

# Innovation Studies Utrecht (ISU) Working Paper Series

The politics of displacements.

Towards a framework for democratic evaluation

Roel Nahuis

ISU Working Paper #08.09

The politics of displacements. Towards a framework for

democratic evaluation

Roel Nahuis

**Utrecht University** 

Copernicus Institute for Sustainable Development and Innovation

Department of Innovation Studies

PO Box 80115

3508 TC Utrecht

The Netherlands

Phone: +31 30 253 6550

Phone2: +31 30 253 1625

Fax.: +31 30 253 2746

E-mail: r.nahuis@geo.uu.nl

**Abstract** 

Although the political dimension of technological innovation is widely acknowledged, there

remains a gap between empirical research into this politics and normative research into its

democratic quality. Especially methods for evaluating the democratic quality of dynamic and

non-formal forms of innovation politics are lacking. This paper develops a framework for

analysing the politics of innovation in terms of displacements of issues. It first argues that

decision-making about design and use generally takes place in a multitude of settings and that

this circumstance calls for theoretical investigation of displacements between settings. Based

on an elaboration of the notions of 'issue', 'setting', and 'displacement' a conceptual frame-

work is construed that might be helpful in the democratic evaluation of the politics of dis-

placements. The framework is applied in a case study of public transport innovation, which

shows how subsequent displacements served to silence serious concerns and objections.

**Keywords**: innovation, displaced politics, democracy, public transport

# The politics of displacements. Towards a framework for democratic evaluation

#### Introduction

The mutual relation between technological innovation and societal change is one of the central topics in Science & Technology Studies (STS). STS conceive of technological (and service) innovation as a social process. They reject the determinist idea of a technological system exclusively driven by scientific discoveries and technological inventions. On the one hand, technological and service innovations can develop in multiple directions and each of these directions affects stakeholders differently. On the other hand, these developments depend on interactions between stakeholders, power structures, negotiations and contingencies. Innovation processes involve heterogeneous actors and are characterised by contest, inclusion, exclusion, power, etc. This reveals an important political dimension of innovation processes (Bijker, 1999; Smits, Leyten & Den Hertog, 1995; Staudenmaier, 1989).

Three case studies clarify the kinds of conflicts of interests and tensions typical for the politics of innovation. The authors of these studies all follow a particular actor trying to realise something they consider valuable or of public interest to some degree and they draw attention to the 'politics' involved. Gjøen and Hård (2002) show how cognitive and behavioural patterns of electric vehicle users run counter to the power practices inscribed in official state policies. Garrety and Badham (2004) illustrate how implementation of user-centred design (UCD) methods at workplaces involves many negotiations and the reshaping of both methods and workplace. Summerton (2004), thirdly, reveals how electricity companies privileged some kinds of users over others with differently branded packages of services and a marketing strategy based on political prejudices. These studies all emphasise relevant aspects of the politics of innovation. They show how services, technologies, expertise, policies or methods

become contested when they contain 'wrong' assumptions about the contexts in which they are actually implemented or employed. They show how designers, engineers, marketing managers, UCD practitioners, scientific experts, state policies and spokespersons of those being affected claim to speak in the name of users in order to grant authority to their claims. And they show how others contest such representations of identities, desires and capabilities of users. In short, the politics of technology involves dealing with the conflicts, tensions and distribution of power between actor constituencies.

Although this political dimension of innovation processes is widely recognised within STS, there remains a gap between the empirical scrutiny and the democratic evaluation of these politics. In the past decades the question of democratic quality has become ever more urgent (Smits & Leyten, 1991). Advances in biotechnology, nuclear energy, military technology, artificial intelligence, etc. have raised ethical concerns and resistance leading to societal debates. Since the 1960s and 1970s broad movements, which advance more citizen participation, have picked up these issues. If facts and values are hard to distinguish and justice should be done to the range of risk perceptions, the heterogeneity of values, different perceptions of desirability and need and contextual features, then decision-making should go beyond expert advice and also include lay knowledge (Bijker, 1997). These societal concerns have highlighted the issue of democratic quality.

Nevertheless, STS scholars still seem to hesitate to take an evaluative stance in the controversies studied. Despite a strong sensitivity for and empirical scrutiny of the operations of power in innovation processes, there are remarkably few examples where conclusions are explicitly drawn in normative terms (Woodhouse et al., 2002). While the abovementioned examples all explicitly concern the "politics" of innovation, they are mainly descriptive and avoid taking a stance: the word 'democracy' does not show up once. The authors deconstruct politics by describing arbitrary representations, differences, contestations, negotiations and compromises

and they foreground the contingencies at work in the design, implementation and use of artefacts, services or methods, but they do not provide us with a framework for evaluating and explaining (a lack of) democratic quality. They fail to link their work with another strand of research in STS.

Table 1. Democratic evaluation criteria for innovation processes

Representativeness	The participants should comprise a broadly representative sample of the affected population.
Independence	The participation process should be conducted in an independent (unbiased) way.
Early involvement	The participants should be involved as early as possible in the process, as soon as value judgments become salient.
Influence	The output of the procedure should have a genuine impact on policy.
Transparency	The process should be transparent so that the relevant population can see what is going on and how decisions are being made.
Resource accessibility	Participants should have access to the appropriate resources to enable them to successfully fulfil their brief.
Task definition	The nature and scope of the participation task should be clearly defined.
Structured	The participation exercise should use/provide appropriate mechanisms for structuring and displaying the decision-making process.
Cost-effectiveness	The procedure should in some sense be cost-effective from the point of view of the sponsors.

