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Proximity as a Value and Framework for Action in Waste Management: Reflections from European Case Studies

This text analyses the notion of proximity promoted by EC regulations with regard to waste management. It focuses on the way that public authorities, industrial operators, citizens, environmental organisations and community groups implement and make use of this principle. The article, based on the results of seven case studies in Europe, considers waste management as a field of experimentation, where it is possible to observe different ways of implementing and testing the principle of proximity. The distinction between implementation and testing reflects the tensions arising from the principle of proximity: tension between the norm and how it is applied in reality, and the tension whereby residents oppose the construction of a waste-treatment facility while engaging in demanding procedures to reduce and sort their waste. Proximity is a value and a framework for action that is used in different ways by the actors involved in waste management, and it plays a role in structuring the relationships between public authorities, industrial operators, citizens and community groups. It is not so much a regulatory principle, because it has a weak enforcement capacity; it is rather a motivating principle. Therefore, with the aim of contributing to the debate on the implementation of environmental policies, this paper highlights the existence of a waste management regime that we define as a «regime of proximity». This means that all stakeholders act in a context in which proximity constitutes a means of justification, a rule that is more or less binding, or a value that can be used to advance different or even competing projects.

La prossimità come valore e quadro per l'azione nella gestione dei rifiuti: riflessioni a partire da casi di studio europei

Il testo analizza la nozione di prossimità promossa dalle normative comunitarie in materia di gestione dei rifiuti. Si concentra sul modo in cui autorità pubbliche, operatori industriali, cittadini e associazioni attuano e fanno uso di questo principio. A partire dai risultati di sette casi di studio in Europa, l'articolo considera la gestione dei rifiuti come un luogo di sperimentazione attraverso il quale possiamo osservare diverse forme di attuazione e di utilizzazione del principio di prossimità. Questa distinzione tra attuazione e utilizzazione riflette le tensioni che il principio di prossimità comporta: da una parte, la norma e la sua applicazione alle realtà locali, e dall'altra, le situazioni in cui gli abitanti si oppongono alla presenza di un impianto e, allo stesso tempo, partecipano a procedure molto vincolanti per la riduzione dei rifiuti. La prossimità è un valore e una cornice per l'azione che viene utilizzata in modi diversi dagli attori coinvolti nella gestione dei rifiuti, e svolge un ruolo nella strutturazione delle relazioni tra autorità pubbliche, operatori industriali, cittadini e associazioni. A causa del suo debole potere vincolante e attuativo, è un principio a carattere incentivante piuttosto che regolamentare. Proponendosi di contribuire al dibattito sull'attuazione delle politiche ambientali, l'articolo mette in luce l'esistenza di un regime di gestione dei rifiuti che definiamo «regime di prossimità». Ciò significa che tutte le parti interessate agiscono in un contesto in cui la prossimità costituisce un modo di giustificazione, una regola più o meno vincolante o un valore che può essere utilizzato per promuovere progetti differenti tra loro o addirittura in competizione.

La proximité comme valeur et cadre d'action pour la gestion des déchets : réflexions à partir d'études de cas en Europe

Ce texte analyse la notion de proximité promue par la réglementation communautaire en matière de gestion des déchets, en explorant la manière dont les pouvoirs publics, les opérateurs industriels, les citoyens et les associations investissent ce principe et le mettent en œuvre dans leurs activités associées aux déchets. L'article, qui s'appuie sur les résultats de sept études de terrain localisées en Europe, propose d'envisager la gestion des déchets comme un lieu d'expérimentations au travers duquel il nous est possible d'observer différentes formes de mise en œuvre et de mise à l'épreuve du principe de proximité. La distinction entre mise en œuvre et mise à l'épreuve traduit les tensions dont le principe de proximité est porteur : celle liée à la norme et à son application à la réalité du terrain, et celle dans laquelle se trouvent les habitants qui peuvent refuser un équipement et s'impliquer dans le même temps dans des procédures contraignantes de réduction et de tri des déchets. La proximité est une valeur et un cadre d'action diversement investie par les acteurs engagés dans la gestion des déchets qui contribue à structurer les relations entre pouvoirs publics, opérateurs industriels, citoyens et associations. C'est moins un principe réglementaire, car il dispose d'une faible capacité de contrainte, qu'un principe doté d'un caractère incitatif. Avec l'objectif de contribuer au débat sur la mise en œuvre des politiques environnementales, cet article identifie l'existence d'un régime de gestion des déchets que nous définissons comme un « régime de proximité ». Ce qui signifie que tous les acteurs agissent dans un contexte où la proximité constitue un mode de justification, une règle du jeu plus ou moins contraignante ou une valeur pouvant être mise au service de projets différents voire concurrentiels.



