



AALBORG UNIVERSITY
DENMARK

Aalborg Universitet

Science and technology policy

Jamison, Andrew

Publication date:
2004

Document Version
Publisher's PDF, also known as Version of record

[Link to publication from Aalborg University](#)

Citation for published version (APA):

Jamison, A. (Ed.) (2004). Science and technology policy. Division of Technology, Environment & Society : Department of Development and Planning: Aalborg Universitetsforlag. Research report, No. 3

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

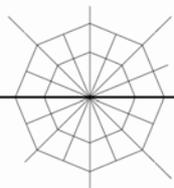
- ? Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- ? You may not further distribute the material or use it for any profit-making activity or commercial gain
- ? You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us at vbn@aub.aau.dk providing details, and we will remove access to the work immediately and investigate your claim.

Research Report 3 2004

**THEME:
Science and technology policy**



Technology, Environment and Society

**Department of Development and Planning
Aalborg University**

Colophon

June 2004
ISBN 87-91404-06-1
ISBN 87-91404-08-8 (electronic)
ISSN 1603-9882
© Authors

Publisher:

Division of Technology, Environment and Society
Department of Development and Planning
Aalborg University
Fibigerstraede 13
Denmark-9220 Aalborg Oest
<http://www.plan.aau.dk>

Scientific advisory board:

Professor Per Christensen
Professor Frede Hvelplund
Professor Andrew Jamison
Professor Anette Kolmos
Professor Arne Remmen
Librarian Kirsten Skou Hansen

Responsible:

Andrew Jamison

Print:

Centertryk, Aalborg University

Paper:

Printed on 100% recycled Cyklus paper

Table of contents

PREFACE

ARTICLES

Andrew Jamison and Terkel Møhl
Public accountability procedures in Denmark: initial profile7

Jesper Lassen
Genetically modified foods31

Karsten Bruun Hansen and Andrew Jamison
Regional/local transport policy: the Ørestad/Metro project55

Karsten Bruun Hansen and Andrew Jamison
Waste management73

ABOUT THE AUTHORS

Preface

This report presents the Danish contribution to the EU-funded project, Analysing Public Accountability Procedures in Europe, which was carried out between 2001 and 2004, coordinated by Simon Joss at the Center for the Study of Democracy at Westminster University in London, UK.

The project has aimed to contrast the ways in which public accountability is practiced in different European contexts, both at a general, or national level, and within specific sectors, or policy areas. The ambition has been both scientific, in terms of improving the understanding of public accountability, and advisory, in terms of providing certain advice for policy-makers and interested parties at the European level, as well as within the participating countries. We hope that the dissemination of the Danish contribution in this report can be of interest for both scientific students of public accountability, as well as practitioners within various Danish contexts.

The project was initiated in 2001, and consisted of three main parts, or work-packages: initial profiles, case studies and comparative analysis. There were seven partners; in addition to Denmark and the United Kingdom, there were project teams in the Czech Republic, France, Germany, Latvia, and Portugal.

The first chapter of this report is the Danish initial profile and was written by the project partner, Andrew Jamison, with the assistance of Terkel Møhl. The other chapters present the Danish case studies, which were carried out by Jesper Lassen (genetically modified food) and Karsten Bruun Hansen (waste treatment and local transport). Andrew Jamison assisted Hansen in the preparation of his reports.

The final phase of the project was comparative and involves a number of cross-country analyses that have been jointly authored among the project teams. It is anticipated that the results will be published in book form in the near future.

As Danish partner in the project, I would like to thank the members of the Danish team for their efforts and the European Union for its financial support.

Aalborg, June 2004

Andrew Jamison

Public accountability procedures in Denmark: initial profile

By Andrew Jamison and Terkel Møhl

Summary

1. The recent change in government in Denmark has brought about a shift in what might be termed the regime of public accountability procedures. The strong interest in such matters as public participation and so-called green accounts that was so prevalent in the 1990s has given way to a regime of public accountability procedures that emphasize fiscal accounting.

2. The words public accountability do not translate directly into the Danish language, but tend to be thought of in terms of democratic control and democratic legitimacy. Five dimensions of public accountability have been distinguished in the Danish context - legal, fiscal, democratic, performance, ethical - that we combine here into a concept of regimes, where emphasis is given to one or more dimensions over the others. There are also different types of institutionalized procedures for public accountability within the different systems (legal, political, economic), as well as more dynamic processes of what might be termed regime-formation, whereby shifts in emphasis among the different procedures take place

3. Danish public accountability procedures build on an historical experience, by which two fundamentally different political cultures were established, one based in the countryside and one based in the cities. Separate

ideologies, separate organizational forms and separate political parties came into being in the course of industrialization, and the two political cultures have shared power through most of the past 100 years through arrangements of consensus-making and compromise. As a society, Denmark has also been characterized by a strong interest in forming associations, and in conducting social and political experiments.

4. Both the legal system and the political system are marked by tendencies toward decentralization and allocation of authority to the local level. In comparison to other countries, local activities play a significant role in public accountability procedures. There is little formal separation between the government and the parliament, or, for that matter, between the legal and political systems, and there is a comparatively strong political influence within the private sector and the media. The strong role played in decision-making by informal consultations among interest groups and by negotiated settlements among different constituencies can be considered an outgrowth of what has been referred to as a "corporatist" form of governance that Denmark shares with the other Nordic countries.

5. Three different regimes of public accountability procedures can be identified over the past 30 years. In the 1970s and 1980s there developed a consensual regime, by which there was an overriding attempt to balance different interests by means of compromise and negotiation, which led to a number of new fora for decision-making, technology assessment, and public participation. In the 1990s, under the social democratic led gov-

ernment, there was what we term a “greening” of accountability, with a number of new procedures being instituted in order to account for the environmental implications of various decisions. It is this regime that is in the process of being replaced by a neo-liberal regime, by which fiscal accounting is given precedence over all other kinds of public accountability procedures.

Introduction: a shift in regimes

In November 2001, Anders Fogh Rasmussen led his liberal *Venstre* party to a resounding victory in the Danish parliamentary elections. At the same time, the then ruling social-democratic party suffered its worst election defeat in some 50 years.

Together with the strong showing of the anti-foreigner Danish People’s party, the election victory of the liberal party changed dramatically the composition of the Danish parliament, making it possible for the government to achieve a majority without the support of the social-democrats or any of the other “left-of-liberal” parties.

In other words, the parliamentary ground rules that had long been in operation, by which decisions were based on negotiation and compromise across the left/right ideological divide, and which had led to a characteristically pragmatic way of doing politics in Denmark, were altered. The new situation would provide the basis for what would soon show itself to be the starting point for the making of a substantial shift in regimes in relation to public accountability procedures.

It is important to emphasize at the outset that Denmark, in almost all respects, is a country of two political cultures, one that is based in

the cities (and, in particular, in the capital of Copenhagen) and one that is based in the countryside. While the life-worlds of public administration and industrial activity provided the basis for a cosmopolitan public sphere to become consolidated in Copenhagen in the course of the 19th and 20th centuries, the life-worlds of agriculture and food-processing provided the basis for a very different kind of public sphere - and collective identity - to develop in the countryside.

Two rather distinct sets of institutional frameworks were established, both in the political realm, but also in regard to science and technology (see Jamison 1991). And unlike many other countries, where the urban political culture tended to take on a hegemonic status in the course of industrialization and “post-industrialization,” Denmark has continued to be divided in two, not least because of the economic significance of agriculture (it is said that there are four pigs for every one person in Denmark). As we shall see, this dualistic character of Danish society has contributed to the formation of a particular set of procedures to ensure and facilitate public accountability.

On the one hand, in Copenhagen and somewhat later in the industrializing cities of Aarhus and Aalborg, the social-democratic party came to represent large segments of the public within the political system. As in the other Scandinavian countries, a system of “corporatism” developed, with employers and employees sharing responsibility for governmental decision-making, especially in relation to industrial policy. On the other hand, the liberal party, along with the left-liberal *Radikale venstre* party, which split from the mother party in the late 19th century, represented large segments of the rural population, who were dependent on agriculture and food-processing for their livelihoods.

A somewhat separate system of institutions - and public accountability procedures - came to be established, which left agricultural policy and related scientific-technological development to the farmers and their political representatives. Because neither of the two political cultures were able to achieve dominance over the other, forms of consensual deliberation and negotiated compromise became characteristic features of Danish governance (see Baark 1997).

That is why the recent and ongoing shift in public accountability regime is so significant.. With its own parliamentary majority, the new government can replace the consensual regime - which, for many observers and participants both inside and outside of Denmark, had come to be taken for granted - by an explicitly partisan, neo-liberal regime.

Public accountability, which until 2001 had primarily meant efforts to ensure a democratic control over decision-making by means of multifaceted processes of participation, or "stakeholder involvement" in governmental activities, changed character. Since November, the procedures for public accountability are in the process of being reduced to a rather straightforward effort to satisfy the voters who support the current government and brought it into power.

Among other things, the new government is seeking to do away with the "rule by experts" that, according to Fogh Rasmussen, had characterized the previous social-democratic government's ways of making, and accounting for, its decisions. Public accountability procedures had previously been based on efforts to involve different "publics" and, in particular, their representatives in governmental decision-making. By doing away with a number of the previous government's public accountability procedures, in particular a good many of its advisory councils and com-

mittees, the government claims that it is both able to save money, as well as eliminate the power and influence of the "experts".

Those opposed to the government's policies have thereby lost much of their influence, and fiscal cost-accounting is to become the dominant procedure for ensuring public accountability of decision-making.

What is public accountability in Denmark?

Before going further in our story, we should attempt to explain what "public accountability procedures" actually mean in the Danish context. First of all, it should be noted that the words do not translate easily into Danish. In the terminology used by political scientists, public accountability tends to be referred to as both "democratic control" and "democratic legitimacy" (Halkier interview). In the most fundamental sense, these terms denote the ideas of policies decisions are made in ways that can be controlled by the general public and that decisions gain their legitimacy by being grounded in an idea of a "popular will".

However, when speaking of public accountability procedures, one should note that while some are primarily related to the aspect of *control*, which would involve such matters as transparency and openness in decision-making, others are primarily related to *legitimacy*, i.e. the ways in which various social interests and interest groups are represented, and involve such matters as access and participation in policy-making.

Where the one type of public accountability procedures tend to be formally codified in legal documents, the others tend to be more informal and tacit in character, taken for granted or assumed rather than formulated

explicitly. Another way to think of the difference between the two types of Danish public accountability procedures is in terms of a distinction between *institutions* of public accountability, on the one hand, and *processes* of public accountability, on the other.

What is common to both types of procedures in the Danish context is that issues of public accountability are discussed in the wider public sphere, as well as in more specific or circumscribed public spaces, in connection to general, and usually rather vague, notions of democracy. Decisions, government agencies, political processes, laws etc. are labelled either undemocratic, or democratic, but the exact meaning of these terms is more implicit than explicit. For our purposes, we can say that democratic practices involve procedures of public accountability, while undemocratic practices do not.

The political scientist Lotte Jensen (2001) distinguishes between five dimensions of public accountability:

- *Legal*: To what extent do actors comply with normative prescriptions?
- *Fiscal*: To what extent do actors spend public money the most effective way?
- *Performance*: To what extent do actors meet the goals articulated by elected politicians and the expectations they have created in the public domain?
- *Democratic*: To what extent do actors respect democratic values and enhance democratic processes?
- *Ethical*: To what extent do actors behave in accordance with codes of ethics and general moral standards?

In this list of accountability dimensions, democratic accountability does not enjoy any especially privileged position over – or apart from – the other dimensions, whereas in the general way in which the idea of public ac-

countability is thought of in Danish, democratic control and legitimacy are core elements.

Jensen describes how the Ministry of Finance has succeeded with normatively constructing and institutionally underpinning fiscal accountability as a prime source of democratic accountability and by the same token enhance its position in the continual governance game in the Danish polity (Jensen 2001, p. 479).

The important point here is that public accountability is treated as a unifying concept that covers various dimensions of accountability. But how do these dimensions relate to each other? One dimension may be subordinate to other dimensions of public accountability in a specific context – they may even be in conflict with each other and priority may be given to one dimension, which downplays or neglects the others.

For instance, the newly elected liberal Danish government has announced, as we have mentioned, the abolition of a range of government boards, councils and committees with the objective of cutting down government expenditures, among these, the Human Rights Centre. The Centre was established to serve as an independent body to monitor violations of human rights in Denmark.

This example shows that the fiscal accountability dimension has been given priority over other dimensions, and, in particular, the ethical accountability dimension (in Jensen's words: "accordance with codes of ethics and general moral standards"). The abolition of the various institutions is part of a set of openly declared goals that the new government has declared should be met within the next election period, thus constructing an image, or expectation that the new government is "performance accountable."

As argued by Wolf, the interplay between the various dimensions of public accountability should be understood as a “web of accountability relationships”:

In this ‘web of accountability relationships’ different authorities give priority to different types of accountability with conflicting behavioural expectations. Priorities can change over time, and even the ‘dormant’ types of accountability can still be invoked in particular circumstances. Reform will often involve a shift in emphasis among different types of accountability leading to an even higher risk of confusing or conflicting expectations (Wolf 2000, p. 18).

Whereas Wolf’s description of “public accountability dynamics” may have some truth to it, the notion of “web” in relation to different dimensions of public accountability may be too imprecise in describing how the dimensions actually relate to one another in practice. To get public accountability procedures in action, we will suggest a concept of “regimes of public accountability procedures” that are constructed in relation to specific political conjunctures and contextual conditions. For instance, the consensual regime emphasized democratic and ethical accountability, while the emerging partisan, or neo-liberal, regime emphasizes fiscal and performance accountability. The point is that, at least in Denmark, different people give emphasis to different dimensions of public accountability, and that the opposing views about these regimes of public accountability procedures give rise to political controversy and conflict.

Historical background

Where do the concepts and normative ideas of public accountability come from? There are a number of historical experiences and cultural traditions that have provided what we

might term the cultural basis for the formation of public accountability procedures in Denmark. As we have already noted, industrialization took a particular form in Denmark in that it was, to a significant extent, based in agriculture.

As such, economic development in Denmark since the nineteenth century has reflected a somewhat unique experience. Endowed with few natural resources or minerals compared to many of the other European nations which started industrialization at around the same time, Denmark built its economic prosperity on exports of agriculture or agro-industrial processing (cf. Senghaas 1982). As recently as the late 1950s, almost two-thirds of Danish commodity exports came from agriculture or food-processing.

In terms of ideology and political culture, the activities and role played by N.F.S. Grundtvig are important to mention. Perhaps in no other country has one individual had such a continuing presence and influence in the public consciousness over the past two hundred years as Grundtvig has had in Denmark. Through his voluminous writings, from hymns to histories, from political speeches to religious tracts, as well as in the institutional activities that he inspired, Grundtvig helped articulate an indigenous form of modernization that served to appropriate industrialization into Danish contextual conditions in a certain populist way.

The philosophy of Grundtvig became a cornerstone of the movement to create Folk, or People's high schools, as well as to enlighten the farmers more generally; his views have been characterized by a foreign observer as “the foundation for a profound cultural synthesis that spoke eloquently to the question of nationalism and national identity” (Borish 1991, p. 17).

In relation to politics, democratic traditions have had a long period of formation in Danish history, and Denmark was one of the few countries in Europe that accomplished a peaceful transition to parliamentary democracy. The mobilization of farmers by the Liberal Party in the late nineteenth century created a viable opposition to the political dominance of the landowner's Conservative Party. The strength of the liberals and, during the twentieth century, of the social-democrats has led to a distinctive delegation of administrative tasks to regional and local government.

Combined with a wide range of popular associations and educational institutions such as the People's High Schools, which aimed to enhance both the practical skills of young people in the countryside and their ability to understand and participate in debates over major political issues, the Danish tradition for decentralized administration has been an important factor in setting the stage for the consolidation of particular kinds of public accountability procedures.

Another key historical factor is the significance of what has been called "associationalism." There is a saying that "whenever two Danes meet, they form an association." Whilst this is clearly an exaggeration, it is nonetheless true that most Danes do take more or less active part in a number of associations in the course of their lives. Danish associations have played important roles in creating the various forms of representation through which individual citizens can organise themselves and exert political influence.

Associationalism is a term developed by Lars Bo Kaspersen, that denotes the importance of associations in the Danish political culture but also in a broader sense of being schools of democratic learning (Torpe interview). As-

sociationalism is important in helping to understand the current political landscape and the ways in which the associations as schools of democratic skills help shape what might be called a framework of democratic coherence between politicians and the public, between the "representers" and the "represented" (Andersen interview).

The first Danish political associations date back to the 18th century, to the period of enlightenment. *Landhusholdningsselskabet* (Agricultural Society) sought to improve Danish agriculture by stimulating the use and development of new technologies and the spreading of know-how to farmers throughout the country (Christensen 1996). These attempts were not just about technology transfer, they were also carried out as a social engineering project with the ambition of creating an enlightened social strata that was to enhance the country's economy via scientific findings and by applying this knowledge to agricultural production.

The second half of the 19th century has been labelled the "Age of Associations" by historians (e.g. Olsen 1990). The period that followed the peaceful transition to representative democracy in 1849 saw, apart from the political modernisation, new developments within the economic sphere and in the wider civic society, especially among the farmers, that were prompted by the formation of new associations and interest-groups that had direct political power as one of several main objectives.

In 1857 the labour market was liberalised; the old guild system that controlled most trades in the cities was abandoned, and now everybody was free to compete on the market. New trades were emerging and new alliances were formed between formerly incompatible associations of people from various trades. Also, a new group of relatively wealthy farm-

ers established corporations that made them independent of the major dairies and other retailers.

In the towns, on the local level, citizen associations played important political roles along with the political parties and were represented in city councils and municipalities. These developments that were directed at gaining political influence was accompanied by the religious national romantic sentiment of the time, especially as formulated by Grundtvig, whose teachings had a major impact on the farmers' movement and, in general terms, throughout the Danish society.

Later in the 1870s the first attempts to form labour unions were made and the development of democratic socialism became a significant social force in Danish politics when the country became increasingly industrialised in the decades before 1900. Revolutionary socialism did not gain much support and the Danish workers' unions were much influenced by social democratic ideology (Bryld 1994).

The social democratic party formed its first government in the 1930s and since then the party has played a dominant role in the creation of the Danish welfare state. The 1930s generally saw a nationalisation of the political life, where national political issues became connected to the local level, and the more formal ways of representation via political parties became the order of the day.

Over time, there has been an increasing professionalization of how the activities within an association are organised. Also associations have been seen to play much more powerful roles on the political level, hiring professional consultants for managing public relations and so on. Already in the 19th century, the associations were openly supported by the state authorities. The relationship between govern-

ment bodies and the associations in the first half of the 20th century was characterised by openness and plurality in the sense that

the associations organised and canalised certain interests and viewpoints to the wider public and into the political institutions, who were relatively open minded and responsive. The associations were the mediating structures between the individual citizen and the state, which mutually influenced each other. The associations helped form the citizens' perception of what was to count as 'proper democratic behaviour' and what norms one had to comply with as a democratic citizen. But the political institutions were also contributing to the formation of the citizens' democratic world-view – both directly and indirectly via the associations. Thus, it makes no sense to speak of civic society/Life world and State/System as two separate worlds. The political institutions are just as important for developing a democratic culture as free and independent associations are (Gundelach and Torpe 2001, pp 81-82).

The associations were "schools of democracy" in the sense that as a member of an association, one had to learn and comply with the rules, i.e. that elections are acceptable ways in which the distribution of leader- and membership roles are made. The former Minister of Finance, the social democrat Poul Hansen, argued that "when you join an association it feels natural to comply with its rules and regulations – rights and duties are clear and simple – and from the experience of fellowship in the small follows the understanding of the political fellowship on the national level" (quoted in Gundelach and Torpe 2001, p. 80).

However, this model of associations as schools of democracy refers mostly to the period before the 1980s. Previously associations could provide a range of various activi-

ties, sports, parties, holiday trips along with the main activities of the association. Today, the citizen may be enrolled in a range of separate associations to fulfil these needs, and one association seldom satisfies them all.

In the 1990s, many associations, and political parties, as well, for that matter, have developed strong and powerful secretariats and typically associations have become primarily lobbying organizations, run much like businesses with a professional staff. This development may have resulted in more political influence, but the distance between ordinary members and their representatives has increased while the opportunities for exerting one's influence as an ordinary member have diminished (Torpe and Christiansen interviews).

In any case, it can be suggested that the Danish associationalist culture has pervaded the political life, where corporatism based on alliances between various associations have been influencing the policy process, either as lobbyists or because they have been given important roles in policy making.

Education has also played an important role in various ways in creating what may be termed a relatively stable society. The school system also contributed to the building up of Danish nationalism in various ways. There were both formal and informal, more civic society based forms of education. For instance the public schools and the People's High Schools that served to instil an appreciation and the allegiance not only to the Parliamentary system, but also to the King. From the 18th century, large parts of the adult Danish population had a minimum of reading skills, because the Protestant church had instituted a rule, that in order for a young couple to get married, they had to be able to read the Lutheran Catechism (Christensen 1996).

The King established public schools in the beginning of the 19th century as a means to make a basis for recruitment to the King's Army. The rationale behind this was to discipline the peasants in order to enrol them in the Danish army. The first law on public education came was instituted in 1808. The public education system has also from the very beginning been important for educating the public in the skills and workings of democracy. The development of Public education should be seen as both a process of "democratisation" and also of "civilisation", of securing social coherence and also of taming unruly elements in the creation of the modern state.

The legal system

A number of institutions have been established in order to ensure that the citizens can control the administrative system - complaints boards, courts of justice, the ombudsman, rules about the right of access to documents etc. - all of which embody public accountability procedures through which the individual or a group of citizens can control the rulings of the administrative system. The citizens have the right to access all documents that are produced within the administrative system. All documents are archived in the Public Record Office (*Rigsarkivet*). Attempts have been made to convert all archives into electronic databases, and this development will most likely continue in the coming years.

Although the right to access is instituted by law, there are many examples of difficulties and bureaucratic bottlenecks that have to be overcome if the law is to function optimally. Although all documents are filed according to a certain code, there are certain limits to what information the citizens can get from the various authorities.

For instance, an NGO-representative wanted to know how many and what sorts of GMOs were planted in Denmark and requested right of access to documents. The department replied that this could not be granted, because the question was too general – he would have to name the specific GMOs that he wanted to be informed about. When he returned with a list of plants using codes for various GMOs the department rejected his right of access because the codes were EU codes and not based on the Danish code-system. The NGO-representative eventually got permission to access the relevant documents by complaining to the Ombudsman (Toft interview).

There may be several reasons for what many citizens have experienced as a reluctance towards granting right of access to documents. The law is hard to administer because the data are not always accessible in the form the citizen wants and no extra funds are given to administer the law, which puts an extra burden on the departments when right of access is requested. Furthermore, the expertise within the administration may not always be sufficient to secure that the right documents are accessed (Toft interview).

There are two types of complaint boards to which the citizens can direct their complaints over the rulings of the administration: the ordinary complaint boards that are integrated in the administrative system, (i.e. tax complaint boards) and the independent complaint boards that belong to another administrative branch independent of the one that the citizen complained about.

The local municipalities enjoy quite a lot of independence as local political units, but are nevertheless supervised by the county's supervisory committees. Most recently, a supervisory committee has been active in the municipality of Farum, north of Copenhagen,

where the Liberal mayor has been accused of fraud and of building up a network of private-public-partnerships that have been using local tax money for illegitimate purposes.

In more serious cases, and in case in which the citizen does not accept the rulings of the complaint boards, the citizen has the possibility of having the rulings of the administration tried at the Courts of Justice. The court can pass judgements of whether the rulings of the administration are valid or not. The courts will not settle the cases, but instead lay out the premises for how this should be done.

The Ombudsman

The Ombudsman institution was adopted after the Swedish model in 1953. The Danish Ombudsman is situated between the Parliament, the administration (municipalities and ministries) on the one hand and the individual citizen on the other. The Ombudsman has no real executive powers. His duty is to ensure that the administrative system is functioning in a satisfactory manner.

After each Parliamentary election the new Parliament elects a new Ombudsman, that on behalf of the Parliament monitors whether the Danish authorities act in accordance with the law or if they in other ways make mistakes or neglect their duties. The Ombudsman has to deliver an annual report to the Parliament or when dealing with cases, that he considers being of special importance.

