The Political Flow of Wisdom:

Science Institutions as Policy Venues

in The Netherlands

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Abstract

This paper deals with the different roles that scientific knowledge can play in shaping and redefining policy images, focusing on two quite distinct policy fields in the Netherlands: immigrant policy and assisted reproductive technology policy. Interactions between policy makers and scientific experts are linked to processes of negative and positive feedback in which a policy monopoly is maintained or attacked. We show how science and the structural arrangements through which it is produced and disseminated truly can be a 'venue' for depoliticization or for fuelling emerging policy disputes. The two cases of immigrant integration and reproductive medicine show variation in topic, tone and tempo, but we also consider points of similarity that may stem from broader features of the system. We conclude with a discussion of institutional conditions for the nexus of science and politics, and point a way for further investigating this subject in cross-national comparative research.

Key words: agenda-setting, expertise, assisted reproductive technologies, immigrant integration, policy change, punctuated equilibrium.

INTRODUCTION

The theory of punctuated equilibrium (Baumgartner and Jones 1993; 2002) focuses on patterns of policy stability and change, and on the driving forces behind these patterns. Punctuated equilibrium theory argues that issues alternate between stable and institutionally protected equilibria in policy subsystems, and the more open and disruptive sphere of macropolitics. Policy entrepreneurs use triggering events to shift issues between these institutional levels, and in this way change topics and tone of political debate. While this theory was developed in the United States, it has potential for broader application. But the theory also may need some conceptual extension.

In this contribution we consider two cases of policy making over time in the Netherlands, a European country with a system that differs widely from the U.S., and recently experienced political turbulence on a number of policy issues. The extension to the theory of punctuated equilibrium we explore concerns the types of venues with relevance to policy making. We draw attention to science institutions as a type of venue in agenda setting. Our contention is that scientific venues such as research institutes, think tanks and expert committees play an important part in the definition of problems and solutions, and thus to agenda setting. As Max Weber (1922) already noted, expertise is a major type of authority in addition to the formal authority vested in political and administrative systems. In our definition, venues of science are institutional and often also formal loci of expertise, and in this sense they differ from expert communities which may be more or less volatile. Expert communities have an institutional and organizational basis in particular venues of science. So, our question is: What scientific venues exist, what is their role in supporting policy subsystems, and how do

they contribute to processes of positive feedback in which new policy images are constructed and, after some time, consolidated in the subsystem?

First, we argue why the relevant set of venues to be analyzed should be extended to venues of science, and explore what the nexus between science and politics may look like. Next, we link the conceptualization of science as a venue to the theory of punctuated equilibrium, more specifically to processes of negative and positive feedback that sustain or destabilize existing policy monopolies. Then we apply this conceptualization to two case studies of agenda setting and policy change in the Netherlands: integration of immigrants and assisted reproductive technology. In our conclusion, we relate the case studies to our more general aim of this paper, and present suggestions for extending this line of research to comparative work on agenda setting across countries.

AGENDA DYNAMICS AND VENUES OF SCIENCE

The particular strength of the theory of punctuated equilibrium in analyzing policy dynamics is that it relates the substantive element of policy images to strategy and institutional structures. 'Policy venues' are institutional sites where the portrayal of problems and solutions takes place (Baumgartner and Jones 1993; 32). They are locations where policies originate, obtain support, and are adopted as binding decisions. Types of policy venues are formal political arenas such as legislatures, executives and the judiciary, but also the media and the stock market can be venues for shaping images of problems and solutions. Venues are sites of strategic issue control, and such control can be directed to stabilizing or

destabilizing a policy monopoly. Strategic actors thus seek venues where they can get their feet into, and influence images of problems and solutions.

The Need to Un-Black Box Science

The concept of venue shopping thus is central to the theory of punctuated equilibrium. Recently it was critically examined by Pralle (2003). Pralle asserts that when strategizing, policy entrepreneurs have bounded rationality and settle for a venue rather than continuously shop around in the malls of the political system. This contention is convincing, but while the menu for venue choice often is limited, it is striking that thus far institutions of scientific knowledge and expertise remained completely outside the picture. Venues of scientific knowledge and expertise include academic research institutes, think tanks, and advisory councils and expert committees that may be more or less established. Scientific venues include formal institutions as well as forums in which expert knowledge is proliferated, exchanged and negotiated (Schmidt and Radaelli 2004: 204-205). These venues of science have both substantive and strategic significance in the policy process, as work on the roles of policy advisers and think tanks done by Jasanoff (1990), Smith (1991), Barker and Peters (1993), and Stone (1996) indicates.

