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Lindqvist, Katja

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PO Box 117
221 00 Lund
+46 46-222 00 00

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HYBRID GOVERNANCE: THE CASE OF HOUSEHOLD SOLID WASTE MANAGEMENT IN SWEDEN

Katja Lindqvist
Department of Service Management
Lund University, Campus Helsingborg
Helsingborg
Sweden
katja.lindqvist@ism.lu.se

Abstract

Governance is hybrid to the extent that it involves several types of stakeholders, jurisdictional domains, and organisational forms. This paper analyses governance of household solid waste management in Sweden from a hybridity perspective, with the City of Helsingborg as example. The empirical material on which the paper is based consists of interviews with politicians, civil servants and management of the municipal waste management company; and of documents of various kinds, from board meeting minutes to formal municipal plans to website pages. Waste governance in Sweden, it is shown, includes conflicting legislation, entanglement of urban infrastructure and planning, and long planning and investment horizons. The latter has resulted in significant innovations over the last twenty years. But the study also shows how organisational forms and the composition of tasks, as well as networks and jurisdiction, change over time, in turn causing tensions in governance processes and relationships.

Key words: governance, waste management, Sweden, hybridity, municipal

The focus of this paper is the challenges of local waste management governance. The specific point of departure of this paper is the municipal responsibility for household solid waste management in Sweden. These changes are studied in the city of Helsingborg in Scania in Southern Sweden. A point of departure for the paper is the claim that much of governance today is hybrid. The aim of the paper is to analyse the character and consequences of the hybridity of governance on local level. What are the concrete manifestations of the hybridity of governance in the case of household solid waste management in Helsingborg? This question is approached firstly by a theoretical clarification of what the hybridity of governance entails. Thereafter, waste governance in Sweden is described. In a third section three specific aspects of governance hybridity are explored with the case as empirical basis: organisational hybridity, jurisdictional hybridity, and stakeholder and network hybridity. The paper ends with some conclusions drawn regarding waste governance in times of increasing competition in an area with a tradition of municipal monopoly and large infrastructural investments.

The empirical data on which this paper is based has been gathered through document analysis and interviews with owner representatives and the CEO of the municipally owned company in North-Western Scania, NSR AB (Nordvästra Skånes Renhållnings AB) and with interviews with civil servants of the contractor department of the City of Helsingborg. Interviews with chairmen of the board of NSR were conducted by Hervé Corvellec and Katja Lindqvist. I have also had access to transcripts of interviews with the CEO of NSR conducted by Hervé Corvellec or Hervé Corvellec and Johan Hultman. The documents used range from board meeting minutes to municipal reports, and on interviews with and an interview with a former chair of the board. Further interviews with relevant respondents will be undertaken in 2012 as the research project advances.

THE HYBRIDITY OF GOVERNANCE

Governance refers to the steering of behaviour in society and of relationships among groups within a specific area. Governance research has expanded enormously in the last decade, and the term itself has several uses. Without going into a discussion of these uses, that others have mapped and commented upon (Stoker 1998, Pierre 2000, Kooiman 2003), for the purpose of this paper a definition of governance implying more than hierarchical and coercive relationships between government and other groups in society will serve as a starting point. Over and above this general understanding of governance, it is recognised that governance as a theoretical concept implies diversity, even hybridity, as it entails organisational forms not only structured according to hierarchy, but also markets and networks. Networks and hybrid organisations, for example, are two key characteristics of governance (Treib et al. 2007, Beveridge and Guy 2009). Furthermore, governance in this paper refers solely to public governance, defined as “the design and implementation of public policy and the delivery of public services” (Osborne 2010: 1).

Hybridity is a concept that is used in governance and public management research to indicate new organisational forms linked to devolution processes, where organisations take on characteristics from both the public and private sector. Hybrid governance is a simultaneous

consequence of this change. Bevir (2011) states that governance entails a plurality of organisational forms, jurisdictional domains, and stakeholders and networks in which these and municipalities are inscribed. Furthermore, governance implies dilemmas related to the hybridity and the multi-jurisdictional character of governance, and the plurality of stakeholders and network involved in it. The hybridity of governance also illustrates the complex reasons for and conditions of cooperation in a context of public responsibilities for service provision (Andersen and Pierre 2010). On an operational level governance implies both policies, policy instruments, and networks and relationships with and between various actors and organisations (Bulkeley and Askins 2009). Governance thus implies both discursive and material interaction.

Organisational hybridity

Public enterprises are not new. They have existed since the nineteenth century in European countries in areas such as natural resources and infrastructures of communication, and have been developed where new technologies have required large-scale cooperation and investment (Millward 2011). Even though public enterprises are not a new phenomenon (Millward 2011), they do pose some governance challenges dissimilar to those of private ones. Organisational hybridity in the public sector can be described as a continuum, where organisations are hybrid in many different ways, and bear characteristics more or less connected to the public or private sphere, but the hybridity also relates to combinations of different public types of organisations. Researchers of governance and public management have recognised that the notions describing organisational forms in the public sector and public services are not sufficient to describe the plurality of actual forms of organisation public service provision today. There are limited companies with private owners, limited companies with public owners, autonomous public bodies, alongside departments and authorities. Therefore, the term hybridity has been convenient to signify the overall nature of several organisations as containing characteristics from more than one ideal organisational form, such as the public bureaucracy or the limited company. Furthermore, there are significant national differences in legislation regarding organisational forms available for the delivery of public services, creating difficulties for comparing the organisational structure of governance internationally.

The concept of hybridity started to appear in management and public administration research in the 1980s (Emmert and Crow 1987), recognising the influence of resource contributors on administrative intensity, aims, and qualities of products produced by such organisations. Hybridity was in this context defined as an organisational response to demands from multiple resource contributors, such as public and private owners or other stakeholders. Hybrid organisations reflect this plurality of stakeholders and the entailed complex environment of the organisation (Kickert 2001, Thomasson 2009, Karré 2011). For example, organisational hybridity entails potential goal conflicts; as societal multiple goals need to be addressed at the same time as business demands on efficiency and market orientation are addressed.

Jurisdictional hybridity

Jurisdictional hybridity refers to the multiple jurisdictional domains that are relevant in governance practices. This hybridity comprises both the simultaneous relevance of several jurisdictional domains for one governance area, but also possible conflicts or discrepancies

among jurisdictions. The jurisdictional domain can also be hybrid due to the relevance of different national and/or international jurisdiction within a specific governance area.