The Ombudsman works independently of the Parliament and he decides whether complaints should be investigated. He cannot be a Member of Parliament or municipal council. He employs and dismisses his staff and can demand that he himself be dismissed with six months notice.

Although the law describes the Ombudsman as the Parliament's Ombudsman, it is more precise to speak of the citizens' Ombudsman. For the citizens, the safeguard of the Ombudsman's-institution consists of the relatively free access to making complaints. Complaints to the Ombudsman is free of charge and only a few conditions have to be met. The rulings of the Ombudsman are final, and the complaint that must not be given anonymously must be lodged within one year.

The Ombudsman decides on his own whether he will initiate an investigation into the matter or not, and what aspects he will investigate. He is not confined to investigate what the complainant should wish the Ombudsman to do. The starting point is that the Ombudsman investigates the case if not the complaint is groundless or of little importance.

At this stage the Ombudsman evaluates the complaint and the prospect of him being able to help the complainant. If there seems to be no prospects of complaining, and there are no further evidence that the rulings of the authorities are wrong, the Ombudsman does not have to ask the authorities for a declaration. He can then write directly to the complainant and explain why he does not take on the case.

The Ombudsman also initiates inspections of any of the State's institutions. These inspections take place foremost where citizens are deprived of their liberty, i.e. prisons, detentions, psychiatric hospitals etc. An inspection may contain an examination of the physical conditions at the institution in question, but also interviews of the inmates and staff. Furthermore, the Ombudsman and his employees examine relevant documents to determine whether the rules that apply to the interventions of staff in the inmates privacy has been observed.

In 1999 the Ombudsman dealt with 949 complaints. In 118 of these he upheld the claimants' contention and found that there were grounds for criticising the rulings of the administration. In 60 cases he asked the authorities to reconsider their rulings. Generally, these recommendations are followed without exceptions. If the authorities maintain their rulings, the Ombudsman has the possibility of asking the Directorate of Civil Rights to grant the claimant civil aid at the courts.

As mentioned above, the Ombudsman has no powers to pass judgements so his authority lies in his capacity to be independent and make qualified examinations of the cases he enters. In this respect his authority is comparable to the media's that also examines similar cases of complaints but have no powers to pass judgements.

The authority of the Ombudsman relies on a delicate balance: if the rulings of the Ombudsman are very controversial, he may risk a loss of credibility, on the other hand, most of the cases that the Ombudsman takes on are controversial in the sense that they question the rulings of other authority bodies. If the Ombudsman refuses to take them on, his arguments for doing so must be well founded, for not risking that the trust in him is lost (Søndergaard interview).

The political system

The Danish parliamentary system is classical in the sense that the sovereignty is based on the will of the people. The parliament (*Folketing*) has 179 seats and comprises, after the last election of November 2001, eight political parties.

The major debates take place in the Chamber and the formal decisions are made here. But the decisions are prepared in the committees

of the *Folketing*. The Committees have thus been labelled the “workshops of the *Folketing*.” (www.folketinget.dk). The work of the committees is primarily linked to the reading of Bills and proposals for parliamentary resolution.

The *Folketing* has 24 standing committees. Each of the committees is composed of 17 Members. The working sphere of a committee largely corresponds to that of a Ministry. The Ministry of Social Affairs for instance corresponds to a Social Affairs Committee, the Ministry of Taxation to a Fiscal Affairs Committee and so on. The main task of the Finance Committee is to read finance Bills and supplementary appropriation Bills as well as to take a stand on the appropriations required over the year.

Before presenting a bill to the Parliament, the ministry that produces the bill usually consults several interest groups (NGOs, for example), government institutions and other actors to hear their reaction to the preliminary bill proposal. When the ministry has received the responses to the bill proposal, amendments are incorporated before the bill is presented to the Parliament.

After the bill has been presented to the Parliament, it is usually passed on to a Parliament committee, for further elaboration. In the case of animal welfare issues, the bill is passed on to the Parliament’s Juridical Committee. When working on the bill, the committee is free to ask questions to the relevant ministries, hold meetings with ministers, arrange hearings, visit relevant institutions, etc.

Before the bill can be subject to the second round of parliamentary debate, the committee must produce a report of its work on the bill. The committee decides when the report will be published. In practice, the report is normally presented after time has been allotted

to questioning and debate, meetings and political negotiations about the bill. After the 2nd round of parliamentary debate, the bill is subject to the 3rd round, followed by a parliamentary vote, by which the bill is normally passed.

Before the former social democratic led government period, the committees played a more dominant role in preparing the law proposals. However, the workload of this part of the legislative process became too overwhelming for the various committees to do, so instead, most often the ministries are the originators of the law proposals. This has of course made the process less transparent but more efficient.

In the first months after the election, the liberal government has managed to do away with the various committees in the sense that bills have been presented to the parliament without having gone through the usual procedure in the committees. Because the government presides over the majority of votes in the Parliament, it is able to avoid the influence of the committees.

The European Affairs Committee deals with questions related to the EU; it is this Committee that gives the Ministers their mandates for negotiation. The committee is in this way more autonomous than the other committees. Nine out of ten times, the committee will sanction the Minister’s proposal for negotiation, after which the Minister goes to Brussels to negotiate.

The EU-Committee can place responsibility on the minister on its own, if the minister has not lived up to the expectations of the EU-committee. This happened in the 1980s, where the Minister of Agriculture received a “nose” (a reprimand), dished out to him by the EU-committee without the involvement of the Parliament. The “nose” is a form of sanction that is used in cases of less gravity than if for

instance the Parliament gives a minister a vote of no confidence, in which case the minister must step back.

The media

As in most modern democracies, the role of the media in providing fora for political discussions and for presenting political issues to the general public has increased dramatically in recent years (Hjarvard 2001). Furthermore, there seems to be a consensus among media scientists that the role of the media is that of an independent actor, not just a mediator between the political level and the citizens, although the exact role of the media is very hard to define, because of the diversity the media have in modern society. The freedom of press that was introduced a few years before the democratic constitution in 1849 gave rise to a plethora of newspapers and bulletins, both on the local and the national level.

It was common that every major provincial town had four newspapers directed at four different "publics". In the 20th century this structure has been maintained, even though there has been a centralization of the print media, and most towns have lost many of their separate papers. A range of different newspapers are written for each audience, or public. Although the direct relation between political parties and newspapers have weakened, some newspapers have been seen to openly support the election campaigns of certain political parties.

Along with the development of the electronic media the roles of journalists have undergone a number of changes in terms of how news was covered. Generally speaking, before the second world war journalists were seen to be less critical in their way of conveying information from experts and authorities - the journalists primarily saw themselves as media-

tors; reporting and editorial writing were two separate activities (Lund 1997). After the second world war, the press became increasingly critical and were seen to be much more sceptical towards authorities and the journalists developed a much more self-conscious approach to putting issues on the agenda, investigating cases etc.

With the establishment of the state monopolised Radio Broadcasting Corporation (*Danmarks Radio* in 1925) and the advent of television in 1951 also monopolised by the state, an era of a relatively stable and coherent public media unfolded itself. There was much concern that the electronic media were very powerful and there were fears that television and radio could be used for "indoctrinating" the public.

In order to ensure that radio- and television programmes were politically balanced, the Board of the Danish Radio Broadcasting Corporation was established in 1953 (but has recently been disbanded). The members of the Board were selected from the political parties in proportion to their representation in the parliament. Because of the dominance of the Radio Denmark monopoly the public sphere from the 1950s until 1988 has been characterised as very coherent, given the fact that most Danes had TV-sets and all watched the same programmes.

In 1988 the commercial channel TV2 was established, and now Danes were challenged by having to choose between two channels. The new TV2 channel was also paid for by the public service licences and took over the task of establishing local TV-stations, that broadcasts news reports each night from the various regions in Denmark.

In the 1990's cable television services became popular and now Danes have access to a plethora of TV-channels, national, interna-

tional and local. At the same time, commercial channels have been created both on television and radio. For the most part, however, the evening news are still dominated by the news reports from Denmark 1 and TV2 and these reports tend to be almost identical in terms of selection of news stories and the style of reporting.

Due to the competition among the various TV-channels, the journalists have taken on a whole new set of roles in the public sphere, comparable to the dramatist of a theatre. (Lund, 1997; Danielsen interview). It is very common that journalists invite persons, that is, experts or representatives from political parties and interest organisations that represent opposing views on an issue to a live debate in the television studio. Although there may seem to be some considerations about democratic representation in these debates, there is little room left for creating a conversation in the Habermasian sense that is aimed at reaching a common "higher reason." (This use of experts in news programmes has been experienced by several of the interviewees Krawack, Jesper Toft, Danielsen, Henrik Toft). By this "staging of democracy" the public is reduced to the role of spectators who experience the quarrels or the drama between representatives with opposing views as in a sports match and there is, as such, little opportunity to hear other, more differentiated views on the issue in question.

The private sector

There is a tradition and wide range of primarily informal procedures for consulting representatives from private companies and from industrial associations in the preparatory phases of policy-making and planning. These consultations can take the form of public hearings, but most often they are meetings behind so-called closed doors.

In terms of bargaining between the labour unions and the employers organisations about wages and other conditions on the labour market there has been established a procedure of three part negotiations with the so-called *forligsmænd* playing the role of mediator. The *forligsmænd* is supposed to be independent of the interests of the other two parts but has the mandate to further the negotiations and push the involved actors to reach compromises. In this respect there is a tradition on behalf of the state for letting the actors to negotiate themselves instead of imposing regulations.

The system of contracting out task that previously were taken on by the state has been employed since the 18th century and does not represent a historic 'new' invention as often argued by adherents of New Public Management Reform. Contracting out has since the 1980s been promoted actively by all of the different Danish governments. There has been much controversy and public debate about whether outsourcing leads to a deterioration in the quality of service being provided. Some outsourcing schemes have been abandoned, most recently in a Danish municipality, where a private company had taken over care of the elderly, but failed to deliver a reasonable and cost-effective service.

The involvement of IT-companies in creating large government IT-systems has been seen to give rise to a lot of problems or "government IT-scandals." Some problems have been caused by private companies that, in order to gain a contract, have been prone to underestimate the real costs of the project and the real price for providing the service.

Since the employment of another subcontractor would mean even more costs, the original private subcontractors have been retained as responsible for carrying out the project. In the case of one government IT-scandal the audi-

tor of public accounts was enrolled to investigate what financial dispositions had been taken during the course of the project.

A number of supervisory committees have been established to examine public private partnerships (or PPPs) in order to ensure that the rules are followed in the area. Noteworthy are the "County Supervisory Committees" (*Tilsynsråd*) which, in have been given the task of examining and monitoring PPPs, as part of their overall task of overseeing municipal government. A major scandal is currently being enacted in Farum, where a liberal mayor used questionable methods of mixing private and public funds for a number of highly publicized programs of local government. In particular, he sold many of the municipal services to private companies, in which he was a partner. It has been argued that contracting out always results in limited means of democratic control, because in transferring public services to private companies, the "political becomes private" – in other words, private companies carry out policies that are less open for scrutinizing and less open for democratic control by the public.

A deliberate attempt to diminish public access to a large government project has been made in relation to the newly projected Copenhagen Metro System. Representatives from the City Council of Copenhagen and their private counterparts have set up a company (*Ørestadsselskabet A/S*) that are in charge of building and outsourcing the operation of the Metro System. By doing so, it has been possible for the company to keep their project dispositions and accounts secret to the public.

Other attempts have been made for making companies take on a social responsibility. Especially during the former Social Democrat government systems of green accounting were promoted in order to make private en-

terprises more socially accountable. For instance, a lot of effort was put into creating so called light jobs in the private sector for people who otherwise would have had difficulties finding work.

Green public accountability procedures have been a kind of experimental activity, but the effects of these procedures has been rather limited, in so far as only a minority of companies have adopted these systems of accounting. The green accountability procedures have worked well in the relatively few companies that have adopted these measures and incorporated them in their marketing strategies to help convey an image of social responsibility. But many companies, particularly in the agricultural and food-processing industries, were opposed to these procedures, particularly when they challenged normal business practices.

Some private companies have been active in initiating dialogues and fostering "stakeholder involvement" in relation to controversial technologies. For instance, the biomedical firm Novo Nordisk, in its development of genetically modified organisms for pharmaceutical products, performs animal experiments that have been criticised by animal protection groups. In recent years, the company has been engaged in a number of activities with critics, including regular discussions with representatives from the non-governmental organizations, and inspection of laboratories by outsiders.

The making of a consensual regime

In the course of the 20th century, consensus-making and compromise tended to become central features of political life in Denmark, for both external and internal reasons. As a small

country that was occupied by Germany in the second world war, there was a widely-felt need after the war for a broad based government and a broad consensus and national agreement, particularly in matters of foreign affairs and international relations. Because of the dualistic nature of the country, however, there was an underlying tension that has been brought out into the open on several occasions during the past 30 years - especially in relation to the European Union (where opposition remains strong in Denmark) and, most recently, immigration.

There were also more pragmatic, internal reasons behind the making of what might be termed a consensual regime of public accountability procedures. Since no particular group in the society could rule without support from other groups, there was a need to compromise, to reach a consensus or at least a representative majority about most social issues. There were also strong traditions of interaction, as we have seen, between what in other countries are the more separate spheres of state and civil society. As in the other Nordic countries, corporatism had been a key feature in the creation of a welfare state, and in the development of policies, for example, in relation to environmental protection and technological development (see Christiansen, ed 1996).

When public debates about environmental and energy issues started to intensify in the 1970s, particularly around nuclear energy but also around the use of chemicals in agriculture and industry, they took on a special character, and struck especially deep chords in the political culture. They were unusually wide-ranging, but also, from the beginning, unusually constructive. Almost at the same time that a movement emerged against nuclear energy, grass-roots groups and people's high schools were experimenting with wind energy and other renewables, and wind

power has since grown into an important export industry (Jørgensen and Karnøe 1995). Similarly, ecological agriculture was practiced early and actively, compared to other countries, and the "ecological farmers" today are an important actor network in the debates about biotechnology and food production more generally.

Another important element in the making of a consensual accountability is what might be termed the quality of the public sphere. The conditions of Danish public life in the 1970s were congenial, we might say, to getting a good debate going. The breadth of the counter culture and the "new left" were impressive - from communes to Christiania, from academic marxism and leftist parties to active feminist and environmental movements (the fact that the Socialist People's Party had been created in the 1950s and become a significant parliamentary force is also important).

There were also the new universities of Roskilde and Aalborg, founded in 1972 and 1974, respectively, which prided themselves on their innovative radical approaches to education. Roskilde University Center, in particular, has continued into the 1990s to be a base for both radical, leftist politics and for pedagogical innovation (almost all undergraduate education takes the form of group project work, and most of it is interdisciplinary, as well). There was also in the 1970s a lively alternative media, with the daily newspaper *Information* (created in the Resistance movement of the second world war) and the weekly *Politisk Revy*, covering all sides of the "new social movements", both the cultural and political. *Information* was especially important in covering the nuclear energy debate, as it unfolded in the 1970s, which had an extra advantage in comparison with several other European countries due to the fact that Denmark had not yet established nuclear energy: there was thus something to debate

and a lot more need and opportunity for constructive alternative thinking, including ideas about new public accountability procedures.

The environmental and energy debates were quite diverse and multifaceted both in substance and form, and they were widely covered in the more established media - both radio, television and newspapers, as well as the alternative press. There also emerged a special "radical science" journal in Denmark, *Naturkampen* (Nature Struggle), which, in comparison to radical science journals in other countries, was unusually professional and influential. It covered the many activities of leftward leaning scientists and engineers in Aalborg and Roskilde, often in relation to labor groups around occupational health issues. Like radical science journals in other countries, it covered the issues of sociobiology, nuclear energy, militarism and labor deskilling; but most importantly perhaps, it provided a vehicle for the kind of radical popular science writing that would continue in book form in the years to come. Shaped by what might be termed a particular Danish "discursive framework", combining cultural modernism with a rural-based populism, *Naturkampen* could play a role in the public sphere that its radical science counterparts in other countries never managed to achieve.

The environmental "movement" that developed in Denmark in the 1970s was also a more significant public presence than it was in many other countries. It was, for one thing, much more characterized by local experiments, and a booming wind energy industry is one of the most visible results (Jamison et al 1990: 66ff). In Denmark, environmental issues became more directly associated with the alternative political ideologies that grew out of the youth rebellion and the student movement of the late 1960s. The most important organization in this connection was NOAH, started in 1969 by biology and archi-

ecture students in Copenhagen, which soon developed into a national organization of environmental activism. NOAH utilized scientific information and cooperated with scientists who served as "counter-experts" particularly in relation to the media. In this way, the first efforts at creating public awareness of environmental problems in Denmark were carried out by an alliance between students and the media.

The activist approach of NOAH drew on the Danish tradition of participatory democracy associated with the People's High Schools, and, more generally, on the populist political tradition of the 19th century. The new social movements like NOAH that emerged in the 1970s contributed to a new kind of public sphere that could, for a brief time, combine rural populism with urban cosmopolitanism. In contrast to other countries, the "grass roots" dimension remained important, even as environmentalists tried to influence energy policy and develop alternative means of energy supply. The opposition to nuclear energy was coordinated by an independent Organization for Information about Nuclear Power (OOA), which so effectively mobilized public resistance and pressure that the Danish government abandoned its nuclear plans in the late 1970s. In addition, the popular debate on alternative energy sources and various public awareness and information campaigns, encouraged movement organizations to foster local practical initiatives which gradually became an accepted part of environmental policy in Denmark.

In a variety of ways, the contextual conditions were substantially changed in the course of the 1980s, as the broad-based and voluntary movements that had been so important in the 1970s became ever more differentiated and professionalized (Jamison 2001). For one thing, in relation to nuclear energy, the movements had succeeded in their political task,

and there was a need to branch out and expand the interest in "technology assessment" to other areas. As is so often the case with influential social movements, there was a kind of institutionalization process that set in, as some activists set up consulting firms and wind-energy companies, others established themselves in the state bureaucracy or as academic experts, and still others moved into party politics. These developments can be seen to have weakened the populist aspects of the environmental movement. For another, the political situation changed in the early 1980s, as the winds of neo-liberalism started to blow across Scandinavia, and the conservative-led coalition government, which came into office in 1982, tried to balance the enthusiasms of the 1970s with the new ideological climate of the 1980s. The interest in the environment, however, and support for renewable energy seemed to cross ideological lines, and throughout the 1980s, there was a so-called "green majority" in the parliament that took a number of initiatives to establish what we might call a consensual regime of public accountability.

There were thus several distinct steps in the making of the regime. The first step was the creation of a small unit for technology assessment within the state technology support agency, then called the Technology Council. In the wake of the energy debate of the 1970s, which had been conducted, not just within the environmental movement, but also under the auspices of a state-supported Energy Information Campaign, a parliamentary commission was given the task of proposing a form for accountability for large technological projects: what has since come to be called "technology assessment". The unit at the Technology Council was one result, as was the creation of a Technology and Society program initiative at the Social Science Research Council. Support from both units was instrumental in the emergence of science and

technology studies at Danish universities, particularly at the Danish Technical University, but also at the new universities in Roskilde and Aalborg (Munch 1995).

A further step in the institutionalization process was the establishment in 1986 of the Board for Technology, which was created by the parliament to provide a focal point for technology assessment activity (Jamison and Baark 1990). The Board sponsored public hearings, which came to be known as consensus conferences, such as, and published a magazine and a number of popular reports, while participating in a number of projects and "social experiments" particularly in relation to the social diffusion of information technology.

Much of the activity that the Board was involved in was integrally connected to the large technology development programs initiated by the Danish government in the second half of the 1980s, and which formed the cornerstones of a new active period of state innovation policy. Both in relation to the Information Technology Program, the Biotechnology Program, and the Cleaner Technology program, substantial funding was made available for technology assessment and information activities, which supplemented the support given to "technology and society" research by the Social Science Research Council.

The result of these activities was thus both a number of new experts in "science, technology and society," as well as new opportunity structures for the radical debaters of the 1970s. But it is also important to see these developments as part of a "strategic" shift in science and technology policy, which also included, in Denmark, increased funding for sectorial research institutes outside of the universities.

Another important factor in the contextual changes of the 1980s was the expansion of the European Community, which would continue into the 1990s. For one thing, much of the substance of the debate moved to a larger, more transnational realm, where it was harder for local and amateurish "grass roots" voices to be heard; and for another many of the new experts found themselves involved in European projects, networks and other activities.

For example, one of the founding members of *Naturkampen*, Per Sørup, got a job in Brussels in the 1980s where he was instrumental in establishing the social science research research initiatives in the Environment and Climate program, and later helped create the Institute for Prospective Technology Studies in Seville, where he is now based.

Finally, and perhaps of most importance to the changing nature of public accountability procedures in Denmark, was the normalization of the issues that had given rise to such intensive debate in the 1970s and the emergence of a new kind of professional environmental movement. All the key problem areas - from nuclear energy to industrial pollution, from occupational health and safety to traffic congestion and urban sprawl - were largely taken over by newly established official bodies, engineering consulting firms, sectorial research institutes, and transnational non-governmental organizations.

There came into being in Denmark, as was the case in most other European countries, a cluster of government agencies and departments for the environment, transportation, energy and planning, and new cadres of energy and environmental experts. As elsewhere, the 1980s were a period when the new social movements were largely transformed into a range of new professional activities.

Research Report 3 2004

The greening of accountability

By the early 1990s, the consensual regime had become consolidated, and when a social-democratic government was elected to office in 1992, it more or less continued in the same ways as its predecessor in stressing social and environmental accountability procedures. Eventually, however, the consensus that had been achieved in the 1980s started to break apart.

For one thing, the new social-democratic minister of the environment, Svend Auken, who had lost a fight for the party leadership, was particularly ambitious in his efforts to "green" the Danish society, which obviously meant that other policy areas were given somewhat lower priority. Auken tried to stake out a leading role for Denmark, both in relation to European Union environmental policies (the environmental agency was located in Copenhagen at his urging, while Ritt Bjerregaard, another leading social-democratic politician, and former minister, was EU environmental commissioner). In any case, Denmark was to be one of the more active countries in seeking to infuse cleaner production processes and environmental management systems into industry in the course of the 1990s, and a number of green taxes were instituted - a kind of greening of accountability (Andersen 1994).

For another, there emerged a kind of backlash or resistance to further environmental measures on the part of many of the important agro-industrial corporations, and, even more seriously, within the rural population that, as in other parts of Europe, came to be affected by an influential populist reaction. Other issues, like immigration and declining health care, gradually became more important in the political debate than environmental protection and renewable energy develop-

ment, especially when the program of greening or sustainable development was so closely identified with the social-democratic party and its minister of the environment. These anti-environmental sentiments were given a highly visible public face in 1997, when the statistician Bjørn Lomborg published a series of articles in the newspaper *Politiken*, in which he claimed to disclose the "real state of the world" in direct opposition to what environmental organizations and their friends in the Danish government were claiming to be the case.

In Denmark there was a much more deep-seated realization that "end-of-pipe" solutions to environmental problems were not sufficient, and that new approaches stressing a change in productive technology were called for. Given the perceived limitations of supply of energy sources - further reinforced by the decision to abandon nuclear power as a result of the intense public debate of the 1970s - the Danish government emphasized the transition to renewable energy sources. This led, on the one hand, to the establishment and rapid growth of the Danish wind turbine industry and, on the other hand, to a diversified regulatory framework in the energy sector encouraging energy-efficient technologies. The attention gradually shifted towards identification of solutions that could be integrated earlier on in the cycles of production and consumption.

The relative effectiveness of economic incentives in improving the technological and organizational capacity for saving energy has inspired similar initiatives in the environmental field: a move from end-of-pipe solutions to a model that emphasizes preventive solutions including the development and diffusion of cleaner technology. Beginning in 1986, the Danish government has launched a series of major support programs in cleaner technology. Compared to most other Euro-

pean countries, the Danish efforts have been substantial, and have spread the various preventive technical approaches to environmental problems throughout the Danish industry (Remmen 2001).

In the first phase, from 1986-1989, the effort was concentrated primarily on investigating the potential for cleaner technologies in different branches of the economy, and in conducting demonstration projects in particular firms. The general approach followed similar "national programs" in technology development that had taken place in the 1980s, in relation to information technology and biotechnology, and were based on the long-standing Danish emphasis in technology policy on demonstration projects.

The second phase of the cleaner technology program, from 1990-92, involved a more active broadening of focus, as well as increased competence-building and information dissemination. Courses were held at engineering colleges and associations, handbooks were written, and special branch consulting schemes in cleaner technology were established in four particular branches: furniture-making, meat processing, fish production, and metal-working.