Venues of science often are 'invisible' to the general public, but they became more important as governments in the Western world took on more complex tasks in all fields of public policy. Indeed, one of the ambitions of the policy sciences as an applied discipline was that scientific knowledge would help in solving the problems of governance. The policy sciences were oriented towards importing 'truth' and 'usable' knowledge in the policy process

(Lasswell and Lerner 1951; Lindblom and Cohen 1979; Wildavsky 1979). This pretention has become inflated (Haas 2004); as Ezrahi (1990) puts it: Icarus has descended.

But scientific expertise still is an important currency in policy making. Venues of science are institutional sites where causal stories are discovered and developed; they produce evidence for 'truth claimers', and they may implicitly or explicitly deliver what Lindblom (1968) has called 'knowledge as political ammunition'. Nelkin (1995: 453) notes that the willingness of scientists to lend their expertise to antagonistic actors in policy disputes undermined the alleged position of "science as the neutral arbiter of truth". This involves a demythologized image of science – it is not a *deus ex machina*. If there has been a scientification of politics, science itself also has become politicized (Weingart 1999). In practice, politics and science are at arms length, and often they become intimate.

Venues of Science and Feedback Processes

Thus, different uses of scientific venues in the dynamics of agenda setting are possible. Scientific expertise may help to limit the scope of conflict and depoliticize issues, and as such be used to maintain a policy equilibrium. This may become so important that science even gets primacy – as often happens when politicians fear the hazards of poking their noses into complex and wicked problems. But the tide may turn. Focusing events may trigger changes in issue attention and change the 'flow of wisdom'. Policy entrepreneurs may mobilize support for policy images beyond the immediate grip of those controlling the venues monopolizing knowledge delivery. Such a change in orientation may involve conflict expansion and a reselection of scientific venues. When challenging an existing policy monopoly, entrepreneurial actors seek evidence for their political messages and claims in

alternative scientific venues. Indeed, as policy entrepreneurs try to shift issues from the subsystem to the sphere of macropolitics, they may attempt to regain primacy and also break through established links between policymakers and science institutions. Thus agenda dynamics involves both shifts in primacy from politics to science and vice versa, and a degree of strategic venue shopping between scientific councils, think tanks, and expert committees.

As with other venues in the dynamics of agenda setting, venues of science play a part in processes of negative and positive feedback. In negative feedback, the process of neutralizing threats against an existing policy monopoly, science can be an important venue. The delegation of policy problems to institutions of scientific knowledge removes issues from the political arena or the agenda. Scientific venues are functional in that they continually provide the evidence needed to sustain the policy monopoly; in other words, they deliver crucial cause and effect arguments for the incumbent 'policy theory'. It helps legitimizing and instrumentalizing policies, shifting the focus of debate away from questions that may challenge the fundaments of a policy image. In such cases, the scope of debate and conflict is thus limited by reliance on experts involved in science-based policy advice. Such strategies thus involve a model in which science is accorded primacy, in that the 'truth' is serviceable to protecting the policy monopoly.

But the interaction between science and politics is not always geared to sustaining an existing policy monopoly. Venues of science also can contribute to processes of positive feedback. Policy entrepreneurs previously failing to have an imprint on the image of a policy may seek access to scientific venues to strengthen their claims; supporting evidence adds to

the persuasive power of alternative policy advocacy. Such new policy images may follow from strategic construction by political entrepreneurs, but they also may rise more directly when scientific institutes present findings that challenge the existing policy image. In such situations, new alliances of intimacy between politics and science emerge. New think tanks even may be set up to promote a particular policy view, as Fischer (1993) described about the United States where conservative 'counter evidence' was considered necessary during the progressive New Deal period and beyond. In these situations, politics is accorded primacy over science, and as the New Deal case illustrates, it may even involve institutional design or redesign of the politics-science nexus. Often, this primacy is temporary when a new policy image is built and entrepreneurs seek scientific venues endorsing the views they promote. As a new policy monopoly gets established, institutional venues of science may regain more primacy in the policy subsystem as important sites of policy image protection. Their role thus changes from providing knowledge as offensive ammunition to one of defence, functioning in a new episode as a vehicle of negative feedback to sustain the policy monopoly.

Political primacy thus is likely to be most expressed during processes of positive feedback, when policy entrepreneurs shift issues to the level of macropolitical institutions. We do not however assume that in all situations of negative feedback and policy stability, science has primacy over politics. In part, this is likely to vary between policy fields – some involve more technical complexity and political risk than others (Schneider and Ingram, 1997). We will consider this possible variation further below in our case studies of immigrant integration and biomedical technology policy.