Keywords: *environmental policies, European Union, proximity, territorialisation, waste management*

Parole chiave: *politiche ambientali, Unione Europea, prossimità, territorializzazione, gestione dei rifiuti*

Mots clés: *politiques de l'environnement, Union Européenne, proximité, territorialisation, gestion des déchets*

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1. Introduction

The principle of proximity, together with that of self-sufficiency, has become a key factor of public policies at all phases of waste management. As laid down in EC regulations (directive no. 2008/98/EC), proximity plays a key role in the management of household waste. On the one hand, treating waste as close as possible to the place where it is produced reduces environmental and economic costs, and on the other hand, making citizens responsible and encouraging them to reduce and sort their waste would help develop a recycling and reuse economy. These elements have resulted in the development of local waste-management plans covering all national territories. These plans reflect the existing situations in terms of flows and treatment systems, and predict future management. They implement the main principles of European waste management policy: giving priority to prevention and reduction, a hierarchy of waste-treatment methods (from reuse to elimination), responsibility of the producer, protection of the environment, and human health. While this framework has led to the dissemination of a common vocabulary for action and objectives shared by all the member States, there are wide variations between countries in waste treatment procedures, and in the relationships between waste management and local practices (Davis, 2016).

Drawing on several case studies, this text analyses the notion of proximity promoted by EC regulations with regard to waste management. It focuses on the way that public authorities, industrial operators, citizens and community groups implement and make use of this principle. This paper considers waste management as a field of experimentation, where it is possible to observe different ways of implementing and testing the prin-

ciple of proximity. The distinction between implementation and testing reflects the tensions arising from the principle of proximity: tension between the norm and how it is applied in reality, and the tension whereby residents oppose the construction of a waste-treatment facility while engaging in demanding procedures to reduce and sort their waste. From this standpoint, it involves observing on the one hand how the principle of proximity is interpreted by the public authorities, the industrial operators and citizen collectives, and on the other hand how this principle is adapted or challenged as a result of contextual constraints (distance in relation to the treatment sites vs. the perimeter laid down by law; local opposition to a waste-treatment facility vs. spatial or economic rationale).

The article is based on the results of seven case studies in Europe: in France (in the Départements of Indre-et-Loire and Isère, and the city of Lyon), Sweden (the city of Malmö), Italy (the city of Turin), Belgium (the city of Liège) and Spain (the Barcelona conurbation). It does not seek to compare the situations as such, but rather to analyse each context in relation to the others, in light of the overarching waste-management principle laid down by European legislation. The survey method is based on qualitative interviews carried out with various stakeholders (technicians and policy makers in institutions and local authorities, employees and volunteers in non-profit organisations, residents), and also on observations at public meetings or initiatives organised by non-profit organisations on the subject of waste (Cirelli and Maccaglia, 2016).

The first part of this article presents the main debates about the notion of proximity within the social sciences, and the interests and challenge of understanding recent changes in waste management based on this notion. The second part shows the four dimensions or levels of proximity on which this study is based, and the



third presents the main conclusions of research and investigates the notion of *regime of proximity* and its contribution to the analysis of public waste-management policies.

2. Proximity as a category of analysis in the social sciences

2.1. Between analysis and policy principle

While it is not possible here to provide a comprehensive survey of the role of proximity in the social sciences literature, it is possible to assess its use by distinguishing between studies that attempt to conceptualise the notion from an analytical perspective and those that put forward proximity as a policy principle.

First of all, it should be recalled that it was following the work of sociologists in Chicago in the early 20th century and their observations of life experiences, forms of interaction and the mingling of populations in a context of rapid urban growth, that the notion of proximity in urban research was used more or less specifically as an explanatory factor for the behaviour of social groups in the city (Bulmer, 1984). Taking a similar view, with direct reference to *spatial ecology*, the notion of proximity was also used in social psychology from the 1960s to understand the role of direct interactions, of *face-to-face contact* and of the neighbourhood in the quality and density of social relationships (Ebbesen, Kjos and Konecni, 1976). In sociology, and also in spatial analysis research (Grasland and Potrykowska, 2002), the relationships between geographical proximity, social interactions, and social networks constitute a subject of debate for researchers interested in the relationships between social and spatial morphology (Freeman, 1999). More recently, a number of studies have investigated the combined effects of globalisation, which breaks down national barriers, and individuals' new experiences of «proximity that is provided in time-space bridging technologies» (Tomlinson, 2002, p. 52). For their part, studies of the geography of social networks explore how new information and communication technologies have abolished distance in interpersonal relationships (Comber *et al.*, 2002).