Stakeholder and network hybridity

Stakeholder and network hybridity refers to the multiple stakeholders and networks in which governance takes place, and which are part of or affected by governance. Infrastructure can be seen as a form of network, and there are clear infrastructural hybridities in the governance of waste. Inter-municipal service delivery can take many organisational and administrative forms, which also tend to shift over time. The reason for such changes is change in national legislation, in turn influenced by public administration trends and national traditions (Hulst et al. 2009). This hybridity, I would suggest, also refers to the entanglement and interaction between various domains of public governance, such as infrastructure and planning. Various domains of municipal (or regional or national) planning, development and day-to-day management overlap. This kind of hybridity is linked to stakeholder and network hybridity, but is foremost material, and demands social interaction in concerned stakeholder groups and networks. The material side of waste is not only a management concern, it is also a governance concern.

WASTE GOVERNANCE AND MANAGEMENT IN SWEDEN

The area of waste management in Sweden is a rather non-controversial area of municipal network governance. In other sectors where private companies have had more significant impact on services provided, such as care and schools, controversy is large regarding profit generation and low levels of service quality. In the waste management sector, however, with almost only municipal companies acting in the household market, there is no discussion regarding either organisational forms, efficiency or quality of services. Waste management governance in Sweden follows a European pattern of outsourcing or externalisation, characterising the reform of public sector service delivery in the last decades (Torres and Pina 2002).

Waste policy as well as climate policy has been described as a third generation policy area (Montin 2007), characterised by complex interaction between several political areas and stakeholders, where cooperation and interaction among a number of actors and stakeholders is a basis for governance. The first generation policy areas concern representative democracy. The second generation policy areas correspond to publicly provided welfare services offered by an expanded public sector. The third generation policy areas, which in time succeed the first two, are marked by multiple stakeholders and wicked problems, which have generated much more complex interaction patterns between various actors than the previous two policy generations. These three policy areas co-exist in contemporary society, as the present case will illustrate. For example, the municipal responsibility for household solid waste is one example of a policy designed during the heyday of public sector welfare service provision. This responsibility of municipalities is today combined with contracting out and cooperation among several actors in the waste market and related fields such as heat and energy production.

In international comparison, municipalities in Sweden have strong autonomy. Municipal horizontal cooperation is the main form of cooperation between public sector levels, whereas vertical cooperation is rare (Hulst et al. 2009). Sweden has a history of multi-purpose municipal governments, which until the 1990s both designed policies and provided municipal services (Wollmann 2004, 2008, Denters 2010). Since then, elements of New Public Management have been introduced, but with significant differences in different policy areas. Sweden is a democracy with local government assemblies and committees directly controlling the execution of policy by public administration. Furthermore, usually cooperation among municipalities takes the form of uniform task execution bodies rather than multipurpose cooperative bodies (Wollmann 2008).

Public-private partnerships are rare in Sweden, as Swedish municipalities have rather contracted out or kept the provision of services in-house or through fully owned companies. Public-public cooperation has been much more frequent than public-private partnerships as a governance solution to emerging problems of flexibility etc. Municipalities tend to contract out waste management instead to private companies, or to administer waste management through municipal companies, as in North-Western Scania (Gossas 2006). The Swedish political culture overall is still also very collective, something which makes decisions on local level to a majority non-dependent on individual campaigning from local politicians. Decisions tend also, in more areas than waste management, be taken on the basis of consensus rather than on campaigning. Sweden has introduced market features in public administration, but the idea of policy based on common interests is till dominant in local politics and public administration (Bäck 2003). In other words, the competitive model of organisation on administrative level is not reflected in the political level of local governments.

Waste management in Sweden is subject to an array of legislation on international and national level, resulting in targets and plans on municipal level (cf. Lippi et al. 2008, Monni and Raes 2008). On an aggregate level, waste management relates to environmental policies; an area which in the last decades has been characterised by “soft law” approaches, as traditional sectoral jurisdiction is not effective enough. EU has taken a leading role in Europe, using a number of policy tools such as information, compulsory self-regulation, and command-and-control just to mention a few (Hey et al. 2007). According to Hey et al. (2007: 1861), regulatory standard setting has been the most common way to govern for EU in recent decades. Regulatory standard setting entails a high level of obligation and low levels of discretion for member states. Policy tools within the environmental area include emission limit values, prohibition of certain actions, and permitting and reporting requirements. In recent years, however, the traditional regulatory standard setting has been superseded by new instruments of governance that allow higher discretion for member states in achieving objectives. Such policy instruments include framework legislation, economic instruments such as taxation.

Framework legislation delegate daughter legislation to committees or member states. Economic instruments and information aims at propelling adherence to new legislation. The EU waste directive is an example of this agenda-setting position of the European Commission. The hybridity of governance as identified in the area of waste management, is

expressed through the plurality of interventions. These include *legislation*; *policy documents and bills* (international, national, local); *targets* (international, national, local); *fees and taxes*; *economic incentives*; and *information*.

As Sweden joined the EU in the mid-1990s, Swedish national law became subordinate to EU law. This has meant that EU *legislation* today dictates both national and local waste governance. Important directives regarding waste management have been ratified in the last decade, such as the EU landfill directive in 1999 (EU 1999). The EU Landfill directive from 1999 is by many seen as the most influential artifact driving action on national and local level as regards waste management policy (Bulkeley et al. 2005). Other more recent directives and similar are a new waste framework (2008/98/EC), the EU green book on management of bio waste 2008, EU energy and climate policies to 2020 in 2008, the Renewable Energy Directive (2009/28/EC), and an EU carbon dioxide tax on vehicle fuels and heat 2009. These directives, laws and other official documents are then translated into national and local goals and guidelines. For example, Sweden has a new national waste plan from 2011, developed by Naturvårdsverket, the responsible central authority. The process of developing a national waste plan follows a procedure familiar to much new national regulation, it is based on formalised feedback from concerned actors.

