Environmental Policy Integration – Organisational Obstacles

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Abstract: *The focus of this article is on organisations, and the question it deals with is how the Danish Ministry of Transport has handled the requirement of integrating environmental concerns into its transport policy. Answering that question has necessitated a study focusing on organisational aspects of the ministry and its interaction with the Ministry of Environment. Neo-institutional theory is applied. Methodologically, historical analyses and case studies of concrete processes are carried through. The article concludes that several organisational barriers exist to integrating environmental concerns into transport policy. Hence, an understanding in the Ministry of Transport after which transport policy mainly deals with satisfying the demand for transport, sub-sectorizing of the ministry, and barriers found in the interplay between the Ministries of Transport and Environment. Organisational potentials are also found. The article shows that it is necessary to extend the debate about the integration principle, so that it also covers how sector ministries – which the integration principle makes into important actors – are enabled to contribute to changes in sector policies.*

Keywords: Environmental policy integration, transport, Ministry of Transport, ministerial interaction, neo institutional theory.

1. Introduction

The United Nations held their first conference on the environment in Stockholm in 1972. At the conference, a declaration containing 26 principles was passed. One of these principles touched on the integration principle. Hence, the declaration stressed that the nations should adopt an integrated and co-ordinated approach to their development planning for the benefit of the environment (United Nations Environment Programme 1972, principle 13). The integration principle was also an element of the first Environment Action Program of the EU (then EEC), and when the EEC-Treaty was changed in 1987, the principle was integrated into it, as was stated "[e]nvironmental protection requirements shall be a component of the Community's other policies" (Krämer 1990, p 101).

However, the integration principle had a relatively weak position in the United Nations declarations and the EEC Treaty. This situation was changed by the publication of the Brundtland Report, "Our Common Future", by the World Commission on Environment and Development in 1987. In the commission's report, the integration principle plays a prominent role in a strategy for sustainable development, "The common theme throughout this strategy for sustainable development is the need to integrate economic and ecological considerations in decision making", and it appears that by "economic" the authors also mean different economic sectors, like agriculture, transport, etc. (World Commission 1987, p 62).

"Agenda 21" which came out of the United Nations conference in Rio de Janeiro in 1992 stated

that environmental concerns should be integrated into the making of sectoral policies. In the EU, the integration principle has been strengthened by the 1998 Amsterdam Treaty, followed by a process, whereby the Council of Ministers from each sector (at first transport, energy and agriculture) has to elaborate strategies for integrating environmental concerns in their sectoral policies (Commission of the European Union 1999).

In Denmark, the government adopted the integration principle a short while after the release of "Our Common Future". The principle was proclaimed in "The Government's Action Plan for Environment and Development" (Statsministeriet, 1988). The integration principle is also a central element in the present Danish government's strategy, "A shared future – balanced development" (2002). In this strategy it says, "The integration of environmental considerations into policies and decision-making processes is a prerequisite for achieving sustainable development […] This makes all sectors and authorities responsible for integrating considerations for the environment, health and sustainable development into all decision-making processes within their respective areas" (Danish Government 2002, p 7).

In my interpretation, the integration principle is a two-sided coin. On the one side you find consideration of the environment, i.e. taking care of the environment through sectoral policies. On the other side, you find organisational integration, i.e. placing the responsibility for environmental concerns with sectoral authorities. The first side has to do with content, while the other side has to do with form. Organisational integration is an important precondition for taking care of the environment through sectoral policies. While consideration of the environment, the first side of the integration principle, is often debated in politics and science, organisational integration, which is the other side, is seldom discussed[1].

"Our Common Future" expressed the need for organisational integration, "The present challenge is to give the central economic and sectoral ministries the responsibility for the quality of those parts of the human environment affected by their decisions" (World Commission 1987, p 10). The Danish response to "Our Common Future", the above mentioned action plan for environment and development, contained similar statements.

In practice, organisational integration is found in the EU in that the Council of Ministers for each sector is responsible for integrating environmental concerns into sectoral policies. In Denmark, organisational integration can be seen, when for example the Ministry of Transport draws up its environmental action plans. For instance, in 2001 the ministry published a report concerning the reduction of CO_2-emissions in the transport sector (Trafikministeriet 2001).