CASES: AGENDA DYNAMICS OF IMMIGRANT INTEGRATION AND REPRODUCTIVE MEDICINE IN THE NETHERLANDS

Agenda setting and policy making in the Netherlands happens in an institutional context of parliamentary democracy and consensus building. Governments are always coalitions based on deals committing the parties in office. Such coalition deals add to the legislative agenda control of governments (Timmermans 2003). Since long, the Dutch system also includes a corporatist element, attributing policy responsibility to representatives from functional groups such as trade unions, employers and organizations in the fields of agriculture, health and education. These features make that policy making in the Netherlands is elite based, and points of access to science-based expertise are strongly institutionalized (Halffman and Hoppe 2006). Planning bureaus and research councils such as the Scientific Council for Government Policy, the Central Planning Bureau, and the Health Council have close relations to government departments, and they also are funded by them.

Within this general context of structural intimacy between politics and science, we consider two widely different policy issues: integration of immigrants and technologies for assisted human reproduction. Both subjects first reached the political agenda in the mid 1980s. The two issues vary not only in the obvious sense that they concern different substantive problems, they also vary in the kinds of scientific knowledge involved in policy making. Immigrant policy borrows mainly from the social sciences, assisted reproductive technology policy is the domain of the medical sciences, with increasing attention for ethical and legal issues. With these differences, the policy subsystems that emerged around the issues since

the 1980s show no overlap. There are no institutional linkages that lead us to expect that policy changes in one field are due to changes in the other field.

On both immigrants and reproductive medicine, changes in topic and tone occurred over time, but the ways and *tempo* in which this happened varied. For issues of immigrant integration, scientific venues played a part in the construction as well as in the challenges to policy monopolies since the mid 1980s. They were relevant both to negative and positive feedback processes, providing supportive evidence for policy images but also offensive arguments disrupting the position of incumbent policy advocates. Agenda setting of assisted reproductive technology policy also was influenced substantively from within institutional venues of scientific advice, but the attention for problem dimensions swept less widely over time. Venues of biomedical science are linked to the medical profession which always enjoyed large autonomy, and this profession has been prominent or even dominant in the closed community since the mid 1980s. On the technically complex issues of ARTs, public access to scientific knowledge always was limited. In this field, agenda setting shows more continuity in negative feedback processes, and change over time was mostly a matter of policy monopoly expansion. The case studies below show the patterns, analyzing larger or smaller shifts in attention, the relationship between scientific advice and politics, and the consequences for policy monopolies whenever these were constructed.

Immigrant Integration Policy

Immigrant integration policy has become increasingly controversial since it first reached the political agenda in the late 1970s. Shifts in the *colour locale* of topic and tone in the domestic debate implied that no policy monopoly was immune to initiatives from policy

entrepreneurs. In this long term dynamics, institutional venues of science played a prominent part. At moments, several scientific institutes had strong influence on the construction of new policy monopolies. Recently, the trend is one away from the extensive use of scientific venues, shifting primacy back to politics.

Constructing a Policy Monopoly: A Technocratic Symbiosis

A policy subsystem on immigrant integration was first developed in the late 1970s. A series of terrorist acts, ethnic riots and the rise of extreme rightwing parties shaked the long held idea that the Netherlands are not a country of immigration and that residence issues are, at the most, temporary. Scientific researchers however started to criticize this view as a myth and promoted a problem image of immigrants as 'ethnic minorities' taking permanent residence, and a new solution, a 'minorities policy'. The Department of Culture was one of the few departments that acknowledged that such an image change was necessary (Penninx, 2005). An Advisory Committee for Minorities Research (ACOM) was created to organize the emerging network of researchers in this field. This institutional design created a symbiosis between a new venue of science and the Department of Culture that put the existing problem image under pressure. The expertise mobilized in this way was formalized in a policy advice by the Scientific Council for Government Policy (WRR) in 1979, which became the substantive fundament of a new policy monopoly built in the early 1980s.

The new policy monopoly centered on a policy image of 'integration with retention of immigrant cultural identities' and a centralized institutional structure to sustain the policy image in which this policy fields was pulled into the jurisdiction of the Department of Internal Affairs. All this took place without any real political debate, as the issue of

immigrant integration was considered a major political risk. The symbiosis between science and politics thus emerged for a large part as a mechanism of depoliticization (Guiraudon, 2000; Rath, 2001). The scope of debate was limited by defining immigrants as 'ethnic minorities' and adopting a strategy of political steering based on the Dutch tradition of pillarization – peaceful coexistence of minorities, each with their own institutions for organizing social life (Lijphart, 1968). This policy monopoly was sustained throughout the 1980s. The minorities policy paradigm was elaborated, focusing on issues of cultural emancipation and fights against discrimination and racism. The negative feedback warranted by the intimate relations between social researchers and the Department of Culture implied that rival perspectives on immigrant integration were considered to be taboo.