At the same time, environmental management systems were instituted in a number of small and medium-sized companies with governmental support, and major efforts were taken to document the experiences with cleaner technology, through a number of technology assessment projects at the technological universities. From 1993, the efforts have expanded further, as the environmental administration has adopted a more flexible, interactive approach, seeking to pass responsibility and policy initiative from the public to the private sector.

The new attempts to alleviate the problems of environmental degradation were, to a significant extent, based on a dialogue between public and private interests that has characterized Danish approaches from the beginning, and a new ideology of commercialization and the use of market forces in regulation. In the political atmosphere that prevailed in Denmark during the 1980s, when the government was usually based on a combination of parties from the center to the right of the political spectrum under the leadership of the Conservative Party, there was a strong leaning towards liberal economic policies and indirect instruments of regulation, i.e., small government.

Even in areas where the government was unable to secure a majority of votes in the Parliament for its policies - as the case was for much of the environmental legislation which was dominated by the so-called "green majority" (social liberals, social democrats and two left-wing parties) - the subsequent implementation of policies tended to be framed in the manner of indirect regulation.

This shift in awareness and attention to a wider economic perspective was also reinforced by the initiatives which sought to integrate technology assessment more directly into policy making procedures. In many ways, a particular Danish style of technology assessment found its application in the policy debates related to areas such as biotechnology and cleaner technology (Jamison and Baark 1990).

In the 1990s, Denmark became one of the most active countries in Europe in pursuing the new ideas of pollution prevention and cleaner production. Indeed, the environmental minister Svend Auken proposed, on a number of occasions, that Denmark should seek to provide an exemplary model for other countries to follow. As in the 19th century,

when traditions of popular participation were mobilized in the industrialization process and during the second world war, when resistance to the Nazis also drew on national cultural traditions, Auken argued that the strength of Danish democratic institutions and not least grass-roots movements is an important factor in explaining the relative success of Danish environmental policy.

Conclusions

In pursuing the recent shift in public accountability regime, the new liberal prime minister Anders Fogh Rasmussen and most especially his minister for the environment have been highly influenced by the teachings of Bjørn Lomborg, who sprung onto the international stage in the summer of 2001 to great fanfare when his book, *The Sceptical Environmentalist*, was published in English. Lomborg's role is important in understanding the shift in accountability regime in Denmark, and it also brings out the ways in which the two political cultures in Denmark have become much more antagonistic than they were in the 1980s.

As already mentioned, Lomborg wrote four articles in 1997 in one of the main Danish daily newspapers, in which he challenged the "litany" of environmental bad news with a statistical tale of things getting better. Lomborg's method of analysis was to reduce everything to money, in a kind of cost-benefit analysis run wild. His book, published in Danish in 1998, was called the "Real State of the World," and was filled with many more figures than he had managed in his articles. It is important to realize that cost-benefit analysis for Lomborg is a kind of religion rather than what most of us think of as science; if you believe that the environmental situation is improving, then you find the figures to support that belief.

And now the Danish government, eager to correct the mistakes of the previous government and its experts, appears to be acting on that belief. A new institute of economic environmental assessment has been proposed, while a large number of the previous government's environmental research programs are being cut. For Fogh Rasmussen and his ministers, environmental protection costs too much money, and other priorities are simply more important. The pioneering role that Denmark has played in relation to international environmental negotiations, wind energy development, urban ecological experimentation, and so many other areas, is fast becoming a thing of the past.

The new procedures that have started to be put in place differ from the old in at least three main ways. On the one hand, because the parliamentary map was so fundamentally redrawn by the election results, the new government could behave in an explicitly partisan manner. Certain publics simply no longer needed to be taken into account. The new government quickly made it clear that the broad-based form of parliamentary decision-making that had been the standard through most of the past 50 years would be replaced by a much more ideological approach.

On the other hand, the new government's substantive priorities are different from those of the previous government. Shortly after the election victory, the new government set to work seeking to undo much of the program of the previous government. It had been known that the government would cut drastically in the foreign aid budget, as well as in the various programs that made life easier for immigrants to Denmark.

But what had not been known was that the new government was so strongly anti- and development - the so-called green jobs fund, for example - that had been supported by the

previous government's ministry of the environment, and which have generally received positive environmentalist as it soon showed itself to be.

The government has decided to cancel several large wind-energy projects and close down a number of innovative programs in environmental research evaluations, as well as a good deal of international interest. By the time the new minister of finance, Thor Pedersen, presented the government's budget at the end of January 2002, the drastic nature of the transformation was starting to become clear. Pedersen eliminated all of the "green taxes" that had bothered much of the liberal party's electoral constituency, and soon thereafter the environmental ministry announced drastic cuts. This government clearly had a very different underlying concern with the environment than the previous government had had.

Finally, the government's overall conception of public accountability differs from that of the previous government. The general idea in the new accountability regime is that there is only so much money to go around - there are to be no new taxes - and if health care and the elderly need more resources, then the funding for foreign aid and environmental protection, for example, must be reduced significantly. The main focus of accountability has been changed - from social and environmental performance to fiscal, or financial performance. Accountability is to be represented in financial terms: real monetary accounting rather than some kind of "green" or social accounting.

It remains an open question how radical this shift in regime will turn out to be, but the recent changes do indicate that a discussion of public accountability procedures in Denmark must take account of the broader political context.

References

Andersen, Jørgen Goul et al, eds: *Hvad folket magter*, Hans Reitzels Forlag, København 2000.

Andersen, Jørgen Goul et al, eds: *Den demokratiske udfordring*, Hans Reitzels Forlag, København, 2001.

Andersen, Mikael Skou: *Governance by Green Taxes: Making Pollution Prevention Pay*, Manchester University Press, 1994.

Baark, Erik: "Environmental Science and Technology Policy in a Consensual Mode: The Case of Denmark," in Andrew Jamison and Per Østby, eds, *Public Participation and Sustainable Development: Comparing European Experiences. PESTO Papers 1*. Aalborg University Press, 1997.

Borish, Steven: *The Land to the Living: The Danish Folk High Schools and Denmark's Non-violent Path to Modernization*, Nevada City, California: Blue Dolphin Publishing, 1991.

Bryld, Claus: "Den demokratiske socialismes gennembrudsår" Doctoral thesis, Roskilde 1994.

Christensen, Dan Charlie: "Det moderne projekt" Doctoral Thesis, Gyldendal, Copenhagen 1996.

Christiansen, Peter Munk, ed: *Governing the Environment: Politics, Policy and Organization in the Nordic Countries*, Nordic Council of Ministers, Copenhagen, 1996.

Edquist, Charles and Bengt-Åke Lundvall: "Comparing the Danish and Swedish Systems of Innovation," in Richard R. Nelson, ed, *National Innovation Systems: A Comparative Analysis* Oxford: Oxford University Press, 1993.

Gundelach, Peter og Torpe, Lars: "Befolkningens fornemmelse for demokrati: foreninger, politisk engagement og demokratisk kultur," in Andersen et al., eds (2001).

Hjarvard, Stig: "Politik som mediemontage. Om mediernes forandring af den politiske kommunikation," in Andersen, et al., eds (2001).

Jamison, Andrew: "National Styles in Technology Policy: Comparing the Danish and Swedish State Programmes in Microelectronics/Information Technology," in Ulrich Hilpert, ed, *State Policies and Techno-Industrial Innovation*, London: Routledge, 1991.

Jamison, Andrew: *The Making of Green Knowledge. Environmental Politics and Cultural Transformation*, Cambridge University Press, 2001.

Jamison, Andrew, Ron Eyerman, Jacqueline Cramer with Jeppe Læssøe: *The Making of the New Environmental Consciousness: A Comparative Study of the Environmental Movements in Sweden, Denmark and the Netherlands*, Edinburgh University Press, 1990.

Jamison, Andrew and Erik Baark: "Modes of biotechnology assessment in the USA, Japan and Denmark," in *Technology Analysis & Strategic Management*, nr 2, 1990.

Jensen, Lotte, "Constructing Images of Accountability in Danish Public Sector Reform" in L. Jones, ed, *Learning from International Public Management Reform*. Elsevier-Oxford Press, London, 2000.

Jørgensen, Ulrik and Peter Karnøe: "The Danish Wind-Turbine Story: Technical Solutions to Political Visions?" in Arie Rip, Tom Misa and Johan Schot, eds, *Managing Technology in Society. The Approach of Constructive Technology Assessment*. London: Pinter Publishers, 1995.

Lund, Anker Brink: "Smitsomme sygdomme i dansk journalistik" Doctoral Thesis, Roskilde Universitetsforlag, 1996.

Lundvall, Bengt-Åke, ed: *National Systems of Innovation - Towards a Theory of Innovation and Interactive Learning*, London. Pinter Publishers, 1992.

Munch, Birgitte: "Danish approaches in social studies of technology," in Tarja Cronberg and Knut Sørensen, eds, *Similar Concerns, Different Styles? Technology Studies in Western Europe*. Luxembourg: European Commission. COST A4, 1995.

Olsen, Olaf: *Gyldendal og Politikens Danmarkshistorie 1850-1900*, Gyldendal, Copenhagen, 1990.

Remmen, Arne: "Greening of Danish Industry - Changes in Concepts and Policies," in *Technology Analysis and Strategic Management*, nr 1, 2001.

Senghaas, Dieter: *Von Europa Lernen: Entwicklungsgeshiichtliche Betrachtungen*, Frankfurt am Main: Suhrkamp, 1982.

Wolf, Adam, "Introduction to Symposium on accountability in public administration: Reconciling democracy, efficiency and ethics," in *International review of Administrative Sciences*, vol. 66, 2000.

Interviews

Jørgen Goul Andersen, Aalborg University, January 22, 2002.

Oluf Danielsen, Roskilde University Center, December 11, 2001.

Bente Halkier, Roskilde University Center, November 29, 2001.

Henrik Toft Jensen, Roskilde University Center and Chairman of the Danish Board of Technology, December 13, 2001.

Susanne Krawack, Danish Board of Transportation, December 17, 2001.

Eva Smith, Copenhagen University, February 2, 2002.

Jens Teilberg Søndergaard, Copenhagen University, February 1, 2002.

Jesper Toft, Økoanalyse A/S, December 14, 2001.

Henrik Christiansen, Copenhagen University, February 8, 2002.

Peter Munk Christiansen, Aalborg University, January 22, 2002.

Genetically modified foods

By Jesper Lassen

Summary

The case study deals with the policy debates and issues of public accountability associated with research, development and production of genetically modified (GM) foods in Denmark.

The study seeks to place these debates and issues in a broad historical and cultural perspective, by tracing shifts in both the form and content of public accountability procedures from the emergence of genetic engineering in the 1970s to the present.

Debates in four main contexts are briefly described and analyzed, with particular focus on issues of public accountability: the public policy arena, the business community, and in particular the firm Novozymes, the academic research community and finally the civil society, or non-governmental sector.

In Denmark, the debates about genetic engineering have been comparatively intense as more members of the public and their representatives have gotten involved, or attempted to get involved in the processes relating to the development, production and, more recently consumption of GM foods. In general terms there has also been a broadening of the debate from an initial concern with scientific issues and the safety of laboratory experiments to a much wider range of issues - from environmental risks to political economy to ethics and morality.

Introductory background

The assessment of gene technology and, with it, GM foods, can be seen to have gone through several phases since the 1970s, roughly corresponding to the different stages of technological development (Jelsøe, Durant, 1998, Lassen, 1999). In each phase, there have been somewhat different issues and actors involved in the policy debate and, as a result, there have thus been some rather significant changes in the processes of public accountability and governance (see chart 1).

Genetic technology was taken up as a topic for debate in Denmark primarily by critical scientists and science students. It was particularly the group around the journal, *Naturkampen* (Nature Struggle), that first brought genetic engineering to public attention. As elsewhere, the technology was discussed in this first phase in relation to what might be termed the underlying theoretical implications, and, as in other countries, issues of scientific responsibility and laboratory safety were also subject to debate.

GM foods became much more controversial in the period of development, in the 1980s, at first in relation to events taking place abroad (mainly in the US) but more actively and locally, in the second half of the 1980s, in relation to the plans of the Danish Sugar Industry (*De Danske Sukkerfabrikker*, later *Danisco*) to develop and carry out field trials with GM sugar beets. The issue was framed almost exclusively in terms of environmental risks, and the environmental organization, NOAH, was particularly active.

A brief history of gene technology assessment

ca 1978 - 1984: *scientific assessment* (research phase)

Debates about laboratory safety in relation to R-DNA experiments and the theoretical implications of genetic engineering, mostly carried out among scientists. In Denmark, a wing of the “radical science movement” was a key actor in this early phase.

ca 1984 - 1996: *risk assessment* (development phase)

Main issues: control and regulation of field experiments and product development; main actors were environmental organizations and technology assessors (both in academia, civil society, and government). In Denmark regulation is established and gene technology is discussed widely in the media and in the general public sphere.

ca 1996 - : *ethical assessment* (diffusion and marketing phase)

Discussion of political and ethical consequences of GM food product, including involvement of consumer organizations, bioethics experts, public and private agriculture and industrial officials, as well as political parties and organizations.

Chart 1: A brief history of gene technology assessment

The Danish parliament passed a law on genetic technology and the environment in 1986 – the first general GM law in the world - which included a ban on deliberate releases, although the government could make exceptions in special cases. This rule was later removed after a revision, paving the way for continued research in and development of GM sugar beets and later also other plants.

There was a rather widespread public debate about GMOs in the 1980s, partly as part of an institutionalization of technology assessment, at both the universities (particularly the technological universities, where units for technology assessment were established - in Aalborg and Copenhagen) as well as at the state level (where, among other things, the Danish Board of Technology was created). There were special funds allocated within the Biotechnological Research Programme, which was initiated in 1987, for information activities about the new genetic technologies, and there were many meetings, publications, as well as larger research projects (such as

Pegasus at the Danish Technological University, which was a broad assessment of the economic, social and environmental consequences of biotechnology) (Jamison, 1990).

From an accountability perspective, these activities were largely framed within what we have termed the “consensual regime”; indeed they were a central feature of the consolidation of this regime in relation to technology policy. The idea was to ensure that as many different interests and interest groups as possible were represented in the discussions, in order to have a broad, consensual support for both the regulatory and support policies of the different ministries (environment, research and industry).

Perhaps the most innovative Danish initiative from this period, and still one of the main activities of the Board of Technology was, characteristically enough, the arranging of so-called Consensus Conferences (Consensus conferences have since become an interesting case of “technology transfer” in relation to

public accountability and participation. Danish-style conferences have been held in a number of different countries, particularly over the past 5-10 years. In this respect, Danish accountability procedures have become an interesting source of public relations and even export income for the Danish government). Consensus conferences are a staged assessment activity, where the aim is to turn the traditional power relations upside down.

This is obtained by giving a group of lay people the power to set the agenda for the assessment and question selected experts before writing up a consensus document. As such consensus conferences can be seen as one among different deliberative instruments applied attempting to make gene technology accountable to the public.

The first consensus conference was carried out in 1987, and addressed genetic technology in industry and agriculture. Despite a great deal of attention given to this and subsequent consensus conferences, their direct identifiable impact on GM food politics in Denmark, as in other countries, has been limited. The major contribution to the GM food politics is no doubt to be found in terms of the media attention they have created and thus the impacts on the discourses about gene technology.

Following the intense debates in the 1980s, there was a pronounced decline in public as well as political attention towards GM foods in the early 1990s. This development coincided with a lower level of activity in NOAH, and institutionalized technology assessors - at the universities and ministries - more or less taking over the role that NOAH had had in terms of educating, or informing the public. In the food sector, Danisco continued their development of GM sugar beets and the seed company Trifolium was developing GM fodder turnips. Industries like Chr. Hansen and Novo

Nordisk also continued their development and production of enzymes and other agents for the food industry in this period. In 1996, a new phase ensued with the coming of GM food products to market, and new actors emerged, such as Greenpeace, but also organizations like *Forbrugerrådet* (The Consumers Association) began to discuss GM issues.

The low level of controversy characterizing the years from 1991 until 1996, can be explained in different ways. On the one hand, it has been suggested that the regulation was a result of traditional Danish consensus seeking politics, ensuring that the regulation reflected and addressed the public anxiety (primarily understood in terms of risks to the environment and health). The absent conflict was hence an expression of the "success" of public participation and information campaigns in the 1980s. On the other hand, the low conflict level can also be seen as a consequence of a shift in the process of innovation, where GM food technologies around 1990 tended to move from an "open" period of field trials into a more commercial and concealed phase of product development.

This state of things was, however, seriously disturbed when it became publicly known that GM soya was shipped from the US to Denmark and other European countries. This event served to reopen the controversy over GM foods. As it has been documented by surveys and qualitative studies in a number of European countries since the mid 1990s, the core of this controversy was a GM food industry, researchers and the majority of politicians failing to understand and address the critique expressed by the public. As the controversy was reopened in 1996, it became clear that the accountability procedures applied in the past - public participation in the shape of e.g. consensus conferences, information activities and TA projects - were not

sufficient. A main reason for this, it was now recognized, was the failure to address the concerns of the public. In a way this demonstrated that the participatory procedures - widely famed outside Denmark - had never really been taken seriously when it came to designing regulation or making decisions of importance for research and the development of GM foods. All in all it became clear that new procedures for ensuring an accountable research and technological development were needed.

The failure of the political processes was not realized overnight. It was clearly demonstrated by the debates in *Folketinget* (the Parliament) following the arrival of the soya. Although never clearly formulated, the general opinion in the Parliament in 1996 was that the public rejection was irrational, since safety was ensured by the existing procedures in terms of regulation. At the political level the most important short-term outcome of the soya crisis was an attempt to restore public accountability of GM foods by agreeing that it should be official Danish policy in EU to promote efficient labeling schemes. In consequence of this and in continuation of the general perception that the public was (only) worried about environmental and health risks, the government joined the restrictive countries in EU in a moratorium of deliberate releases, awaiting implementation of new regulation ensuring segregation and defining a satisfactory minimum level of GM contamination of non-GM foods.

By taking this step, the Parliament tended to move the conflict from the political sphere to the market, making it a matter to be resolved in the relation between consumers and the producers/distributors. By this "marketization" of the conflict, accountability could be provided primarily by giving consumers the option to choose freely on the market – that is to choose to purchase the GM products or not.

This can be seen as a response to what happened in 1996, when Monsanto had ignored consumers by denying the possibility of segregation of GM and non-GM crops - much to the frustration of the wider public. Wider ethical concerns remained, however, ignored by the majority of the politicians.

In the period following the soya crisis there are indications of a growing understanding among some politicians and policy makers of the complexity of the public attitudes to GM foods. This can be seen in the increased public funding of bio-ethical research as well as an incipient understanding of the need for the inclusion of ethical assessments as the basis for approval of GM foods. One result of this new understanding was the establishment of the 'BioTIK' group, an expert group of philosophers and other academics set up to sketch the frameworks of an ethical assessment. The conclusions formed the basis of a report to the Parliament, which will be discussed in more detail below.

Although bio-ethics in this way was established as an area that had to be taken into account, and an ethical discourse developed outside narrow philosophical circles, specific actions, that is, the development of new accountability procedures beyond "good intentions" still remain to be taken. Neither Danish law nor EU regulation take account of anything but environmental and health risks, and the use of labeling as a mandatory instrument.

The Danish food industry has been a rather silent actor after the soya crisis. Although there is evidence that they have products in the pipeline, to be marketed when/if public critique evaporates, they have not tried to promote these. Other industrial actors like Novo Nordisk (after 2000 Novozymes), producing among other things GM enzymes to the food industry, have during the 1990s de-

veloped a strategy of involving the public in their marketing and PR activity (see below).

As we will see, one group of actors which has generally failed to develop appropriate public accountability procedures in relation to GM foods is the researchers. As we shall see later researchers tend to be portrayed as unscrupulous or in the pocket of industrial interests. This, and the fact that GM researchers depend on gene technology in a different way than industry and retailers who have gene technology as one option among others, may be the reason why we among plant biotechnologists still find a solid representation of the understanding that the public is irrational and ill informed about scientific facts (Meyer, 2001).

The policy process: developing an ethical discourse

From the very start of the Danish debate, biotechnology was discussed as an issue raising safety as well as wider social and ethical questions. The concerns were raised to the extent that Minister of the Interior in 1983 decided to set up two committees to make accounts of the need for regulation of safety issues on the one side and ethical issues on the other.

Gensplejningsudvalget (The Committee for Genetechnology) was set up to suggest the organisation of public administration of the use of the new biotechnological processes with a specific focus on the risks to environment and humans. The mandate for the committee pointed out that ethical questions were not to be an aspect of the account, but would be "*taken up in a broader context*" (Indenrigsministeriet, 1985). Interpreting this mandate, the committee dedicated their overall focus in

the produced account to risks related to research and production using gene technology.

In the account "Genteknologi og Sikkerhed" (Gene Technology and Safety) the committee concluded that three separate acts were needed to regulate the risks of gene technology: an act addressing research, an act addressing uses in agricultural production and an act regulating the use of gene technology in products and production in general.

Parallel to the work in *Gensplejningsudvalget*, the *Udvalg om Ethiske Problemer ved Ægtransplantation, Kunstig Befrugtning og Foster Diagnostik* (The Committee on Ethical Problems Regarding Transplantation, Artificial Insemination and Diagnostics) was set up. Apart from investigating ethical problems of the technologies mentioned in the title of the committee, the mandate also specifically instructed the committee to look into gene technology (Indenrigsministeriet, 1984).

Although the mandate did not specifically ask the committee to limit its assessment of gene technology to human uses, gene technology was presented within a human/medical frame, leading the committee to interpret their mandate as limited to social and ethical aspects and the mentioned new diagnostic methods to the extent they are used or may be used on humans. Safety issues were accordingly not dealt with, but explicitly seen as belonging under the *Gensplejningsudvalget*. Likewise ethical questions related to animals and plants although seen as ethically relevant, were seen as falling outside the mandate for the committee. In the report "Fremskridtets Pris" (The Price of Progress) the committee concluded that there was no need for a specific ethical regulation, but recommended instead the establishment of an advisory ethical committee within the human area.

As described here, the first initiatives from Danish authorities led not only to a separation of applications but also a separation of which concerns should be addressed in which contexts. In this way the different mandates and their interpretation by the two committees can be seen as both an illustration of the two dominant framings of the gene technological issue until the mid 1990s, but also as an important structuring force behind the development of different framings (Andersen, 1992).

In the following years, a tendency to split, or separate the discussions, and indeed the regulation, can be observed allowing for the development of two separate discourses: On the one hand a human-ethical discourse where the focus was on the ethical, and to some extent social questions pertaining to applications directly related to human uses. On the other hand a production-risk discourse, where the focus was on the risks to environment and human health. Although ethical questions regarding the use of animals and plants were recognized by both committees, such questions were excluded from the accounts and thus also largely from the following formal policy process and regulation. In addition questions of microorganisms and ethics were not raised by the two committees.

Hence public authorities and government sought to ensure the accountability of gene technology in two different ways depending on the area of application. The political and regulatory structures constructed in the following years took up this split accountability: In relation to human applications, accountability of gene technology was to be ensured by a combination of the Det Etske Råd (The Ethical Committee) set up in 1987 to advise public authorities (Indenrigsministeriet, 1987), and a number of laws and other regulatory initiatives. For GM foods and other uses of gene technology in production, accountability

was largely reduced to the question of avoiding risks - the means first of all being the laws on gene technology and environment and working environment (Miljøministeriet, 1987).

Hence the accountability of GM foods was - in the political processes at parliament - mainly seen in the context of risks, whereas ethical and social issues were never seriously addressed. An exception from this picture was the *Det Genteknologiske Råd* (The Gene Technological Council) established in 1987, having a mandate that included risk as well as ethical issues. Ethical aspects became, however, never a key priority of the council, probably due to the dominance of biotechnologists: six representatives from biotechnology and industry were appointed and only one from humanities (a pastor). By example the council did not take up ethical question in its first judgment of the Danish situation in 1988, but only addressed limitation to the research and industrial application (Det Genteknologiske Råd, 1988).