Against this background, the article deals with the Danish Ministry of Transport and the ministry's interaction with the Ministry of Environment. The aim of the article is to make clear that specific institutional barriers and potentials exist within and around the Danish Ministry of Transport, which make possible, or prevent, the integration of environmental considerations into transport policy. A secondary aim is to illustrate the usefulness of a neo-institutional framework to study it[2].

I proceed by introducing the theoretical and methodological discussions. In two subsequent sections, I discuss the history of the Ministry of Transport as well as the ministry's immediate reaction to the integration principle. Next, a case study of the widening of a motorway, a decision making process which went on mainly in the 1990s. Against this background I discuss institutional barriers and potentials within and around the Ministry of Transport by the end of the decennium, and finally, the conclusions and some perspectives.

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[1] However there are exceptions. E.g. Swedish Environmental Protection Agency, 2000. In that publication the term "institutional integration" is used, which has similarities to the term "organisational integration", which I use. See also Joint Expert Group on Transport and the Environment, 1999.

[2] The research behind the article is a Ph.D. thesis (Sørensen 2001). In the thesis the interaction with the ministries of Finance and Taxation is also analysed.

2. Theoretical and methodological considerations

From a traditional point of view, organisations are seen as tools that co-ordinate and systematise activities with reference to a certain purpose (Brunsson 1989, p 2-4, Morgan 1986, p 19-38). This is part of the truth, but the whole truth is more complicated. Hence, in this article I take my point of departure in sociologically inspired neo-institutional theory. Thus, organisations are also collections of institutions, that is collections of routines, procedures, and understandings. Organisations embody specific practices and understandings. For that reason, ministries like other organisations are not just tools or instruments for a certain purpose. On the contrary, they are to some extent autonomous, they have their own life (March and Olsen 1989, p 17).

As a consequence, ministries and other authorities do not just mirror political will. Organisations are not empty bottles, which you can fill up with any sort of substance. There is something already there, which cannot easily be taken away. Hence, these organisations can be difficult to change, and processes of readjustment to the principle of integration might last long.

A broad understanding of "institution" is the basis of the article. My understanding is consistent with Scott's approach arguing that "[I]nstitutions consist of cognitive, normative, and regulative structures and activities" (Scott 1995a, p 33). The cognitive dimension is concerned with the unreflective, routine, taken-for-granted behaviour and understandings. It expresses how something is viewed as given, and that a behaviour pattern is understood as a matter of course (DiMaggio and Powell 1991, Scott 1995a, p 40-45, Scott 1995b, p xvii-xix). The normative dimension stresses values and norms that prescribe certain behaviour. It expresses how something ought to be, and how a pattern of behaviour is viewed as proper (Scott 1995a, p 37-40, Scott 1995b, p xv-xvii). The regulative dimension turns on rules that individuals or organisations have to comply with to avoid sanctions. These rules can be formal or informal. This dimension expresses how something has to be, and why a pattern of behaviour is necessary (Scott 1995a, p 35-37, Scott 1995b, p xiv-xv).

In short, I define "institution" as a super-individual, routinized practice including connected understandings. "Super-individual" means that an institution applies to a group of individuals (Peters 1999, p 18). "Routinized" refers to the fact that a pattern of behaviour contains an element of reproduction, reiteration and hence stability. It also implies that the pattern of behaviour in question usually is deliberately considered every time it is repeated (Jepperson 1991, p 145). Organisations consist of collections of such institutions.

A widespread critique of neo-institutionalism is that it sees organisations as static, that it cannot handle change in organisations. I do not support this criticism, although I agree that processes of change are dealt with to a different degree in the neo-institutional literature. In my opinion the Norwegian author, Kjell Arne Røvik has elaborated interesting concepts to help understanding organisational change (Røvik 1998, p 145-170, Sørensen 2001, p 46-51).

He introduces some concepts regarding organisations' adoption of organisational recipes (organisational recipes for example are total quality management, benchmarking, managing by goals, etc.) Some of the concepts are inspired by other authors. Translated into the context of this article, Røvik's concepts regard how a ministry can respond to a demand from the outside for integrating environmental considerations. A ministry can respond in different ways, as illustrated in the figure below.

