of an effective cooperation. One problem is the adjustment of the experts' research question to the information need of the policy maker. Maybe the policy maker has to look for sources of knowledge in unfamiliar territory, or has to prevent researchers from pursuing specific questions, following their own research interests more than those of policy. Experts might be inclined to question the presuppositions of the policy maker, may want to signal new problems which the policy maker is trying to avoid, or may try to translate policy questions in to researchable and do-able research problems (In't Veld 2000).

We call all the work that is done to come to a working cooperation between experts and policy makers '*boundary work*'. When experts and policy makers try to come to a working cooperation, they actually do two things: they make a more or less sharp *distinction* between who fulfils which role, and they *coordinate* their mutual tasks. The distinction between expert and policy maker can be quite complicated. We do not just find the clichéd image of the career civil servant being advised by the academic professor. There are specialised policy domains, such as in water management or environmental policy, where policy makers and experts switch identities several times in their careers, sometimes even during the course of one meeting. Experts may be deeply involved in the implementation of policy and policy makers may be extremely knowledgeable about the relevant knowledge – so much so that it becomes very difficult to make a distinction between both roles in the first place. The way in which they coordinate their tasks can also vary significantly, depending for example on who initiates cooperation, who has the major say in defining the problem, or who handles the translation of findings to a policy audience (Bal, Bijker et al. 2002; Hoppe 2002; Halffman 2003).

None of this work is performed in a cultural and institutional vacuum. The division of labour between experts and policy makers is always already embedded in routinised advisory practices, in the existence of specialised consultancy bureaus, in legally anchored scientific advisory boards, or even in the bureaucratic habits of a civil service. Such patterns are the result of long traditions of boundary work and provide instruments for organising the division of labour between policy makers and experts. These instruments can be of a social nature (habits, social networks), but also include language (protocols, concepts), or even material objects (measurement networks, testing equipment, buildings) (Shapin 1994; Halffman 2003). For example, the move of the Health Council of the Netherlands to the building of the Ministry of Health was a sensitive operation, because the Council was worried that its presence in the same building could suggest that the Ministry had a bigger grip on the work of the council (Bal, Bijker et al. 2002).

¹ We would like to thank Bert de Wit for comments on an earlier version of this proposal.

Every time the division of labour between a policy maker and an expert is at stake these devices are mobilised, and with them the results of previous rounds of boundary work. In ongoing boundary work, in distinguishing and coordinating, these devices are refined and adapted. Because of the ways in which these devices can operate together and gain structural characteristics, we can call them boundary configurations or, in short, boundaries.

1.2 A contribution to boundary work

Social science research can contribute to better boundary work. Not so much because this research can explain what needs to be done, but because it can explain the advantages and disadvantages of organising science/policy boundaries in specific ways, i.e. of specific boundary configurations, and how these connect with the nature of societal problems under investigation or the societal forces involved (Hisschemöller and Hoppe 1995-1996).

Those who want to contribute to science/policy work need to be careful of some traps. For example, there is a temptation to think in terms of knowledge transfer: the experts are the holders of knowledge, which has to be translated as well as possible to policy and used in policy as much as possible. The model behind this approach is one of one-way traffic, in which knowledge streams from expert to policy maker. Based on the popular metaphor of 'impact on policy', this stream is apparently expected to hit policy with some force. The model may be useful for some well-delineated problems, but in cases where there is no agreement on the definition of the problem, or on the relevant knowledge, this model leads to considerable complications. The impact model says very little about how complex problems such as climate change or the definition of durability should be demarcated or how the decision on such a demarcation should come about. Is climate change mostly a problem of atmospheric pollution, or should unequal development also be addressed? The answer to such a question has grave consequences for the kind of knowledge that will be considered relevant: should we consult meteorologists and climate scientists or include development studies?²

Because of the limitations of models such as the one-directional impact model and knowledge transfer, it is important to develop knowledge about different and alternative boundary configurations between science and policy. In this way, we should be able to develop a wider pallet of boundary configurations to shape the division of labour between science and policy. The trick is to find a way of presenting such alternatives in an accessible and clear way, which also includes an inventory of advantages and disadvantages.