The somewhat ambivalent attitude towards GM foods (and other non-human applications of gene technology) expressed in the writings from the two committees was repeated in the parliamentary debates over gene technology. A telling example was a question in 1986 asked of the Minister for the Environment, by a member of the *Socialistisk Folkeparti* (Socialist People's Party, SF) concerning measures taken to keep humans and the environment free from risks (Folketinget, 1986). Although the question specifically was about risk issues, the opposition as well as the Minister stressed that there were wider ethical concerns that needed to be addressed, as the Ministry put it:

"Finally it is my view that there is a need to consider also ethical aspects. The Minister for the Interior has recently submitted a Bill banning certain experiments using genetic ma-

nipulation on humans. Similar problems are raised in relation to animals and plants. To me there is a major difference between what science is capable of doing, and what we, keeping our basic philosophy of life in mind, will accept" (Ibid.).

The Minister promised to make the issues subject to public debate and consider how ethical questions outside the human area could be addressed in coming acts. Whereas the public debate was stimulated in the following years (see the following section), ethical questions were never taken up in the regulation set up in 1986, or in the subsequent revisions in 1989 and 1991.

During the 1990s ethical questions beyond the human area began to appear in the wider political processes of gene technology. The Ethical Council on Animal Ethics (*Dyre-etisk Råd*), was e.g. established in 1991, given the task to oversee ethical questions in relation to animals - although the focus was on animal protection in a traditional sense, the council was also given the task to follow the gene technological development (Justitsministeriet, 1991). In 1992 The Board of Technology hosted a conference on transgenic animals, specifically taking up ethical issues (Teknologinævnet, Teknologiske dyr. Indgreb i kønsceller på højerestående dyr. Teknologinævnets rapporter 1993/1, København, 1993). And in 1994 ethical issues were taken up during a parliamentary enquiry about labeling of GM foods and ingredients. The result being an unanimously adopted motion for an adjournment stating that it is Danish policy to avoid marketing for unlabelled GM foods in Denmark. The arguments were not only drawing on the risks of these products, but also on the consumers rights to a free choice - a freedom that could be expressed in a desire to avoid GM products based also on ethical or religious concerns, as it was argued by the proposers from SF (Folketinget, 1994).

The core of the parliamentary inquiry in 1994 was however on technicalities of labeling, legal issues and risks - there was still no developed ethical discussion of GM food matters. Following the re-opening of the controversy in 1996 this picture did however change dramatically. A first sign of this was a debate in Parliament coinciding with the unloading of the first GM soya in Denmark. Here several speakers took up ethical questions as well specific questions in relation to the consumers' freedom of choice, the power of multinationals, the third world and what benefits are considered legitimate. The most striking example was a statement from the spokeswoman from *Kristeligt Folkeparti* (The Christian Democrats), who elaborated on elements of an ethical assessment – this speech, however, did not evoke any particular resonance among the other parties. Although ethical questions were taken up focus remained on risks, technicalities of regulation and the usefulness of GM foods (Folketinget, 1996).

Whereas the soya controversy primarily served as an eye-opener for the inability of the existing regulatory structures to cope with the concerns of the public, the announcement of the cloned sheep Dolly a few months later, added major elements of ethics to the parliamentary debate. Now a central focus of the debate of GM foods was the ethical questions, leading to the following parliamentary decision:

*"Considering that:
the biotechnological development raises ethical and environmental questions concerning humans, animals and plants and that human cloning is forbidden in Denmark in research as well applied on humans
The Parliament urge the Government to:
Ensure that animal cloning is limited to research
Ensure experiments on full grown cloning is limited to the extent that no fully developed /*

*subjects are produced.
Ensure that cloning of domestic animals is
not taking place
(...)*

Before end of 1997 (...) work to find a method ensuring that intervention against developments offending the ethical norms of society can take place in due time; and that a foundation for a renewed debate in the general public as well as in Parliament of the ethical limitation to research, is created" (Folketinget, 1997).

Neither Dolly nor the GM soya represent surprises in a purely scientific sense: GM food like the cloning techniques had been subject to intense research and development activities in many countries for more than a decade. Regardless of this, they took the public by surprise and hence also the Parliament and public authorities, who had been working hard in the 1980s to construct frames ensuring the accountability of GM foods. In a way the events after 1996 clearly demonstrated the goal of publicly accountable GM foods had not been reached, and it is in this light the urge to create the basic framework of an ethical debate about limits to research must be seen.

In the area of GM foods, ethics thus diverged from risks in the sense that risks at the national level had been subject to continuous assessments, several accounts and parliamentary enquiries and scientific reports; and internationally risk assessment was accepted as a scientific discipline. Unlike this the ethics of GM foods had never had national attention nor developed into an acknowledged scientific discipline noticed by the political processes.

Many had, as demonstrated above, stressed the importance ethical questions in relation to GM foods, but so far the issue had been allo-

cated to public debates and meetings - it was never taken seriously and made subject to e.g. research activities, parliamentary enquiries or accounts. The period following the re-opening of the controversy in 1996, can largely be understood as period, where the frameworks of a GM food-ethical discourse is under construction in the sense that a vocabulary and taxonomy of ethical concerns related to GM foods is created by public authorities and in Parliament.

In the past, ethical and societal aspects of gene technology had primarily been taken up by *Teknologirådet* (The Danish Board of Technology), this changed after 1996, as the issues pops up in other contexts also. Among the most important new domain of debate and discursive construction was *Erhvervsministeriet* (The Ministry of Trade and Industry), who had previously only related to the gene technologies from a strictly business oriented point of view. Among the initiatives set up by the Minister was the so-called BioTIK group, a working group with 11 members counting philosophers, biologists, theologians, medical doctors and other academics who had been working in and around biotechnology. The task of the working group was to produce a discussion paper that could serve as the basis of a balanced debate and increase the understanding of the public concern.

By the end of 1997 the working group produced the report *De genteknologiske valg* (The Gene Technological Choices) (BioTIK-gruppen, 1997); a report, discussing issues (visions as well as problems) identified to be central for the decision making about gene technology. One outcome of the report was a suggestion of ethical criteria for development and application of gene technology, for the first time seriously integrating the different human and non-human applications and including ethical, risks as well societal concerns.

In March 2000, the minister of business presented a statement on ethics and gene technology to the parliament (The Danish Ministry of Trade and Industry, 2000). This statement, receiving general support among the political parties, repeated the conclusions of the report from the working group, and stated the policy the government wanted to pursue. This included among other things 1) To work for an international convention on the inclusion of ethical considerations in the regulation of biotechnology in plants and food. 2) To work for the inclusion of ethics in the regulation of gene technology, in particular ensure the inclusion of ethics in the revision of the EU-directive on deliberate releases. 3) To develop guidelines for ethical assessment of new biotechnological methods. 4) To support debate and information.

One outcome of the statement was the establishment of the so-called BioTIK secretariat under the Ministry for Trade and Industry in 2001. The secretariat joined nine ministries working for realizing the ambitions of the statement, that is on the one hand the incorporation of ethical principles in the regulation of and decision-making about biotechnology, and on the other hand the establishment of a basis for public consultation and information (See: www.biotik.dk).

These attempts to twist the policy process in a more ethical direction, has, however not yet materialized themselves in significant regulatory changes. The 2002 revision of the central law in regulation GM foods, The Act on Gene Technology and Environment, does include ethics considerations, but, following the line of the revised EU directive for deliberate release, this is an open possibility, not mandatory (Miljøministeriet, 2002b).

One of the substantial changes is a recent extension of the mandate of the Ethical Council (Etisk Råd) to also cover non-human is-

ues – the status of the council has, however, not been changed as it is still consultative. In summary Danish bio-politics still is characterized by a strong utilitarian tradition, where risks to health and environment is weighed against the benefits, although discussions of basic ethical principles like autonomy, dignity, integrity and vulnerability are becoming integrated elements (Rendtorff, 2000).

The business arena: merging public and economic accountability

Among the first industrial movers on the biotechnology arena in the early 1980s were the companies Novo and Nordisk Gentofte. Novo as well as Nordisk Gentofte had production of human insulin and other pharmaceuticals, and Novo, by far the larger of the two, had in addition industrial enzymes for the food sector and for the detergent industry as important areas of business.

In 1984 Novo and Nordisk Gentofte almost simultaneously announced plans to develop and apply genetically modified organisms in the production of insulin respectively human growth hormone. It is characteristic of this early phase of development of gene technology in Denmark, that both companies surrounded their concrete plans with a high level of secrecy. At that time, there was no compulsory registration of research or other uses of gene technology in Denmark. Instead companies or researchers could, if they wished to, report their use of genetic manipulation to "Registre-rings-udvalget", where the reports were kept secret to the public (Toft, 1985).

This strategy of relative secrecy must be seen in the light of the common understanding that gene technology in itself is not different from other technologies, hence regulation

should address the products, not the way they are produced (Kiel, 1984).

Consequently there is also no need to go public with plans to apply gene technology and stimulate a debate – the secrecy may on the other hand also reflect a (at that time common) perception that avoiding public debate is a useful strategy to ensure a peaceful business environment. The events surrounding Monsanto's introduction of soya to the European market in 1996 proved this latter strategy wrong.

The sudden announcement of concrete plans of application of gene technology in pharmaceutical production took most parties by surprise, probably because the relative secrecy had left members of the public as well as NGOs and other actors on the political arena parties unaware of the advanced stage of the technology. One outcome was that the announcements became triggers for the first era of public debate of gene technology in Denmark. Another was that the productions plans themselves became subject to intense public attention, forcing both companies to engage in a public dialogue at some level. One expression of this (new) engagement with the public was pamphlets explaining the essentials of gene technology and presenting the companies interests. Other expressions were the organizing or participation in public meetings where Novo and/ or Nordisk Gentofte were confronted with opposing actors like NGOs or neighbors (Terney, 1986).

It seems fair to say that from the starting point the dominant business strategy, as expressed by Novo and Nordisk Gentofte, was that since gene technology should be treated like any other technology, it needed not to be accounted for in any particular way. Just as the view was that no particular public accountability was needed industries involved in gene technology, these industries supported

the view that a specific regulation was not needed. In the years following the introduction of the Act on gene technology and environment in 1986, the Association for Biotechnological Industries in Denmark (*Forenningen af Bioteknologiske Industrier i Danmark*) counting companies like Novo, Nordisk Gentofte, the breweries and sugar industry among its members, accordingly fought the – to their opinion - strict Danish regulations. One example being a comparative analysis of the level of regulation of biotechnology in different countries, published in the hope of influencing the parliament (Fink, 1988). The set off from this analysis was the notion that biotechnological business in Denmark was impeded by the strict regulation, placing Danish industries in poorer position compared to their foreign competitors.

By the late 1980s things started to change. Novo and Nordisk Gentofte merged into Novo Nordisk and went public with the view that regulation is not necessarily in contradiction to business interests. As such Novo Nordisk opposed not only many of their Danish brothers in arms, but also the continued trend in the European biotech industry arguing that regulation is not in the interest of biotechnological industries. Defending this view, representatives of Novo Nordisk argued that there is no documentation for alleged reduced competitiveness resulting from regulation. Instead the argument was that on the one hand regulations provides a known and secure environment for production and on the other hand that regulation is seen as a means to ensure public acceptance of biotechnology (Kvistgaard, 1996).

The shift indicates that to proactive industries, like Novo Nordisk, the public was not only perceived of in terms of consumers to be dealt with on the market, but also as citizens who have a say, eventually influencing the political processes and thereby the frames for

doing business. Hence public accountability became important to businesses like Novo Nordisk, who in the following years developed a charter and a strategy for their relations to the public and other stakeholders. The remainder of the section shall exemplify this trend where business attempts to handle 'the problem of the public' in a proactive way outside the market by presenting elements of Novo Nordisk's merger between economic accountability to the shareholders and this new broader understanding of accountability.

The company structure of Novo Nordisk was changed in 2000, when the company demerged into Novo Nordisk and Novozymes. Today the Novo Group comprises Novo A/S as the holding company and the two operating companies Novo Nordisk A/S (pharmaceutical activities) and Novozymes A/S (mainly enzyme business). Both are publicly listed companies with Novo A/S as the controlling shareholder. The annual net turnover for the Novo group is approx. 26,000 mill DKK. Gene technology is the important basis for many of the activities in the Novo Group, but for our purpose Novozymes is the most interesting, since they cover the use of gene technological methods in the production of enzymes and other ingredients for food and feed production, besides their important production of technical enzymes for the detergent industries (The following is partly based on an interview with Kirsten Stær, Novozymes, 7 February 2003).

As it will appear, Novozymes is, however, not totally independent since important frames for the business concerning values and strategies are set up by Novo A/S. These frames are given in the Novo Group Charter, which set up values and commitments underlining the importance of the stakeholder dialogue and committing the companies to use the triple bottom line reporting for their activities.

Statements about common values and commitments are expressed in the Charter, which constitutes the basic criteria or framework for all companies in the Novo Group and their employees. The question of accountability is specifically addressed in one of the values in the Charter, where it says: "Each of us shall be accountable – to the company, ourselves and society – for the quality of our efforts, for contributing to our goals and for developing our culture and shared values" (The Novo Group, Charter for companies in the Novo Group, no year). Such value commitments expand the understanding of what the employees and the company need to account for, far beyond the traditional economic obligations. While many companies would probably approve of similar principles, and do their best to ensure that their sales are not affected by criticized (that is unaccountable) actions, fewer explicitly work with values as The Novo Group attempt to do.

The idea that accountability also stretches beyond what is of importance for market performance and production costs, can be illustrated by three commitments included in the Charter, stressing commitment to be financial as well as social and environmental responsible. Essential parts of these commitments include maintenance of openness about products and processes (to the extent openness does not harm competition), and engagement in dialogue with stakeholders and the ambition to live up to the International Chamber of Commerce's Business Charter for Sustainable Development as well as the UN declarations on Human Rights and Biological Diversity.

The maintenance of social and environmental responsibility is hence important ingredients in the construction of the public image of Novozymes. One important tool to ensure this is the so-called triple bottom line accounting system. This system has over the last years

been developed by the companies in the Novo Group as a tool to measure and control the performance – and indeed report – not only economic aspects, but also environment, bioethical and social consequences of their business.

The ideas of accounting for environmental performance and identify future environmental aims is by no means unique to Novo, but has over the past decade been institutionalized in the public regulation, e.g. requiring certain industries to make annual green accounts (Miljøministeriet, 2002a). By expanding this required task to also include social issues, the companies in the Novo Group joins, however, a smaller group of more innovative companies.

The basic idea in Novozymes' environmental report is to describe environmental status based on a number of indicators like consumption of resources, release of wastewater solid waste, the accidental release of GMOs, number of animals used for testing and the total contribution to environmental problems like the depletion of the ozone layer, acidification and the global warming.

The social report is made up in a similar way, identifying a number of indicators for social performance. These social indicators are all related to Novozymes as a workplace and include e.g. the distribution between the two sexes in different positions, average age of employees as well as the health and safety of employees (Novozymes, 2003).

The reporting of social and environmental performance are both followed by identification of long term and/or short term aims for the indicators, making these reports steering instruments in much the same way traditional accounts are used to make budgets and set goals for economic performance. To validate the quality of the selection of indicators and

the calculation of the indicator values, Novozymes has in its most recent report included auditing of also environmental and social accounts by the same auditors who audited the economic accounts.

The third important tool for Novozymes in their efforts for accountability is the dialogue with the surrounding society. Contrary to most other businesses, relations are not reduced to customers and contractors in the production chain, instead all actors who might have an interest are acknowledged as relevant stakeholders. Of particular interest in this context are roundtable discussions with NGOs. Within these discussions NGOs are invited to participate in a dialogue about the activities of Novozymes – the idea being that NGO can be a source of inspiration for strategic decisions in the future.

The importance of accountability for gene technological firms was demonstrated by the introduction of the first GM food products to the Danish market by Monsanto in 1996.

Although the actual presence of GM soya in the shipments was marginal (2%), the handling of the situation by Monsanto reinforced the public understanding of a multinational business attempting to force GM soya upon reluctant Danes and other Europeans against their will. By rejecting segregation and only too late being willing to engage in a dialogue with the critics and concerned, Monsanto helped pave the way for the second era of controversy over GM foods (Lassen, 2002).

There is little doubt that the continuous effort to ensure and maintain public accountability by Novo Nordisk in the 1990s and the members of the Novo Group in the last years also can be interpreted as a strategy to avoid the involvement in future controversies of similar kind.

That this strategy seems to work is indicated by the results of a survey carried out by the Union of Engineers in Denmark in 2000, where ethical and moral performance of 4 major gene technological companies was addressed. In this survey Novo Nordisk came in second, only exceeded by Carlsberg, a well-known contributor of major funding of science and culture for centuries (Institut for Konjunkturanalyse, 2000). It is, however, still unsure to what extent the strategy will preserve Novozymes and other companies in the Novo Group as targets of future biotech controversies.

This will on the one hand depend on their ability to maintain the stakeholder dialogue at a level, where critical stakeholders feel that their participation in the dialogue makes a difference – if not they may feel tempted to remove the critique and debate from the relatively closed environment of the stakeholder dialogue and open a more public arena for debate and criticism of gene technological activities. On the other hand it will also depend on the ability of companies in the Novo Group to develop methods to expand the social and ethical indicators in the triple bottom line accounting system so that they in the future more specifically up take up some of the unquantifiable, particularly moral, concerns about gene technology shared by large parts of the public.

The scientific arena: In search of publicly accountable research

Throughout the 1980s and into the 1990s a number of national research programmes have supported biotechnological research (see Figure 1, p. 53). At first these programmes were minor investments in a potential technology, but by the mid 1980s, as the

technologies were able to demonstrate its (economical and technical) usefulness in e.g. the production of enzymes and other proteins, the public support became substantial. The parliamentary adaptation of the first major biotechnological research and development programme in 1986 marks the first turning point in public support of biotechnological research. From 1987 and onwards the public funding increases in size and follow a set strategy. For an overview see the inserted table.

It is not surprising that the main interest and focus of public funding in the years after 1987 was to advance the natural scientific knowledge, just as it was in the preceding programmes. As an illustrative example the first research programme (Undervisningsministeren, 1986) allocated approximately 480 mill. DKK over four years expecting a similar private funding of the research activities.

Recognizing that Denmark is too small a country to cover all aspects of biotechnology, the idea was to build capacities in areas where Danish industry already had a strong basis. The areas identified by the parliament included agriculture, food production and contained uses – clearly referring to the economically significant agri-food, pharmaceutical and enzyme sectors. The focus of the programme was partly on the production of PhDs and graduate students and partly on the establishment of a research infrastructure concentrating efforts in fewer research centers addressing issues like methods and processes, farm animal production, food production, food production and the prevention of diseases.

This line was continued in the second research programme (Forskningsrådenes udvalg vedr. bioteknologi, 1990), building, as it was said, “on the best of the activities initiated under the former programme” and (again) emphasizing the importance of the

private sector, when specifying the important role of businesses in organizing and participating in the utilization of the results. As the table shows, the consecutive programmes on biotechnology has ensured annual public support of 50-150 mill. DKK for basic research, education and (industrial) application ever since the first programme.

This focus of the research must be seen in the context of Denmark, lacking rich natural resources apart from the agricultural land (and some North sea fossil fuels), increasingly dependent on a production of products and services with a high content of scientific knowledge. Hence the importance to the Danish government facilitating a research keeping abreast of the international technological development.

Consequently the so-called new biotechnologies were visualized as (necessary) means to maintain a modern industrial production, as it is stated by the minister for the environment in a parliamentary enquiry on biotechnology in general in 1986: *“Denmark has excellent possibilities for a position among the leading nations in the world [when it comes to utilizing biotechnology], to create a competitive production, to enter new markets and to earn much needed foreign exchange and good jobs. We can of course not reject this possibility”* (Folketinget, 1986).

Supporting biotechnological research has a natural role in these framings of the issue, almost making it a precondition for maintenance of the welfare state. Such arguments draw heavily in the construction of biotechnology as an economic necessity and consequently almost taking their economic accountability for granted: they are indisputable sources of wealth and therefore economically accountable. The pure technical and natural scientific research was, however, not the only aspect of biotechnology that was supported in

the period until 1996. As described previously, the critical debate grew alongside the increasing research and industrial. Reflecting this criticism, some of the research programmes included aspects of technology assessment, safety research and information/dialogue. At several occasions the public concern is directly referred to as a reason for including this perspective in the research programmes - as in the description of the second major programme, where it is said:

“Considering the anxiety entertained by the population concerning if the limits to what is seen as desirable research are transgressed, it is important to be open about research and inform about its methods and results. Furthermore continuous assessment of methods and results is important (...) including broader technology assessments clarifying the impacts of the research results on other aspects of the social life, including the economy. Furthermore the assessment must include ethical aspects of the research, seen from the point of view of the individual, the nature and the environment in general” (Udvalget Vedrørende Bioteknologi, 1992).

The first major contribution to such technology assessment activities were allocated in the first programme, but not with the tacit consent of the conservative led minority government. During the Parliamentary debates of the proposition, the red-green majority forced the government to allocate 20 mill. DKK to information and technology assessment. Compared to funds for the natural scientific research the amount for assessment and information here, like in other programmes, was small, but they did secured the continuation of assessment activities like those initiated by the Technology Council under the Ministry for Industry in 1982, when they supported the Pegasus project carried out at the Technical University.

The establishment of the Parliamentary Board of Technology in 1986 (once again against the will of the government), and the Social Scientific Research Council's (SSF) initiation of the technology-society initiative, increased the focus on technology assessment – including assessment of biotechnology. All in all the 1980s was characterized by the development of technology assessment as a method and the accomplishment of a number of technology assessment activities dealing with different aspects of biotechnology.

The relative quietness surrounding the biotechnological issues in the first half of the 1990s could, as discussed in the previous section, be interpreted as the result of not only the successful establishment of the national (and EU) regulation, but also of the carrying out of assessment activities intending to make biotechnological research and development accountable to the public.

As indicated by the quotation from the description of the second research and development programme, an underlying idea seemed to be that the assessment activities should run parallel to the biotechnological research in order to utilize the results in the biotechnological research. This interpretation is confirmed by the call for applications, where priority was given to projects that assess issues related to the supported biotechnological research.

The re-emergence of the controversy in 1996, must, however, also be seen in the light of the inability to efficiently connect the assessment activities and the biotechnological research.

Instead of business adjusting its activities accounting for the issues (beyond environment and health covered by the regulation) raised by the assessments, it continued more or less as if nothing had happened. This was particu-

larly true for the GM-food related business apparently living a life of its own, only occasionally confronting the broader concerns raised in e.g. the media.

Consequently the assessment activities never really directly influenced the development path taken in the biotechnological research and development – indirectly they can, however, be judged to have had some impacts on the development of the critical discourses in the society as such first of all in shape of a continuous supply of (new) areas of concern but also in securing a base for the critical discourse at the universities.

After the controversy re-appeared in 1996, this problem was also addressed in the public funding of biotechnological research. This was e.g. stressed in the National Strategy for Biotechnological Research from 1998, where it was stated that: *“The development of biotechnology must take place in a way that reassures the public. This requires that ethical and legal aspects are systematically assessed and reviewed through independent research in close dialogue with the biotechnological researchers and relating to the actual research”* (Forskningsministeriet, 1998). Despite these intentions, the national strategy did not point to how this closer link between assessment and biotechnological research should be put into praxis. Some suggestions were, however, present in some of the research programmes in the period after 1996.

First of all the programmes took up the heavy focus on basic and applied research but they also suggested new organizations of the assessment activities. Within the programme National Staking on Biotechnology running from 1999 until 2002, priority was given to “... interdisciplinary research, as far as possible based on collaboration with biotechnological research groups. The main aim of the activities is to produce knowledge and results that

are to the benefit of public authorities and business activities within the biotechnological area" (Forskningsstyrelsen, 1998). Similar lines were laid out in the call from the Ministry for Food, Agriculture and Fisheries for application in the programme "Biotechnology in Food Research". Here it was stressed that the part of the programme supporting research into the attitudes and assumptions of consumers, should establish a dialogue to the biotechnological research projects supported under the programme (Ministry of Food, Agriculture and Fisheries op cit, 1997).

Partly based on the funds from these latter programmes, a research Centre for Biotechnology and Risk Assessment (CeBRA) was established. CeBRA was launched in 2000 to perform research into two biotechnological areas: genetically modified crops and genetically modified research animals (See: <http://www.bioethics.kvl.dk/eindex.htm>).

For the first time research into biotechnology as well as public perceptions and ethics taking place at seven major Danish research institutions were joined in the same research center. Apart from issuing a newsletter ("Gene-ethics in Praxis") and arranging joint workshops for the involved projects, it is required that a third of the scientific articles from each project are result of interdisciplinary research. The will to go beyond the biotechnological research was further demonstrated as the institutions behind the center after the end of the ministry funds decided to support the center for another five years.