Test of compatibility *is a ministry's test of whether the integration principle is compatible with the routines, procedures and understandings in the organisation. If the principle is consistent it will be adopted. If it does not pass the test of compatibility it will be repelled, de-coupled or translated.*

Immediate coupling is the name of a process when the principle passes the test of compatibility. The principle can easily be taken into use. No adaptation or adjustment is necessary. The principle is coupled and becomes part of routines. Immediate coupling was not experienced in the Danish case.

Repelling occurs if the integration principle is inconsistent with routines, procedures and

understandings in the ministry. The principle might be seen as too simple compared with the complex tasks of the organisation, or the principle goes against basic norms and values in the ministry.

De-coupling occurs when the demand for integration does not pass the test of compatibility, but the ministry is simultaneously met with strong pressure from the outside to adopt the principle of integration. The ministry can handle this dilemma by adopting the integration principle, but keeping it de-coupled, so that the influence on the activities in the organisation will be limited. Externally, the ministry proclaims that it is following the integration principle, but in reality, business is as usual. The ministry expresses one thing, but does something else in practice.

De-coupling can take the form of *encapsulating*, which means that a unit is formed taking care of everything regarding integration. However, the unit is kept isolated from the rest of the ministry.

Another possible development is *translation*. Because the integration principle is an idea that is flexible and elastic, it can be interpreted and converted before a ministry adopts it. Translation concerns an organisational change, where the change does not differ from the routines, procedures and understandings in the ministry or only differ to a limited extent. Translation might be the immediate response to the demand of integrating environmental concerns into transport policy, but it might also be a reaction after a period of de-coupling.

Last, but not least is *virus*. Virus is a positive term. This can occur because the de-coupling between the integration principle and the activities in the ministry might not be a permanent but a provisional situation. In the long term, ways of speaking which have entered the ministry with the integration principle might slowly - (and almost like an activated virus) - settle and influence activities in the organisation. This is due to a strong norm that organisations that wish to appear as rational may not be seen as inconsistent. For that reason, in the long run, organisations cannot say one thing and do another. Such schizophrenia will be discovered, and followed by activities to ensure coherence between the external expressions and practice.
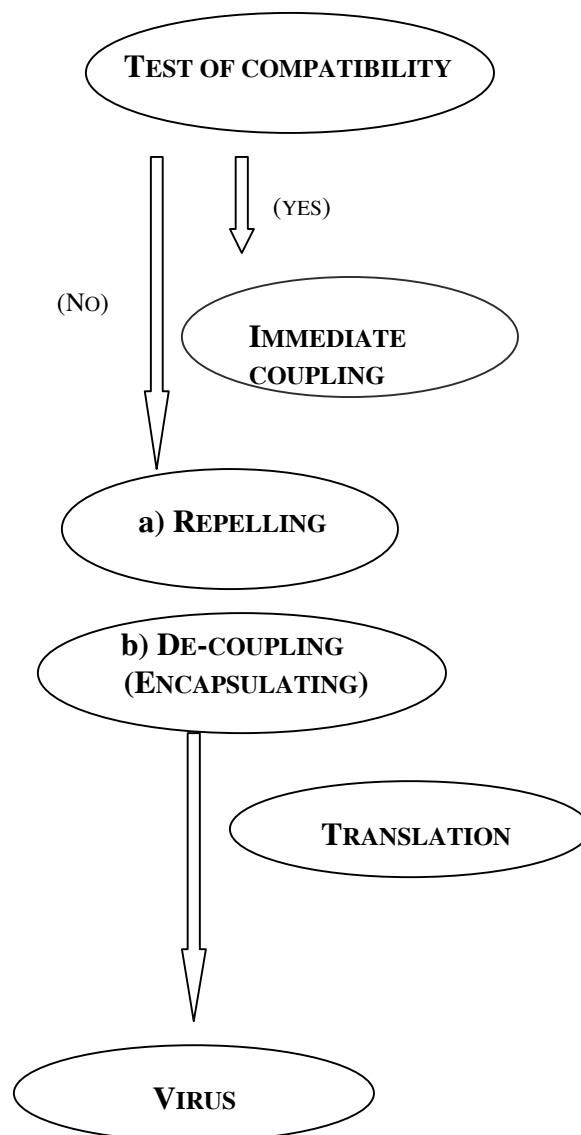
However, the incubation period for such viruses can be long. I use the term virus regarding organisational changes, which are relatively comprehensive. Virus is the result of processes, where relatively radical changes occur in routines, procedures, and understandings in the ministry.