Source: Rowe, Marsh and Frewer (2004)

This other strand endeavours to develop evaluation criteria based on deliberative theory. Rowe and his colleagues, for example, have developed a set of criteria for evaluation of deliberative practices such as consensus conferences and dialogue workshops (Rowe & Frewer, 2000, , 2004; Rowe, Marsh & Frewer, 2004). Table 1 presents these criteria. Hamlett (2003: 123), in addition, has coined the possibility to extend the application of these criteria to more informal and non-procedural politics of innovation by treating it

"as one anchor of a continuum of political structures that might reach from the broadest participatory democracy; through various forms of limited participation democracy, such as pluralism, interest group bargaining, corporatism, or other representative forms; through to various forms of elitist, technocratic, or authoritarian systems."

This argument thus suggests a possibility for evaluating the different cases of more informal politics of innovation and the rules and procedures that *de facto* structure them. However, such evaluations have rarely been undertaken so far. There remains a gap between empirical scrutiny and democratic evaluation.

This paper seeks to bridge this gap by proposing a framework for evaluation based on a dynamic conception of decision-making about technological innovation. Given that the shaping of technological or service innovation takes place in a variety of settings, the paper develops an approach based on the concepts of issues, settings and displacements, which helps evaluators understand the dynamics of decision-making. The approach is applied to a case of public transport innovation to discuss how displacements might (not) contribute to democratic quality.

# The politics of innovation as the displacement of issues

How can we understand and evaluate democratic quality of the politics of innovation? Starting point of this study is the observation that technological steering does not take place from a central 'cock-pit', but is distributed over a multiplicity of settings (Rip & Schot, 2002). Settings are those locations where socio-technical issues emerge, get articulated, are dealt with, are settled (Hajer, 2005). Examples of settings are parliaments, councils, and forums; but also laboratories (Latour, 1987), work floors (Garrety & Badham, 2004) and even households (Silverstone & Hirsch, 1992). The literature on Science, Technology and Innovation provides

a strong sensitivity for this multiplicity, though it depends on theoretical angles which settings are considered most relevant. Elsewhere I have briefly reviewed evolutionary, constructivist and cultural approaches and, without being exhaustive, presented a list of potentially relevant settings (see table 2) (Nahuis, 2007).

Table 2. Potentially relevant settings for the politics of innovation

Laboratories, research institutes and design departments

User representation techniques (usability trials, user feedback)

Technological scripts (confronted with real users)

Experiments and demonstrations

Meetings between mutually dependent stakeholders

Markets, commercial advertisements and 'what's new' pages in magazines

Public debates and discourse (metaphors, visions)

Cultural expressions (art and critiques)

Social relations (schools, subcultures)

Situations of actual use

Source: Nahuis (2007)

The distribution of decision-making means that the shaping of technologies and services by means of discussing and settling aspects of design, funding, regulation, marketing, and use occurs in more than one particular setting. Decision-making about innovation generally extends over this range of settings. As a consequence, evaluating a decision-making process implies analysing the different settings where issues displace between.

In a review of the STS literature on the relevance of the notion of displaced politics for technological innovation Nahuis and Van Lente (2008) have distinguished five different perspectives. First, an 'intentionalist' perspective emphasises how engineers are politically active when they materialise particular values and norms in the technical content of artefacts (e.g. Illich, 1973; Winner, 1980). The second perspective is more focused on the process than the outcomes and is based on the criticism that mutual dependencies, interactions and contingencies are easily dismissed in the first. Social constructivist approaches to technology development, on which this second, 'proceduralist' perspective is based, rather look for politics in

settings and procedures where mutually dependent social groups interact (e.g. Bijker, 1997; Pinch & Bijker, 1987; Rip, Misa & Schot, 1995). Another response to the first perspective is actor-network theory. An 'actor-network' perspective also emphasizes the importance of interactions and network formation in the development of technology, but extrapolates these mechanisms to explain the emergence of hegemony in general (e.g. Latour, 1988, , 1991b). A fourth, 'interpretivist' perspective is based on the reflexive turn in STS. Self-application of insights from social studies of science inspired the exploration of the role of ambiguity, rhetoric and network formation in STS themselves (e.g. Woolgar & Cooper, 1999). A last, 'performative' perspective builds on insights from actor-network theory, but specifically highlights the constraining and enabling conditions of settings (e.g. Gomart & Hajer, 2003; Levidow, 1998). Due to its focus on the role of settings this performative perspective is particularly promising for our purposes.

The performative perspective emphasises a hardly explored dimension of the politics of innovation: the (positive) contribution of the biases of settings to the politics of innovation (Gomart & Hajer, 2003; Hajer, 2005). This perspective finds its roots in the political theory of Schattschneider (1960). Schattschneider argues that the conflicts at the heart of politics are staged and that this staging is an expression of bias. Underlying this argument is the presumption that in a conflict two (or more) parties combat and strive after support from potential allies, who may be able to intervene in the conflict. Possibilities for intervention, however, are not entirely open but already part of a certain framing. Settings like councils, stakeholder meetings and negotiation structures frame conflicts by prescribing the rules of the game. The constitution and history of settings co-determine the conditions for participation, the requirements for representation, the relevance of information, the rationality of arguments, the legitimacy of decisions, and consequently what it means to be involved (Gomart & Hajer, 2003).<sup>1</sup>

Settings frame the conflict and the issues at stake. The displacement<sup>2</sup> of an issue, thus, means the entrance of the issue into an often differently framing setting. Consequently, displacements are not value-free. Conflicts may be won or lost by displacement, because each displacement mobilises other biases. This may reinforce existing positions and roles but it may also open up new opportunities and possibly new allies or resources for advantageous solutions. Displacements are thus an essential characteristic of politics.