Policy instruments within the area of waste governance in use are prohibition of landfills, landfill tax, pollution regulations, produces responsibility, and a system of deposit on bottles and aluminium cans. Laws regulating waste and the municipal responsibilities of waste management include the Work Environment law (SFS 1977:1160), the Environment law (SFS 1998:808), the Planning and Construction law (SFS 2010:900), a law on landfills (SFS 2001:512), and several laws on the collection and treatment of materials such as oil (SFS 1993:1268) and batteries (SFS 2008:834), incineration of waste (SFS 2002:1060), and the producer responsibility for other materials, such as paper (SFS 1994:1205), tires (SFS 1994:1236), lamp bulbs (SFS 2000:208), electronic and electric products (SFS 2005:209), and packaging (SFS 2006:1273), cars (SFS 2007:185), and drugs (SFS 2009:1031). In 2010 important changes were introduced to legislation relating to the waste management area (NFS 2002:26, NFS 2002:28 and SNFS 1991:4). Important developments in Swedish waste related legislation and governance are found in table 1.

Table 1. Policy instruments identified in Sweden, in a survey undertaken by the Waste Refinery research institute, Borås (Nilsson and Sundberg 2009: vi).

Year	Policy instrument	Year	Policy instrument
1991	Municipal waste management plans	2009	Renewable Energy Directive 2009/28/EG
1992	NOx fee	2009	Suggestion to remove the tax on incineration
1993	Producers responsibility	2009	Suggestion for new energy and carbon dioxide taxes
1998	Environmental regulations in agriculture	2009	Policy instruments for the use of biogas
1999	Landfill directive	2009	Landfilling ban in Norway
1999	Certification of compost	2009	Waste incineration or Co incineration?
2000	Landfilling tax	2009	Certification of compost in EU
2002/05	Landfill ban for combustible/organic waste	2009	Trading system for SOx and NOx within EU
2002	The waste ordinance	2009	Standardisation of waste fuels
2003	Policies for methods concerning storage, digestion and compost of waste	2009	Carbon dioxide tax on vehicle fuels and heat (EU)
2003	Certificate system for renewable electricity	2010	Changes in regulations for animal waste

2005	Emission trading system	2010	Implementation of the waste framework directive
2005	National environmental goals	2010	The Sysav-court decision and exemptions from LOU
2007	Regulation on waste transportation	2010	Changes in NFS 2002:26, NFS 2002:28 and SNFS 1991:4
2008	New waste framework (2008/98/EG)	2010	Handbook for the use of waste in construction work
2008	Green book: Management of bio waste (EU)	2010	Strategy for the use of biogas
2008	Energy and climate policies to 2020 (EU)	2010	Directive on industrial emissions
2009	"Krav" ecolabelling of compost	2010	Minimum quota levels for biological vehicle fuels
2009	Suggestion for material based producers responsibility	2010	Third part access to the district heating systems
2009	Suggestion to remove the tax on artificial fertilizers		

Possible future policy instruments currently discussed include: information, tax on raw material, material and/or hazardous material, waste fees based on weight or environmentally differentiated waste fees for households; a change in distribution of advertisements to households only is asked ("advertisement – YES please!"); tax on incineration; better control/inspection; changed VAT rules; and ban of incineration of recyclable material (Bisaillon et al. 2009, Ekvall et al. 2010).

Targets (international, national, local) are closely linked to legislation, even though it is less clear what sanctions may be relevant for noncompliance. Targets relating to pollution and sustainability in Sweden are often formulated by central government authorities, such as Naturvårdsverket, which then demands plans produced by municipalities in which the contribution to national targets are detailed. Sanctions for not complying with legislation and targets etc, are part of the coercive dimension of governance, but will not be described in this context.

Fees are a central element of the Swedish waste management system. Municipally owned companies have for a long time had as a demand not to make a profit out of household waste management. This demand was linked specifically to the municipal monopoly on management of household solid waste. The fees for waste collection and management are based on the cost price principle, and have been determined annually by the municipal company. The municipal waste management companies charge the owner municipalities for the service of municipal household waste collection and management, and the municipalities in turn decide on fees for each household or housing complex on the same cost price principle. The polluter pays principle is in effect in several countries today, with waste charges and fees as an important policy. This policy states that the polluter pays, and this is translated into for example waste fees based on volume or weight or frequency of collection, rather than a flat rate where there is no incentive to reduce waste volumes (Davies and O'Callaghan-Platt 2008). *Taxes* have been added and removed in the area of waste management, especially for industrial waste and activities. Examples of taxes that have impacted on waste management are the carbon dioxide tax and landfill tax (see table 1).

Economic incentives in Sweden related to waste management include government grants to develop eco-friendly waste management facilities (Rylander 1985). NSR and its owner municipalities have enjoyed national economic support for the development and construction of new waste management plants and technologies, and thus national priorities are reflected in the choices of infrastructure development on local level. Finally, *information* is one of the cornerstones of municipal governance of waste in Sweden. Annually, households receive regular information regarding waste collection news generally from their municipality or their waste management contractor.

This rather extensive presentation of EU and national policy instruments related to the waste area goes to show the substantial legal framework in which Swedish municipalities need to govern household waste management. Municipal governance of waste has to be executed in concordance with other municipal welfare services and priorities for development. The situation of municipalities is what we will look at next.

The role of municipalities

Municipalities have extensive autonomy in relation to national government in Sweden. The local is the major decision-making locus of welfare and critical services in Swedish society, with regions being involved mostly in healthcare and public transportation services. A municipality in Sweden has to offer waste management, in addition to a number of critical community services, such as care of children and education on primary and secondary level, housing, public transport, et cetera. Thus waste management is a municipal obligation.

Municipalities are not allowed to operate outside their own geographical domain. Furthermore, municipally owned companies are not allowed to work on a for-profit basis; therefore the cost price principle for waste collection and management fees to municipal inhabitants. Service provision with a substantial value that is not within the area of municipal monopoly has to be put on contracts open for competitive tendering, according to the Public Procurement Act (LOU; SFS 2007:1091). This law, in effect from 2007, marks the increasing importance that competitive tendering as a procedure for ensuring fair competition and what is perceived as efficient use of tax monies. An older version of the Public Procurement Law was ratified in 1992 (SFS 1992:1528). For example, the Swedish Competition Authority the following year strengthened its position as guardian of the adherence to this law, as they were given sanction powers towards municipalities which were seen as violating this law.