I want to stress that these concepts do not illustrate an automatic or mechanic process. A ministry met by the demand of the integration principle might repel or de-couple the principle and not continue the development. Some processes might not result in translation or virus.

However, it is not only the Ministry of Transport which is the object of analysis. The ministry's

interaction with the Ministry of Environment is also in focus. Hence, the neo-institutional perspective is complemented by B. Guy Peters' concepts regarding co-ordination in the government (Peters 1998, p 295).

Regarding different problems of co-ordination, Peters introduces two concepts which are useful to my analyses. *Incoherence* exists when ministries and governmental agencies have "different goals and requirements". If goals and requirements conflict, the interaction among the ministries is reduced, "Each organization has a rationale for its action and is linked with a clientele. It may be that what it is doing is proper while the actions of the other organization(s) are the ones that need to be changed" (Peters 1998, p 303). *Redundancy* on the other hand is defined as a situation in which "two organizations perform the same task" (Peters 1998, p 303). In my application of "redundancy", the concept is interpreted broadly. If a ministry moves into an area, which another ministry sees as their field of responsibility, I consider it to be at situation of redundancy.

I give Peters' concepts an institutional shape, i.e. that both concepts can be due to different goals and requirements in the ministries, but also to negative us-them pictures of other ministries. Hence, incoherence and redundancy are both dependent on the collection of institutions, which exists in each ministry.

The empirical research on which the article is based partly consists of two historical analyses, partly of four case studies of concrete processes. Empirically, the main focus is on the 1990s. The case studies cover:
• The genesis of two government action plans
• A government review regarding transport and the environment
• The decision making process of the widening of a motorway
• The change of a vehicle registration fee

These four case studies complement each other and enable me to analyse institutional conditions both within the Ministry of Transport and in the ministry's interaction with the other ministries. In the case studies, I get close to everyday practice (reading letters, minutes of meetings and so on). Only parts of the empirical research carried out is reported in this article. Thus, one historical analysis covering the 1990s and two case studies are left out.

Five kinds of written sources were applied in the research: 1) books and articles about the history of the relevant ministries, 2) legislation, 3) articles from newspapers and magazines, 4) official publications from the ministries, and 5) documents of files from the ministries.

Another important source is research interviews. I conducted 26 research interviews with 28 different persons. All interviewees were selected as regard to their expected knowledge. Almost all the interviewees were present or former civil servants in the ministries involved in the study. The method used in these interviews was a mixture of critical and qualitative research interviews.

Dialogue with the interviewees and with other actors in the field has been an important methodological tool. Thus interviewees have read the transcription or summary of the interviews, and approved it. Furthermore 26 actors in the field (among them many interviewees) have read parts of my analyses, and made comments on it. Finally, during the research process I have made presentations of provisional results in seminars and conferences, where actors in the field participated.

So far I have introduced the integration principle, theoretical concepts, and the method. I will now turn to the empirical matters[3].

3. History
Institutions are produced in a historical process. Thus, it is a prerequisite for understanding institutional patterns in the Ministry of Transport to gain an insight into its history.

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[3] In the subsequent empirical sections I do not mention sources such as files, newspaper articles and interviews. I refer to Sørensen, 2001 for documentation.

Many years ago, before the formation of a Ministry of Transport in Denmark, the main purpose of transport policy was seen as satisfying the demand for the transport of passengers and goods. This was also the situation when the Ministry of Transport was formed in 1894.

In the 19th century traffic consisted of pedestrians, riders and horse-drawn carriages. However, during the century the first railways opened, and in 1885, a directorate-general of railways was formed, mirroring the situation with the Postal Services. In the beginning of the 20th century, both directorate-generales became independent from the department of the ministry. Thus, they obtained a status equivalent to the department, and the director general had no superior bosses other than the minister.

From the turn of the century trains competed with cars. During the 1920s and 1930s different commissions were set up concerning co-operation between the two modes, and a coherent planning. Nevertheless, the results were poor.