In conclusion, to understand and evaluate the roles of biases in settings one should follow the *issues* into the *settings* where they *displace* to. Schattschneider's integrative framework relates these central notions to one another. With this framework in mind the main concepts of the approach can be discussed and defined.

#### Issues

Conflicts are at the heart of political processes. For this reason STS have conceived of innovation processes as politics with other means (Latour, 1987). Translation theory, for example, emphasises the fundamental contestability of technological scripts, of the envisioned futures implicitly assumed by the supposed use of artefacts (Callon, 1987; De Laat, 1996). Contested scripts are the issues in the politics of innovation; they are the objects of conflicts and tensions.

The concept of *script* points to the political dimension of technology (and services). Artefacts are not socially neutral but affect the world into which they become embedded by prescribing particular programs of action (Latour, 1991a) and (Akrich, 1992). Designers 'inscribe' these programs in the technical content of new objects. For example, non-standard plugs and screws do not allow reparation of a broken device by lay people, but instead foster users to return it

to the manufacturer. "Like a film script, technical objects define a framework of action together with the actors and the space in which they are supposed to act" (Akrich, 1992: 208).<sup>3</sup> Inscribed action programs acquire force from actors willing to take up their prescribed roles (Akrich, 1992). However, the roles these actors see for themselves may of course also run counter to the inscribed roles. They may be harmed or adversely affected by the inscribed action program and engage in antiprograms that aim at objection, rejection or adjustment of the technology. The contestability of technological scripts then becomes manifest in the opposition between action programs and antiprograms.

Translation theory starts from this assumption when it is stated that all kinds of innovation processes can be conceived of as interactions between action programs and anti-programs (Latour, 1991a). This theory suggests that actors translate their own action programs – their interests, purposes, problem definitions – into those of others, attempting to align action programs and enrol others into their networks. Translation theory insists on the importance of alignment. Alignment allows one actor to represent and speak in the name of all aligned others. Once the conflicts between action programs and antiprograms are being solved and opponents have aligned their interests, the final specifications stabilise, design choices turn into features of black-boxed artefacts, collaborators speak in each other's names, "child diseases" are cured, and user guidelines become accepted. The script gets performed.

This paper proposes to take the issues themselves – that is: the objects of conflicts constituted by opposing action programs – as the unit of evaluation. This idea of a dialectics of action programs and antiprograms offers the possibility to describe innovation processes in terms of conflicting interests and positions. Antiprograms cause clashes and deadlocks in need of translation from either side. The clash or conflict between an action program and an antiprogram thus forms an 'issue'. These issues are followed when they are politicised, translated,

displaced, and depoliticised. To be sure, a translation is not the same as a displacement: translations can be done within a single setting. Displacement can be the consequence of the interplay of action programs, but this interplay can also displace to another setting for reasons external to the issue.

# Settings

The clash between an action program and an antiprogram happens in what I define as a setting. Settings are not neutral. They provide the conditions for dealing with issues. In addition to asking 'who participates', the question 'what enables people to become participants' should be addressed (Gomart & Hajer, 2003; Mol, 2002). Settings empower some actors into effective participants, while excluding others. The characteristics of settings not only define who has access, but also what counts as relevant information, reasonable arguments, and legitimate decisions. Barry's notion of 'demonstration' provides a nice illustration (Barry, 2001). In its common political meaning 'demonstration' refers to protest. Typically the harmed and weaker party in a conflict protests against a situation to gain public support for its case. It questions an unjust or intolerable situation, a broken promise, or an otherwise undesirable state of affairs. In its second meaning 'demonstration' refers to the practice of showing something to an interested audience, which is historically rooted in the anatomical theatres as the origin of medical academia. This second meaning emphasises the equipment needed to perform the (political) demonstration: a stage to speak up, a case, valid argumentation, communication technology, an audience to speak to, and – more specific for the politics of innovation – proposals, prototypes, experiments, spreadsheets, etc. To take the two meanings together: opponents demonstrate the injustice of a certain situation. This event marks the setting. The setting

consists of those elements and techniques that make demonstration possible; it is thus the concrete and local condition for the clash between action programs.

Notions like actors, settings and performance are metaphors borrowed from theatre and drama and used to render comprehensible the reciprocal and sometimes dramatic nature of technological activities. As Pfaffenberger (1992: 285) states: "The metaphor of drama ... is to emphasise the performative nature of technological 'statements' and 'counterstatements', which involve the creation of scenes (contexts) in which actors (designers, artefacts, and users) play out their fabricated roles with regard to a set of envisioned purposes (and before an audience)." In other words, acts and scenes co-evolve in technological dramas. Yet, while these metaphors are fruitfully used to analyse processes of co-evolution of technology, actors and settings (Akrich, 1992; Gomart & Hajer, 2003; Pfaffenberger, 1992), the structuring roles of settings in these processes still remain underemphasised. In other words, the metaphor of a setting as a theatre stage is theoretically underdeveloped. For example, what role do settings play in the 'invitation' of actors? What kinds of attributes that make the performance possible are available and allowed on these settings? What roles do audiences play in different kinds of settings? To develop a more elaborate theoretical understanding of settings, three features of theatre stages are assumed to characterise settings in technological innovation:

- Access conditions: settings give access to some actors while others are part of the audience or excluded altogether.
- Attributes: settings provide and/or allow the attributes with which the performance is enacted.
- Audience: the audience comprises those who are able to observe the performance and are indirectly involved, either by asserting influence on the participants in the setting or by asserting influence in subsequent settings.<sup>4</sup>

Due to these characteristics settings frame issues in a particular way. Such framing might offer new opportunities, because issues disappear, new issues appear, or already existing issues are reinterpreted.