For the economic sciences, proximity became an analytical category in the 1990s. This approach first identified forms of local cooperation (Beaurain and Longu  p  e, 2006) as part of research into situations of competitiveness, innovation and economic

growth at the local level (Mollard and Torre, 2004; Torre and Rallet, 2005; Bouba-Olga, Caris and Carincazeaux, 2008). From this standpoint, proximity gave rise to two main forms of conceptualisation (Pecqueur and Zimmermann, 2004): geographic proximity, which concerns the constraints imposed by the physical space (distance and accessibility) on interpersonal relationships and economic activities (Rallet, 1992; Torre, 2009); and organisational proximity (Torre and Zuindeau, 2008), which highlights the role of networks of stakeholders, whose capacity for mobilisation and coordination is considered to be a function of the system of their shared values, beliefs, representations and skills, and of their adherence to a collective view of the issues and of shared goals. Other studies have demonstrated the importance of defining proximity in detail in order to take into account the behavioural and cognitive dimensions of organisational forms (Boschma, 2005). Thus, institutional proximity takes into account the rules and representations characterising the institutional environment in which the stakeholders interact, cognitive proximity concerns the knowledge and skills shared within a company or organisation, and social proximity refers to the impacts that social relationships (based on friendship, family ties and experience) can have on economic results (particularly, for the school of proximity, on learning and innovation processes). While the economy of proximity has mainly been applied in the analysis of productive relationships, it has also been transposed to the study of conflicts and collective action at the local level (Mollard and Torre 2004; Torre and Zuindeau, 2009). Use of the notion of proximity has led to a distinction between «imposed geographic proximity» and «desired geographic proximity». In the former, residents are obliged to live near a facility or an activity that causes a nuisance. In the latter, individuals deliberately seek proximity to a specific geographic environment (recreational, natural, protected, etc.) or to a particular social environment.

Taking a multi-disciplinary view, other studies have used the notion of «proximity conflicts» to highlight the dimensions of the transaction between the near and the far in urban, development or environmental conflicts (Mel   2013; Bobbio, Mel   and Ugalde, 2016). In these situations, the concerned groups attempt to raise awareness of their proximity to facilities or to keep away from the spatial dynamics or activities identified as causing a nuisance or risk. These studies have highlighted not only the territorial but also the social and political productivity of conflict situa-



tions. In effect, conflicts can produce an intermediate public space (Melucci, 1989) in which public decisions are debated (Bobbio and Melé, 2015).

While these different viewpoints are essentially analytical, some studies endow proximity with positive values, giving a more normative vision to forms of public policy organisation. In line with research on community development, public action set up at neighbourhood level is presented as a positive solution in the field of education, health and even the police (community policing), while debates remain intense between those who hold the view that the community is dead and those who stress the importance of the neighbourhood, the environment and housing (Sampson, 2012). Moreover, studies on planning and in political science, as in management, question the *right* scale and the appropriate administrative and zoning system when setting up resident participation schemes. Studies on the role of proximity overlap with those on local action, the neighbourhood and the role of place in the development of multi-level management or governance (Stephenson, 2013). In the field of economic intervention, *cluster-based* strategies, depending on the way they are defined in different countries, attempt to reproduce the capacities of local innovation identified by the economy of proximity. Enhancing proximity must be seen in connection with affirmation of participation on the one hand, and with a certain form of rationalisation of public management as close as possible to the inhabitants' needs on the other. Proximity is put forward as a means of democratising decision-making; the local is seen as a component of participative democracy. M.H. Bacqué and Y. Sintomer show that while proximity enables debates to be based on concrete issues, it also leads to a form of localism (2001, p. 154). Proximity provides the means to access other scales of involvement and other participative spaces, on condition that the stakeholders are able to situate the issue within a broader framework.

It should be noted that in the French-speaking context, the expression «democracy of proximity» was used in 2002, making participatory systems obligatory in large cities at the infra-municipal scale. Moreover, it should also be pointed out that proximity is presented as a value, in other words, as a principle that can be evaluated (Heinich, 2017) in relation to different lifestyles, forms of organisation and institutions, a value that sees reducing distance as an objective to be met, giving priority to the local level and face-to-face interaction.