Science as a Venue for Breaking Taboos

But at the end of the 1980s, there were increasing doubts about the effects of the minorities policy programme. The government asked the Scientific Council for Government Policy WRR to formulate another policy advice. The independent scientific status of the WRR made it an effective venue for critically examining the assumptions and taboos upholding the minorities policy. As in the late 1970s, the WRR released a report in 1989 which changed topic and tone. Attention was shifted to the socio-economic dimension, and on the rights and duties of immigrants on the labour market and in Dutch society. This was a stone in the pond of the existing policy monopoly, and first reactions were strongly rejective. The Advisory Committee for Minorities Research ACOM heavily criticized the WRR report (ACOM, 1989). Policy makers did not feel the sense of urgency speaking from the WRR advice – with all the political risks this would involve. The report however unleashed public

debate, in which the taboo on speaking about immigrants in terms of rights and duties was broken.

It took a few years before this debate extended to the political arenas. But when this happened, the strategies of depoliticization followed thus far were more difficult to continue. As the scope of debate increased, the tone also became more negative. The 1989 WRR advice thus was the point of departure of a positive feedback process in which the existing policy monopoly eroded and a new policy image of integration with emphasis on economic participation and civic duties of immigrants was advocated. This was seen to require also institutional decentralization. The emerging integration policy meant that the institutional symbiosis between science and politics ended. In 1992, the ACOM which previously functioned as a strategic venue on the boundaries of science and politics was dissolved.

Politicization and Scientific Venue Shopping

While the new integration policy institutionalized in the 1990s, it appeared not to be robust. Several developments and focus events regenerated broad public and political attention. Actually, the integration policy of the 1990s itself was an episode in an incubation process leading to drastic image changes after the turn of the century. In 2000, an opinion leader labelled the Dutch multicultural society a 'tragedy'. In 2001, Pim Fortuyn, a populist political entrepreneur entered the political arena, focusing almost exclusively on Muslim immigrant integration as a national policy problem. These were also the days of 9/11. While Fortuyn was killed in the streets by a violent opponent, his party made a landslide electoral victory in 2002, and was included in the next government.

The electoral shock and the government coalition change following it marked a crucial turn of the political tide in which the whole inherited package of immigrant integration policy was called into question. Policy failure became the dominant tone. The new policy image breaking radically with the past was one of assimilation, with a shift to the social and cultural dimensions. The institutional expression of this image was a shift towards centralization and the creation of a new ministerial portfolio for immigrant integration.

These changes in policy image and institutional rules came with far less involvement of institutional venues of science than before. When in 2003, a parliamentary inquiry committee investigated the long term history and effect of immigrant policy, and formulated a nuanced conclusion, it was immediately dismissed by a significant part of the national parliament. The critique was that the scientific experts conducting the investigation had themselves been involved closely with policy making, biasing the conclusions. The media gave broad coverage to this alleged intimacy between policy advisers and policy makers.

In this shift towards political primacy, the institutional venues of science that long enjoyed privilege in the policy subsystem were considered with scepticism or even were ignored. A fresh report by the WRR for example received no political follow up and even hardly resonated in political debates. Instead, the government engaged in selective venue shopping for bits of scientific evidence to back up the new policy image of assimilation. Knowledge thus was used as political ammunition to build a new policy monopoly, and for driving a process of negative feedback once this monopoly was in place.

Assisted Reproductive Technology Policy

Another set of policy issues on the agenda since the 1980s are assisted reproductive technologies (ARTs). ARTs include reproductive techniques developed since the introduction of in vitro fertilization and technologies for embryo research. In the definition of these issues, medical and increasingly also ethical, legal and financial elements are present. Specific issues are for example the 'market' regulation of egg cells, genetic screening, and the creation of embryos for genetic research. The Netherlands has an international reputation as a permissive country towards abortion, euthanasia, homosexuality and drugs, but this is less true for reproductive medicine.

The Dutch health policy subsystem is tightly organized. The features of consensus democracy take specific forms, such as semi-public bodies with spokespeople from government, the medical community, and health insurance organizations. This hybrid structure between public and private involves tight rules of access and jurisdiction. In this closed institutional environment, the most prominent body for scientific policy advice is the Health Council.