# Displacement

Because settings are not neutral, they are contestable and negotiable in principle. As Gomart and Hajer (2003: 34) put their findings: "Actors not only deliberate about the solutions for the problems on their agenda, but *while doing so*, also negotiate new ways of doing things, resulting in new political practices. [...] They design new concrete conditions, and search for new shapes of legitimate political intervention." Those who feel excluded or marginalised, because the access conditions or attributes of settings do not serve their purposes, may attempt to negotiate new practices. Once actors try to displace issues, they simultaneously contest the legitimacy of current political settings and practices. This contestability of settings thus becomes manifest in the possibility to displace the issue to other or transformed settings.

The displacement of politics is usually associated with a democratic deficit. In these associations displaced politics takes place in settings, which lack democratic features like transparency, equality, accountability, or division of power. If, for example, New York architect Robert Moses engages in racist politics by means of bridge building, then the democratic deficit emerges from the elitist nature of architects' decision-making in contrast to democratic decision-making in councils (Winner, 1980).<sup>5</sup> In this thesis a displacement is defined as the movement of an issue to another setting or as a significant change on one of the three dimensions of the setting (access conditions, attributes, audience). This is not negative per se. Because this approach to displacements does not idealise one particular kind of setting but

instead evaluates the cumulative effects of settings where issues are dealt with, the contribution of the characteristics of settings to the democratic quality of political processes should be measured in a comprehensive way: settings may *reinforce* or *compensate* each other's biases. For example, if some stakeholder is denied access in setting A, but features prominently in setting B, then a displacement from A to B leads to compensation in terms of participation. To give another example, if an issue displaces from setting A with broad participation to setting B with limited participation, but this displacement happens on the base of a mandate broadly supported in setting A, then democratic quality of the overall process might still enhance despite a reduction in terms of direct participation. Thus, the contribution of displacements to democratic quality depends on their cumulative reframing effects.

# A definition of democracy

The approach developed in this paper suggests the possibility that displacements can contribute positively to democratic quality of innovation processes instead of merely manifesting a democratic deficit. Moreover, it offers a dynamic framework that enables evaluators to bridge the gap between empirical scrutiny and democratic evaluation. This, however, raises the question how democratic quality can be determined.

Recent efforts to develop thought-out lists of democratic evaluation criteria can also serve the evaluation of displacements of issues. Table 1 (see above) listed the set of democratic evaluation criteria from Rowe, Marsh and Frewer (2004). Although these criteria were mainly developed for evaluating particular events, like consensus conferences, citizen panels and focus groups, it is suggested that they can be treated as an anchor point for evaluating more mundane forms of politics as well (Hamlett, 2003). I want to argue, however, that it is possible to

reduce this elaborate list of criteria to three core principles: participation, empowerment and impact.

- Participation/representation: the degree to which stakeholders are able to participate, either directly or indirectly;
- *Empowerment:* the degree to which all stakeholders are able to articulate their ideas and action programs;
- *Impact/influence:* the degree to which the articulation of ideas and action programs affects outcomes.

Displacements contribute to democratic quality if one or more of these principles is reinforced.<sup>6</sup>

My argument is that the list of criteria of Rowe, Marsh and Frewer is reducible to these three principles if one views decision-making about innovation as a politics of displacement. The criteria of 'involvement',<sup>7</sup> 'resource availability' and 'influence' are directly covered by the three principles of participation, empowerment and impact. Other criteria can be derived from these principles. Consider for example 'representativeness': if a participant in a certain setting claims to represent a broader constituency, then the analyst should trace back the mandate<sup>8</sup> to the setting where it originates. Whether the mandate is legitimate should be determined by studying the displacement of the mandate, for example by asking whether all constituency members are sufficiently participating and empowered with resources in the voting about it. A similar argument holds for 'transparency'. The concept of audience was not only introduced because one can differentiate settings on the base of this characteristic, but also because the presence of stakeholders in the audience matters for the quality of the performance they witness. If the performance in a setting is not transparent, then stakeholders in the audience are insufficiently empowered as audience.

Remaining criteria can be legitimately disregarded for different reasons. 'Independence' should be dismissed, because settings need not be independent or neutral at all. Instead, the multitude of settings should together bias in favour of effective participation of a broad set of stakeholders. The criteria of 'task definition', 'cost-effectiveness' and 'structuring', finally, are emergent features of the process and evaluated by the actors involved. If a setting does not provide tasks and structure, then participants may be dissatisfied and contest the legitimacy of the setting along with the issues on the agenda. Criteria like transparency, independence, cost-effectiveness, task definition, and structuring refer to the bias of a setting, which' performative qualities should be evaluated in relation to other settings and the performances these enable and delimit. Applying the criteria of Rowe, Marsh and Frewer to the politics of displacement thus boils down to evaluating the multitude of settings in terms of stakeholder participation, empowerment and impact.