Municipalities need to relate to EU legislation and EU formal bodies; national government and various central authorities implementing legislation and other decisions by parliament. Important central authorities, as regards waste management, are the Swedish Environmental Protection Agency but also the Swedish Competition Authority. Other municipalities, especially the ones co-owning waste management companies or infrastructure, are of course of outmost importance, as well as local authorities that implement municipal policies. Citizens are of central importance, partly as direct customers of waste management companies, and as voters and political subjects as inhabitants. The regions do not, for the time being, play any significant role in the governance of household solid waste in Sweden. But the increasing complexity and technical achievements in terms of waste treatment technologies, may

stimulate a more regional perspective on waste management solutions as part of regional energy and other infrastructural development strategies. However, regions do not have any responsibility regarding household waste.

Many municipalities in Sweden cooperate in household solid waste management since the 1970s, when the amounts of household waste started to grow, and municipalities were given the responsibility for waste management by the state. The reasons stated have been economies of scale and pooling of competences. Waste management has been described as an area where monopoly supply is more effective than competition and privatisation, due to the characterstics of the service itself, the need for regulation and control, and the market itself. From a municipal perspective, therefore, the current governance mode of monopoly with sections outsources, is rational (Bel and Warner 2008). The Swedish version of devolution is interesting as it started before the NPM influenced privatisations in Europe, and reflects a combination of second and third generation policy areas.

Public-private partnerships have not been a significant part of the privatisation trend in Sweden. Instead, municipally owned companies perform municipal tasks and services, or these are contracted out to private service providers. Solid household waste management has been a full municipal responsibility since the 1970s. Many municipalities have chosen to join forces through joint waste treatment facilities organized through municipally owned limited companies. Due to the strong autonomy of municipalities, different solutions for waste collection and treatment have developed over time. These companies have been established since the 1980s, and fulfill tasks that are fully within the responsibility of municipalities. The cooperation, however, is often older than the municipal companies. The municipal waste management companies operate on a cost price basis; which means that the companies are allowed to charge fees according to the costs for providing the services. Municipalities owning one inter-municipal waste management company individually decide on how and to what extent household waste will be collected and treated, and an individual company needs to adapt to various municipal preferences in one region.

Responsibility for waste management is divided between municipalities, producers, and possessors or holders of waste (Slater et al. 2007, Dijkgraaf and Gradus 2008, Johansson and Siverbo 2011). This responsibility contains physical, economic and judicial dimensions. The responsibilities are combined with a complex infrastructure and waste management services providers. Municipalities are responsible for household waste, except for household waste that has been defined as the responsibility of producers. The jurisdiction has also opened for stronger market features within waste management, due to the law on competitive tendering in the public sector. As a result, waste management is a market that has grown considerably in the last decade, due to the introduction of producer responsibility for various types of materials. Through legislation since the 1990s, producers have taken over responsibility for various types of waste that related to produced goods, foremost cars, electric and electronic goods waste, tyres, packages, glass and paper. The responsibility of waste possessors is mainly to secure a correct handling of the waste they possess, i.e. making sure that it does not end up where it should not. The physical waste management is mostly taken care of by

contractors specialised in recycling and waste processing. Municipalities furthermore bear responsibility for dangerous waste.

Citizen insight and influence on the governance of waste management in Helsingborg takes many forms. Citizens can react to the of waste collection service at their home to the customer service provided by NSR, even though collection of household solid waste is contracted out. Furthermore, citizens are informed of new modes of waste collection and management, and new routines that this may imply. In addition, there is the power of the electorate on election days, and open meetings regarding city planning and development offer opportunities for the inhabitants of Helsingborg to voice their opinion. It is also possible for citizens to voice their opinion directly to politicians. Contemporary waste management then, combines the voice options of public and private sector, without the conflicts of interest resulting from strict privatisation or public-private partnerships, and without the rigidness of purely hierarchical public structures.

Governance of waste in North-Western Scania

Helsingborg is one of six owners, with a majority of shares, of the limited company NSR AB (Nordvästra Skånes Renhållings AB), which handles waste falling under municipal responsibility in North-Western Scania. The other owners are the municipalities Bjuv, Båstad, Höganäs, Åstorp och Ängelholm, and the company was established in 1982. This cooperation takes the form of a local federation (kommunalförbund), and the shares are distributed according to number of inhabitants in the various municipalities, leading to the city of Helsingborg being the main shareholder with 51.56 percent. The other municipalities are much smaller than Helsingborg, with Bjuv owning 7.70 per cent, Båstad 6.40 per cent, Höganäs 11.48 per cent, Åstorp 6.90 per cent, and Ängelholm 15.96 per cent of total shares. The individual municipal assemblies select members on the board of NSR, the formal highest decision-making organ of NSR, but also are represented in an owners' advisory council (ägarråd). This advisory council has no formal decision-making power, but is an arena for discussions among the owner municipalities regarding the company outside the formal structures. The task of the company is to provide solutions to the household solid waste management responsibility of municipalities in North-Western Scania, and are laid down in owners' directives (ägardirektiv) These directives have been reformulated a few times, and they stipulate the societal function of the company, but contains a demand on a profit margin and the extent of activities. The business model is both similar to other municipal waste management companies in the region, but at the same time display different technical solutions as to management and treatment of waste, organisation, and other factors (Corvellec et al. 2012).

The aim of the limited company is stipulated in its statutes, and particular for municipally owned companies is that their mission is to be specified as being of service to the municipality through specifically specified activities, such as household waste management. The function of the limited company is therefore serving a municipal purpose, as dictated by the Municipality Law (Kommunallagen). The boards of municipal companies with a municipal purpose differ from other limited companies, as the paragraph about the board being appointed by the annual meeting is replaced by a paragraph in the Municipality Law

that states that the municipal assemblies of the owner municipalities appoint the board members. This is an important difference in legal status between municipal limited companies and other limited companies (Setterlid 2010). Thus, municipal companies act under the Limited companies Law (aktiebolagslagen), but are also subject to specific conditions in the Municipality Law.