In 1949, the Road Directorate was formed. During the following decades the Road Directorate interpreted its purpose as building roads. Especially the building of motorways became a fundamental part of the identity of the directorate. While the Directorate Generale of Railways referred directly to the minister, the Road Directorate referred to the department. However, several interviewees stated that in practice the Road Directorate in this period often had direct access to the minister. Also, in public, the Road Directorate behaved independently.

In 1977, a Planning Division was formed in the ministry. The purpose was to overcome the organisational separation between different modes of transport, and promote coherent planning in transport. The Planning Division however did not obtain this function. Instead, the division happened to be the ministry's "ambulance service". The Planning Division ended up with that sort of business that it was not possible to place in other parts of the ministry.

The lack of co-operation across transport modes had to do with tensions among the different units in the ministry. Interviewees talk about power struggles between the Road Directorate, the Directorate Generale of Railways, and the department of the ministry.

In the beginning of the 1970s, a ministry of environment was formed, and bills regarding environment passed in parliament. Different approaches and understandings in the two ministries' legislation caused a conflictual relationship from the very beginning. However, the conflicts were also due to different cultures in the ministries and pictures of "Us" as the good guys, and "Them" as the bad guys. Several interviewees from both ministries described the bad relationship. In the Ministry of Environment, the relation to the Ministry of Transport was named "the Punic Wars", referring to three, long wars between Rome and Carthage.

In spite of these wars, some improvements regarding the environment were incorporated into the Ministry of Transport's practice during the 1970s and 1980s. Measures regarding protection of landscape and nature, and measures regarding noise were incorporated, but still the ministry understood satisfying demand of transport as the main purpose.

Now, which institutional conditions existed when the Brundtland report was introduced in 1987? In the Ministry of Transport satisfying the demand for transport was seen as the main purpose. The ministry experienced - what I have named - subsectorizing concerning the organisation of transport modes in separate units, and a conflictual relationship existed between the Ministry of Transport and the Ministry of Environment.

4. The immediate reaction to the integration principle

The Brundtland Report was introduced in 1987. The following year, the Danish government responded with a so-called "Government's Action Plan for Environment and Development", and two years later, a "Transport Action Plan" came from the Danish Ministry of Transport. I have studied the processes in the Ministry of Transport and among the other relevant ministries during their work with the action plans.

The first action plan was formulated under the presidency of the Prime Minister's Department. The plan only contained a rather short chapter concerning transport. The Ministry of Transport's attitude to the action plan was negative, in Røvik's terms, it can be characterised as repelling. As a civil servant involved in the work stated, "I am quite sure, that for the most part we were the rear wheel. That is putting the brake on. One can say that what I did in principle was to ensure that nothing was written that we could not live with". The ministry behaved like this due to an understanding that environmental considerations were not important, and especially not compared to other tasks of which the ministry took care. Several documents from the ministry illustrate that the other most important task was satisfying the demand for transport. The integration principle did not pass the test of compatibility.

Because of this attitude, the ministry fought to gain the main responsibility for the "Transport Action Plan" on which the work subsequently started. Documents show that the purpose was to "obtain decisive influence on content and elaboration of the action plan". The Ministry of Transport definitely did not want the Ministry of Environment to be the responsible agency. The ministry won this fight.

When the work in connection to the "Transport Action Plan" began, the ministry changed its attitude. It shifted from the rear wheel to the front wheel, because the ministry was afraid of loose the chairmanship. Because of the tensions in the ministry, the Planning Division did not receive the task. Instead, a very small secretariat was formed in the ministry's department. It mainly consisted of a chief of section and a principal. However, these two persons were indeed engaged in the project.

Several interviewees emphasised that a very good co-operation between civil servants in the Ministry of Environment and the secretariat emerged. The small secretariat, however, was faced with other problems, both inside and outside the ministry. Inside the ministry, different units were occupied with defending their own transport mode, especially the Directorate General of Railways and the Road Directorate. I see this as a consequence of sub-sectorizing. Other parts of the ministry simply did not want to contribute to the action plan. It was none of their business. What the ministry experienced was de-coupling taking the form of encapsulating.