# The case of a flexible public transport system

To illustrate the framework presented, a case study about a flexible public transport system in Hoogeveen, the Netherlands, is performed. The case starts in 1999, when a former civil servant and his American companion negotiated with the provincial authorities of Drenthe to provide a transport service with small buses for elderly and disabled in the town of Hoogeveen. Those days transport company Arriva provided regular public bus transport within the town, as it did in and between nearly all regions in the north. In addition, a railway operated by the Dutch Railways connects the town to the cities of Groningen and Zwolle. The transport system which the two entrepreneurs initially had in mind was supposed to serve the 'bottom of the market', thus complementing regular public transport. They proposed a quite innovative service concept for a number of reasons: in proportion with the town size and target

group, the buses were just large enough to transport eight passengers; instead of at designated bus stops, the buses stopped for anyone on the route who raised his hand; it was even possible to pick up (disabled) people from their homes if that would not disrupt the time schedule; panels of users determined the principle routes, time schedules, and tariffs (Schlingmann, 2002). These features amounted to a highly flexible and demand-driven system, which was very attractive for small towns.

The province of Drenthe decided to start the experiment in Hoogeveen and the two entrepreneurs founded a company called Millennium Transport International (MTI). After a successful initial period, the province decided to scale up the experiment and to grant MTI a contract to provide a regular public transport service in and between the towns of Hoogeveen and Meppel (InterHoMe region) in the province of Drenthe.

For supervision, the province founded and chaired the so-called Development Group Southwest Drenthe. This group, and the circumstances in which it met, is the first setting that is discussed in this case study. The conceptual framework is used to show how one of the main issues debated in this setting was depoliticised by a sequence of displacements. It is important to note at this place that the Development Group worked with a mandate from Provincial States and that State members would eventually have to decide upon continuation of MTI's service after a first contract period.

#### Development Group

MTI's action program was now to provide regular public transport in and between Hoogeveen and Meppel and this was to be realised in conjunction with programs and interests of actors in the setting of the Development Group. The group held two-weekly meetings from May 2001 on. Participants were representatives of the province (chair) and the municipalities in the region, as well as someone from traveller organization ROVER, who represented a platform of consumer organizations. Furthermore, the participation of both Arriva and MTI reflected

constructive intentions: the group could directly allocate tasks to those actually serving the region.

Initially, a constructive atmosphere in the Development Group contributed to the successful take off of the project. However, after about one and a half year, the first tensions started to arise. The agenda of the group showed a number of small issues that were not adequately taken up. MTI postponed or did not execute its tasks and over time the list grew and turned into an issue itself, the province presented a document to the Development Group (13-1-03), which summarized thirty-eight not (sufficiently) executed tasks from five meetings, most of them allocated to MTI and to do with travel information and communication. Among these thirty-eight were the following tasks:

- The national internet service for travel information should get the MTI data.
- There should be more information along the routes.
- Drivers should be able to communicate in case a back-up bus meets with peak demand.
- It should be clear how buses deviate from the routes in case of road works.
- Drivers should be able to communicate with the office otherwise than by mobile phones.
- MTI should make clear how it deals with complaints.
- MTI should organize a user panel for the InterHoMe region.
- MTI should develop a communication plan.
- MTI should sell tickets in the bus and not let people without a pre-paid ticket travel for free.
- ...

Follow-ups of these tasks remained unclear as the director of MTI mostly happened to be excused on the meetings of the Development Group. The document reports that he was late once, replaced by subordinates twice, and just absent on the last meeting. The conclusion of the document clearly reflected the group's annoyance:

"Unfortunately, MTI time and again shows its unprofessional side in spite of guidance by the province. There is a number of reasons, like a lack of experience in public transport, the small board of MTI, the many miscommunications within the company, and the non-attendance of meetings. There is a strong hierarchy at MTI, where the top decides what happens. The other parties in the development group unanimously find MTI unprofessional and there is explicit doubt whether MTI is capable of operating public transport services at all."

The initial issue constituted by MTI's desire to provide public transport vis-à-vis complementary action programs of other participants in the Development Group was reframed during these meetings into a much more antagonistic issue comprising an opposition around the question whether MTI was capable at all.

#### Private meeting (province, MTI)

Continuation of the MTI project was both a concern for MTI and for the provincial officials who had committed themselves to the project. However, if MTI were to survive in the next tender then the issue needed to displace to another setting where MTI could be given a second chance. This displacement came about when the deputy of the province invited MTI for a private meeting. In this meeting, reported in the Development Group (10-2-03) as a 'clarifying conversation', the deputy of the province reassured the board of MTI that the company should work on the action list (Diepens & Okkema, 2003b). The province was authorised to commission public transport, on which MTI's existence depended. If MTI wanted to be involved in the next tender, then it now had to listen to the province.

In effect, this displacement marked the beginning of a true rehabilitation. Firstly, the action list, an initiative of provincial officials, already reduced the variety of issues to one single issue: MTI's capability to operate a public transport system. Secondly, in the conversation the two actors made arrangements about this most urgent issue without interferences and irritations of the other actors. As a result, the action list returned on the agenda of subsequent meetings of the Development Group and MTI reported task by task about the state of affairs. In this refreshed atmosphere the Development Group (eg. 19-5-03, 16-6-03) did not raise new issues and the most controversial ones gradually disappeared from the agenda.