1.3 Seek the patterns

It is not an easy task to construct an accessible overview of the large variety of science/policy boundary configurations, but we can start by mapping accepted conceptions of different forms of boundary work. Concerning the *distinction* of science and policy, there are diverging views on whether science and policy should be strictly distinguished or whether the two should rather be seen in terms of a continuum. As concerns *coordination*, there are diverging views on who should dominate the division of labour. For example, should the experts bring in knowledge and signal problems or should policy makers initiate and define policy relevant research?

Using these parameters, it is possible to construct a typology that gives a good overview of different possibilities in the division of labour between scientific experts and policy makers. (We will not treat this typology here in detail, as it has been discussed at length elsewhere, see (Hoppe 2002; Hoppe 2002).) For each of the models for the division of labour in this typology, strengths and weaknesses can be indicated. For example, in an engineering model of science/policy boundaries, instrumental knowledge is provided at the initiative of policy makers within problem definitions that are considered to be given as unproblematic. Such a model is well-suited to quickly provide instrumental knowledge for well-defined problems, but runs the risk of ignoring new knowledge that could contradict dominant policy beliefs. This model also tends to overlook tensions in problem definitions, such as disagreement over what problem is at stake outside of established policy

² The same problem also occurs reflexively, meaning that social science researchers should not just expect that their research on boundaries should 'impact' on policy.

networks, leading to conflict later on in the policy process, and possibly even to the deconstruction of knowledge that at some point had been provided to policy so seemingly straight-forwardly.

2 Current research and an international expansion

The conceptual approach briefly described above, is used in the project 'Rethinking Political Judgement and Science-Based Expertise' of the Dutch National Science Foundation (NWO). In this project, five large scientific advisory bodies of Dutch government policy are compared: the Scientific Council for Government Policy (WRR), Alterra (a nature policy research institute at the Agricultural University of Wageningen), the Dutch National Institute for Public Health and Environment (RIVM), the Central Bureau of Statistics (CBS), and the Netherlands Bureau for Economic Policy Analysis (better known as the Central Planning Bureau, CPB).³ The national focus of this project implies a considerable limitation on the possibilities to learn from international experiences of other boundary organisations. There may be a considerable collection of case study research on practices of expert advice to government policy in a large number of policy fields (e.g. (Jasanoff 1990; Cambrosio, Limoges et al. 1992; Barker and Peters 1993; Evans 1997; Abraham and Sheppard 1999; Van Asselt 2000)) and even some limited international comparative research projects (e.g. (Brickman, Jasanoff et al. 1985; Abraham and Millstone 1989; Halfman 2003)), but there is hardly any research which tries to produce more systematic comparisons that could allow boundary organisations to learn from experiences elsewhere.

In principle, it would be very possible to expand the structure of the Rethinking project to embrace an international comparison. This would imply that similar research projects are started in different countries, using the same parameters (the typology, the same kinds of advantages and disadvantages that should be considered), with comparable demarcation of cases and the same orientation to ultimately come up with models and stories oriented at policy learning in practices of policy advice. The Rethinking project has already explored possibilities of international cooperation.

3 The application

Setting up international comparative research which is not only do-able, but can also be funded, requires considerable effort, which is impossible without some external support. To launch this project, we hereby request some financial support in order to, firstly, perform some preparatory research specifically on what constitutes advantages and disadvantages (or success and failure criteria) in the experience of various boundary organisations, and, secondly, to use the results of this pilot to develop an international research proposal. Both parts will be elaborated in more detail in the next paragraphs.