Voluntary organisations, elected representatives, unions, neighbourhood groups all use the argument of proximity to demand that public policies should be established at local level and in direct contact with the public concerned to ensure that its expectations are taken into account; referring to proximity constitutes a tool for citizens to lobby politicians (Bourdin, 2005). Moreover, the debates on ecological and energy transition, like the search for a lifestyle that reduces environmental impact, also play a strong role in promoting the local level and short supply chains. It is as if there is, in different contexts, both a desire to build collective actions taking direct responsibility for certain aspects of social life on the most local basis possible, and a social demand for public local-level action.

2.2. Understanding waste management in relation to the notion of proximity

It seems particularly pertinent to examine the relationship between waste management and proximity, as both the analytical and the regulatory and axiological aspects of proximity can be applied. Moreover, the effects of these different views of proximity can be observed *in situ* in relation to the waste issue, which on the one hand involves a tension between the desire to keep at a distance not only waste but also all facilities linked to its management, and on the other hand, is one of the domains of public action in which proximity has been developed as a policy principle that has to be respected by public stakeholders. Furthermore, proximity is claimed by some to be proof of acceptance of responsibility for waste, and of a will to participate in the development of a way of life that is compatible with environmental and ecological transition. As illustrated in anthropological studies, waste, insofar as it is likened to the disintegration of living matter, is linked to the idea of death, and constitutes a mirror of the vulnerability of both living and social matter (Harpert, 1998); associated with abhorrence and pollution, waste symbolises what society perceives as a threat to social order (Douglas, 1966). The threat is averted by distance, confinement and control of the disposal of liquid and solid matter.

The economy of proximity has also found one of its fields of application in the waste domain, notably regarding the negative externalities of storage facilities. Some authors (Méry, Mtibaa and Torre, 2009) have made a distinction between geographic, cognitive, organised and



imposed proximity as a framework of analysis. Other economists have examined how negative externalities are taken into account, without explicitly taking an economy of proximity approach (Jeanneau, 2006). In addition, the literature also demonstrates that proximity to waste-treatment facilities (incinerators, landfill sites, maturation of bottom ash) can lead to the mobilisation of people concerned about the risks related to these facilities (Wiedeman and Fermers, 1993; Barber, 2005; Rootes and Leonard, 2010; Cirelli 2015; Bobbio, Melé and Ugalde).

Research conducted in the USA in the field of environmental justice sees proximity through the lens of racial discrimination (Bullard, 2008; Taylor, 2000). The authors seek to establish a correlation between the location of waste-treatment facilities (incinerators, dumps, toxic waste disposal sites) and the ethno-racial and socioeconomic characteristics of the sites (Bullard, 1983; Brueggemann, 1993; Taylor, 2000; Bowen, 2002; Walker and Bulkeley, 2006; Mitchell and Carson, 1986; Pellow, 2002), as the neighbourhoods where minority and low-income groups live are more exposed to risks and pollution. This has given rise to debate about the mechanisms underlying these situations of over-exposure.

The way societies relate to waste should however be seen in relation to historical and national contexts. Studies of informal waste and recycling activities in countries of the Global South, where a large number of people often work and live in contact with waste, show that proximity to scrap material, far from being feared, is sought after and often serves waste recycling and upgrading activities (Furedy, 1999; Medina, 2007; Gutberlet, 2010, 2015; Scheinberg *et al.*, 2011; Cirelli and Florin, 2015). In these cases, the hazards associated with proximity seem neither to be taken into account, nor to constitute a real issue for the individuals involved in these activities. It is therefore possible to consider that with regard to waste, proximity is not only an organising principle of management, it also provides residents with a means of challenging public policies. They justify their right to do so as stakeholders rooted in a place that they define as near and who are directly affected and concerned by the methods chosen for waste management. However, this place also constitutes the framework for new forms of waste management based on innovative local collective actions. These general elements form the basis of the analysis framework

presented in this article. Here, we see proximity as both a framework for action – that justifies the regulatory constraints directing the action, and a value – that organises the judgements, actions and justifications of those involved.

3. Proximity and public waste management policies: the contribution of European case studies

To examine the relationships between proximity and waste management, we will present case studies in five different countries, on which this research is based. We identified four different types of proximity: a) institutional proximity, seen as the way public policy is planned and organised; b) functional proximity, which refers to the flow of waste; c) contested proximity, identified in the social mobilisation against waste management facilities; and d) activist proximity, when collective actions are developed in response to changes in waste management. The four types do not occur in every case, but we studied one or more situations illustrating each type in each country. The following table summarises our observations in the situations studied.