The relation between the biological scientists and the public constitutes a serious problem for this and other activities to move the biotechnological research in a more accountable direction. Recent research has thus demonstrated that there is a significant skepticism towards the biotechnological scientific community.

Research Report 3 2004

In a survey in 1996, 71% of the asked Danes tended to agree in the following statement: "irrespective of the regulation, biotechnologists will do whatever they like" (John Durant et al., eds, *Biotechnology in the public sphere*, Science Museum, London 1998, p.261). A reasonable hypothesis is that this extremely low level of accountability partly can be explained by the unwillingness to let social science or humanities seriously influence the biotechnological research agenda.

The civic arena: nongovernmental organizations

As in most other industrialized countries significant segments of the Danish public, in the course of the 1960s and 1970s, expressed concern over the dominant forms of technological development and their environmental "side effects". In the 1970s, this was primarily related to the development of nuclear technology and the pollution and waste problems associated with industrial production and agriculture (Jamison, 1990).

As a result, a number of new environmental organizations came to be established in Denmark, and by the 1980s, some of them started to interest themselves in genetic technology. As mentioned earlier, it was critical scientists who first drew attention to the potential risks and benefits of biotechnology. An actual debate did not develop until 1984, when Novo and Nordisk Gentofte announced plans to develop gene technology in pharmaceutical production.

As described in the previous sections this awakened a public debate and concern over pharmaceutical applications but later also GM foods. Together with the ongoing preparation of the regulation of gene technology, this

opened the way for the development of organized critique in the NGOs.

In the following years NOAH became the most important environmental movement organization attempting to represent the concerns of the public. NOAH played throughout the 1980s a role as public watchdog, critically partaking in the policy processes in relation to both the development of a national legislative structure, the EU regulation and the first applications for industrial production and deliberate release.

With its decentralized structure and focus on “counter-expertise” NOAH can be described as a mild form of participatory protest organization (Diani, 1999).

As such NOAHs activities in relation to gene technology in the following years included participation in the political process in relation to the setting up of the regulatory framework and the applications for deliberate release of sugar beets.

Although many proponents of gene technology were critical of NOAH in these years, the form of action was by no means radical in the sense that they broke, or violated any laws. NOAH saw it as its most important task to inform the public about these new technologies – and indeed did so by arranging and participating in many public meetings and continuous publication of books and articles (Halkier, 1984, Toft, 1985).

During the 1980s NOAH enjoyed a virtual monopoly, when it comes to an organized critique of biotechnology. None of the other “new social movement” organizations dealing with consumer, environmental, third world or other issues where the question of gene technology was potentially important, were particular active - and most (if not all) had no policy about gene technology policy at all. In

terms of accountability, NOAH played thus an important role in these first years of the controversy.

Firstly NOAH came to be a force stimulating a continuous public debate over gene technology – in writings and through practical action NOAH constituted one of the actor groups demanding accountability beyond the economical and technical usefulness of GM foods as of other applications of gene technology.

Secondly NOAH came to be the critical voice - invited or not - participating in the gene-political processes. As such NOAH was the de facto representative of the public in the political processes – this does not necessarily mean that NOAH represented the public concern, but rather that since there were no other organized forms of representation, NOAH was the one involved.

Thirdly these roles, together with NOAH's educational strategy also gave them a role in the development of the critique of GM foods in the general public. Not that they alone set the agenda and provided information, but NOAH's monopoly gave them some impact on what was needed of the political process to make GM foods public accountable.

From the start NOAH, first of all having an identity as an environmental – and to some extent a consumer - movement, were most active and visible in relation to risk related concerns.

They did, however, also raise concerns outside risks to environment and health and translated e.g. a book dealing with GM foods in a third world perspective, presenting GM foods as a new green revolution (Hobelink, 1988) and co-organized a conference on gene technology and intellectual property (ICDA Seeds Campaign, 1989).

Although NOAH in this way also voiced the economic critique and some of its aspects of power, justice and exploitation they never had the success to move the core of the public debate in the media and political processes away from the heavy focus on risks clearly dominating the 1980s.

As the EU regulation is set up in 1990-91 and implemented in the Danish regulation NOAHs disappeared slowly from the public arena, coinciding with a general decline in level of controversy over gene technology in the first half of the 1990s. This left open a space for other NGOs, first of all *Greenpeace* (established in Denmark in 1982) and to some extent *Forbrugerrådet* (The Consumers Association, FR) and *Naturfredningsforeningen* (the Society for the Conservation of Nature, DN).

Despite this, it was not before 1996/97 following the soya landings and the birth of Dolly, that NGOs were visible on the GM food arenas again. After the reopening of the controversy, a number of organizations joined Greenpeace, FR and DN in taking over after NOAH who now slowly also was building up again. Most of these new organizations were small single-issue organizations devoting their energy combating gene technology.

They included e.g. *Oplysning om Genteknologi* (Information about Gene technology, OOG) and *Organisationen mod gensplejsede fødevarer* (the Organization Against GM foods, OGF). Typically disappearing after a short period of activity, or to the extent they existed over longer timer, virtually without any impact on debate or politics.

Among the new organizations was however one, *Danmarks Aktive Forbrugere* (Active Consumers in Denmark, DAF) which proved to be viable and has together with Green-

peace been among the most influential and visible NGOs in the area in the years since 1996.

In an analysis of public accountability, it is however interesting to notice that while the political interpretation of the pressure for accountability moves towards ethical issues (see previous section on the development of an ethical discourse in the political process), these dominant NGOs maintained the risk focus of the 1980s. DAF as well as Greenpeace have identities as environmental NGOs and as such they both place their central focus on the environmental risks.

At first sight this looks like a sort of tacit division of labor among the NGOs. Environmental NGOs like Greenpeace and DAF concentrate on environmental issues, and leave other issues to other organizations, who has this aspects within their resorts. A closer look at the NGO landscape and activities demonstrates, however, a rather patchy division of labor.

The dimensions that have been referred to as the discourses of economic concern and cultural concern, supplementing the concerns about the risks, are not fully covered by the presently active NGOs (Jesper Lassen & Andrew Jamison, "Genetic technologies meet the public. Discourses of concern", forthcoming in *Science Technology and Human Values*).

The economic concerns dealing with issues of profitability and production and raising concerns like economic costs/benefits, power and responsibility is covered by a number of organizations. Exploitation of poorer developing countries is e.g. an issue taken up by the development organization *Mellemfolkeligt Samvirke* (MS) who tend to dominate the GM food issues this respect. Wider consumer issues like concerns about consumers' right to

choose on a free market or impacts on food prices that are typically issues dealt with by the traditional consumers' organizations.

What might be termed the discourse of cultural concern, that covers religious and moral aspects raising concerns over e.g. ethics or rights, is poorly covered by NGOs. In a round of interviews with some of the most visible NGO in 2000, none of these took up the issues of naturalness of GM plants or animals. Similarly the dominant animal welfare NGO, *Foreningen til Dyrenes Beskyttelse* (the Society for the Protection of Animals, DB) has been strikingly silent in relation to GM foods.

As a result of this utilitarian approach where usefulness is measured against suffering, animal integrity of trespassing limits to nature seemingly does not play any particular role.

The overall picture is that Danish NGOs activity in relation to GM foods focus on risks and economic concerns, whereas the cultural concerns seem to have been left out. Different circumstances may explain this situation.

Firstly it has been of importance that all powerful GM-food related NGOs have had their core identity as environmental, consumer or other movements dealing with specific issues. As a consequence of this NGO landscape, no strong single issue NGO working with GM foods and who potentially could take up all three discourses of concern has existed. Instead GM food aspect has been taken up as a side concern to the extent it is included in the interests of the NGO.

Secondly, there is no tradition for taking up such cultural concerns by the movements carrying the critique of food production and techno-science in general, rather the focus is on risks and economics. In relation to the cultural concerns related to nature and unnaturalness this is partly a result of the almost to-

tal absent deep-ecology movement in Denmark. On the other hand it is also an expression of the rather secular traditions in Denmark, where the church and its organizations in the latter half of the 20th century, not organized in a synodic structure, have not involved themselves in political matters – hence the a potential religiously rooted critique has also had poor conditions.

Since 1996 we have therefore had the peculiar situation in Denmark, that although there has been a political openness to ethical concerns in the political process, this has only been partly been filled out by NGOs. To the extent the parliament and public authorities are not able to make GM foods accountable in the cultural sense by themselves, the fact that there is no organized expression of this discourse, may eventually result in another reduction of the interpretation of the public concern and thus failure to make biotechnology publicly accountable. At the core of this problem is the fact that most NGOs active in the area have reached a state in their development, where they have detached themselves from their original roots in the public, and live a life of their own, where they do not necessarily need to account for their actions and views to the public.

References

Andersen, Svend, Jørgen Husted & Viggo Mortensen, *Bioteknologi og etik i den offentlige debat - i USA, Tyskland og England*, Teknologinævnets Rapporter 1992/2, Teknologinævnet, 1992.

Arbejdsministeriet, *Bekendtgørelse om genteknologi og arbejdsmiljø*, 1987.

BioTIK-gruppen, *De genteknologiske valg*, Erhvervsministeriet, 1997.

The Danish Ministry of Trade and Industry, *The Danish government statement on ethics and genetic engineering*, The Danish Ministry of Trade and Industry, 2000.

Diani, Mario & Paolo Donati, "Organisational change in Western European environmental groups: A framework for analysis, in: *Environmental Politics* vol.8(1), 1999, pp. 3-34.

Durant, John, Martin W. Bauer & George Gaskell, (eds), *Biotechnology in the public sphere*, Science Museum, 1998.

Fink, Kirsten & Ole Terney, *Sådan reguleres genteknologi. Praksis og erfaringer*, Foreningen af Bioteknologiske Industrier i Danmark, 1988.

Folketinget, *Forespørgsel nr. F13*, 6. December 1994.

Folketinget, *Forespørgsel nr. F18*, 4. February 1986.

Folketinget, *Forespørgsel nr. F25*, 12. December 1986.

Folketinget, *Forespørgsel nr. F64*, 22-23. May 1997.

Forskningsministeriet, *National delstrategi for bioteknologisk forskning*, Forskningsministeriet, 1998.

Forskningsrådernes Udvalg Vdr. Bioteknologi, *Det nye program for bioteknologisk forskning og udvikling* (opslag), 1990.

Forskningsrådene, *Det bioteknologiske forsknings- og udviklingsprogram 1991-1995*, 1992.

Forskningsstyrelsen, *Støtte til bioteknologisk forskning*. www.forskraad.dk, (assessed 18. dec. 1998), 1998.

Det Genteknologiske Råd, *Årsberetning 1987*, Forskningsdirektoratet, 1988.

Henrik Halkier, *Gensplejsning – Genistreger eller streger i regningen*, NOAHs Forlag, Aarhus, 1984.

Hobbelink, Henk, *Genteknologi: nyt håb eller falske løfter? Bioteknologi og den tredje verdens landbrug*, NOAHs forlag, København, 1988.

ICDA Seeds Campaign, *Patenting life forms in Europe – Proceedings*, Barcelona, 1989.

Indenrigsministeriet, *Bioteknologi – behov og muligheder*. Arbejdsnotat nr. 4. København, 1985.

Indenrigsministeriet, *Lov om oprettelse af et etisk råd og regulering af visse biomedicinske forsøg*, Lov nr. 353, 1987.

Indenrigsministeriets Gensplejsningsudvalg, *Genteknologi & sikkerhed*, Betænkning nr. 1043, Indenrigsministeriet, 1985.

Indenrigsministeriets Udvalg om Ethiske Problemer ved Ægtransplantation, Kunstig Befrugtning og Fosterdiagnostik, *Fremskridtets pris*, Indenrigsministeriet, 1984.

Institut for Konjunkturanalyse, *Danskernes syn på bioteknologi. En analyse af det holdningsmæssige landskab over for bioteknologi*, Nyhedsmagasinet *Ingeniøren*, 2000.

Jamison, Andrew and Erik Baark, *Modes of Biotechnology Assessment in the USA, Japan and Denmark*, in: *Technology Analysis and Strategic Management*, 1990 no.2.

Jamison, Andrew, Ron Eyerman, Jacqueline Cramer & Jeppe Læssøe, *The making of the new environmental consciousness. A comparative study of the environmental move-*

ments in Sweden, Denmark and the Netherlands, Edinburgh University Press, Edinburgh, 1990.

Jelsøe, Erling, Jesper Lassen, Arne T. Mortensen & Mercy Wambui, Denmark in: John Durant et al., eds, *Biotechnology in the Public Sphere*, Science Museum, London, 1998.

Justitsministeriet, Dyreværnslov, Lov nr. 386 af 6. juni 1991.

Kiel, Pauli et al., *Interviews med eksperter og repræsentanter for interessegrupper indenfor bioteknologiområdet.*, 2. del, Projekt Pegasus Rapport nr. 5, Danmarks Tekniske Højskole, 1984.

Kvistgaard, Morten, *Impact of regulation on the development of biotechnology*, Environmental Project No. 322, Ministry of Environment and Energy, 1996.

Lassen, Jesper & Andrew Jamison, Genetic technologies meet the public. Discourses of concern, forthcoming in *Science Technology and Human Values*.

Lassen, Jesper, Agnes Allansdottir, Miltos Liakopoulous, Arne T. Mortensen & Anna Olofsson, Testing times – the reception of Roundup Ready soya in Europe, in: Bauer & Gaskell, eds, *Biotechnology. The Making of a Global Controversy*, Cambridge University Press, Cambridge, pp.279-312.

Lassen, Jesper, Changing modes of biotechnology assessment in Denmark, in Miettinen, ed, *Biotechnology and public understanding of science*, Publications of the Academy of Finland 3/1999, Edita, Helsinki, 1999, pp. 82-90.

Meyer, Gitte & Sandøe, Peter *Oplysning og dialog om bioteknologi i forhold til planter*,

Projektrapport nr. 1, Center for Bioetik og Risikovurdering, 2001.

Miljøministeriet, *Lov om miljø og genteknologi*, Lov nr. 288, 1986.

Miljøministeriet, *Bekendtgørelse om visse listevirksomheders pligt til at udarbejde grønt regnskab*, BEK nr. 594, København, 2002a.

Miljøministeriet, *Bekendtgørelse om lov om miljø og genteknologi*, LBK 981, København, 2002b.

Ministry of Food, Agriculture and Fisheries, *Biotechnology in Food Research. Invitation of project applications*, 1997.

The Novo Group, *Charter for companies in the Novo Group*, (no year).

Novozymes, *The Novozyme report (Account and data)*, <http://www.novozymes.com/cgi-bin/bvisapi.dll/ar2002/download.jsp>, (Assessed 27. February 2003), 2003.

Rasmussen, Finn D., *Bioteknologi: Temarapport om det bioteknologiske uddannelsesprogram*, COS Forskningsrapport nr.4, Handelshøjskolen i København, 1990.

Rendtorff, Jacob D. & Peter Kemp, *Basic ethical principles in European bioethics and biolaw. Vol.1: Autonomy, dignity, integrity and vulnerability*, 2000. pp.161-70.

Stær, Kirsten, Personal interview with Kirsten Stær, Novozymes, 7th February 2003.

Teknologinævnet, *Teknologiske dyr. Indgreb i kønsceller på højerestående dyr*. Teknologinævnets rapporter 1993/1, København, 1993.

Terney, Ole, *Debatten om gensplejsning*, Bio-Nyt Forlag, 1986.

Toft, Jesper, *Kampen om generne*, NOAHs Forlag, 1985.

Toft, Jesper, *Genteknologi – konsekvenser for miljøet ved anvendelse af gensplejsede mikroorganismer*, NOAHs Forlag, Aarhus, 1985.

Udvalget Vedrørende Bioteknologi, *Det bioteknologiske forsknings- og udviklingsprogram 1991-1995*, Forskningsrådene, 1992.

Undervisningsministeren, *Forlag til folketingsbeslutning om iværksættelse af et bioteknologisk forsknings- og udviklingsprogram*, Beslutningsforslag B44, Undervisningsministeriet, 1986.

Major research activities addressing new biotechnologies in Denmark since 1980			
Period	Programme	Focus	Budget mill DKK
1981-5	The Technology Council (Ministry of Industry) appoints gene technology as a target area. (1)	Biotechnology: To promote gene technology in the interests of Danish Business and society. Technology assessment, ethics and information: Support of technology assessment.	10
1984-88	The Ministry of Education's Programme for advancement of research into biomolecular techniques. (2)	Biotechnology: To strengthen basic research at universities within biomolecular techniques and to improve the training of researchers. Technology assessment, ethics and information: To build up public expertise in assessments of safety issues related to applications of biotechnology by private enterprises.	33
1986-87	The Technology Council's Action plan for gene technology. (2)	Biotechnology: To support research institutions and private enterprises in promising activities within micro-organisms, enzyme and protein technology. Technology assessment, ethics and information: To support research into safety aspects of contained use of gene technology.	5
1985-89	The Ministry of Agriculture's Biotechnological Research Programme. (2)	Biotechnology: To establish biotechnological expertise at specific public research institutions and universities. This includes development and use of specific genetic techniques in relation to husbandry, plant breeding, food production and new uses of bio-mass. Technology assessment, ethics and information: None	27
1987-90	The Biotechnological educational programme. (3)	Biotechnology: To prepare educational institutions to match the coming demand for biotechnological skills and increase the production of biotechnological PhD candidates. Technology assessment, ethics and information: None	70
1987-90	The Biotechnological research and development programme 1987-1990. (4)	Biotechnology: To support research centers promoting basic and applied research into biotechnology enabling Danish research, business and educational systems to utilize biotechnology in the areas of biotechnological methods, fermentation technology, plants, animals, aquatic organisms, food production environment and the prevention and control of diseases. Furthermore a main target was to trigger research in the private sector. Technology assessment, ethics and information: To increase knowledge about benefits and risks by supporting technology assessment activities. To inform the public about benefits and drawbacks of different applications of biotechnology.	500
1991-93	The biotechnological Research and Development Programme 1991-1995. (5)	Biotechnology: To continue the technical research from the first programme and improve the industrial utilization of the results. To establish biotechnological research centers on plants, the human genome, protein engineering, medicals, farm animals/fish, processes, peptides and ecology. Technology assessment, ethics and information: To support research into projects aiming at assessing impacts of biotechnology on society, technological development, nature and the individual. To support the dissemination of research results to the general public.	456
1994-98	Follow-up on the biotechnological research programmes	Biotechnology: Continued support of the established centers Technology assessment, ethics and information: None	50-70 per annum
1998-03	Ministry of food, Agriculture and Fisheries programme "Biotechnology in Food Research". (6)	Biotechnology: Strengthen the use of molecular and cell biological methods in food research. To produce food of high quality. Develop and implement the second-generation molecular biology in public and educational institutions. Technology assessment, ethics and information: "To elucidate people's attitudes and ethical questions regarding the development and use of biotechnology in the food area". To establish a dialogue the natural scientific research projects and the results of the results from the research into attitudes and ethical problems.	63
1999-01	Ministry of research. Funds for building up centers competence. (6)	Biotechnology: To establish centres structured around expensive research instruments for shared use. Technology assessment, ethics and information: None	150
1999-02	National Support for Biotechnology. (7)	Biotechnology: To support younger post doc researches within the biotechnological area. Technology assessment, ethics and information: To support the establishment of interdisciplinary research within centres addressing ethical and legal aspects of biotechnology.	55

Figure 1: Major biotechnological research activities in Denmark

Notes:

1. Indenrigsministeriets Gensplejningsudvalg, Genteknologi og sikkerhed, Betænkning nr. 1043. København, 1985, p.61.
2. Indenrigsministeriet, Bioteknologi – behov og muligheder, Arbejdsnotat nr. 4. København, 1985.
3. Finn D. Rasmussen, Bioteknologi: Temaraport om det bioteknologiske uddannelsesprogram, COS Forskningsrapport nr. 4, Handelshøjskolen i København, 1990.
4. Undervisningsministeren, Forslag til folketingsbeslutning om iværksættelse af et bioteknologisk forsknings- og udviklingsprogram, Beslutningsforslag B44, Undervisningsministeriet, 1986.
5. Forskningsrådene, Det bioteknologiske forsknings- og udviklingsprogram 1991-1995, 1992 and: Forskningsrådenes Udvalg Vedr. Bioteknologi, Det nye program for bioteknologisk forskning og udvikling (opslag), 1990.
6. Ministry of Food, Agriculture and Fisheries programme, Biotechnology in Food Research. Invitation of project applications, 1997.
7. Forskningsstyrelsen, Støtte til bioteknologisk forskning, (www.forskraad.dk), 1998.

Regional/local transport policy: the Ørestad/Metro project

By Karsten Bruun Hansen and
Andrew Jamison

Summary

The case study deals with the development of the Metro light-train project in Copenhagen and of the new city area, Ørestad, that is to be serviced by the train. The project is described as an example of a new approach to urban planning, and an illustration of Danish consensus politics in action.

The study relates the historical development of the project, how the plans were made in the late 1980s, and briefly traces the process of implementation in the 1990s, focusing on conservation issues that emerged, as well as the choice of technology for the Metro system.

A number of issues related to public accountability are then discussed in more detail. In particular, questions of openness, consultation, and cost-accounting are taken up. The treatment of the project in the media is also briefly analyzed.

The case is an all too typical example of inadequate procedures of public accountability in relation to large infrastructure projects. Lack of openness and involvement of relevant stakeholders in the decision-making and implementation process are striking features of the case.

Introductory background

The Ørestad/Metro project is an example of a new approach to urban planning that has become popular throughout Europe over the past two decades, according to which cities are seen as sites of "strategic growth". According to this perspective, cities and infrastructural developments are to be seen as "motors" or driving forces for economic growth and commercial competitiveness, and public policy thus becomes primarily a matter of managing this growth potential by using techniques and procedures that are derived from the business world. Public administration becomes a form of corporate activity.

New regional accumulation, or strategic growth, strategies have come to be seen by many local politicians and public officials as providing the basis for urban renewal and revitalization in cities that have lost much of their industrial base and industrial workplaces. Urban Development Programmes (UDP), such as the one that was devised for the Copenhagen region, became important instruments of public policy. UDPs involve so-called public-private partnership (PPP) rather than traditional forms of decision-making: multilevel governance rather than top-down government.

In Denmark, these ideas came to be influential in policy circles in the course of the 1980s, particularly within a political "growth coalition" which consisted of leading representatives from the Social Democratic, Conservative and Liberal Parties, the largest parties in the Parliament, together representing

some 70-75 percent of the electorate. As part of what we have previously termed a consensual regime of public accountability procedures, plans for the strategic growth of the Copenhagen area were formulated by means of a negotiation process among leading politicians and officials from these three parties.

Those plans included the bridge across the Øresund between Sweden and Denmark, a new urban area to be located near the Copenhagen airport and what would be the bridgehead to Sweden – the so-called Ørestad on the island of Amager – and a light rail connection, the Metro, linking Ørestad to the city center. In this case study we recount the history and discuss issues of public accountability associated with the Ørestad/Metro project.

Urban planning in Denmark had previously, in the 1950s and 1960s - the era of the postwar welfare state - been characterized by functionalism and "goal rationality": cities were administered and projects planned in such a way that they could serve and contribute to the general public welfare. The Danish planning system was hierarchical, which meant that municipal planning was under the jurisdiction of regional planning authorities and, most especially, subject to decisions taken in the national parliament.

With the coming to power of the Conservative/Liberal Government in 1982, and the new doctrines of strategic urban growth, the planning system changed character. What had previously been based on bureaucratic forms of administration, with formalized procedures of accountability, was changed to a more fluid form of administration with more informal procedures of accountability.

The shift can be characterized in terms of a general weakening of the exercise of "government", which involves a relatively cen-

tralized political decision-making structure and a legally separate sphere of public administration. The more fluid system of planning can instead be seen as part of a more general shift toward the strengthening of a more multifarious realm of "governance", by which public authorities are accountable to different networks and "stakeholders", and, in particular, by which public officials often conduct their activities in close relation to business, without clearly delineated hierarchies.

In theory, this shift has been conceptualized as the shift from one or another form of industrial, or modern society to something else: risk society (Beck), knowledge society (Stehr), network society (Castells).

Whatever it is called in theory, there can be no doubt that in practice, the boundaries between public and private, between politics and administration, have tended to diminish and become increasingly blurred in relation to "mega projects" such as the Metro/Ørestad (Flyvbjerg, 2003). Instead, multilevel governance and public-private partnerships gain importance in this new approach to planning.