In spite of the processes, the *Transport Action Plan* was a remarkable document, especially compared to earlier plans from the ministry. The point of departure of the plan was sustainable development and the existence of huge environmental problems for which transport is responsible. The ministry succeeded in translating the demand of integrating environmental concerns to a demand of utilizing cleaner technology with which the ministry was experienced.

The study shows that during the work with these action plans institutional barriers existed regarding the understanding of the main purpose of transport policy (satisfying the demand for transport), regarding sub-sectorizing, and regarding incoherence between the Ministry of Transport and the Ministry of Environment. The case study shows that mutual, negative pictures of the other ministry contributed to incoherence. An institutional potential existed regarding the ministry's awareness of cleaner technology.

Thus, institutional barriers and potentials were experienced when entering the 1990s. A case study of the widening of a motorway illustrates the situation later in the decennium.

5. Case study: Widening of a motorway

The case study regards the widening of a motorway between Copenhagen and Helsingør, a town on the north east coast of Zealand. The decision making process was long. I focus on a period of 10 years from 1987 to 1997, when the widened road was finally opened.

The Road Directorate was the actor that put the issue up for discussion. From the very beginning they argued for a widening of the motorway by arguing that there were congestion and tailback on the road, and that there was a need for achieving efficient flow conditions. This argument to some extent conflicted with government plans, among

others *Traffic 2005*, which was published in 1993. Regarding the Copenhagen Area, this government plan stated that the aim was to strengthen public transport, and as a consequence radial roads as the motorway in question should not be enlarged. I see this situation as an example of de-coupling, thus, proclaiming one thing in publications, but in reality continuing business as usual.

Environmental concerns played a minor role in the Road Directorate. However, problems that could be handled through cleaner technology interpreted in a broad way, were incorporated. Thus, concerns about the landscape, nature and noise were incorporated into the enlargement project. These concerns expressed the ministry's awareness of cleaner technology, which is one of the translations of the integration principle.

The Danish Environmental Protection Agency, which is an agency in the Ministry of Environment, expressed opposition to the widening. Referring to *Traffic 2005* they argued that congestion and tailbacks in the rush hours should not be solved in this way. Instead, they argued for additional measures to reduce noise, which the Ministry of Transport was not prepared to comply with. Hence, a great conflict arose with the Environmental Protection Agency and the neighbouring municipalities on the one hand and the Ministry of Transport on the other. Incoherence between the two ministries was obvious.

Another agency in the Ministry of Environment is the Danish Forest and Nature Agency. This agency was also involved in the process, because the widening had consequences for nature and the landscape. These negotiations however proceeded in a conciliatory atmosphere. Hence, I see the interaction as a result of successful organisational integration, because the Ministry of Transport and the Road Directorate, due to a 25 year old law, had incorporated concerns about nature and the landscape into road planning.

When the bill passed Parliament in spring 1995 many circumstances were still not clarified, and new

conflicts arose. Hence, the bus company in charge of the busses in Greater Copenhagen[4] stressed the contradictions between the official transport policy of the government, and the actual enlargement of the motorway. They argued that a continuation of the general government policy would be to integrate improvements for public bus transport in the project. The company found that if such improvements were not incorporated, the enlargement project "must be considered as a one-sided favouring of motor traffic, at variance with the intentions in the government traffic plan *Traffic 2005*".

This intervention gave rise to negotiations, and an internal process in the Road Directorate, where some sections of the directorate argued in favour of incorporation, while other parts of the organisation did not see any reason for co-operation with the bus company. In the end, public bus transport was integrated into the enlargement process, and this was remarkable, regarding the history of the Road Directorate. The reasons for this were among others, the statements in *Traffic 2005,* the ministry's thorough marketing of this plan, and indefatigable actors in the directorate as well as outside (the bus company).

The case study reveals the importance of individual actors in change processes of integration. A chief in the Road Directorate stressed the importance of *Traffic 2005*, "I see the overall statements as important. For people like me they are weapons which can be used to change on organisations self-perception". Indefatigable individuals are important.

The decision had longer-term consequences in the directorate. Thus it contributed to de-sectorizing, that is reducing the processes of sub-sectorizing in the ministry, and improving co-operation across public and individual transport. I see the process as an example of virus. Thus, changes were caused by the fact that the directorate could not continue to de-couple the expressions in the official plan from practice, and the result of the process was relatively radical changes in the institutional patterns within the organisation.