Over the thirty years NSR has been in operation, it has had only two CEOs. The first CEO led the company for more than 20 years, and developed the company to a company leading in technical innovation within recycling and biological treatment of waste. As the company until the 1990s had no competition, it was in a position to invest in an R&D department and allocate large sums to innovation processes. During the 1990s, the board also held members with a long-term engagement with the company. Since the 1980s, when the company was established, it had grown substantially until the 2000s. As a majority of the owner municipalities are small, the largest owner, Helsingborg city, did not want to be too dominant at board meetings. This meant that the smaller municipalities were allowed proportionally large influence in the board. Several previous members of the board of NSR describe the board as non-political, and wholly focussed on technical and business-oriented matters. The board representatives of the owning municipalities, have been in a position to be educated in waste management by the CEO, while conducting their governing role. Board members, however, have not always find support in their home municipalities, with their respective municipal assemblies. Party politics seems to have been stronger in the discussion of waste management in municipal assemblies, where detailed information of conditions and development within the field was less spread. The board members thus can be described as more technically oriented in their decisions on development of NSR, than party politically oriented.

Waste management requires substantial infrastructure, from waste collection to treatments plants to pipes for gas and heating. Whereas producers have the obligation to receive and handle waste falling under the producer responsibility clause, municipalities have the responsibility of receiving and handling remaining types of household waste, mainly organic waste and other non-hazardous waste. This means that producer organisations, private actors and municipalities have developed waste reception, deposition and handling infrastructure. These may consist of various waste handling and treatment facilities such as incinerators, bio-fuel plants, and mechanical treatment facilities. District-heating infrastructure has been built in Sweden since the 1950s, and is a backbone of home heating. Where municipalities with monopolies of waste management during the 1970s and 80s developed large-scale facilities for waste treatment and landfills, the recent deregulation has forced municipalities as well as municipal waste management companies rethink their waste management strategies.

The waste infrastructure in Helsingborg consists of multiple-fraction waste-bins, at private homes and building complexes, which are emptied at certain intervals. The bins are owned by home-owners, whereas the collecting carriers are often operated by private companies with temporary contracts with municipalities. Each municipality hosts one recycling facility, depot or plant, and the main recycling facility in Helsingborg (Filborna) is neighbour to an extensive area on which are located various waste treatment plants. There is also a plastics recycling

facility in Ängelholm. The Filborna plant in Helsingborg was originally landfill opened in 1951, which has transformed over the years. This site displays activities operated by several companies, of which NSR is only one. The city of Helsingborg owns the land on which the plant and the various activities take place.

Waste management and district-heating infrastructure are closely linked today. Originally district heating infrastructure was developed on a large scale in the 1950s, mainly fed with oil, but in later years increasingly with bio-fuels. With the oil crisis of the 1970s, new ways to manage waste and heating more economically won preference, and from this period onward, waste incineration has been combined with district heating in many parts of Sweden. Important in this development was government incentives for the construction of waste management infrastructure, foremost incineration plants. In Helsingborg, however, incineration was not chosen as the model for waste and energy management. The perspective on preferred technologies for waste management has changed over time; a few decades ago the economic perspective was primary, focussing on rational waste management. This economic perspective became stronger with the oil crisis, but in recent decades the technical and biological dimensions have become stronger. Today, investments are valued according to efficiency of energy production of different waste management technologies, where energy recovery within a municipal framework has become an important aspect of municipal planning and infrastructure development.

In the region (North-Western Scania), there are plants for collected paper, plastics, biogas production and management of hazardous waste. An incineration plant owned by Öresundskraft is currently being built at the Filborna plant. Renhab AB, previously owned by the City of Helsingborg, a waste collection company, offers mobile transport infrastructure (waste collection). Furthermore, there is biological treatment and landfill at the Filborna plant in Helsingborg. The development of technologies and operations at Filborna demands environment permits granted by an Environment Court. The planning of Filborna over time has demanded close cooperation with the planning department of the City of Helsingborg. For many municipalities, waste incineration has been a convenient solution as substitution for oil as fuel for district heating, but in the Helsingborg area, this was not a chosen option.

A new heat plant (kraftvärmeverk) is being built at the Filborna waste management site, something which will influence waste management for a long time ahead. The investment in biogas has led to changes in waste collection, as organic waste is separated from other forms of waste, something which in turn impacts on the design of wastebins located in housing estates and in individual houses, and waste collection vehicles. Until recently, two municipalities had, for example, collection only of four fractions, whereas all other municipalities in the NSR cooperation used a system of collection of eight fractions. The two municipalities with fewer waste fractions will now be urged to adapt an eight fraction model of collection, in order for the internal consistency of the system to be higher. This of course will mean more separation work for individual households, and be preceded by related information campaings, change of wastebins, etc. The governance of waste infrastructure could be a paper in its own right. In this context, suffice it to say that the governance of infrastructure related to waste management and the new raw materials produced through itk

involves both other municipal companies and their owners, national authorities and controlling bodies, as well as private companies.

Today, municipalities produce substantive plans for various dimensions of society, relating to waste management, such as waste plans and waste management directives (Renhållningsordning) to energy plans. This is due to the substantial investments in infrastructure that are needed both in the area of waste management, but also other central sectors of community infrastructure services such as energy management and urban planning. This is seen in the closeness of political preferences within the domain of for example waste, environment, regional development and similar goals, with plans for development of infrastructure in the corresponding areas.

The individual municipalities in North-Western Skåne decide autonomously on how waste is managed, and on the fees charged for waste management. This means that each municipality has the ability to use the common waste management infrastructure to the extent it individually chooses. This has had as a result that waste collection in some of the municipalities is divided into four fractions, whereas other municipalities have waste collection in eight different fractions. The City of Helsingborg in various plans states how household waste is integrated into various aspects of city management, such as energy, environment and more specifically waste management (Renhållningsordning 2011; Miljöprogram 2011-2015; Avfallsplan 2011-2015). *Renhållningsordningen* (sanitation regulation) is a formal document listing the responsibilities of the waste management and collection area, and their distribution on municipal, corporate and individual actors. The waste plan (avfallsplan) dictates goals for various areas related to waste, as formulated by city authorities.

Renhållningsverket (Waste management Authority) is the technical body responsible for the correct implementation of waste management in the city of Helsingborg, and is the commissioning body of waste collection in the municipality. The political committees within the City administration related to developments within the waste area are Stadsbyggnadsnämnden (Urban Planning Committee), and Miljönämnden (Environment Committee). Renhållningsverket is an administrative body under the Urban Planning Committee. In the 1970s, all the activities relating to waste collection and management was done by the Sanitation Agency, from decisions on town planning to waste collection. Today, the opposite is achieved through the incorporation of billing into NSR. This development will be discussed in more detail later on.