#### Office of evaluators

A second step towards rehabilitation of MTI and renewed support from the province was a displacement of the issue to the office of a consultant, who was commissioned to perform a project evaluation. The evaluation report did not hold MTI primarily accountable for the current conflicts and tensions. Rather than evaluating MTI's performance the evaluation aimed at lessons for the province regarding forthcoming tenders (Diepens & Okkema, 2003b). The evaluators mentioned a lot of problems, miscommunications and ignorance, but they only drew conclusions about how the province should have prevented or solved these problems. For example, they ascribed the growing action list to a lack of steering by the province: "In the implementation phase the province insufficiently controls the execution of arrangements between Arriva and MTI [...] and MTI gets too much freedom in (not) living up with appointments" (Diepens & Okkema, 2003b: 28). It concluded that the project was indeed innovative and feasible and would have been better managed if the province had played a better part. This focus on policy lessons offered valuable input for the new tender invitation, but it also neutralized the annoyance and 'excused' MTI for its incapacity.

#### Provincial States

When the first contract was expiring, the provincial Board of Deputies prepared a new tender invitation. Provincial States was the main audience, because it held the Board accountable for the adequacy of decisions. The Board wanted to continue with MTI and thus needed to convince State members of the capability of MTI to operate a public transport system. In the Committee on Spatial planning, Infrastructure and Mobility (SIM) of Provincial States (19-1-04) the Board indeed expressed its belief that public transport in rural areas could benefit from experiments like these. What is more, without much discussion it had prepared a tender invitation that clearly favoured MTI. The Board had invited three transport companies to compete for the contract, but the competitors did not have a fair chance. The program of

requirements reinforced the existing situation (except user panel): the winner should drive the same lines with the same time schedules and kind of equipment as MTI had been doing for the last two years. The program even required the absence of regular bus stops (except for unsafe locations), which was one of the specific features of the MTI concept. Moreover, the contract would just last for one and half year, because Drenthe and its southern neighbour Overijssel had already agreed to invite tenders for an extended region around July 2005 (Diepens & Okkema, 2003a). This short period was of little attraction to newcomers. Because the requirements obviously favoured MTI, the company indeed appeared to have made the most economic tender and was selected on that ground (Committee SIM, 19-1-04; Provincial States, 17-3-04). State member, the audience of this decision-making process, did neither object to the procedure, nor to the outcome. The reason for this, I will argue, is their lack of empowerment.

#### Democratic evaluation

The issue of aligning MTI's action program with action programs of other stakeholders in the region was featuring on the agenda of the supervising Development Group. The most important attribute in this group was a mandate from Provincial States to look after the arrangements in the contract between MTI and the province. Access conditions ensured that inhabitants were represented via the municipalities of Hoogeveen and Meppel, via a representative from the consumer platform, and via the mandate carried out by provincial officials. Due to the composition of this group a constructive client perspective prevailed and as long as MTI took suggestions from participants into account, inhabitants were adequately represented. Yet, the growing action list evoked serious doubts about hitherto unquestioned capabilities of MTI. If these doubts were right, then inhabitants would not get value for money. At this point in time, representatives of inhabitants should have been empowered with attributes to decide about the conditions for continuation of the project. Instead, the group did not meet

for some time. The province tried to settle the issue via displacements to settings with limited access. Officials took MTI apart and bracketed the distrust in the Development Group.

The mandate from Provincial States remained the only attribute that carried on the voice of inhabitants, meaning that State members should have taken part in the audience, check whether the mandate was carried out properly and question the mandate again when the nature of the issue changed. But when the issue had indeed dramatically changed, this audience remained silent. State members had not been very interested in the politics of the Development Group. They did not raise their voice in the name of inhabitants and did not prevent the bracketing of antiprograms in the 'good conversation' and the 'excusing' evaluation report. Not until Provincial States had to decide about the next tender did the results of these bracketing displacements – the image of a cooperative and flexible transport provider called MTI – become available as strong attributes in Provincial States. MTI's victory in the next tender invitation proofs the efficacy of these attributes.

Whether deliberate or not, by excluding the stakeholders represented in the Development Group and by bracketing doubts and distrust dominant provincial officials *over*used their mandate and constructed a 'successful' project. They were able to do so, because State members did not take part in the audience to look upon the mandate. As a consequence, State members who represented inhabitants were not empowered to decide about continuation of the project when the issue finally displaced to Provincial States.

#### **Conclusions**

This research starts from the observation that there is an important political dimension of innovation processes and that this political dimension begs for democratic evaluation. STS have well researched the politics of technological innovation in numerous case studies. Yet, despite increased recognition of this political dimension and despite lively and ongoing de-

bates about their democratisation STS scholars still often hesitate to base normative conclusions on empirical findings. When it comes to democratic evaluation these studies do not to take a normative stance and one has to consult a different body of literature in which sets of democratic evaluation criteria are developed for relatively formalised and proceduralised settings. However, the politics of innovation that is taking place in and displacing between a mixture of formal and informal settings, like design departments, private meetings and councils, is not easily captured by such criteria. This paper aims to bridge the gap between empirical scrutiny and evaluative ambitions by developing a more dynamic approach to evaluate the politics of innovation.

The approach developed here involves following 'issues' when they 'displace' between 'settings'. Issues, firstly, are defined in terms of clashing action programs. In innovation processes action programs are inscribed in the technical content of artefacts. But action programs may provoke antiprograms that aim at rejection or adjustment of the artefacts. A setting is the direct context of such clashes. The metaphor of a theatre stage suggests that such settings are not neutral but that issues are framed by three important characteristics of settings: their access conditions, the attributes, and the audience. These characteristics can be beneficial for some action programs and go at the expense of others. A displacement is the movement of an issue to another setting or a significant change in the characteristics of a setting. Given the framing effects of settings, displacements shift the balance of power between action programs, which may have democratic implications. The reframing effects of displacements on issues raise (empirical) questions about the democratic implications of displacements.