Depoliticization and Construction of a Procedural Policy Monopoly

In response to the opening of IVF centers, the government considered possibilities for regulation in the mid 1980s. Thus far, reproductive technologies were mostly a subject of selfregulation by the medical community, which has a tradition of large autonomy. In 1989, a comprehensive 'Planning Decree In Vitro Fertilization' was enacted. This decree contained mainly procedural regulation, emphasizing planning and control of IVF. Only few substantive restrictions were included, such as a prohibition of commercial trade in egg cells.

The regulatory package involved mutual gains: it sustained the autonomy of selfregulation of the medical community, and the government averted political controversy.

The emphasis on procedural regulation mirrored the policy image that had emerged. IVF was seen as a socially accepted instrument for resolving the 'medical' problem of infertility – an emerging technology serviceable to the 'right to have children' (Blank 1990). The community of medical professionals (the Dutch Association of Obstetricians and Gynaecologists, the Association of Clinical Embryologists) preferred procedural regulation to substantive regulation that would affect professional autonomy. Political statements, when made, did not travel far beyond symbolism. In this context, the Health Council was the most prominent venue and it even enjoyed primacy in the creation of the policy image and the concomittant policy package. Other actors such as the feminist movement, a Pro Life Platform and religious organizations had rather limited access to this or any other venue for influencing agenda setting.

Due to this closedness of the health subsystem, the scope of debate was kept limited. Earlier experiences with the abortion issue deterred political parties to engage in open confrontations, and this conflict avoidance facilitated the procedure oriented strategy of the Health Department in a symbiosis with the medical community. This structural arrangement facilitated a process of negative feedback in which the emerging procedural policy monopoly was shielded off from disruptive challenges. In the years following the first IVF decree of 1989, policy changes were incremental and based on policy advice by the Health Council (Timmermans 2004: 167-169).

Expanding Issue Attention and the Scope of Policy

While this reactive style of policy making with its primacy of scientific advice was politically rational, it did not prevent that breakthroughs in cloning techniques in the mid 1990s triggered broader issue attention. The 'birth' of cloned sheep Dolly was a major focusing event. In the emerging discourse on cloning and developments in embryo research techniques, moral and ethical elements became more prominent. The Health Council also began to take ethical and legal aspects more explicitly into account. Thus in the debate on ART issues, changes were beginning to appear in topic and tone.

A political window of opportunity opened in 1994, when for the first time since 1945 the Christian Democrats were excluded from a government coalition. This party long had used its central position in power for vetoing policies on issues dividing the party itself. A coalition of Social Democrats, Liberals and Liberal Democrats changed this type of agenda control. The new secular coalition announced regulatory initiatives, taking into account the increasing attention for moral hazards of this field of biomedical technology.

A number of separate policy proposals for legislation were formulated in the early 1990s, but they lacked political support and were filibustered to death or were withdrawn. Announced in 1995, a new and comprehensive bill on embryo research was submitted by the government in September 2000, after the minister of Health went through the regular consultation of the Health Council and detected the degree of coalition support. This bill mentioned restrictions for creating embryos for research, use of foetal tissue, and it prohibited gender selection on nonmedical grounds, reproductive cloning and hybrid and chimera building. The Embryo Act thus went far beyond codifying medical selfregulation,

and it resulted from political agency more than before. Not all recommendations by the Health Council were followed, in particular the government decided to include tighter restrictions for embryo research (Timmermans 2004: 170). The bill was adopted in June 2002.

With this recent substantive regulation of ART research, politics reclaimed a degree of primacy over this area, made possible by a major shift in the government coalition. This change was not really a decomposition of an old policy monopoly and the buildup of a new one. The policy 'punctuation' entailed a shift in topic, from reproductive medicine as a remedy for infertility to the possibilities for choosing the quality and characteristics of children born after biomedical intervention, and the limits of this set in the new law. The Embryo Act in 2002 resulted from positive feedback by increased attention for ethical and moral values in regulation, and the political momentum to also agree on this matter. While still reactive, the political initiative made the Health Council less prominent as an institutional venue of science, as the emphasis on depoliticization had decreased.

Medical professional and scientific experts long controlled the policy images of ARTs. However, in the interaction between policy makers and institutions for scientific policy advice, primacy has shifted some part away from science. Comparatively, the Netherlands takes an intermediate position in regulating assisted reproductive technologies (Rothmayr et al 2004). While procrastination and legislative detour occurred, an expansion of the scope of debate in the 1990s did not lead to stalemate, but to comprehensive legislation made possible by parliamentary control of a secular majority government. The return to power of the Christian Democrats in the fall of 2002 did not lead to a political dismantling of the policy monopoly, but some changes are likely to be placed onto the agenda.