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[4] Local authorities are the owner of the company.

6. Institutional barriers and potentials

Here, it is not possible to report all the empirical research that has been carried out. In this presentation of institutional barriers and potentials, I exclusively draw upon the above analyses. Hence, I see the following three institutional barriers to integrating environmental concerns into transport policy:

*   In the Ministry of Transport, the understanding exists that transport policy deals with satisfying the demand for transport and achieving efficient flow conditions. This understanding has deep historical roots. It is, nowadays, an institutional barrier for integrating environmental concerns into transport policy to the extent that concerns for satisfying demand for transport are contrary to environmental concerns. These two concerns often clash with each other, and in such situations the Ministry of Transport usually argues in favour of satisfying demand for transport.

*   The organisation of the Ministry of Transport is divided into different transport modes. This division is seen in the agencies and directorates in the ministry, and in the organisation of the department. This so-called sub-sectorizing of the ministry is bound by tradition, and it is an institutional barrier to integrating environmental concerns into transport policy, because it prevents co-operation across transport modes. It makes it difficult to identify the optimum solutions to environmental problems in the sector.

*   The interaction between the Ministry of Transport and the Ministry of Environment has always been conflictual. Also today, mutual, negative pictures of the other ministry exist. So do different understandings of the environmental problems caused by transport, and conflicts regarding the fields of responsibility (redundancy) and which of the two ministries should be credited for different initiatives. The Ministry of Environment has an ambiguous attitude towards the integration principle. The character of the interaction between the two ministries complicates a constructive dialogue. Thus, I see the interaction as an institutional barrier to integrating environmental concerns into transport policy.

However, institutional potentials also exist:

*   In the latter part of the 1990s, the Road Directorate changed its goal from road building to achieving efficient flow conditions. The new goal still has not penetrated the whole organisation, thus de-coupling has been experienced. In relation to integrating environmental concerns into transport policy, the change is positive, because there are other solutions to problems of efficient flow conditions than building roads. Thus, I see it as an institutional potential, although the new goal also can conflict with concerns of the environment.

*   Historically, the Ministry of Transport has been engaged in employing cleaner technology as a way to reduce environmental problems caused by transport. However, during the last decade the ministry has increased the awareness of cleaner technology, it is one way that the ministry translates the integration principle. I see this awareness of technology as an institutional potential for integrating environmental concerns into transport policy, because it enables the ministry to identify technical solutions to environmental problems in the transport sector.

*   Regarding sub-sectorizing, a development towards de-sectorizing has taken place during the 1990s. Hence, the Ministry of Transport has taken initiatives to overcome sub-sectorizing in different transport modes. The tendency finds expression in organisational changes and official publications. Most especially the Road Directorate's practice concerning de-sectorizing is positive, and I apply the virus metaphor to characterize the development. The tendency towards de-sectorizing is an institutional potential for integrating environmental concerns into transport policy, because it makes it easier for the ministry to identify optimum solutions to environmental problems in the sector.

7. Conclusions

The aim of this article has been to make clear that specific institutional barriers and potentials exist within and around the Danish Ministry of Transport, barriers and potentials which make possible, or prevent, the integration of environmental considerations into transport policy.

I see the following institutional barriers: The understanding in the ministry after which transport policy mainly deals with satisfying the demand for transport, the sub-sectorizing of the ministry, as well as barriers found in the interplay between the Ministries of Transport and Environment.

Institutional potentials are also found. One, in the Road Directorate's change of its goal from road building to achieving efficient flow conditions, another, in a growing awareness of cleaner technology as a way to reduce environmental problems caused by transport, and finally, tendencies towards de-sectorizing.

A more general conclusion can also be drawn from the Danish experiences. The study shows that neither the sector ministries nor the Ministry of Environment can as a matter of course handle the integration principle. This is also the situation 15 years after the introduction of the principle in the Brundtland Report. This situation is understandable, because the ministries consist of routinized practices and understandings, which are not that easy to change deliberately. The incubation period can be long. Elsewhere, I have illustrated that the situation in the Danish transport sector is not specific. Similar experiences exist in other sectors, too (Sørensen, 2000). Hence, the integration of environmental considerations into sectoral policies has an important organisational side. Generally, integration of sectoral policies has been much discussed in recent years, and the study shows that it is not an easy task.