Organisational hybridity

The reason for the municipalities of North-Western Scania to create a joint waste management company was the vast financial investments in waste treatment plants and related waste management infrastructure needed and the municipal responsibility for household solid waste (which was much larger at the time of establishing the company). The limited company as organisational form was chosen in order to grant operational flexibility, whereas the full municipal ownership secures public influence. This means that the municipal waste management company NSR was and is a hybrid organisation. It operates under private law,

but its function is stipulated in public law. The funding is based on fees from households generating waste. However, the prices are strictly regulated according to the cost price principle. The market environment for NSR has gone from being monopolistic to becoming increasingly competitive. However, the monopoly on household solid waste remains, but NSR acts on both the monopoly household waste market and the deregulated industrial waste market.

NSR as many other municipally owned waste management companies in Sweden is fully owned by municipalities, and is therefore politically governed, but at an arm's length distance. This is secured by appointing a separate board for NSR among the local parliaments, the municipal assemblies. There is also an informal owner's committee that discusses broader issues of relevance for the governance of local waste management. Public organisations have to adhere to the publicness principle, according to which any citizen may demand to take part of any formal document produced by the organisation. However, for NSR and other municipal companies, only board minutes are public documents, whereas other documents produced within the company are not public. The owner representatives at the board of the company may find themselves in situations where their political assemblies or individual politicians ask them to share information that might include sensitive information regarding the market strategies of NSR. Individual board members therefore need to be aware of their duties as regards the balance between the public interest and the interest of the municipal company.

Due to deregulation of the industrial waste market in the early 2000s, NSR met a growing competition that the company could not handle. It lost several important contracts to private competitors, and had difficulties in adjusting the organisation to the new market conditions. NSR, which previously had never had economic problems, started to show negative results. The negative results made the owner municipalities demand changes to the management of the company. The CEO of NSR had been a visionary leader of the company for many years, and was leading in waste management innovation in Sweden, but did not have the same managerial as technical innovation capabilities. The board demanded more business-like structure and management of NSR. A management consultant was also called in to suggest a reorganisation of the entire company, and to reinforcement of market and management skills within the company. The board initiated a reorganization of the company in 2005, and also formulated new owner directives including demand on profitability. After significant changes in the company, including the appointment of a new CEO in 2006, reorganisation and downsizing of the company, and a new market strategy, the figures and results of NSR were again in balance, and the initiative could again be given to the company from the board, regarding the way forward for NSR.

Today, the relationship between the board and the CEO is characterised by an active CEO developing plans for the company, and informing and seeking feedback from the board. A difference in the board is that many of its members are new, and therefore the internal work of the board has become more difficult, as experience and information cannot be transferred between board members as it had been in the previous period. Since the restructuration, the company has developed its strategy, and now emphasizes the mission of supporting the development of the region in many dimensions. For example, a central mission is to create

possibilities for both companies and employees at their sites and through their technologies and competence.

The description of the relationship between owners and NSR follows a clear dramaturgy, where the owners take on a passive role when things go smoothly, but step in and actively interfere in the company when results are negative. When reorganisation and new owners' directives are in place, they can step back and resume their previous passive ownership role again.

As a result of the court cases against Helsingborg and other municipalities (see the section below), Helsingborg City has decided to reorganise the tasks related to household solid waste management. NSR has changed its billing structure towards other businesses using their services at the waste management facilities. Previously, NSR bought waste from other companies, and then sold it to other companies at their facilities who are specialised in various treatments. After the court judgements, NSR charges a "net" fee for the use of their facilities from companies who have waste they want to dispose of. The companies using the Filborna facilities instead sell their waste directly to companies who use the NSR facilities. Even though this part of the activities of NSR does not relate to household waste, it impacts on the basic conditions for the governance model of all waste management in the region.

Effects of jurisdictional hybridity

Waste management in Sweden has become an issue of jurisdictional controversy, ensuing in several court cases in the late 2000s. The background was that a principle of competitive tendering became enforced by law in the 1990s, whereas older legislation regarding municipal services dates back to the 1980s. These two laws have only recently been tested against each other recently, as private operators have taken legal action against what they have seen as a violation of the limits within which municipally owned companies may undertake commercial activities without a competitive tendering procedure. As a response to increasing competition from private actors on the market for industrial waste, and also on the market for household solid waste collection, several municipally owned waste management companies in Scania, among them NSR, developed their market activities. This was done through regular market activities, where larger industrial waste producers in North-Western Scania were contacted in order to stimulate demand for services offered by NSR (NSR board minutes 2005-2006, NSR AB 2006). The private actors competing with municipal companies had in the second part of the 2000s seen with growing dissatisfaction on this kind of market orientation of municipal companies. The development led to a number of studies and reports on competition in the waste management and collection market (Persson 2007, 2009, 2010, Konkurrensverket 2008). According to private waste management actors, several Swedish municipalities, among those owners of NSR AB and Sysav, did not follow the Public Procurement Act, as they let their municipal companies have extensive contracts through direct deals rather than competitive tendering procedures. Private actors claimed that municipalities to a large extent gave waste management contracts directly to municipal waste management companies, without competitive tendering procedures. The municipal monopoly over household waste was seen as a major obstacle to private expansion. This in turn resulted in a charge from

private waste management actors towards two small Swedish municipalities of breaking the law of public competitive tendering.

The municipalities for their part claimed that Swedish municipalities have a right that is based in the Municipal Law (Kommunallagen), to provide certain societal services with a monopoly within their own geographical areas, as for example waste management, if it was a fully municipal responsibility stated in law. It is the municipal full responsibility for household solid waste that is the reason or the emergence of municipal waste management companies in the 1970s and 80s. Their lawyers also emphasized an exception to the obligation to procure societal services, if these were more or less fully provided for within the municipality, and were of societal importance, the so-called Teckal exception. The main question was if municipalities can directly give commissions to municipal companies without a preceding competitive tendering procedure. The waste management companies won the cases in all three court instances in Sweden. The municipalities, it was concluded by the courts, did not adhere to the Public Procurement Act. The judgement of the Swedish Supreme Administrative Court was that the law on competitive tendering had been broken by municipalities who gave contracts on household solid waste management to municipally owned waste management companies without previous competitive tendering (RÅ 2008:26). The court concluded that in Swedish law there are no exceptions from the demand to appoint contracts after a public procurement procedure, even though there are cases in the EU court where judgements allow exceptions. This is due to the fact that the exceptions have not been included into Swedish law.