CONCLUSION

The integration of immigrants and assisted reproductive technologies are national policy problems, but they are driven by international developments of globalization. Migration waves have increased in scale, and medical scientific breakthroughs travel across continents. National governments are confronted with policy questions that come with these types of globalization. In our two cases, the types of focusing events that led to shifts in issue attention varied between, literally, life and death – the birth of the first baby after in vitro fertilization, successes in stem cell cloning, and the terrorist attacks on 9/11 and the assassination of Pim Fortuyn, a popular national political entrepreneur. The shifts in issue attention also led to policy changes, and these changes seem to have become more punctuated over time.

The creation or revision of policy images can be explicit, open and even be politicized, or be more implicit and hidden from the broader public. Analysis of this variation in origin and dissemination of policy images depends in part on what kinds of venues of agenda setting are included into the picture. Political arenas may be the loci of formal decision making. But often they are not the venues where problem and policy images originate. In this paper we analyzed the role of institutional venues of science in political agenda setting and policy development between the late 1970s and 2005.

The two cases show that scientific venues were important in processes of negative feedback, and partly also in generating positive feedback, thus sustaining or challenging policy monopolies. While the fields of scientific knowledge differed widely, our analysis suggests that technical complexity of an issue is not the only reason for policy makers to resort to institutions of expertise. Social scientific knowledge was equally vital in depoliticizing the immigrants issue. The case study of immigrant integration shows how the understanding of immigration as a permanent phenomenon was based on scientific evidence and advice, which created a sense of urgency to formulate policy. A symbiotic relationship between policy makers and a closed platform of experts representing particular venues of science helped containing the issue and avoid politicization in the 1980s. This implicit primacy of scientific knowledge upheld the first policy monopoly, but it also made it vulnerable as the independent Scientific Council for Government Policy (WRR) was changing its view of the problem. As a new science-based image of economic and civic integration of immigrants incubated, the risk of political trouble declined. In this context, shifts in departmental jurisdictions also were framed as administrative changes and remained outside the realm of party controversy. Even stronger monopolizing tendencies were visible in biomedical policy, where the prominent Health Council constantly refilled the same 'medical' image of problems and solutions, and in this way limited the scope of political debate. A policy monopoly of selfregulation and a regime of procedures served the interests of the closed community of medical professionals and departmental policy makers, and was sustained in the 1980s and 1990s.

Conducive to the prominence of institutional venues of science in creating policy images was the status of these scientific institutions for policy advice as sources of 'truth and wisdom'.

This asset for legitimizing policy images was most important in keeping processes of negative feedback going, but on immigrant issues it also propelled positive feedback – changing the political attitude of problem ignorance in the late 1970s, and revising the topic of debate one decade later. Such science-driven positive feedback occurred less in biomedical policy. In this field, agenda setting and policy change over time are more according to what Princen and Rhinard in this volume call 'low politics'. This cannot surprise: medical scientists as policy advisers were speaking about their own domain of activity – the policy advices protected rather than limited their professional autonomy. Compared to the immigrant issue, the shift to the level of high politics involved less public arousal, and also less political risk because a stable majority for a new policy package was already in place.

The interaction between politics and science thus can be oriented to sustaining arrangements of intimacy that protect a policy monopoly, according to what Wittrock (1991) calls 'technocratic' and 'engineering' models of interaction. It also can be oriented to challenging a policy monopoly and involve a search for alternative venues that can deliver counterevidence. Rarely, this is a pure quest for scientific 'enlightenment'; more often it will involve political adversity (ibid). Struggles over scientific 'objectivity' and credibility are part of such strategies of defence or attack.

The thrust of these points: the interaction and 'boundary work' between politics and science involves a crucial element of agency, which connects well to the concept of policy entrepreneurship in the theory of punctuated equilibrium. Protecting a policy monopoly implies a different kind of agency than challenging it. Securing policy stability means maintaining arrangements of institutional intimacy between a group of political and

scientific actors, averting issue expansion and politicization. Challenging policy images and building a new policy monopoly can take different routes.

Actors may approach alternative venues of scientific evidence and build new relationships to have them near at hand (most clearly immigrant policy). It also may involve changes in departmental jurisdiction (most clearly immigrant policy), strategic timing in the release of advisory reports for government departments (both fields), and indeed, within institutional venues of science, the choice of topic and tone in formulating policy advice (both fields). The cases contain examples of all these possibilities.