I have argued that the integration principle is a two-sided coin. On the one side, you find consideration of the environment, and on the other side, you find organisational integration. The second side is an important precondition for the first. Political and scientific debate about the integration principle almost exclusively concentrates on environmental considerations that are to change the concrete sector policies. However, the debate should be extended, so that it *also* covers organisational integration that is how sector ministries – which the integration principle makes into important actors – are enabled to contribute to changes in sector policies.

8.Perspectives

A central question is how institutional barriers to environmental policy integration should be handled, and how institutional potentials can gain more weight. In neo-institutional literature it is stressed that deliberate changes of organisations are not easy. The literature suggest that deliberate changes either can be accomplished through small, incremental changes or through comprehensive shocks in the organisation or its environment. In the last case changes will arise, but the outcome of a shock is uncertain. In any of these cases, it is important that suggestions for change are constantly present in a long period of time (March and Olsen 1989, p 58-65 + 86). In such endeavours individuals are important (Brunsson and Olsen 1997, p 6), as also stressed by the case study of the motorway widening.

The collections of institutions that constitute an organisation are ambiguous. Thus, different and sometimes contradictory institutions exist in the same organisation as well as in its environment. This ambiguity leaves room for individuals, because they have to interpret a given situation and compare to institutional practices (Sørensen 2001, p 44-46).

Inspired by Røvik's concepts and the empirical findings one could suggest some ideas regarding how civil servants in a ministry of environment and a ministry of transport, respectively, could react in different situations. Hence, in the table below I suggest ways of behaving if the intention is to overcome situations of repelling, de-coupling and encapsulating in the sector ministries, and to reach translation and virus.

CONCEPT	MINISTRY OF ENVIRONMENT	MINISTRY OF TRANSPORT
REPELLING	THIS IS PROBABLY A TEMPORARY SITUATION BECAUSE OF THE PRESSURE FROM OUTSIDE. SUPPORT THE PRESSURE, BUT DO NOT BEHAVE ARROGANTLY.	BE AWARE OF THE PRESSURE FROM OUTSIDE, FROM THE EU, FROM THE UN, ETC.
DE-COUPLING	REPEATEDLY, EXPLAIN THE POSSIBILITIES FOR INTEGRATING ENVIRONMENT INTO TRANSPORT POLICY. YOUR TASK IS TO ACT AS A CATALYST FOR INTEGRATION PROCESSES.	NOTICE THE INCONSISTENCIES BETWEEN LANGUAGE AND PRACTICE
ENCAPSULATION	SUPPORT THE CAPSULE, AND SUPPORT IT BEING VISIBLE IN THE MINISTRY OF TRANSPORT.	EXAMINE IF THE ORGANISATIONAL STRUCTURE IMPLIES ENCAPSULATION. TRY TRANSVERSE NETWORKS IN THE MINISTRY, IT CAN HELP TO INTEGRATE ENVIRONMENTAL THINKING IN OTHER PARTS OF THE ORGANISATION.
TRANSLATION	SUPPORT TRANSLATION, E.G. BY SUGGESTING COLLABORATION ON ENVIRONMENTAL TASKS, OR HAND OVER TASKS TO THE MINISTRY OF TRANSPORT IF THEY ARE READY. COMMON FIELDS OF PRACTICE BETWEEN THE MINISTRIES ARE IMPORTANT TO OVERCOME NEGATIVE US-THEM PICTURES.	LOOK FOR SYNERGIES AND WIN-WIN SITUATIONS BETWEEN ENVIRONMENT AND CORE TASKS. TRY ROTATION PROGRAMMES FOR CIVIL SERVANTS ACROSS MINISTRIES.
VIRUS	BE PERSISTENT AND PATIENT. IT IS NECESSARY TO SAY THE SAME YEAR AFTER YEAR	KEEP EMPHASIZING THE POSSIBILITIES FOR INTEGRATING ENVIRONMENT INTO TRANSPORT. THE CONTINUING EXISTENCE OF IDEAS, SOLUTIONS AND POSSIBILITIES ARE IMPORTANT CONTRIBUTIONS TO VIRUS.

Acknowledgements

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