However, this decision rendered further developments both within the Swedish parliament and in the EU. In 2010, the European Commission sent a motivated statement (motiverat yttrande) to Sweden, as a result of the judgement in the Swedish Supreme Administrative Court that Swedish municipalities directly giving waste management contracts to municipal companies without preceding competitive tendering procedures violated the EU directive (2004/18/EG, 2004-03-30, articles 23-55) on procedures for public procurement (EC 2010). In this motivated statement, the EC concludes that the reasons for exempting Swedish municipalities from the need to undertake public procurement procedures as regards waste management contracts to fully owned municipal companies violates the EU directive on public procurement procedures, as the specific conditions for exemption are not fulfilled. The criteria that Sweden has claimed were applicable on the cases in question were the so-called Teckal criteria, used in EU law practice, where municipal companies undertaking only marginal work for other than the owner municipalities can be given contracts without a competitive tendering procedure. The problem was, however, that Sweden had not incorporated the specific law paragraphs on exceptions to the demand to undertake procurement procedures for Swedish municipalities into Swedish national law. Therefore, Swedish municipalities could not refer to EU court practice as it had no legal basis in Swedish national law.

In order not to cause major changes in municipal autonomy in Sweden, the Swedish parliament in 2010 passed a law that allowed municipalities to organise and govern their stipulated societal service obligations, such as waste management, according to their

preferences. Thus, the parliament clarified that the municipal independence was to be superior to the law on competitive tendering. This standpoint was also clarified in communication from the Swedish government (Department of Foreign Affairs) to the European Commission (Rättssekretariatet 2010). The Swedish courts could not pay attention to the Teckal exceptions, however, since they had never been ratified in Sweden. Therefore EU legislation and court practices be appealed to, since Swedish law was above EU legal practice in cases where Sweden had not specifically stated that EU law should be in force even nationally. It did not matter that the municipal companies had been established before the ratification of the first Public Procurement Act in 1992, and never been changed since.

The government at this point commissioned an investigation into public companies and the legislation on public procurement, control and publicness. It was specifically to research the need for exceptions from the demands on public procurements (Fi 2009:8). The Swedish parliament swiftly ratified a temporary acknowledgement of the Teckal exception in Swedish law in 2010, and made it permanent in 2011. This meant that after 2010, the municipalities needed only to show that any commercial activities of municipally owned companies was marginal, and that they had full control of the company, so as to make it comparative from a control perspective with a municipal department. Publicly controlled bodies, such as municipally owned companies, that are commissioning bodies must still adhere to the Public Procurement law; i.e. they cannot claim to be exempted from the demand on public procurement.

Stakeholder hybridity and networks

Waste governance comprises a whole circle of considerations, from waste production to the provision of energy and fuel that feeds back to society, and demands strategic considerations regarding a vast number of issues. The municipal autonomy also impacts on the diversity of waste management infrastructure, as in the case of the differing number of fractions into which household solid waste is sorted in various municipalities, to the demands on waste collection vehicles to use bio-fuel if working for the municipalities of North-Western Scania. This means that planning within the City of Helsingborg needs to coordinate developments within a broad range of areas when outlining new urban districts or renewal projects.

The municipal cooperation regarding waste management in North-Western Scania can be described as a single-purpose service organization in Hulst's et al. (2009) terminology. This arrangement in the Helsingborg is a stable structure, unaltered since its formation in the 1970s. The reason for establishing the municipal joint waste management companies so common in Sweden was cost-efficiency, and continues to be so, besides an increasingly important argument of environmental benefits of large-scale investments in innovative waste management and treatment technologies. The network among which cooperation occurs, however, have in recent years expanded, not so much on formal as on informal level. The ways in which cooperation occurs has also changed over time, both among municipalities and among the owners of NSR and NSR itself. The changes in national and international legislation over the last decades has caused the municipalities in North-Western Scania to develop their cooperation, especially through development of the jointly owned waste

management company, but also in other forms, such as informal mutual adjustment of waste management procedures with nearby municipalities.

The six owner municipalities of NSR have decided on mutual information sharing and policy discussions with the municipalities of Landskrona and Svalöv (LSR AB) and Klippan, Perstorp, Örkelljunga, which together with Åstorp and Bjuv (who are also owners of NSR AB) organise waste management through Nårab (Norra Åsbo Renhållnings AB) (Sopsamarbete: Organisation). In 2012 all contracting activities are moved from the Sanitation Board (Renhållningsverket) to NSR, and a joint contracting agreement has been reached by several municipalities through their respective municipal waste management companies. This is made in order to maximise the turnover of NSR with the City of Helsingborg and the other owner municipalities. The court cases have also caused the owner municipalities to cooperate even more regarding waste management, especially to achieve better environmental results, and to rationalise administration and management. Steps to achieve this have been taken since 2009 through something called Sopsamarbete Skåne Nordväst (previously Sopkoll); a project aiming at communicating the cooperation in the field of waste among ten municipalities in the area of North-Western Scania.

This cooperation is voluntary, but has as aim to create economies of scale for the municipalities and better possibilities to achieve environmental goals. At the same time the cooperation is based on dialogue among the municipalities, whereas each municipality is formally autonomous to decide on waste management fees and organisation etc. Four of the six owner companies have transferred their competitive tendering functions to NSR, whereas two municipalities still administer these themselves (Ängelholm and Höganäs). Most of the owner municipalities have only a few thousand inhabitants, except Helsingborg, something which means the corresponding functions in each municipality is only a fraction of the functions of the respective Sanitation Agencies'/Boards' tasks. As contracts for municipal waste management or collection are increasingly complex, contracts hardly come with less than 130 pages of text, these are a time-consuming task for especially small municipalities, that may also lose the competence of developing good contracts and competitions as the contracts are so long. The municipalities of North-Western Scania see many benefits with a joint tendering and billing function located at NSR.