In both cases, science has been used extensively for depoliticization, and the 'technocratic' model applies to a large part of the policy history. The episodes of a flow of scientific wisdom as *steady state* in the 1980s and 1990s were facilitated by a corporatist type of institutional arrangements in the two fields, filtering what went in and out the policy subsystem. In the Dutch tradition of political accommodation, the issues in both fields were delegated carefully to the level of specialized departments - below the risky sphere of high politics. As a consequence, for most of the time, the episodic policy punctuations and institutional relocations were not as drastic as in the theory of punctuated equilibrium.

But rooted as it may be, accommodation did not prevent that issues in both fields became more political in the late 1990s. Since then, politicians reclaimed a significant degree of primacy in agenda setting. This may have been reinforced by a general decline in the belief in scientific knowledge as a tool for rational problem solving. But more directly important were focusing events and electoral shocks followed by government coalition changes. After

the turn of the century, the reclaim of political primacy appeared to be more than just rhetoric of politicians pretending to be in control. Both on immigrants and reproductive medicine, strategies of issue expansion resonated in an increased attention for cultural and religious aspects of immigrant integration, and for ethical and legal hazards of embryo research. The tone of debate became more critical about existing policies, and drastic changes in political majorities facilitated legislative breakthroughs. These recent policy decisions are punctuations of a magnitude not seen in previous decades. In this changed macropolitical setting, the use of scientific knowledge in the portrayal of problems and solutions has moved to what Renn (1995) calls the 'adversarial' type. This is particularly true for the immigrant issue. In the case of biomedical policy, an emerging coping strategy is to turn interactions between the medical community, politics and the public into a format of dialogue. A rationale for this strategy is that it limits the burden of legitimizing policy decisions taken by government coalitions. By contrast, immigrant integration has become a major issue of electoral politics, and this has induced the different political parties to seek for those kinds of scientific truth that are most serviceable to them.

The case studies in this contribution show how empirical analysis from the perspective of punctuated equilibrium theory can be usefully extended to institutional venues of science, which have remained largely outside the scope of attention in the existing literature. One way ahead is thus to apply the perspective we developed to other fields of policy and to other countries. We have explored this theme for two different policy domains, between which similarities appeared despite variation in the type of issues and in the scientific disciplines involved in policy advice. Further work may be more explicitly comparative,

either between policy fields or between countries. We conclude this contribution by mentioning possibilities for such comparative analysis.

This special issue contains countries that vary in the patterns of policy dynamics. In all countries, problems and policies muddle through most of the time, but this process is interrupted by punctuated changes. Such policy shifts however do not always come as big bursts; they also may be, what Hayes (2001) calls 'dramaturgical incrementalism': in part symbolic changes made by politicians in response to public arousal. The Dutch case contains indications of such policy drama, though changes in the two fields have become more real and significant over time. These shifts mirrored changes on the nexus of politics and science, which were generated at the level of macropolitics.

Thus an important avenue for comparative work is analysis across countries of the way in which the political system carries institutional relationships between politics and science, and how changes occur. Moe and Caldwell (1994) argue that developments of bureaucratic organization within countries are driven by a kind of 'institutional genetics'. This idea may apply also to arrangements structuring the interaction between politics and science within policy subsystems. Thus shifts in primacy between politics and science, with their substantive consequences for topic, tone and tempo of policy initiatives, are embedded in a macropolitical context. This is an old theme with a new application: assessment of the impact of systemic variation on what Renn (1995) calls styles of using scientific knowledge in the policy process, and on the specific patterns of change over time.

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REFERENCES

Advisory Committee on Minorities Research. (1989) *Een beter beleid?* The Hague: SDU.

Barker, A. and B.G. Peters (eds.) (1993) *The Politics of Expert Advice. Creating, Using and Manipulating Scientific Knowledge for Public Policy*, Edinburgh: Edinburg University Press.

Baumgartner, F and Jones, B. (Eds.) (2002) *Policy Dynamics*, Chicago/London: The University of Chicago Press.

Baumgartner, F and Jones, B. (1993) *Agendas and instability in American Politics*, Chicago/London: The University of Chicago Press.

Blank, R. (1990) *Regulating Reproduction*, New York: Columbia University Press.

Ezrahi, Y. (1990) *The Descent of Icarus. Science and the Transformation of Contemporary Democracy*, Cambridge: Harvard University Press.