With regard to democratic evaluation criteria it was argued that principles concerning effective stakeholder involvement, such as participation, empowerment and influence, are much more important than criteria concerning the appropriateness of settings and procedures. The reason for this is that the quality of settings depends on the framing effects of these settings in

relation to the framing effects of other settings in a chain of displacements. It may be the case that displacements amount to hegemony; it may also be the case that the democratic merits of one setting compensate for the democratic deficits of another. Whether and when displacements contribute to democratic quality is, however, is essentially an empirical question.

To illustrate this latter proposition, an empirical study and evaluation of displacements in a case of public transport innovation was performed. The study showed how an issue untimely depoliticised at the expense of empowerment requirements. These results illustrate how the conceptual framework developed in this research highlight the conditions that need to be fulfilled for the democratisation of innovation processes. In this case, it appeared that elected members of Provincial States, who were supposed to be the main audience throughout the process and who eventually had to debate the continuation of the project, were insufficiently empowered to assess the transport company's capabilities.

### Notes

1

<sup>&</sup>lt;sup>1</sup> This perspective thus takes Winner's (1980) thesis about the performative role of artefacts in politics serious to the point of symmetry: political artefacts (settings, procedures) also play a performative role in technological innovation.

<sup>&</sup>lt;sup>2</sup> Schattschneider (1960) uses the concept of displacement for a somewhat different political mechanism. For him, it refers to the displacement of one issue by another one on political agenda's. Because these agendas can only comprise a limited number of issues, actors may strategically try to close the conflict by displacing the issue with another, 'more important' one. In this thesis, I will use the notion in its present-day meaning. Displacement refers to the shift of decision-making from one setting to another.

<sup>&</sup>lt;sup>3</sup> The notions of 'scripts' and 'action programs' are used as synonyms in the vocabulary of the Actor Network Theory. In this thesis I will mainly use the notion of 'action program'.

<sup>&</sup>lt;sup>4</sup> This conception of an active audience in the politics of innovation suggests that stakeholder participation can also come about by taking part in the audience. This does not per se prioritise representative democracy over direct participation, but it does point to a way to delegate the complex tasks of innovation politics to specialised actors, while simultaneously urging for reflections on the limits of mandates, on the need for publicity and accountability of leading actors, and on the conditions under which the audience can actually intervene.

<sup>&</sup>lt;sup>5</sup> Even more explicit about such democratic deficits are Bovens et al. (1995). In a small booklet about democratic renewal in the Dutch context they discuss displacement of politics in six different directions. Politics moves from parliaments towards for example local administrative bodies, networks of civil servants, or societal organisations. Unlike parliaments, these 'destinations' fall short in democratic terms: "The displacement of politics is often mainly a displacement of societal power and not or not yet a displacement of democratic control" (p.21). The politics should therefore either be brought back to parliaments, or democratic control should be brought to these politics in the form of user involvement for example. This line of argument has a clear moral appeal, but its practical consequences are far from self-evident. Decision-making about innovation takes place in a variety of settings. What does the 'displacement of democratic control' then mean? Should all these settings be controlled democratically? Or are some settings allowed to compensate for the democratic deficits of others?

<sup>&</sup>lt;sup>6</sup> To be sure, application of these three principles is not straightforward. These principles are by no means unambiguous criteria; they should be understood as dimensions of democracy that are general enough to capture local variation and specific enough to make a difference between good and bad. They are general enough to cover local variations like issue-specific requirements to participation, the actor-specific agreement about the proper level of empowerment, or contingent influences on achievements. Nevertheless, they are also specific enough for normative evaluations; they offer a ground for normative comparison of settings and henceforth a way to assess the contribution of displacements to democratic quality.

<sup>&</sup>lt;sup>7</sup> Involvement should not be early per se, I would argue. It should be timely and the right moment of participation depends on the evolution of the issue, that is: on how an action program at a certain moment is going to affect a wider public.

<sup>&</sup>lt;sup>8</sup> A mandate is a representative kind of attribute (Nahuis, 2007).

<sup>&</sup>lt;sup>9</sup> The following episode is part of a larger case study, which is reported in Nahuis (2007)

#### References

#### Akrich, M.

1992 "The de-scription of technical objects." Pp. 205-224 in W. E. Bijker, and J. Law (eds), Shaping Technology/Building Society: Studies in Sociotechnical Change. London: The MIT Press.

#### Barry, A.

2001 Political machines. Governing a technological society. London & New York: The Athlone Press.

# Bijker, W. E.

1997 "Démocratisation de la culture technologique." La Revue nouvelle CVI (9): 37-47.

1999 "Towards Politicization of Technological Culture: Constructivist STS Studies and Democracy." Pp. 5-16 in H. Ansal, and D. Çalisir (eds), Science, Technology and Society: International Symposium. Istanbul: Istanbul Technical University.

#### Bovens, M., W. Derksen, W. Witteveen, P. Kalma & F. Becker

1995 De verplaatsing van de politiek. Een agenda voor democratische vernieuwing (The displacement of politics. An agenda for democratic renewal). Amsterdam: Wiarda Beckman Stichting.

#### Callon, M.

1987 "The sociology of an actor network: the case of the electric vehicle." Pp. 19-34 in M. Callon, J. Law, and A. Rip (eds), Mapping the dynamics of science and technology: MacMillan.

#### De Laat, B.

1996 "Scripts for the future. Technology foresight, strategic evaluation and sociotechnical networks: the confrontation of script-based scenarios." Amsterdam: University of Amsterdam.