CONCLUDING DISCUSSION

What does municipal governance of household solid waste management encompass? Firstly, it encompasses flows of material waste. Waste management demands substantial infrastructure that is linked to both design of sorting bins and the environments in which they are physically placed in connection to individual or communal housing, to the infrastructure needed to collect and manage or treat the waste types and the transformation of waste to other forms of raw materials, such as biogas, all the way to infrastructure for distributing new raw materials to other customers. Secondly, it encompasses the governance of attitudes and behavior. In order to get biogas, inhabitants need to comply with sorting their waste into eight or any other number of different fractions, something which needs information and other instruments in order to be realized. The behaviour demanded can be achieved through a

combination of information and incentives as well as (the threat of) sanctions. Thirdly, waste governance encompasses planning and design of urban and semi-urban areas. Bio-gas plants need to be placed somewhere, and waste collectors need to be able to reach sorting bins easily in order to do an efficient work without health hazards. Furthermore, district heating and other distribution infrastructures are closely linked to long-range plans for municipal services such as water, energy, waste management and heating.

The scope of municipalities in governing household solid waste management is framed by international and national legislation and targets. Within these limitations, there is considerable autonomy of municipalities as regards the priorities and design of public services. What we have seen in the case study is that stakeholders in the form of competitors also influence the development and change of waste governance from the "side". Whereas international or national legislation may cause changes in local governance, private competitors in this case use a discrepancy in legislation to shift the power relations between municipal and private companies in the market of household waste. The changes in local governance of waste management in Helsingborg and North-Western Scania in recent years, have not been the result of planned development according to preferences of the owner municipalities of NSR, but are reactions to a chain of events initiated by private competitors.

Recent changes to the governance of waste in North-Western Scania have thus not been a result of changed local government preferences, but of adjustment of municipalities to changing national legislation and the actions of private competitors due to the discovery of discrepancies between Swedish national legislation, national legislative intentions and EU legislation practice.

Governance hybridity in Sweden firstly takes the form of municipal companies performing municipal tasks, and not direct public-private partnerships as in other countries. The challenges of this form of public-private hybridity is that conflicts of interest may appear among owners, but less so in the board of the municipal company. Fragmented ownership due to several municipal owners through local federations (kommunalförbund), gives increased power to the CEO of the municipal company, as also noted by Grossi and Thomasson (2011). The importance of voluntary agreements between owners and company in Swedish municipal companies are interesting examples of the hybridity of governance in the water and waste management areas (Grossi and Thomasson 2011).

National government and the EU have a significant say in how individual municipalities can govern local waste management. This happens through the ratification of directives, decrees and laws, which are left to individual municipalities to contribute to, for example through targets to be achieved. Municipalities can then decide on how to achieve these targets. The technical development of waste management, on the other hand, is effectively strictly in the hands of local waste management companies and their management, as the knowledge level about technical solutions and development is low among board members and owners. Therefore, development of waste management techniques is more an issue to be anchored and accepted by the board and owners of municipal waste management companies than something which owners of local waste management companies actively drive. Furthermore, competitors

increasingly have tried to redefine the confines between regulated and deregulated waste markets, as is clear in the court cases initiated by private waste management actors in the late 2000s in Sweden. On the other hand, the owners of NSR and municipalities owning nearby waste management companies today cooperate much more than previously, in order to increase cost-efficiency. The relationship between the City of Helsingborg and its citizens must also be regarded as good, as there are significant complaints neither on the day-to-day waste collection or chosen technologies for waste management and treatment. The only substantial complaints occurred in the mid-2000s when smell from leaks from a treatment plant spread to nearby habitation. The levels of wrongly sorted waste is also very low, so households apparently have both significant information and engagement in the current system of waste management.

The challenges of the governance in the case discussed relate to

- organizational hybridity; as several municipalities own a limited company, that serves municipal missions and objectives, and the borders between municipal organisation and tasks and company tasks and organisations are flexible
- jurisdictional hybridity; in that municipalities jointly own waste management companies that sort under private law, whereas municipalities sort under public law, and national law contains discrepancies, and EU and Swedish law are not fully compatible
- domain hybridity; waste management infrastructure is intertwined with other infrastructure locally (e.g., heat production and distribution, energy production), and also impacts on other sectors of municipal activity, such as local planning and development
- multiple stakeholders and networks; waste management has for municipalities meant increasing competition from private actors, but also acquisition of other companies, and in addition increasing cooperation with nearby municipalities on both formal and informal level. Also citizens are asked to interact more regarding waste management, by demands on sorting waste and enabling contacts both as customers and owners of the local waste management company.

Governance hybridity entails *transformation* over time. The challenge of governance is thus not linked only to the multiplicity of organisational forms and objectives, jurisdictional domains and networks per se, but also to changes in these over time. These transformations over time correspond well with the change patterns in public ownership identified by Thynne (2011) A shift from ownership as regulation to ownership and regulation, public law ownership to private law ownership, introduction of customer fees as funding base for public service provision (ownership return), and governance of municipal companies through a principal-agent relationship are all identified developments within municipal governance of waste management in Sweden.

Long-term investments
A further challenge in the governance of waste management is the long planning and investment periods involved in the construction of waste management and treatment plans, something that makes investment decisions dictate available methods for treatment.

Distance has allowed innovation
National but foremost local governments in Sweden have not been driving as regards waste management innovation, something Sweden has in common with for example New Zealand (Davies 2009). Instead, it has mostly been municipally owned waste management companies which have been driving in innovation in this field. With the benefit of having a strong financial backing in the form of owner municipalities, Swedish publicly owned waste management companies have been able to invest in and experiment with innovative processes and infrastructure which private actors would not invest in. this has rendered some of the Swedish municipal companies world-leading in waste management innovation. The reason that there is a technically innovative infrastructure for both collection (biogas driven vehicles) and management of waste in North-Western Scania is, according to waste management officials at the City of Helsingborg, that municipalities have had the full responsibility for waste management. According to these respondents, private actors in the waste sector are reluctant to invest in costly infrastructure. In Helsingborg, innovation was enabled through rather passive ownership, which allowed the municipal waste management company to develop and experiment with technical solutions according to their professional competence, without political interference from politicians.

This is an interesting area for further comparative research. Research investigating the efficiency of public and private waste management companies have not been able to prove that private organisations are more efficient than public ones.

Regionalisation?
There are several interesting questions regarding the future of municipal waste management. The increasing importance of regional governments may in the long term impact on municipal governance of waste management in Sweden, but at the moment, municipal joint companies are the only form of regional cooperation that is found. There are no formal discussions of developing regional schemes for waste management in Scania. The Regions in Sweden do not have a history of waste management, and probably a regional approach to waste management would have to be developed with municipalities as the central actors.

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