The decision-making process

The specific motivation for the Metro/Ørestad project was the need to revitalize the economy of the Danish capital city. Like many comparable cities around Europe and North America, Copenhagen experienced a loss of much of its industrial base during the 1970s and 1980s: some 50,000 industrial workplaces had disappeared. When the Parliament in 1988 decided to move the Holmen naval base from Copenhagen to Jutland, the politicians realised that something needed to be done to generate new growth in the Capital.

The Liberal Party, which primarily represented Jutland farmers, was eager to move public institutions (such as the naval base), away from the capital to the provinces (Interview with David Rehling).

To achieve support for their plans, the liberals needed to give something back to the city, and, in particular, the parties that represented the urban political culture – the conservatives and Social Democrats (In the initial profile, we refer to the fact that Denmark is divided into two political cultures, based in the cities and the countryside, respectively, which provide the historical basis for the consolidation of a consensual regime in decision-making in the period after the second world war, which has strongly influenced public accountability procedures).

It was the Social Democrats, in opposition at the time, that presented the contours of a compromise plan in the spring of 1989. Only one month later the conservative prime minister presented his own plan for “Growth and Progress”, which, somewhat immodestly, was called by the Government, “the Plan of the Century.” Both the Social Democrats and the Conservatives seemed to agree that something needed to be done for the capital, and so a committee was formed in order to come up with some proposals.

Infrastructure was given high priority in the subsequent report (the Stallknecht Report), submitted in November 1989, and the construction of a bridge to Sweden was seen as especially important. The conservative prime minister Poul Schlüter was supportive of the committee’s idea about a “Nordic Growth Centre” around the Øresund strait.

The Øresund region (including Copenhagen, Malmö and Lund) was seen to have a great growth potential, due to a highly skilled labour force, a comparatively clean environment,

several universities on both sides of the strait, lots of land for shopping malls, hotels and sports facilities, and an extensive and sophisticated infrastructure, especially in terms of communication and information technology facilities.

The Stallknecht Report called also for a new administrative structure in the capital region, which was necessary since the parliament had decided to close down the Greater Copenhagen Council (*Hovedstadsrådet*, HR), which was a representative body with members from different county and municipal authorities. This meant that there was no longer a central authority that had overall planning responsibility in the region. A major parliamentary debate in March 1990 highlighted the capital’s problems.

Both the conservatives and the Social Democrats stressed the need for growth and development in Copenhagen, very much in line with the Stallknecht Report. Hence first priority was to be given to a fixed connection from Zealand to Sweden. To deal with the regional policy and development the prime minister set up “The Capital Development Council” (*Hovedstadens Udviklingsråd*, HUR) as a kind of development company run by national politicians (Hansen, 1992, Abild, 2002).

The municipality of Copenhagen was not eager to take part in the development company’s work, however, perhaps because there was another committee in operation, the Würtzen committee, which was to propose measures for dealing with traffic problems in the capital region.

However, and perhaps because of the failure of the political development company, a small group within the Würtzen committee decided for themselves, after the parliamentary debate in March 1990, that the questions of

growth, development and innovation, should be integrated with the committee's traffic issues. They formed a partnership of three and constructed the Ørestad/Metro project.

The three, who would become the project secretariat, were Anne-Grethe Foss, head of the planning department in the Danish State Railways (DSB), Dan Christensen, architect in the municipality of Copenhagen and Erik Jacobsen, head of the department in the Ministry of Finance.

They suggested that the money needed for traffic investments could be raised from the sale of land in the area near the bridge if the new area in Copenhagen had high-quality infrastructure (light-rail). The land would be attractive due to a light rail connection (later: the Metro). The Ørestad was to be built on Amager, an island in the southern part of Copenhagen, close to the airport, the bridge and not far from the inner city.

There were some problems with their idea. For one thing, much of the area had the status of a nature reserve, and the Ørestad would also be in violation of the regional development plan, which had not proposed a new urban district in the area. But these were to be only minor problems, due to the fact that the Copenhagen municipality approved of the idea – and because of the elimination of HR, the municipal government became the responsible authority.

The secretariat constructed this win-win project, the Ørestad. If you could supply West Amager with sufficient quality communications, i.e. a high technological Metro, you would be able to sell the land at exorbitant prices (Interview with Ulrik Dahlin).

The official launching of the Ørestad project was the Würtzen committee report, published in March 1991. It was a popular proposal for

city officials, who could neither raise funds for traffic or for strategic growth. As one city official put it,

There's nothing wrong with the organisation and financing model for the Ørestad. Now we have the Metro that we have needed for so many years, and without cutting in the public service (Interview with Eskild Tuesen).

Later it was realised that the Ørestad plan was similar to a much earlier project idea about the future of West Amager from 1965. That project had been conceived by architect Knud E. Rasmussen, since 1987 head of the planning office in the Copenhagen municipal government.

In 1965 K.E. Rasmussen believed in a growth centre in Copenhagen, and in his opinion Copenhagen should compete with other cities like Göteborg, Hamburg and Stockholm. In the early 1960s many town planners saw the Øresund region as a potential Nordic Growth Centre. The Ørestad Plan, as proposed in the Würtzen committee, was, according to architect Arne Gaardmand, more or less a copy of the 1965 plan, which is not so surprising since Christensen had worked many years for Rasmussen (Interview with Arne Gaardmand).

Mayors of Copenhagen have had strong feelings about West Amager, ever since the land was reclaimed from the sea in the 1930s. The present mayor, Jens Kramer Mikkelsen (S) was also keen to the Ørestad idea, which was said to be tax neutral and bring new prosperity to the Copenhagen area. The same feelings were shared by the prime minister and the parliamentary opposition, led by the Social Democratic Party leader Svend Auken.

Anne-Grethe Foss chose to keep the plan secret, because of the County's Social Democrats (...). She gets the Minister of Finance,

Henning Dyremose and Poul Nyrop Rasmussen [the future Social Democratic prime minister] to make a political agreement, by which the technical aspects of the bridge – 4 track highway and two track railway – are settled. From this point nothing can be changed. When the political deal is made, it's beyond the point of no return (Interview with Per Henriksen).

The Ørestad/Metro plans were disclosed in the newspaper *Politiken* in February 1991, one month before the report was supposed to be published. When the report was published the public learned that the other committee members were also not aware of the Ørestad plan. Only the three members of the secretariat knew about the plans. The Minister of Finance, Henning Dyremose, soon became a spokesman and promoter for the Ørestad plan together with the mayor in Copenhagen, Kramer Mikkelsen.

Those who speak in favour of a bridge refer to the Ørestad, and those who are positive to the Ørestad plan refer to the bridge. There have all the time been these peculiar explanations, which kept an opposition from taking shape (Interview with Knud Vilby).

The report was published in March 1991 with two minority statements, in which members from the City Government expressed their unwillingness to take responsibility for the Ørestad plan. They claimed that it had first been informed by the media, and by the secretariat only four weeks before publication. Two days later the prime minister published an article in the daily newspaper, *Politiken*, in which he proclaimed that "It's now time to act, Copenhagen" (Schlüter, 1991).

Less than two months later, in May 1991 the a Bill on on the Ørestad was introduced to the Parliament, which according to the city's former planning chief, Arne

Gaardmand, violated then current planning procedures. According to Gaardmand there was no provision for public hearings, so that public opinion could be heard, as was required. And there were also no alternatives presented for consideration, something that was also stipulated in the planning laws. Other planners, both academic and practical, criticized the fact that there had been no public debate in the media, or any attempt to solicit expert opinion. Among other critics at the time was the Danish Society of Architects, which published a highly critical report (Danske Arkitekters Landsforbund, 1991).

Everything had been decided in advance (...) Both bridges [across the Great Belt and across the Øresund] and the Ørestad were decided upon behind closed doors. There were no real public hearings, debate or alternatives. These plans were drawn up by less than 10 leading bureaucrats and politicians from both sides in the parliament. There was never openness and transparency in their analyses, reports and explanations, for example why they chose a Metro. All the resolutions about debate and public hearing periods in the Planning Act, were never maintained, even though the [Social Democratic] Minister of Finance [in the 1990s] Mogens Lykketoft and other top politicians claimed that it was the most democratic decision ever made about a big project, because nothing is more democratic than Parliament.

My argument against this was that the Planning Act also applies in big infrastructure projects. The Ørestad is not a single example. There are lots of other projects undertaken in the 1980s and 1990s (...) where you can see the same pattern. I think the politicians don't want the quarrels with the citizens, and in-

stead they let the professionals and entrepreneurs take over; these things are seen to be much too complicated for ordinary human beings (Interview with Arne Gaardmand).

The Ørestad Law was passed in June 1992. In the first proposal the fixed connection to Sweden was combined with the Ørestad project, but some of the Social Democratic Members of Parliament were not convinced about the projects – especially not the Ørestad project. The Liberal Party – in government together with the Conservatives - was unwilling to allocate new economic resources to the troubled and debt burdened Social Democratic led Copenhagen City Government. The secretariat in the Würtzen Committee had offered a win-win solution that would redevelop Copenhagen without direct costs for the state. The Ørestad Development Company (ØDC) could sell the land at market prices. The revenues from the sale of attractive land in the Ørestad, due to highly developed infrastructure - comprising a light-rail system - would be used to build the light-rail trail. Later on, the revenues from the light-rail could pay back the credits.

The crucial commitment from the Social Democrats for the Law was first ensured at the last moment. In April 1992 Svend Auken was deposed as party leader by right wing members in the party, with vice-chairman Poul Nyrup Rasmussen becoming the new leader. Many members, especially in the Copenhagen region, were sceptical to the new party leader and also sceptical to the Ørestad plan, while the mayor who had supported Auken, was, as we have seen, quite interested in the Ørestad.

When the mayor, Kramer Mikkelsen for the first time met the new chairman, he told the three leading Social Democrats present that the city needed money, that unemployment was high and that something needed to be

done. He forcefully argued that the Ørestad plan be put into action. Hence Poul Nyrup committed himself to the plans about establishing a common Ørestad Development Company (ØDC) between the state and the municipal governments. The mayor remembers in a newspaper article in 2002 this special evening where the six persons afterwards went out to celebrate:

This is so big ... This is going to be the kick that sends Copenhagen into the future ... This decision is in a category of its own - at a level where history is written (Fall Nielsen, 2002).

As the Amager resident and future Social Democratic Minister of the interior, Karen Jespersen said:

The government [Conservatives and Liberals] got the Ørestad and we got the collective transportation [the Metro] (Abild, 2002).

The Copenhagen City Government (owners of 55 per cent of the company) and the Danish state (45 per cent) set up the Ørestad Development Cooperation (ØDC) in March 1993. The company was founded on the law from June 1992, where the Social Democratic, Liberal and Conservative parties voted for the proposal in a left-right coalition that was opposed by some of the smaller parties, such as the Christian Democrats and the socialists.

The economy in stage one was (in 2001 prices) 6.3 billion DKK (10.8 billion for all three stages). The ØDC finance stage one, and the pay back time was estimated to 25 – 30 years.

The two main tasks for the ØDC were:

- To develop and build the Ørestad, a new part of Copenhagen, on land on Amager
- To build and operate a new light-rail system in Copenhagen

The rail system should be built in three stages. This case study is only concerned with the first stage, the rail system from Nørreport in the middle of Copenhagen to the Ørestad (South western part of Amager) and to a station in the Northeastern part of Amager (Lergravsparken). Stage 1 was officially opened in October 2002 two years behind schedule.

The Board of Directors in the ØDC has 6 members; 3 selected by the Ministry of Traffic and 3 from the Copenhagen City Government. The ØDC should sell 75.000 square metres a year to investors, and the infrastructure investments would require an initial outlet of some 4 billions DKK.

The implementation process

The tragedy of the commons

One problem related to public accountability that emerged in relation to the implementation of the project concerned a piece of land that had interest for conservationists. The Danish Society for the Conservation of Nature (*Danmarks Naturfredningsforening*: DN) and the Copenhagen City Council in 1987 had made an agreement about the preservation of Amager Commons, (Amager Fælled), an area of West Amager where a part of the Ørestad was to be built. DN had up till 1987 tried to get Amager Commons (Amager Fælled) included in the general nature preservation regulations, but the authorities claimed that it would be difficult.

They said that they would of course not cheat; if we do we'll damage the reputation of the Planning Act as a steering instrument (Interview with David Rehling).

DN believed in the authorities' guarantees, printed in the Regional Plan of 1989, that Amager Commons was to be characterized as an area for park and recreation use with conservation to sustain lake- and marshland areas. DN perceived it as a de facto preservation. However, as David Rehling, former director, recounted for us in an interview, other civil servants from the City Government and the state were in the Würtzen Committee, at the same time planning to build on West Amager.

He was contacted in February 1991 and told about the secret Ørestad plan from a highly-placed friend in the central administration. Rehling called the journalists who had followed the case, and they checked with their unofficial sources in the parliament and the government, but nobody had heard anything. Only one journalist accepted to cover the story, in the newspaper *Politiken*. After one month, where the Minister of Finance, Henning Dyremose in a television programme, together with Rehling, denied that the authorities planned to build on Amager, DN wrote a letter to the prime minister:

In the eighty-year history of DN, we have never before experienced such broken promises. It is not acceptable to nature or to the Danish population. In a speech the other day the Prime Minister said that; "The democracy will die in lack of confidence, if there's no harmony between the decision-makers on one side and the populations' attitudes on the other". In DN we find it difficult to believe that the authorities actually will break such a promise (The letter was given to us during the interview with David Rehling).

The prime minister wrote back a few days later telling that: "he had first read about the plans in the newspaper".

After this DN, and other non-governmental organizations, made a formal complaint about the conservation of Amager Commons. According to Rehling, the authorities tried to persuade the Conservation Council to reject the case, but on June 18, 1992 the Board unanimously voted to preserve Amager Commons from exploitation.

But Amager Commons had only status as a conservation area for 18 hours. When on June 19, the Liberal, Conservative and Social Democrats in Parliament voted in support of the law proposal on the Ørestad, with a new decision where: "*all not yet decided (pending) conservation cases are rejected*". Hence the authorities made a pro forma appeal to the Conservation Council.

Afterwards DN had a seat in the Ørestad Committee, in order to offer advice the ØDC in architecture and nature conservation questions, but as the former director tells in 2003:

It was a part of a show to make it look democratic. The Ørestad has been a dividing mark. Before that time it was unthinkable that the authorities could violate Laws in such a blatant way. Ever since (laughs) it has only become worse. There have of course always been secret deals, but since 1991 I believe that we can talk about 'brutal parliamentarism'. It means that there is no longer an attempt to involve the public, and that is totally against the EU commitments when it comes to environmental assessment of plans, projects and programmes (Interview with David Rehling).

When the four winning proposals for the Ørestad were chosen in November 1994, models for the proposals were presented in a meeting hall on Amager in January and February 1995. Two citizen meetings were held. They lasted approximately 5½ hours and 35 persons asked questions.

Anne-Grethe Foss wanted opinions on the four winning proposals, but most people asked why the Metro was placed in the periphery of Amager where nobody lived. The director answered that it could be discussed but not changed. Others had taken these decisions. Many wondered about the missing information and the secrecy, by which everything was planned in advance (Interview with Arne Gaardmand).

The choice of technical solution

Why the Minister of Finance chose a Mini-metro, as in the French city Lille, is not clear.

In 1994 the rail system best suited to Copenhagen was to be selected. Of three different systems – trams, light-rail and Metro – the ØDC selected, in accordance with the consultant report (from Carl Bro) the Metro. According to the report the Metro would be the most environmentally friendly, the most economic, and be able to carry the highest number of passengers and have the fewest accidents.

The Metro is driverless, and is based on fully automatically ATC. This means that the Metro is able to be very punctual – at least 98 per cent of departures will be on time. The Metro is supposed to carry 250.000 persons in 24 hours when all the stages are completed in 2006.

According to critics Carl Bro was told to recommend the technologically advanced Metro solution. When the secret consultant report, choosing the Metro, was uncovered, it was realised that the competing tram solution that was discussed in the report was an old fashioned variant (Interview with Per Henriksen).

I still don't understand why they chose the Metro, the most difficult solution (Interview with David Rehling).

According to Per Henriksen, employed at the SF (Socialist Party) secretariat in the Parliament, the ØDC had already chosen the Metro because the technically advanced solution “*would be the best signal to send to potential future companies in the Ørestad*”:

ØDC was to consider the technical solutions. But at the same time they chose to outsource very much. I believe that COWI, Carl Bro and other consultants, have received fees for some 1 billions DKK. In this manner they had at the same time secured that the experts in Denmark were dependent on further work from the ØDC (Interview with Per Henriksen).

The ØDC chose the driverless Metro. The basis for this choice was unknown for the public. The secret advisory report was only published 3 years after the decision was made. In Per Henriksen’s opinion the arguments for rejecting trams and light-rail were not convincing. There are good experiences with trams in France, the Netherlands and Sweden. In France the Ministry of Traffic recommended in 1975 that all the big cities should develop trams instead of building metros, because of the huge investments required.

In the Parliament some members were sceptical of the technically advanced and expensive solution. That meant that the final choice of equipment supplier in 1996 became critical. The ØDC had to choose between Siemens and Ansaldo. Siemens’ tender, as disclosed later, was approximately 500 million more expensive, but was supposedly of a better quality and Ansaldo had never before tried to build a Metro.

The consultant engineers (COWI) paid attention to this in the confidential report, which later was disclosed in the press. Central in this was the ATC system (Automatic Train Control), security, as, according to COWI,

would cause Ansaldo problems. ATC is to secure that the driverless Metro runs and stops properly. COWI argued that the Ansaldo proposal would involve a greater risk and therefore increased expenditures.

COWI was also asked to assess the economic consequences of a delay of the project, and in COWI’s opinion the consequences were substantial. The consultants determined that Ansaldo would delay the project by approximately 27 months, with extra costs of over 1 billion DKK. Siemens was expected to delay approximately 16 months with extra costs of 640 million DKK.

In summer 1996 ØDC initiated contract negotiations with Ansaldo, without letting the public know about the consultant assessments of the two tenders. This first happened a year and a half later when a television station in February 1998 disclosed the consultant report. The reason why ØDC picked Ansaldo might not only have been due to a lower tender.

The reason to choose a component supplier that had never tried to build a Metro before was probably due to the estimated delay: According to a later – classified – COWI note, “The advantage to choose Ansaldo’s bid increased if there were delays in construction.” If ØDC had known that the construction company, COMET, which was carrying out the tunnel work in the Copenhagen underground, could face a delay, then it wouldn’t make such a big difference.

In spring 1999 the board of directors in ØDC sent a note telling that COMET’s seriously delaying the work would have meant a ten times bigger compensation claim if ØDC had chosen Siemens instead of Ansaldo, simply because Siemens would have come further in their work (Dahlin, 2002).

COWI's final conclusions just before the contract assignment, describes Ansaldo's ATC-system as of "*inferior quality with high risk*", but COWI estimates that Ansaldo however will be able to deliver a fully automatic driverless system.

The contract with Ansaldo was signed in October 1996 in Copenhagen. In spring 1997 ØDC was called to a meeting in Pittsburgh, USA, where the subsidiary company, Union Switch & Signal, was going to produce the ATC-system for Copenhagen. In a not public summary (account) it is told that the It-platform to the ATC-system had been changed.

That means that the system was still under development. In the same spring Ansaldo tried to get approval for the Metro's concept design, but all documents were rejected. But the public was never told, not even the parliamentary reference group had been told. In August 1997 the members were informed that Ansaldo was delayed some six weeks, but director Anne-Grethe Foss added that Ansaldo's delays were decreasing, and that the ØDC counted on quickly being able to counteract the delay.

In the autumn Ansaldo was approximately 11 months behind schedule with the development of an ATC-system. Nevertheless the Minister of Transport, Sonja Mikkelsen wrote in December 1998 that Ansaldo was "more or less" following schedule.

Five months later, after receiving a new status report, she admits that her confidence has been replaced by an equal amount of scepticism. Sonja Mikkelsen writes – against the advice from the Head of the Traffic Department – a letter, also mailed to the Parliamentary Traffic Committee. Here the Minister apologises that:

Ansaldo (...) are clearly behind schedule on vital parts, especially when it comes to software and documentation, which should form the basis for the security approval (...) I am the first to apologise that the Parliament (...) has been given an unnecessarily positive impression of the status for this part of the Metro. (Abild, 2002).

Only one day after the publication of the report there is a change in the ØDC board of directors. The head of the planning department in the Ministry of Traffic was removed, and the new member of the ØDC board was not employed in the Ministry of Traffic. As a result the responsibility for the project moves somewhat further from the Ministry of Traffic, which had taken over responsibility from the Ministry of Finance in 1996 – 97. Apparently it no longer wanted to have close ties to the big building project. (Interview with Ulrik Dahlin).

Public accountability issues

Openness

Ulrik Dahlin, a journalist who has followed the project from the outset, has continually emphasized the fact that the decision to build the Metro and the Ørestad were made behind closed doors:

The ØDC construction reminds of many other construction projects which the leading political parties have settled through many years. Behind closed doors they make a political settlement. It's not at all unusual; such a project is organised in a semi-private company, which means that it will not hit the minister if something goes wrong. It's the same with the airport, Post Denmark and the Danish State Rail and in many other cases. (Interview with Ulrik Dahlin).

The planning laws call for more openness, but in the ØDC the public is refused admission, for business reasons. This was supposedly changed in 1996, when the company claimed to follow the planning laws, but when the journalist Ulrik Dahlin claimed right-of-access to documents both in the Copenhagen City Government and the ØDC he found big differences; he received much more information from the city than from the company.

But it's the same as with other big companies; they are open in the way they want to be. That's quite normal. (Interview with Ulrik Dahlin).

At two public meetings in 1995 the ØDC's director Anne-Grethe Foss, said, as mentioned earlier, that the decision about the Ørestad and the Metro could be discussed, but not changed. Many have criticized the lack of public consultation in the projects. The retired planning director, Arne Gaardmand, says that the ØDC followed the letter in the planning law but not the intentions (Interview with Arne Gaardmand).

By this he means that there were instituted certain formal procedures of accountability, but that there was almost no effort to develop ways of involving concerned citizens into the planning and implementation of the project.

There has certainly been a lack of public consultation and discussion with those living in the area where the project is being constructed. As Palle Kummerfeldt, spokesperson for the Amager Metro Group (AMG) told us in an interview:

I think that many people on Amager feels that things have been going on over our heads, where everything was dealt with in advance. My impression is that the citizen involvement was just a show. (Interview with Palle Kummerfeldt).

Many citizens apparently gave up in advance. When AMG was created there were approximately 120 members, but by early 2003, there were only a handful active in AMG.

As Kummerfeldt explains:

The problem with [mayor] Kramer Mikkelsen is that he's wearing too many hats in this case. He is Lord Mayor, he has a seat in the ØDC board, he's a member of HUR and he's vice chairman in the East Amager Rail Company [the company responsible for the second stage of the Metro]. He is planner, decision maker and complaint board all in one. (Interview with Palle Kummerfeldt).

Kramer Mikkelsen concluded one week before the opening of the Metro in October 2002, that:

The process has not been open enough. We have underestimated the public need for influence, and the forthcoming metro building must be more transparent. This is not a critic of the Ørestad Development Cooperation, because I'm still convinced that the Metro building process has been far more open than other big public works projects. But we can improve. (Dahlin, 2002).

The retired city-planning director, Arne Gaardmand, is more concerned:

This new kind of corporate planning is a threat to our democracy. In corporate exercise of power, as seen in the 1990s big infrastructure projects, more influence is given to leading politicians, commercial and professional groups, behind closed doors where public hearings and debate become ritualistic excuses. (Interview with Arne Gaardmand).

Cost-accounting

The budget in the ØDC has since the beginning increased four fold. The initial outlay was to be paid back from selling land. The period for the payback of credits has been prolonged from some 11 years to 20 – 22 years (2020), and that makes the project potentially more vulnerable to fluctuations in the interest rate. Recent figures show that the credit limit has been reached and that an additional 145 million Euro has been added to the total credit limit.

According to Palle Kummefeldt from the AMG group, a retired economist, the operation of the Metro will not be profitable: the ØDC has 'forgotten' to include costs of depreciation in their accounts. That means a deficit of approximately 100 – 200 millions DKK every year when all three stages are completed.

The National Audit Office published a critical report on the ØDC in 2000:

The ØDC has not provided adequate control nor proper management information about the project's progress. This had a big influence on the Metro projects delay and cost escalations.