#### Diepens & Okkema

2003a Aanbestedingsdocument InterHoMe concessie Zuidwest Drenthe (Inter-HoMe tender invitation Southwest Drenthe). Assen: Provincie Drenthe. 2003b Procesevaluatie experiment InterHoMe. Assen: Provincie Drenthe.

#### Garrety, K. & R. Badham

2004 "User-Centered Design and the normative politics of technology." Science, Technology & Human Values 29 (2): 191-212.

#### Gjøen, H. & M. Hård

2002 "Cultural politics in action: Developing user scripts in relation to the electric vehicle." Science, Technology & Human Values 27 (2): 262-281.

#### Gomart, E. & M. Hajer

2003 "Is *that* politics? For an inquiry into forms in contemporary politics." Pp. 33-61 in B. Joerges, and H. Nowotny (eds), Social studies of science and technology: Looking back ahead. Dordrecht: Kluwer Academic Publishers.

#### Hajer, M. A.

2005 "Setting the stage. A dramaturgy of policy deliberation." Administration & Society 36 (6): 624-647.

#### Hamlett, P. W.

2003 "Technology theory and deliberative democracy." Science, Technology & Human Values 28 (1): 112-140.

#### Illich, I.

1973 Tools for conviviality. New York: Harper & Row Publishers.

#### Latour, B.

1987 Science in action: How to follow scientists and engineers through society. Cambridge, Mass.: Harvard University Press.

1988 "How to write The Prince for machines as well as for machinations." In B. Elliot (eds), Technology and social change. Edinburgh: Edinburgh University Press.

1991a "Technology is society made durable." Pp. in J. Law (ed), A sociology of monsters. Essays on power, technology and domination. London: Routledge.

1991b Wij zijn nooit modern geweest (We have never been modern). Amsterdam: Van Gennep.

#### Levidow, L.

1998 "Democratizing technology--or technologizing democracy? Regulating agricultural biotechnology in Europe." Technology in Society 20 (2): 211-226.

#### Mol, A.

2002 The body multiple: Ontology in medical practice. Durham and London: Duke University Press.

#### Nahuis, R.

2007 The politics of innovation in public transport. Issues, settings and displacements. Utrecht: Knag & Copernicus Institute.

#### Nahuis, R. & H. Van Lente

2008 "Where are the politics? Perspectives on democracy and technology." Science, Technology & Human Values 33 (5).

#### Pfaffenberger, B.

1992 "Technological dramas." Science, Technology & Human Values 17 (3): 282-313.

#### Pinch, T. J. & W. E. Bijker

1987 "The social construction of facts and artifacts: or how the sociology of science and the sociology of technology might benefit each other." Pp. 17-50 in W. E. Bijker, T. P. Hughes, and T. J. Pinch (eds), The social construction of technological systems. Cambridge, Mass.: MIT Press.

#### Rip, A., T. J. Misa & J. Schot

1995 "Constructive Technology Assessment: A new paradigm for managing technology in society." Pp. 1-14 in A. Rip, T. J. Misa, and J. Schot (eds), Managing technology in society. London: Pinter Publishers.

#### Rip, A. & J. W. Schot

2002 "Identifying loci for influencing the dynamics of technological development." Pp. 155-172 in K. H. Sørensen, and R. Williams (eds), Shaping technology, guiding policy. Cheltenham, UK: Edward Elgar.

#### Rowe, G. & L. J. Frewer

2000 "Public participation methods: A framework for evaluation." Science, Technology & Human Values 25 (1): 3-29.

2004 "Evaluating public-participation exercises: A research agenda." Science, Technology & Human Values 29 (4): 512-556.

#### Rowe, G., R. Marsh & L. J. Frewer

2004 "Evaluation of a deliberative conference." Science, Technology & Human Values 29 (1): 88-121.

#### Schattschneider, E. E.

1960 The semisovereign people. Hinsdale, Illinois: The Dryden Press.

#### Schlingmann, M.

2002 "Contact met de reiziger essentieel voor plattelandsvervoer (Contact with passengers essential for rural transport)." OV-Magazine 8 (7): 16-17.

#### Silverstone, R. & E. Hirsch

1992 Consuming technologies. Media and information in domestic spaces. London and New York: Routledge.

## Smits, R., A. Leyten & P. Den Hertog

1995 "Technology assessment and technology policy in Europe: new concepts, new goals and new infrastructures." Policy Sciences (28): 271-299.

#### Smits, R. & J. Leyten

1991 Technology Assessment: waakhond of speurhond? Zeist: Kerkebosch.

#### Staudenmaier, J.

1989 "The politics of successful technologies." Pp. 150-171 in R. C. Post, and S. H. Cutliffe (eds), In context: history and history of technology. Essays in honour of Melvin Kranzberg. Bethlehem Pennsylvania: Leigh University Press.

#### Summerton, J.

2004 "Do electrons have politics? Constructing user identities in Swedish electricity." Science, Technology & Human Values 29 (4): 486-511.

#### Winner, L.

1980 "Do artifacts have politics?" Daedalus (9): 121-136.

#### Woodhouse, E., D. Hess, S. Breyman & B. Martin

2002 "Science studies and activism: Possibilities and problems for reconstructivist agendas." Social Studies of Science 32 (2): 297-319.

#### Woolgar, S. & G. Cooper

1999 "Do artefacts have ambivalence? Moses' bridges, Winner's bridges and other urban legends in S&TS." Social Studies of Science 29 (3): 433-449.