Fischer, F. (1993) 'Policy Discourse and the Politics of Washington Think Tanks', in Fischer and Forester (Eds.), *The Argumentative Turn in Policy Analysis and Planning*, London: Duke University Press, pp. 21-42.

Guiraudon, V. (2000) *Les politiques d'immigration en Europe: Allemagne, France, Pays-Bas,* Paris : L'Harmattan.

Haas, P.M. (2004) 'When does power listen to truth ? A constructivist approach to the policy process', *Journal of European Public Policy* 11(4): 569-592.

Halffman, W. and Hoppe, R. (2006) 'Science/Policy Boundaries : A Changing Division of Labour in Dutch Expert Policy Advice', in Maassen and Weingart (Eds.) *Scientific Expertise and Political Decision Making* Dordrecht: Kluwer Academic Press.

Hayes, M. (2001) *The Limits of Policy Change. Incrementalism, Worldview, and the Rule of Law,* Washington: Georgetown University Press.

Jasanoff, S. (1990) *The Fifth Branch. Science Advisers as Policy Makers*, Cambridge: Harvard University Press.

Lasswell, H. and Lerner, D. (1951) *The Policy Sciences: Recent Developments in Scope and Method,* Standford: Standford University Press.

Lijphart, A. (1968) *The Politics of Accommodation. Pluralism and Democracy in the Netherlands,* Berkeley: University of California Press.

Lindblom, C. (1968) *The Policymaking Process,* Englewood Cliffs: Prentice Hall.

Lindblom, C. and Cohen, D. (1979) *Usable Knowledge: Social Science and Social Problem Solving,* New Haven: Yale University Press.

Nelkin, D. (1995) 'Science Controversies. The Dynamics of Public Disputes in the United State', in S. Jasanoff et al. (Eds.), *Handbook of Science and Technology Studies*. London: Sage, pp. 444-456.

Penninx, R. (2005) 'Bridges between research and policy? The case of post-war immigration and integration policies in the Netherlands', *International Journal of Multicultural Studies,* 7(1): 33-48.

Pralle, S. (2003) 'Venue Shopping, Political Strategy, and Policy Change: The Internationalization of Canadian Forest Advocacy', *Journal of Public Policy* 23(3): 233-260.

Rath, J. (2001) 'Research on immigrant ethnic minorities in the Netherlands', in Ratcliffe et al. (Eds.), *The politics of social science research. Race, ethnicity and social change*, New York: Palgrave.

Renn. O. (1995) 'Style of using scientific expertise: a comparative framework', *Science and Public Policy* 22(3): 147-156.

Rothmayr, C., Varone, F., Serduelt, U., Timmermans, A. and Bleiklie, I. (2004) 'Comparing policy design across countries. What accounts for variation in ART policy?', in Bleiklie et al. (Eds.), *Comparative Biomedical Policy. Governing assisted reproductive technologies,* London: Routledge.

Schmidt, V. and Radaelli, C. (2004) 'Policy Change and Discourse in Europe. Conceptual and methodological issues', *Western European Politics* 27(2): 183-210.

Schneider, A. and Ingram, H. (1997) *Policy Design for Democracy*, Lawrence: University Press of Kansas.

Scientific Council for Government Policy. (1979) *Etnische Minderheden,* The Hague: SDU.

Scientific Council for Government Policy. (1989). *Allochtonenbeleid,* The Hague: SDU.

Smith, J.A. (1991) *The Idea Brokers: think tanks and the rise of the new policy elite,* Oxford: Free Press.

Stone, D. (1996) *Capturing the Political Imagination. Think Tanks and the Policy Process*, London: Frank Cass.

Timmermans, A. (2003) *High Politics in the Low Countries,* Aldershot: Ashgate.

Timmermans, A. (2004) 'The Netherlands: Conflict and consensus on assisted reproductive technology policy', in I. Bleiklie, M. Goggin and C. Rothmayr (Eds.) *Comparative Biomedical Policy. Governing assisted reproductive technologies*, London: Routledge.

Weber, M. (1922) *Wirtschaft und Gesellschaft,* Mohr: Tübingen.

Weingart, P. (1999) 'Scientific Expertise and political accountability: paradoxes of science in politics', *Science and Public Policy* 26(3): 151-162.

Wildavski, A. (1979) *Speaking Truth to Power. The Art and Craft of Policy Analysis*, Boston: Little, Brown.

Wittrock, B. (1991) 'Social knowledge and public policy: eight models of interaction', in P. Wagner et. al. (Eds.) *Social Sciences and Modern States. National Experiences and Theoretical Crossroads,* Cambridge: Cambridge University Press.

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