Like many similar projects, the Ørestad/Metro project has seen its budget increase substantially in the course of implementation, by some 5,6 billion DKK, and there has also been a delay of 2 years in completing the first stage of the Metro. This is also due to a lack of accountability; that, according to critics like the Danish planning professor Bent Flyvbjerg, too few people are involved in the management of the project.

He and his colleagues have investigated 258 large public infrastructure projects, or megaprojects, representing different regions and historical periods worldwide. In 9 out of

10 transportation infrastructure projects, costs are underestimated. There is, as they put it, a "calamitous history of cost overrun", according to which the costs of such megaprojects are systematically underestimated. Underestimation cannot be explained by errors and is best explained by strategic misrepresentation, usually for political purposes. The methods of cost estimation that are used in most mega-projects are simply not based on proper accounting methods (Flyvbjerg, 2003).

Benefits

The traffic situation has for decades been a major problem for Amager. The Würtzen Report claimed that the Metro would approve the traffic situation on Amager.

On Amager we don't need growth – we already have problems with the existing traffic. (...) The Ørestad will attract more traffic. Although they make some traffic investments, they leave others behind. The car traffic will increase, and the problems for the current inhabitants will grow worse. (Interview with Knud Vilby).

The local newspaper *Amager Bladet* (weekly) has since the Metro opening in October 2002 been full of angry letters to the editor, where it is described how much more time people spent every day in the traffic. The old bus lines have been eliminated and replaced by other busses going to the Metro on the western part of the island. More than 1500 local citizens on Amager have complained to HUR since the opening of the Metro. As a response HUR has set in more busses.

Although ØDC claims that the Metro will be neutral in terms of traffic figures compared to earlier many of those expressing their opinion in letters to the editor of the local paper do not agree. The Ørestad is still far from finished, and the citizens on Amager will from

now on have to be transported across the island in order to fill up the Metro.

The Metro has only been realised to capitalise on the Ørestad. On Amager the Metro is called the "stage coach across the prairie" because the Ørestad is still unspoiled nature. (Interview with Knud Vilby).

Due to a lack of investors a big shopping centre has been constructed (the Fields Centre). This was allowed under the former Social Democratic Government, when the Minister of the Environment made an exception from the rules. The construction of such a large shopping centre had previously been forbidden. According to Vilby, there is a risk that the Fields Centre will lead to the closing of many local shops on the main street, as well as in the inner city. The Fields Center expects customers from as far away as Jutland to the west (ca. 250 km) and from Sweden in the east, and it will presumably increase car traffic significantly.

In 2001 the ØDC should have sold 315.000 square meters to private investors. The ØDC have sold 471.000, but only approximately 176.000 to private investors. Of these 176.000 the Fields Centre bought 146.000 square meters.

In Knud Vilby's opinion the Ørestad plan is an expression of a blind faith in growth. Business people and politicians believe that the two big bridges (as well as a third bridge that is in the works to Germany) along with the Ørestad will ensure prosperity for Copenhagen. But there are no examples in history, in Denmark or anywhere else, that bridges and highways bring about growth and economic development by themselves.

For the "Growth Coalition" half way through the implementation phase of the Ørestad/Metro, the point of no return has been passed

a long time ago. Land in the Ørestad is not being sold fast enough and as a result the ØDC cannot provide the needed funds for the Metro project. In addition the costs of the Metro were greater than anticipated. It would retrospectively perhaps have been cheaper to construct the Metro with public funds partly subsidised with revenue from the selling of land.

The changes of investments and credits highlight the project's economic vulnerability. The plans were based on assumptions that were more political than practical in nature (Andersen, 1999). The ØDC construction has cost a lot, also in terms of public and political legitimacy.

The Metro/Ørestad in the media

As mentioned in the initial profile, newspapers in Denmark are highly politicized, with *Jyllandsposten* standing quite close to the Liberal Party, *Berlingske Tidende* being closely aligned to the Conservative Party, and *Politiken* generally supporting the Social Democratic Party.

This means that it has been problematic to criticize a big project that has been supported by all the large parties. It is really only the independent, left-wing newspaper, *Information*, which has provided much in the way of critical coverage of the project.

The Ørestad project was first presented in public in *Politiken* in March 1991, reporting that the mayor, Kramer Mikkelsen was trying to put pressure on the party leader, Svend Auken, who was sceptical about a quick decision due to reluctance in the party.

An article in *Jyllandsposten* in April 1991 said that the Conservative Minister of Finance, Henning Dyremose would summon the Parliament to an extra session in August to

achieve broad political support for three major projects: a fixed connection to Sweden, the Ørestad and a conversion of the Copenhagen harbour.

Typical examples from the first year is as follows:

(...) this new part of Copenhagen will create thousands of working places and more industry in the capital. (...) In the Government's law proposal are the traffic investments estimated to approximately 3.9 billions DDK. (Jyllandsposten, May 7, 1991).

The Ørestad project will become a growth factor to a crisis-stricken capital. The project will result in 60.000 new working places over the coming 30 years. (Jyllandsposten, May 30, 1991).

Most of the articles in these years are dealing with the growth perspective. This is due to a broad consensus that something needs to be done for the capital. There were only few writing in the first three or four years from a more critical perspective: A local citizen meeting on Amager in the beginning of 1995, arranged by the ØDC, was only briefly discussed under the headline: "The Ørestad director in harsh headwind":

And in the article:

Director Anne-Grethe Foss tried unsuccessfully to convince the citizens that the ØDC all ready once had heard the public and changed a law proposal (...) Many didn't believe her, but said that earlier investigations had proved opposite. The citizens talked about manipulation. (...) The citizens were not satisfied with the fact that the Ørestad was placed on earlier beach area (...) The answer from the director was that the building was allowed on the earlier beach areas, which had never been a area for conservation (...) (Berlingske Tidende, January 26, 1995).

From 1996 to the opening in 2002 all four newspapers publish more critical articles. But usually not from a 'public participation' or 'citizen involvement' perspective: The first editorials appear in late 1998.

Most critical was *Information*, which in the leading article "What is it we want with the capital?" writes:

Investors are not certain where the authorities want to locate the development (...) is it in the harbour? in "Holmen"? (...) or in the Ørestad, where there is constructed a Metro as the only selling point, and nothing else? In the middle of the political quarrels about international competition with Hamburg, Stockholm and only God knows where, there is something ironic in the fact that we are mostly competing with ourselves in a random and failed development. (Information, December 9, 1998).

In an editorial in January 1999 the Ørestad project was discussed, after the chairman in the Parliamentary Finance Committee, Peter Duetoft (from the small Christian Democratic Party), the day before had claimed that: "(...) there is more and more in the Ørestad case that is problematic".

The leading article is dealing with the Ørestad project as a case closely related to the Danish 'province trauma' or 'the majority of parliamentary members from Jutland'. The Ørestad project is explained as a 'clever' solution:

Fraud was the name. (...) and it also meant that the authorities ran away from promise, they had been giving in this specific area on West Amager. (Information January 21, 1999).

Politiken writes editorially, much in the same vein, that it is excellent that the parliament now asks the National Audit Office to deal

with the financing model in the Ørestad project. Even so *Politiken* is much more sympathetic to the project; the Ørestad is called;

the most explicit initiative for the future that has been made in several decades – not just in Copenhagen, but in the whole country. (Politiken, January 24, 1999).

Like *Politiken* most of the newspapers praise the growth aspects in the Ørestad/Metro project.

The editorial in *Information* on May 24 2000 criticises under the headline "The Minister's exception", the Minister of the Environment, Svend Auken (S) for allowing the construction of a new Mega shopping centre (Fields) in the Ørestad. Until this exemption there was no possibility to build shopping centre outside the cities in Denmark.

This rule by decree is due to a reference to; "It is important to stop the shop closures. It is important for the urban environment, we must make sure that we have living cities. So that Denmark is not only for car drivers, we must protect our old shopping streets". The editorial also reminds the readers that Auken before the parliamentary election in 1998 had said:

It's very difficult for me to see that it should be possible to build a large shopping centre in the Ørestad, if we are still in government after the election. (Information, May 24, 2000).

The Social Democratic Government coalition won the election, and a year and a half later the exception was made. The editorial expresses the fear that the Fields Centre will draw costumers from the inner city and from the local shopping streets. It is the 'crazy' financing model (in the Ørestad project) that is to blame:

To pay for the Metro, which is supposed to strengthen public transportation, the Minister is forced to give an exception to the Fields Centre, which will lead to increased numbers of car drivers. Hence: the Metro is paid, but who's gonna ride in it? (...)When the Bill from 1991 was passed no one knew that the Ørestad should be used to build a mega centre. No, no we were told that it should house the future high technology, knowledge-intensive companies and biotechnology (...) The mayors in the rest of Denmark, who were not allowed to build new shopping centres must be following the Ørestad project very closely. (Information, May 24, 2000).

A year later *Information* published an even more sarcastic editorial:

Should we laugh or cry? (...) the Ørestad project would be so comical, if only it weren't so deeply tragic...The reason for this is that the environmental court by a vote of 7 to 3 has decided that the Fields centre is illegal, but (...)not so illegal that it must be stopped?! All ten members agreed that it was illegal, but only three felt that it would have negative environmental consequences (Information, February 14, 2001).

Two weeks before the opening in October 2002, an editorial in *Politiken* proclaims: "We can't wait". The article is very positive: "better late than never", "we look forward to exciting experiences" and "beautiful Italian trains". In the second part of the article there are some critical comments on the financial part of the project (*Politiken*, October 2, 2002).

As in other leading articles it is clear that public accountability aspects are marginal, almost not existing with the exception of *Information* – an exception, as the expression goes, that proves the rule.

On the opening day, *Jyllandsposten* writes that; “with the Metro (...) we have an obvious reason to celebrate Copenhagen”.

This is a strategic investment (...) which will contribute to giving Copenhagen a more international status, which is needed if it's going to be a metropolis. It is a milestone in infrastructural terms (...) and will only increase the optimism and economic growth our capital has experienced in the last couple of years. (Jyllandsposten, October 19, 2002).

The same day in *Information* under the headline, “Metro politics” there is a more critical tone:

(...) public investment was not in sight (...) and the Members of Parliament from Jutland were eager to get money to another Jutland highway. (...) That was the real background for the secret Ørestad/Metro plan”.

The land sale on West Amager should, according to the leading article, cover the expenses of the Metro. This is called ‘Magic Metro Politics’ (*Information*, October 19, 2002).

Berlingske Tidende writes in the leading article – under the headline “Congratulations”, that; “The metro is going to be a success” and “(...) incomprehensible that the capital has been able to do without a Metro for so many years”. The editorial, however, finds it deplorable that the building project was delayed two years and the costs increased so much (*Berlingske Tidende*, October 19, 2002).

Conclusions

The Metro/Ørestad project is an example of accountability behind closed doors. Shaped by a consensual policy “regime” with deep roots in the Danish political culture, it was difficult for the public to be involved in the formulation or implementation of the project. The lack of openness and consultation with the public and with those who are most affected by the project – the inhabitants of West Amager – well illustrate the *modus operandi* of the consensual regime.

What is intriguing about the case is how difficult it has been to institute other procedures of accountability. Neither the interests in environmentalism that characterized the period of implementation – what we have termed the “green accountability regime” in the initial profile, nor the more recent interest in cost-benefit analysis and cost-accounting that is characteristic of the new Liberal Government, have been utilized, in any significant degree, to the Metro/Ørestad. Due to the political and perceived economic importance of the project, it has simply been impossible for the public to mobilize what might be termed an accountability capacity. There have been no appropriate contexts that have developed, no sites of debate or critique, no hybrid forums where critical voices could present their opinions. There have been a few highly circumscribed hearings, and occasional articles in the officially sanctioned critical newspaper, *Information*, but a broad public discussion has been conspicuous for its absence.

In the end, we are perhaps left to conclude that mega-projects such as the Metro/Ørestad are unable to be accounted for in a meaningful way without some kind of fundamental change in the political culture, or, for that matter, in the Danish mentality. People know what they could, and even should do,

but for some deep-seated reasons, they simply haven't done those things. They have chosen not to try very hard to make their authorities accountable for the decisions they have made.

References

- Abild, L & U Gardel (2002). I sporet af 11 milliarder (In the track of 11 billions), in Erik Valeur, et al, eds, *Magtens bog* (The book of power). Copenhagen: Aschehoug.
- Andersen, E. (1991). Hvordan Ørestaden blev til (How the Ørestad was born) in *Information*, May 4.
- Baastrup, M. (2002). Stilhedens bro (the Bridge of silence). in Erik Valeur, et al, eds, *Magtens Bog* (The book of power). Copenhagen: Aschehoug.
- Dahlin, U (2002). Det førerløse pendul (The driverless pendul), in *Information*, November 19.
- Danmarks Naturfredningsforening (1991). *Natur og miljø* (Nature and the Environment). Copenhagen.
- Danske Arkitekters Landsforbund et al. (1991). En faglig kommentar til de aktuelle bestræbelser på at fremme udviklingen i hovedstadsområdet. Copenhagen.
- Engelbrecht, M. (2002). Sporvogne – fremtidens transportmiddel (Trams – transport of the future), in *Ingeniøren*, October.
- Flyvbjerg, B. (2002) Underestimating Costs in Public Works Projects. *Journal of the American Planning Association*, Vol. 68, No. 3, Summer.
- Flyvbjerg, B., et al. (2003) *Megaprojects and Risk. An Anatomy of Ambition*. Cambridge University Press.
- Fall Nielsen, H. & Flensburg, T. (2002). Fra mark til Metro (From fields to Metro), in *Politiken*, October 13.
- Gaardmand, A. (1991). Et skønmaleri af Ørestaden, in *Politiken*, December 13.
- Gaardmand, A. (1996). *Magt og medløb*. Arkitektens forlag Copenhagen.
- Hansen, K. et al. (1992) Ørestaden – løsningen på Københavns problemer? (The Ørestad – is it a solution for Copenhagen?) Geografisk Institut. Copenhagen.
- Hovedstadsrådet (1989). *Regionplan 89*. Copenhagen.
- Jeppesen, J. (2002). Larsens udsyn (The chairman in HUR's outlook). article in *Amager Bladet* December 10.
- Lovforslag nr. L. 24. (1991-1992). Lovforslag om Ørestaden (Law on Ørestad). Copenhagen.
- Schlüter, P. (1991). Så er det nu, København, in *Politiken*, March 24.
- Schultz Lovbibliotek (1991). Lov om Naturfredning, nr. 7. Copenhagen.
- Schultz Lovbibliotek (1992). Lov om naturbeskyttelse, nr. 9. Copenhagen.
- Udvalget om Hovedstadsrådets trafikinvesteringer. (1991). Udvalget om Hovedstadsrådets trafikinvesteringer (Würtzenudvalget). Copenhagen.

Vestergaard, A. (2002). Jeg vil have 2'eren tilbage (I want busline no. 2 back again), in *Politiken*, October 27.

Ørestad Development Corporation (2001). Ørestad – expanding Copenhagen City. ØDC Copenhagen.

Interviews

Ulrik Dahlin, journalist, *Information*, September 27, 2002.

Bo Dybvad and Nina Kampmann, the Ørestad Development Company, May 17, 2002.

Arne Gaardmand, former director of the Planning Board, June 12, 2002 and December 10, 2002.

Per Henriksen, Socialist party parliamentary secretariat, March 21, 2002 and August 15, 2002.

Palle Kummerfeldt, spokesperson for Amager Metro Group, January 8, 2003.

David Rehling, former director of the Danish Society for the Conservation of Nature, January 3, 2003.

Eskild Tuesen, director, Copenhagen City Government, May 30, 2002.

Knud Vilby, citizen on Amager and former editor-in-chief, *Information*.

Waste management

By Karsten Bruun Hansen and
Andrew Jamison

Summary

The case study deals with public accountability issues connected to household waste management in the municipality of Copenhagen. In relation to what we have previously termed the "green accountability regime" of the 1990s, the case study focuses on two local experiments with recycling of household waste. These can be seen as examples of green accountability in action in the sense that efforts have been made to involve the local population in the project, as well as follow principles of "sustainable development" by integrating an environmental concern into the procedures of waste management.

The study presents some of the principles of waste management in Denmark, as well as the historical development of the projects.

Public accountability issues in this case primarily deal with the processes of participation, and what might be termed the cultural dynamics of participation in the two projects.

Background

In Denmark some 13 millions tons of waste (2000) are produced every year, of which approximately 22% is domestic, or household waste. A large part of the generated waste is used for heat and electricity production, with a relatively small percentage going to landfill. In keeping with the decentralized character of

environmental management and policy-making, the main responsibility for waste management lies in Denmark with municipal, or local authorities.

The central government, through the Ministry of the Environment, sets the overall "framework" conditions for waste management, while implementation rests almost entirely with local governmental authorities (The Ministry of the Environment 2001).

Waste management was, in the 1990s, one of the areas that was central to what we have termed in the initial profile the "green accountability regime." In the 1990s, public accountability procedures - and public policy making in general - came to be explicitly related to the quest for sustainable development, both in doctrinal and practical terms. Characteristic features of the green accountability regime were the institutionalisation of processes of public participation and stakeholder involvement, and an emphasis on prevention rather than control in relation to specific areas of environmental policy and decision-making.

A new national waste management plan - *Waste 21* - became law in early 1999. *Waste 21* (the Ministry of the Environment and Energy 1999) prescribed new initiatives in order to facilitate a more efficient waste management, especially in regard to source separation. *Waste 21* introduced a change of focus in Danish waste management. Focus had previously been on quantitative objectives, i.e. waste minimisation and increased recycling. From *Waste 21* focus should also be on qualitative objectives, in order to reduce environmental impact and increase resource utilisation in an economically effective manner.

The plan also emphasized the importance of involving business enterprises and local citizens in the management solutions. The plan underpins that also in the future, municipal governments will be responsible for the development of new management solutions, in order to make them flexible and appropriate to local and regional conditions. It is crucial that waste management solutions be based on the so-called waste hierarchy, meaning that recycling has a higher priority than incineration and land filling.

Waste 21 identified the following challenges as being the most important:

- i. to reduce environmental impact from contaminants, and
- ii. to ensure better resource recovery.

According to the general doctrine of sustainable development, the main area of effort is to separate waste more effectively. The different types, or components, of waste should be treated separately, insofar that it is economically possible and environmentally beneficial. This will increase recycling and decrease the problems caused by environmental contaminants. The plan calls for a broader public participation of citizens and enterprises in waste solutions, in which prevention is one of the key elements.

The following eight types, or components, should be separated at the source:

- Organic waste
- Paper and cardboard
- Cardboard packaging
- PVC
- Impregnated wood
- Waste electrical and electronic equipment
- End-of-life vehicles
- Batteries

The Danish waste management model, which is presented in the *Waste 21*, is meant to be a comprehensive system covering waste pre-

vention, collection and treatment. It is based on a combination of traditional administrative instruments, and various other instruments such as taxes and charges, subsidy schemes and agreements. The waste tax is differentiated so that it is most expensive to landfill waste, cheaper to incinerate it, and tax exempt to recycle.

Every four years, the local authorities must prepare a short-term waste management plan covering four years, and a long-term plan covering 12 years. The Danish waste model is the result of a close interplay between EU regulation and national regulation. The EU waste regulation policy forms the background for waste management in Denmark. In one respect Denmark differs from the other European countries in that incineration is much more predominant than landfill. The fundamental principle of the model is that waste management is a public sector task, thus the local authorities or city councils are responsible for the management of all waste in Denmark.

The established public collection systems with source separation enjoy widespread public acceptance. It is a municipal task to ensure that the waste hierarchy is followed, and to solve the waste problem at the source by introducing cleaner technology, environmental management, green accounting and similar concepts. As such, waste should not only be perceived as an environmental problem, but also as a resource and source of economic activity (The Ministry of Environment and Energy 1999 p.40).

Recycling of domestic waste is meant to be increased considerably. In 1997 there was a recycling rate of 15 per cent. The objective in year 2004 is 30 per cent recycling and 70 per cent incineration of domestic waste. Focus will be put on increased separation and collection of glass, paper, plastic and the organic

fraction of domestic waste. These four waste types cover around 84 per cent of total waste amounts.

Visitors and planners from other countries often ask how we get people to separate the waste. Maybe it's because the Danish population is so well educated and enlightened. Compared to other countries we are far ahead. (Interview with Merete Kristoffersen).

The national targets for reuse, incineration and land fill in 2004 are 64 per cent reuse, 24 per cent incineration and 12 per cent land fill.

In a report from the Ministry of Environment and Energy to the Parliament in May 2002, it is proposed that be considerably more reuse, more incineration and less land filling to reach the targets in 2004 (the Environmental Board 2002).

Of approximately 13.000.000 tons of waste in 2000, 8.461.000 tons were reused, that is 65 per cent of the total amounts. This is a rise on 646.000 tons compared to 1999. The total amount of waste incinerated in 2000 was 3.064.000 tons. That is an increase of 135.000 tons, but the share to incineration is unchanged at 24 per cent. The amounts of land filling were in 2000 1.489.000 tons, which is an increase of 17.000 tons compared to 1999. Proportionately land fill represents 11 per cent of the total amounts.

The overall target (for 2004) in Waste 21 was almost reached in 1999. Year 2000 has showed a further shifting between the treatments, hence the share going to reuse is 1 per cent higher compared to the target for 2004.

Waste management in Copenhagen

In January 1999 491.082 people lived in the municipality of Copenhagen, which is 9,3 per cent of the whole Danish population. From 1994 there has been a population growth of 5.1 per cent, and it is expected to increase another 6,4 per cent from 1999 to 2012. In 1999 there were a total of 279.300 dwellings (homes) in Copenhagen, and there were 321.000 workplaces in the municipality with a growth rate at 1 per cent every year. It is especially in relation to IT, biotechnology, consultants and public administration that there has been a growth rate. Almost 170.000 of those who work in Copenhagen live outside the municipality.

Approximately 21 per cent (1999) of the waste in Copenhagen is household waste. Waste amounts increased from 1996 to 1999 with 4 per cent every year. In 1999 every citizen in the capital produced 439 kilo of waste. The amounts have slightly increased over ten years up to 1996, remained almost stable, and been arising again from 1999 (The Municipality of Copenhagen 2001). In the municipality of Copenhagen the City Council is the supreme political authority. It has 55 members who are elected for a 4-year term. The City Council lays down the framework for the administration and duties of the seven standing Committees. Each of the standing committees consists of 11 members, one of whom is a Mayor and the Chairperson of the Committee.

The Committees normally decide cases within their field of responsibility. Overall decisions are, however, still made by the Copenhagen City Council. The agendas of the meetings are available from the City's libraries, the City Hall Information Centre and before the meetings in the public gallery of the

City Hall. After the meetings, minutes are prepared which are available from libraries and on the Internet. The administrative structure of the City of Copenhagen is based on the one-stop principle so that, as far as possible, citizens need only contact one administration in each specific case.

The Energy, Water and Environment Committee is responsible for waste disposal and recycling. In year 2000, when a municipal Waste Plan was passed in the City Council, the committee's Mayor and Chairman was a socialist (Bo Asmus Kjeldgaard), representing the Socialist People's Party, which is a party to the left of the Social Democratic Party. To day, after the election in November 2001, the Environmental Mayor is a Social Democrat as are three other members of eleven.

It was to a large degree the politicians that wanted an increased citizen involvement. That has meant that we have implemented specific projects, as in Inner Nørrebro and Kgs. Enghave, although it is more expensive. We have not wanted to take part in a 'left-right separation of shoes' – although maybe we have anyway ... (Interview with Merete Kristoffersen).

The ongoing waste management plan is the third waste plan for the Danish capital city. It represents a commitment to the EU regulation, "Waste 21" and the Danish waste management model. The first waste plan in Copenhagen was passed in 1990 ("Waste Plan 1993") and the second in 1998 ("Waste Plan 2000"). The two first plans focused on recycling of building and construction waste, and by 2000 more than 90 per cent were being reused. In 1990 only 10 per cent of building waste was reused.

"Waste Plan 2004", which runs to 2012, highlights household waste. The waste flow has increased over the last ten years, and this is

one of the biggest challenges discussed in the Plan. According to the Waste Plan the increased waste flow calls for innovative thinking and cooperation among producers, distributors, the parliament and all the consumers. Producers must invent new, so-called cleaner technologies and citizens must separate the waste at the source.

A specific communication plan, to increase the dialogue with citizens, is being prepared. Communication and dialogue is a special task in relation to "Waste Plan 2004". A top-down flow of information is considered insufficient.