3.1 Success and failure criteria

It is not always unambiguously clear when communication between policy makers and experts can be considered successful. There are quite a few criteria that can be used to evaluate the cooperation and between some of these criteria there is a tension. A classic example relates to the appropriate distance between policy makers and experts. Experts that are too close to the policy process and its policy beliefs may provide knowledge that fits the instrumental logic of a policy project more closely, but experts further removed from the policy process are better capable of a critical evaluation of policy assumptions.

Within the various models for the division of labour between experts and policy makers some criteria will tend to receive more explicit attention, while others are considered less relevant. For example, in the engineering model mentioned earlier, instrumental criteria will be considered more relevant by the actors involved in the policy network: is this knowledge that can be used, given the goals and solution strategy of the policy project. This implies that members of expert boundary organisations and policy makers may have extensive experience with policy advice and hence have very valuable knowledge on what can be considered success and failure, but that the analysis of

³ For details, please consult the project's website: <http://www.bsk.utwente.nl/rethinking/>

boundary configurations more in general should maintain some overview and steer towards a more distanced position in order to build a more complete list of success and failure criteria.

In this proposal, we want to suggest an approach that will take both sides into consideration, the valuable knowledge and experience of practitioners and the need for a more distanced analysis. Hence we propose (1) a theoretical and (2) an empirical analysis of success and failure criteria in science/policy boundary work.

(1) Theoretical analysis: systematise success and failure criteria

Based on the preliminary, open list of possible success and failure criteria that has been developed by the RMNO (in the preparatory note to this proposal) and of a brief analysis of relevant literature, we want to make a list of criteria that is both more complete and more systematic. This will result in a boiled down list that can be used in empirical research. The idea is that the list can be checked and completed in dialogue with practitioners during the empirical part of the research. This will occur in open, qualitative interviews. In such interviews, the list should not be used as a starting point, but rather at the end of the interview, as the list could lead to socially expected answers and hide the bias in the use of success and failure criteria inherent in each of the models for science/policy boundaries.

Eventually, the list of success and failure criteria could be used as a policy tool, which boundary organisations could use in reflection or evaluation of their practices of policy advice.

(2) Empirical analysis: preparatory case studies

The empirical part of the research will consist of about four cases studies, located at boundary organisations abroad, but organised around a specific policy issue in which the organisation has provided key advice. These cases studies will serve several purposes simultaneously:

- improve and test our inventory of success and failure criteria
- get a better sense of how success and failure criteria relate to the various models
- track down unexpected problems in the extrapolation of the approach of the Rethinking project to an international comparative study
- prepare more extensive case research on boundary organisations abroad, where possible in cooperation with potential international partners

To maximise possibilities of learning from comparison with Dutch cases in the Rethinking project, the case studies should be constructed in the same way as is done in the Rethinking project. This implies that we use a major policy issue which was very knowledge-intensive to study the role of a major boundary organisation. Evidently, it is possible that other knowledge institutes will also play a role. Expanding from this material, we then make an analysis of the institutional background of the boundary organisations involved, where possible based on secondary materials. Hence the target of the case is the organisation of the science/policy boundary in research institutes, but to keep the topic concrete, we access this through a policy issue in which the institute was involved.

The core of the case studies will consist of up to ten qualitative interviews. This may seem a lot for a relatively small research project, but the Rethinking project will make a significant contribution to this part of the project. As the opportunities rise, we will also consider the possibility of interviews with important actors in other boundary organisations, specifically if they are known to have interesting views that could help expand or structure our list of criteria.

In the selection of cases, there are principled and more pragmatic choices. Opportunities for Dutch boundary organisations to learn from experiences abroad are best in countries with comparable political cultures, i.e. negotiation-oriented and relatively small or decentralised. On a more pragmatic level, there are also issues of good access to material and people, and prospects of expanding the case in the international research proposal. Hence the selection of cases from Scandinavian countries, Belgium, Germany, and possibly the UK may seem most appropriate, but on pragmatic grounds such a choice may have to be modified. For the details of case selection, there will be consultation with the client and with possible international partners.