In Copenhagen all collection of refuse and night soil from the citizens is governed by "Waste Disposal Company 1898" (R-98), which has been granted the waste concession. It is a non-profit consumer led, self-governing institution/company.

The R-98 concession, running to 2020, has become the focus of some debate, at a time when many public concessions are being converted to private companies, or to public-private partnerships. R-98's governing authority is made up of consumer representatives, i.e. homeowner organisations, the large housing corporations, tenants association, members of the City Council in Copenhagen and the employees of R-98. The Board consists of 12 members, four for the local authorities and two for the employees.

R-98 is interested in new waste projects, but they some times find it hard to work close together with grass roots:

We had one of them employed at R-98, but it was a chock for him that he had to work so hard, effectively, register so much etc. He stopped. (Interview with Kirsten Henriksen 2003).

According to a local chairman in Inner Nørrebro the R-98 company is not particularly satisfied with the Nørrebro waste model although they say something else:

The politicians tells R-98 that they must be positive to the Inner Nørrebro project, but they are not. It's too troublesome and it's too expensive. (Interview with Asbjørn Skytte, Chairman in the Renters and Owners Board in Inner Nørrebro 2003).

Inner Nørrebro and Kgs. Enghave

Two different parts of Copenhagen have implemented projects in relation to waste prevention. In Inner Nørrebro and Kgs. Enghave have citizens, local businesses and local authorities for some years being separating the waste at the source. The Waste project in Inner Nørrebro grew out of an urban ecological building project (BO 90), which was part of the Urban renewal efforts. The waste project was, to a large extent, the initiative of local citizens.

In Inner Nørrebro it was very much the local citizens that started the waste project. It had a starting point in our experiences from BO-90 [a so-called urban ecology project in 1990]. (Interview with Erik Jørgensen).

The waste project in Kgs. Enghave (meaning: the Kings Garden) is an Agenda 21 project and a part of an urban renewal project. The waste project was implemented and led by R-98 and partly financed by the Ministry of Environment.

Public participation in Kgs. Enghave ... yes ...maybe...It has mostly been 'information' ... we had citizen meetings and tenant board meetings, but ... yes ...it has primarily been

the fact that administrative staff and company employees have taken part in the decisions. Before I was project leader it was the citizens that decided that they wanted a 'green Kgs. Enghave'. In the last three years I've been working very close together with the tenants boards, and they represent the citizens. Citizen involvement can be troublesome; they work at another speed and they don't know about how the system works. There are good and bad things about public participation, but here in Kgs Enghave it's the professionals [R-98] who are in charge. (Interview with Anita Ringsing).

Inner Nørrebro can be considered more of a bottom-up project and Kgs. Enghave is more a top down project. They represent different strategies in relation to citizen participation and public accountability in waste projects.

In Inner Nørrebro the project was initiated from below as well as from the authorities. The KMEK organisation [NGO] has gone through the Mayor, and they have been very skilled to push the right buttons; it has not been started from us. [the municipal administration] That means contrary that we have many bad experiences, where we have been forced to clean up after some failure local waste projects. I am not saying that it's impossible when all the responsibility lies in the hands of a few local activists, but if one or two of them stops or moves to another town, everything can easily be dropped on the floor. The Inner Nørrebro project has received quite a lot of money, and that's what lifted them up. All these projects however make the whole system more expensive, and that's a big problem. (Interview with Merete Kristoffersen).

The two project areas will briefly be presented here in order to understand the different contexts and experiences.

In November 2001 31.275 people lived in Inner Nørrebro, and the percentage of foreign-born was 15%. There were 16.669 small rental dwellings. The area consists of old apartment houses inhabited by students and workers, a number of ethnic restaurants and small shops. The waste project in Inner Nørrebro comprise approximately 25 per cent (approx. 7700), or 29 apartment houses, 300 shops, some schools and other public institutions (Danwaste, 2002A). In 2001 15.700 lived in Kgs. Enghave. Kgs. Enghave is an old working class area with small non-profit rental apartments. Many retired workers live here. The waste project should have comprised 6200 inhabitants but reached about 3 – 4000 (Danwaste, 2002B).

The waste management project in Inner Nørrebro started in 1998, and was to a large extent based on what we have termed the Danish waste management model. The main participants in the project are the Copenhagen Environmental and Energy Office (KMEK), a local NGO, the City Council and R-98.

It was initiated when a local resident, Erik Jørgensen, living in Eco 90 (an ecological apartment house) in 1997 contacted KMEK, which was then working with compost and local waste management. Together they made a proposal to the Nørrebro Local Council (not existing any longer), for a project that they called Eco Town 1997-99, which the EU LIFE program supported.

You may say that the difference is that Kgs. Enghave was a top down project and Inner Nørrebro more a bottom-up approach. In Kgs. Enghave it was R-98 that led the project, and it was not in a similar way public participation [as Inner Nørrebro]. The strategy in Kgs. Enghave is partly due to another demography, where the inhabitants are retired workers and there are not so many activists as in Inner Nørrebro. The project in Kgs.

Enghave had to be top down, otherwise things couldn't run. The difference between Kgs. Enghave and Inner Nørrebro is that it is much more difficult to make things work, when it's led from below. In Kgs. Enghave, where R-98 is in front, they are a part of the whole Copenhagen waste system, and therefore it is much more dependable. In Inner Nørrebro the system is much more vulnerable. (Interview with Merete Kristoffersen).

In four years the Inner Nørrebro waste project raised some 5 million DKK, from different funds in I.A. the Ministry of Environment for supporting local waste initiatives. The waste project in Inner Nørrebro is situated (organised) at KMEK where Erik Jørgensen is project leader for 6 – 8 project-employees.

In Kgs. Enghave the citizens wanted, as a part of a renewal project, 'a green Kgs. Enghave'. None of the projects was started on behalf of R-98's initiative. There were so many other interesting projects we could have cooperated together with instead. In Kgs. Enghave it was just another kind of grass root movement; it was the inhabitants organisations. That's the only difference compared to Inner Nørrebro. In Kgs. Enghave the local residents wanted to take part in waste projects, and hence the residents elected boards supports it very much. I don't believe that the Inner Nørrebro model is better or worse. The Kgs. Enghave model is simply just best suited for Kgs. Enghave (social apartments). (Interview with Kirsten Henriksen).

In Kgs. Enghave the main participants were R-98, AKB and 3B (two non-profit building associations). The project leader from R-98 partly had her fee from the Green Fund (the Ministry of Environment). It is a local Agenda 21 project with a starting point in an urban renewal project, where citizens called for 'a more green Kgs. Enghave'. The project is in

line with the Governments "Waste 21" from 1998, and "Waste plan 2004" from the Copenhagen municipal. I spring 2003 tries R-98 (Anita Ringsing) to raise money for the 2. stage comprising owner partnership flats and owner-occupied apartments, which BE-BOERE they expect to become much more difficult (Ringsing 2003).

I can't explain why, but when we invited to a citizen meeting in Kgs. Enghave some 200 persons were actually present at the meeting. The Renters Boards are very active even though its non-profit rental housing. It's quite surprising, but none the less a fact. (Interview with Project Leader in R-98, Anita Ringsing 2003).

In Kgs. Enghave a high environmental consciousness exists due to the historical fact that waste from Copenhagen was taken out here. Maybe the inhabitants in non-profit rental apartments haven't a high income, but they got 'time', and that can be an important resource' in local waste projects. Professionals leaded the waste project in Kgs. Enghave; R-98, EJENDOMSFUNKTIONÆRER, the Renters Boards, myself ETC. The public articipation in Kgs. Enghave has gone through the Renters Boards. We have partly been inspired by the Inner Nørrebro waste project - as well as from other places. (Interview with Torben Forskov, Local Green Guide in Kgs. Enghave, 2003).

Some of the renters representatives in Kgs. Enghave are disappointed because parts of the waste projects, told to be GENNEMFØRT by R-98, has not been implemented. They have been very keen about the overall waste project and feel sorry to realise that it has not been possible to realise:

I am very sorry that the source separation and BIOGAS project have not succeeded. R-98 have not been able to overcome their

promises. I've heard that they are driving the organic waste to Holbæk (70 km), and in my opinion the whole idea is then gone. It's very disappointed now when the renters finally have improved. In my opinion the Copenhagen municipal is promising more than they want to realise. We, the renters, want to continue, but I have not heard about a 2. stage, as you are telling me about [information from interview with Anita Ringsing R-98]. (Interview with Birget Andreasen, Chairman in a local Renters Board and member of 'Green Steering Group' in the Kgs. Enghave waste project).

Another Chairman from a local Renters Board has some of the same experiences:

In my opinion is it all right to talk about citizen involvement in the waste project. Apart from public participation in the ongoing urban renewal, where the citizens now have established their own Agenda groups, in opposition to the municipal. The municipal has chosen projects 'with a positive outcome' instead of 'the traffic topic' as the inhabitants has given highest priority. The municipal of Copenhagen has in my opinion not been GEARET to citizen involvement this far.

The politicians want to improve, but many inhabitants experiences are the opposite. It's the FORVALTNING they are not used to it. They have always been doing that they wanted, and have never asked the citizens. They has just started to learn it. But that is in general and not a part of the waste project. We have not been in contact with themunicipal in the waste project. R-98 – Anita Ringsing – hasbeen an important person in the citizen involvement in Kgs. Enghave. (Interview with Harry Ottesen, Chairman in a local Renters Board and member of 'Green Steering Group' in the Kgs. Enghave waste project).

In Inner Nørrebro the renters representatives or Boards are also active, and have been important stakeholders in the decision and implementation phase:

The renters are very satisfied with the waste project in our building block. I believe that we are now approximately 65 – 75 percent who is taking part in the source separation project, but off course some is not so interested, but I have not received any complains. And when you ask if I can mention some persons who are critical here in our building block [approximately 300 apartments]. I'm afraid that I can't find any names. You have to ask some of our employees. Those who are critical remain apparently silent. (Interview with Asbjørn Skytte, Chairman in a building block renters and owners board).

Our renters [in Inner Nørrebro] are generally good to separate the waste, but off course there are also some that aren't interested, and they don't take part in the project. I believe that 3 out of 4 are active, but I have never met any critics, they remain apparently silent. When you explicitly ask for critics I can think of one or maybe two persons and that is due to the fact that I have experienced that they don't separate their waste. (Interview with Hans Melin, EJENDOMSFUNCTIONÆR in Inner Nørrebro).

In autumn 2001 there were established 72 local waste stations in 26 apartment houses in Inner Nørrebro. It is possible for almost 10.000 citizens to separate their waste in as many as 20 different types, or fractions. 16 public institutions are taking part in the waste project. There have been established 169 local composting plants, and 32 building association employees have taken part in an urban ecological training and education program.

We have raised some 16 'gårdmandsstillinger'. These employees have the daily contact to the inhabitants and makes every thing work. We [KMEK] have published all our results. You can find it on the Internet. I believe that R-98 feels threatened by the Inner Nørrebro waste model. That's the reason they made their own model in Kgs. Engave. It's a competing top-down model, and they're trying to shoot us down. I don't understand why. In Kgs. Engave it's the system [R-98] that decides your choices, but we believe, in opposition, that citizen participation is a precondition for a good result. (Interview with Erik Jørgensen 2002).

The consultant firm, Dan Waste Consult has estimated the costs – for R-98 - in Inner Nørrebro to approximately 540 Danish kroner for each citizen. In other municipalities the costs is expected to be almost the same. The project has been running for four years and the recycling percentage has increased from 17 per cent to ca. 35 per cent, compared to the average for Copenhagen as a whole of some 21 per cent (Danwaste 2002A).

The inhabitants in Kgs. Engave are very interested in source separation. People are very interested, even though we have many retired workers and early retired people. Maybe it is conditioned by the fact that we have used a lot of money on our information material. (Interview with Anita Ringsing 2003, and CredoConsult 2002).

In winter 2001/2002 the waste project in Kgs. Engave was comprising approximately 3500 inhabitants. The citizens can separate their waste in some 8 - 10 different types. The recycling percentage has increased from 15 per cent to 32 per cent. The Kgs. Engave model is much cheaper for R-98. There should have been established a central composting plant in Kgs. Engave, but it was never realised. Two local waste stations were planned, but

are not yet realised. In a consultant report it is estimated that the Agenda project in Inner Nørrebro is approximately 3 times more expensive than Kgs. Enghave. This might be caused by the fact that Kgs. Enghave started 1 – 2 years later than Inner Nørrebro, and this meant that Kgs. Enghave could learn from the Inner Nørrebro's experiences (Danwaste 2002B).

The Inner Nørrebro has used a lot of money. It's the local ILDSJÆL and project employees that facilitate the citizen participation and not the other way round. In such a perspective I believe that Kgs. Enghave consist of a more real citizen participation. Things are dealt with at board meetings in a democratic way, by democratic elected chaismen. In Kgs. Enghave it was also a local ILDSJÆL, almost as in Inner Nørrebro that initiated the waste project. The Nørrebro waste model is very expensive. They are not professional, things take a lot of time for grass roots. They work in a different way. (Interview with Kirsten Henriksen R-98 2003).

According to project leader Erik Jørgensen from Inner Nørrebro:

The material to compare Kgs. Enghave and Inner Nørrebro was not fair, and very much in favour for Kgs. Enghave. It made Inner Nørrebro look much more expensive than it really is. In Sweden, where they have succeeded to make citizens fraction the waste, they are using much more money than we are. So you have to decide - in advance - in political terms if you want to make citizen involvement in waste projects. It's correct that we are using the existing TAKSTER in our – the renters – favour; we're only paying for the rest waste (DAGRENOVATION), and not the different fractions. But that is what we tell anyone, and it is just as well in order to tell the politicians that the existing paying system doesn't encourage citizens to separate their waste. We

have been waiting for a political decision for many years. (Interview with Erik Jørgensen).

In a status report it is stressed that there has been a strong commitment from all stakeholders; politicians, administration, citizens, local politicians, employees and the waste disposal company R-98 at Inner Nørrebro. The report calls for the establishment of a centre, something like an Agenda 21 centre, to coordinate the local waste and environmental work, which has now been started. It has not been easy to start recycling processes in Inner Nørrebro. A precondition for a successful implementation is information and dialogue with the citizens Dan waste 2000A).

The waste project is being evaluated in 2002 in order to communicate the experiences to other interested municipalities in Europe.

If I should draw a conclusion then it would be that I can't tell if Inner Nørrebro or Kgs. Enghave is the best model which could be used in other places. I believe that the essence in our experiences is that we must stress that it requires quite a loss of resources to make in go. (Interview with Kirsten Henriksen R-98 2003).

Public Accountability procedures are a political topic (GOAL) in Denmark. It is a tradition for democratic procedures, or public participation, as the politician claims to keep up (honour). In this waste management case from the Copenhagen municipal, have the Social Democratic Party, the Social Liberal and some Left Winged Parties used a lot of money and been giving high priority to waste project with a high degree of citizen involvement, partly to the municipal employees disapproval. In their opinion are that kind of projects expensive, the results limited and the project process vulnerable due to the fact that the projects often lie in the hands of a few ILDSJÆLE.

None the less must it be concluded that the Inner Nørrebro waste project have reached the highest numbers of BEBOERE, and the highest rate of waste separation although Kgs. Enghave have reached almost the percentage of waste separation, but not the same number of BEBOERE.

Both waste projects are under pressure from the dominant societal 'monetary rationality'. Perhaps can Kgs. Enghave be seen as a project leaded more by experts or specialists, or a tendency against a more instrumental top-down strategy. But at the other hand, one might as well claim that the demand for further dialog has been meet in a rational or pragmatic way in Kgs. Enghave. (to the proposed preface: environ discourse.doc).

Experiences from Sweden points at the fact that successful citizen involvement assume (presume) high project costs and a time-consuming process, and this is perhaps the most important experience the administrative employees are now facing – also in Kgs. Enghave, where the implementation process have shown itself to be much more time-consuming than first estimated to.

Public accountability issues

In my personal opinion the Copenhagen municipal is too much involved in the waste collector company (R-98). R-98 is so big that it's hard to change things. We miss some diversity in their solutions to different places. They have only one system and that's all. As a citizen in the municipal am I although quite pleased with how things run, but there ought to be more opportunities, not just in a few project areas. We [DN] have some concrete proposals, inspired from Sweden, but we believe that it's almost impossible to get through

with such proposals. An example is I.E. that the tender material - to R-98 - is partly made by R-98 themselves. It is simply not good enough. (Interview with Erik Jacobsen)

The local Copenhagen Committee in DN took part in the decision process with "Waste Plan 2004". But the local committee hasn't good experiences with stakeholder involvement in Copenhagen. The Copenhagen municipality made a public hearing period, before the law proposal, where the local committee in DN were asked which proposals they could have. However:

In our opinion there wasn't changed so much as a comma in the draft proposal, despite our suggestions. In the following hearing phase for "Waste Plan 2004" we made a comprehensive objection; in our opinion Waste Plan 2004 wasn't ambitious enough. They had not involved experiences from Inner Nørrebro and other places. They did only what they wanted to in advance. We are being heard because we are supposed to. Sometimes we get the impression that some parts of our proposals are incorporated in the next generation waste plan. So in a way we have some influence - in a long perspective, but we are often deeply frustrated as citizens and as a popular organisation, when we realise that they haven't changed as much as a comma. That is our general perception of hearing phases, of our objections and of our authority contact. We have perhaps been heard – as supposed to, but we can't change anything. (Interview with Erik Jacobsen).

An example from the proposal from the Local DN Committee is F.EX:

Information is an important aspect of "Waste 21" and hence in the Copenhagen waste plans. Focused and effective information is very expensive. ... [But] among the Local DN Committees members finds quite a lot of the

members it hard to separate their waste. We find that there are an obvious need for more information. Due to the many different sections of the population in Copenhagen must information come through many different channels and projects.(The Local DN Committee in Copenhagen 2000).

The opposition in the City Council (Liberal and Conservative) were not satisfied with "Waste Plan 2004". In a minority statement in "Waste Plan 2004" they claims that it is too ambitious, and that the implementation of its proposals would be too expensive:

The Conservative (C) and the Liberal Party can't accept the waste plan in it's present form. C and the liberal do not support targets about rising the reuse per cent. We don't want 'reuse-no-matter-what', only when it's rational in economic terms. (Helle Sjelle (C) & Preben Bille Brahe (the Liberale), quoted from: The municipal of Copenhagen 2001)

The conditions following this minority statement in "Waste Plan 2004" has the Waste Disposal Company R-98's experiences in this way:

Now we have planned three local Agenda 21 centre in Copenhagen; which is fine, but it has for a long time been very difficult to get money to project including citizen participation, from the politicians – and I don't believe that it's getting easier now. But the Agenda Centre has not the needed knowledge about what each apartment house needs or the sufficient information about the waste disposal Company (R-98). It would have been better if we (R-98) could continue to employ local project leaders to facilitate local waste and reuse projects. But the politicians claims that we need to save; we don't have the money. It's been in that manner for many years. Conservative and the Liberal in the municipal has not the majority, but they do create a certain

'mentality';now we must do things more effectively. They can't accept that the waste plan costs more money, and then it becomes very difficult for us to say that we need more money. The former Mayor (from the Socialist party) was under the same pressure in the 90's. We know what to do, but we don't get the money to the projects. It's not so much the Social Democrats, although they as well want to do thing in as cheap way as possible. That's what everybody wants – of course. (Interview with Kirsten Henriksen)

References

Credoconsult (2002). R-98: Kampagneeffekt – undersøgelse I Kgs. Enghave (R-98: Effects of the Waste Project in Kgs. Enghave). Credoconsult, Odense.

The Danish Society for the Conservation of Nature (DN) (2002). Rom blev ikke bygget på én dag, spørgeskemaundersøgelse af inddragelsen af DN's lokalkomiteer i den kommunale affaldsplanlægning. (Rome wasn't Built in One Day, a query on the DN local committees participation in municipal waste planning). The Danish Society for the Conservation of Nature, Copenhagen.

Danwaste Consult (2002A). Agenda 21 affaldsprojekter I København (Agenda 21 Waste Projects in Copenhagen). Danwaste Consult, Copenhagen.

Danwaste Consult (2002B). Evaluering af affaldsmængder og økonomi vedr. Kgs. Enghave Agenda 21 affaldsprojekt (Assess on Waste Amounts and Economy in the Agenda 21 Waste Project in Kgs. Enghave). Danwaste Consult, Copenhagen.

The Environmental Board (2002). Review. The Parliament, Copenhagen.

Jamison, A. (2001). *The Making of Green Knowledge. Environmental Politics and Cultural Transformation*. Cambridge University Press, Cambridge.

The Local DN Committee in Copenhagen (2000). Høringssvar på Københavns kommunes "Forslag til Affaldsplan 2004" (Proposal (HEERING ANSWER) on the "Waste Plan 2004"). The Local DN Committee, Copenhagen.

The Ministry of Environment and Energy (1999). Waste 21. The Ministry of Environment and Energy, Copenhagen.

The Ministry of Environment (2001). Natur og miljø, udvalgte indikatorer (Nature and the Environment, Selected Indicators). The Ministry of Environment, Copenhagen.

The Municipal of Copenhagen (2001). Affaldsplan 2004 (Waste Plan 2004). The Municipal of Copenhagen, Copenhagen.

R-98 (2001). Grøn affaldsordning i Kongens Enghave (Green Waste Separation in Kgs. Enghave). R-98, Copenhagen.

Waste.eionet.eu.int. WasteBase – the database on waste and material flows. The European Topic Centre on Waste and Material Flows.

Interviews

Andersen, Allan, Waste Coordinator in the Danish Society for the Conservation of Nature (DN), February 18, 2003.

Andreasen, Birgit, Chairman in a local renters Board in Kgs. Enghave and the 'Green Steering Group' in the waste project in Kgs. Enghave, March 4, 2003.

Forskov, Torben, Local Green Guide (financed by the Copenhagen municipal), March 3, 2003.

Henriksen, Kirsten, Former Head Clerk in the Environmental Office in R-98, February 14, 2003.

Jacobsen, Erik, Speaksman in the local committee of DN, February 20, 2003.

Jørgensen, Erik, Project Leader in KMEK (NGO) in Inner Nørrebro, August 13, 2002.

Jørgensen, Erik, Project Leader in KMEK (NGO) in Inner Nørrebro, March 4, 2003.

Kristoffersen, Merete, Project Coordinator in the Waste Office in the Copenhagen Municipal, November 30, 2002.

Melin, Hans, employee in a building block, February 26, 2003.

Ottesen, Harry, Chairman in a local renters Board in Kgs. Enghave and the 'Green Steering Group' in the waste project in Kgs. Enghave, March 19, 2003.

Ringsing, Anita, Project Leader (in R-98) in Kgs. Enghave, January 21, 2003.

Skytte, Asbjørn, apartment renter in Inner Nørrebro (Chairman in building block), March 3, 2003.

About the authors

Andrew Jamison

Andrew Jamison is docent in theory of science and science and technology policy and, since 1996, professor of technology and society at Aalborg University. He was the coordinator of the EU-funded project, Public Participation and Environmental Science and Technology Policy Options (PESTO) from 1996 to 1999 and a member of the board of the Danish Center for Environmental Social Science from 1998 to 2001. He is the author, most recently, of *The Making of Green Knowledge. Environmental Politics and Cultural Transformation* (Cambridge University Press, 2001).

Terkel Møhl

Terkel Møhl studied history at Roskilde University Center and worked at the Danish Board of Technology. During his employment on the PubAcc project, he was based at the Royal Danish University of Agricultural and Veterinary Sciences.

Jesper Lassen

Jesper Lassen has a PhD from Roskilde University Center and is associate professor of social science at the Royal Danish University of Agricultural and veterinary Sciences. He has worked on several other EU-funded projects, as well as the Danish project, NGOs and Biotechnology Policy.

Karsten Bruun Hansen

Karsten Bruun Hansen has a PhD from Aalborg University and is currently employed at the Danish Institute for Forestry and Landscape Research. He has previously been employed at the Danish Institute for Building Research.

Who is responsible for environmental and technological policy in Denmark? And how are those "policy-makers" made accountable to the public for their decisions?

This report attempts to answer these important questions by presenting the Danish contribution to the EU-funded project, Analysing Public Accountability Procedures in Europe.

The first chapter presents Danish public accountability procedures and places them in historical perspective. The other chapters are case studies of genetically modified food, transport policy in the Copenhagen area with a focus on the Metro, and local waste management in Copenhagen.