3.2 International research proposal

For the international project, we will start with colleagues abroad who have already indicated that they could be interested in cooperation. These involve: Andy Jamison (Denmark), Rob Evans (UK), Brian

Wynne (UK), Peter Weingart (Germany), Pepka Boyadjieva and Kristina Petkova (Bulgaria), Sujatha Raman (UK), David Guston (US), and Ned Woodhouse (US). If the target of an international research project will be a European proposal, then this network will have to be expanded with contacts in Southern Europe. We think cooperation with the United States and other non-European would be extremely interesting, but is likely to run into limitations of funding opportunities. (We have good lines to South Africa and there are clear opportunities in Australia or New Zealand.)

Because of the limited options for funding, there are two possibilities for an international comparative project: (a) one major international research fund and (b) matching of funds from national sources. As the possibilities for both options become more clear, this will lead to two different products: either (a) a complete and tightly integrated international research proposal or (b) a more loosely knit catalogue of research projects that are constructed as independently executable modules.

(a) A research proposal directed at a major international research fund

In practice, this means that a research proposal has to be prepared that is geared towards a specific fund. Last Winter it was decided that the Sixth Framework programme of the EU is no longer a realistic option for projects of this size, because of the clear preference for very large projects and because of the unrealistic legal construction that is being forced upon cooperating partners. The most important next candidate is the European Science Foundation. Meanwhile, we have submitted a proposal to the ESF for an international workshop, which could also be used to prepare an application for ESF research funds. Other possible European (co-)financers are being considered or approached.

(b) Matching of national sources: a catalogue

If international funding does not appear to be possible, then we will have to focus on matching of smaller (national) sources of funding, such as national science foundations, private foundations (e.g. the Ford Foundation), national governments (such as government departments frequently involved with experts), knowledge brokers or even research institutes. In such a case, it would be more appropriate to make a catalogue of research planned by the various participants, as they would require the freedom to tailor their project to the demands of their specific source of funding. The catalogue can then be used to show that each applicant is not isolated, but is supported by an international network and perspective. The catalogue would still offer an integrating methodological and theoretical perspective, but divides the research more into separate modules, which can lead to independent research projects.

In practice the construction of an international research project means that:

- existing contacts need to be activated and new ones need to be constructed
- the present conceptual framework needs to be elaborated in an international direction (e.g. what is the role of national policy styles?)
- research proposals have to be gathered and integrated into a complete proposal or a catalogue
- bilateral contacts have to be pulled together into a network (using an e-mail list, expansion of the present Rethinking website with an international section, where research proposals can be stored for commenting)
- personal contact will be necessary for coordination and trouble-shooting (in as far as this is not possible in the context of international conferences or the case research, extra travel may be required)

4 Research resources and planning

Human resources

The project will be undertaken by Dr. W. Halfman.

Planning

The duration of the project will be ten months, calculated from the date of approval of the proposal.

Deliverables

1. Report on the case studies
2. A research proposal to an international funding agency, or a catalogue of proposed research to be funded by national funding agencies.

Budget

| | | |
|---|------------------------|----------------|
| 1 (a) Preparatory analysis of success and failure criteria | | |
| 5 days x €600 per day | | €3.000 |
| 1 (b) Preliminary research for four case studies | | |
| 4 x €14.000 | | €56.000 |
| Per case: | | |
| - Preparation | 5 days x €600 per day | €3.000 |
| - Interviews | 5 days x €600 per day | €3.000 |
| - Analysis | 10 days x €600 per day | €6.000 |
| - Travel and subsistence | | €2.000 |
| - Total per case study | | €14.000 |
| 2 Coordination of a planned international research project | | €11.000 |
| Contact and (if necessary, personal) consultation with potential partners; surveying potential funding opportunities; development of a research catalogue; development and writing of a proposal: | | |
| 15 days x €600 per day | | €9.000 |
| Travel and subsistence (to be combined, as far as possible, with travelling for purposes of case study research) | | €2.000 |
| Total | | €70.000 |

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