3.1. Institutional proximity: local planning and waste management

This level of proximity refers to the way that national authorities consider proximity in public policies for household waste management and introduce the principles and criteria contained in European legislation².

In the contexts studied here (Isère and Indre et Loire *départements* in France, Wallonia, the autonomous community of Catalonia, the city of Turin in Italy, the city of Malmö in Sweden), the principle of proximity has been transposed into the legislative system and/or planning instruments. However, all the case studies demonstrate the difficulty of defining an optimal area for applying the principle of proximity and the coexistence of both complementary and contradictory approaches: waste collection and treatment is organised on the basis of proximity depending on the needs of the municipality (or more often of an inter-communal structure), and at the same time on economic factors concerning the national and international movement of waste seen as a source of energy. In Sweden, for example, while the principle of proximity appears in waste-management guidelines, it is not referred to directly in



Tab. 1. The types of proximity observed in the five countries studied

COUNTRY AND CASE STUDY	TYPES			
	Institutional proximity	Functional proximity	Contested proximity	Activist proximity
Belgium Wallonia City of Liège	Coordination mechanisms of the intercommunal authority responsible for waste - Intradel - and its links with the local area	Movement across the area of objects and waste flows (containers, microchipped bins, etc.)		
Spain Autonomous community of Catalonia City of Barcelona	Implementation of selective door-to-door collection	Waste flows at the commune level in the Barcelona urban area		
France Département of Indre et Loire (Centre region) Département of Isère and city of Lyon (Auvergne-Rhône-Alpes region)	Setting up waste management plans at departmental and regional level	Creation of <i>ad hoc</i> boundaries and institutional innovations in waste flows management	Conflicts related to treatment facilities (incinerators, landfill site)	Community commitment to collective composting and creation of <i>ressourceries</i>
Italy Piedmont region City of Turin				Community commitment to recycling
Sweden Scania region City of Malmö	Regional organisation and functioning of <i>Sysay</i> (organisation responsible for waste management at regional level)	Waste flows: regional vs economic approach		

Source: research project Dimensions territoriales des politiques de gestion des déchets

legislative instruments, and rather than institutional proximity, it would be more apt to refer to an institutional choice of waste mobility (Corvellec, 2016). In Catalonia, following the strengthening of a waste prevention policy and the encouraging results of a very ambitious door-to-door selective collection system with a dense network of recycling centres, *ressourceries*, sorting and composting plants, as well as «ecoparks»³, the authorities have extended this experience to the whole area, the key to its success being proximity to the source of the waste (Alió Torres, 2016).

The scale of reference for planning household waste management in France was until 2015 the *département*⁴, in Belgium, Italy and Sweden it is the region, and in Spain the autonomous community. However, the principle of proximity does not seem to be linked to administrative boundaries but rather to the localization of the activities and to the perimeters of cooperation drawn up between local stakehold-

ers (based on the criteria of the «catchment area» of waste, of the «living area», or of the application of the principle of economies of scale): in other words, functional territories⁵. These can – depending on local waste management policies implementation – circumscribe more or less extensive areas.

3.2. Functional proximity: analysing the space of flows

When we speak of proximity in relation to waste management, the issue at stake is the source and movement of waste, from where it is produced to where it is treated and eliminated. In order to understand how the notion of «proximity» functions as an action plan in relation to waste, we need to identify the movement of waste in a given area. This involves examining the operational nature of the framework imposed by European and national legislation, and how it is implemented by the public authorities and/or operators. The cases stud-



ied show that there is a principle promoted by the regulations and a practice that differs widely from this principle; in effect, the definition of proximity varies according to the cost and value of the waste. We can observe that the environmental rationale promoted by the directive is in opposition to the economic rationale, because the objective of waste recovery takes precedence over that of local treatment (Reggiani and Silvestri, 2017).

The Swedish case provides a good example of the territorial difficulty of this principle. There is a highly developed collection and sorting system at the local level, some municipalities having introduced multi-compartment bins enabling local collection of more than 10 different recyclables (Corvellec, 2016); at the same time, the same organisation receives waste for incineration from Great Britain, Norway and Italy. In Catalonia, while some inter-communal structures have succeeded in setting up a network in order to treat waste locally (composting, sorting and energy recovery), some recycled materials can cover long distances for reuse, following a market-based approach imposed by the national eco-organism. Likewise, in Isère (France), new forms of cooperation (charters) between inter-communal structures from different *départements*⁶ (Savoie and Rhône) have been set up to pool waste management facilities. In this way, waste can be sent to neighbouring *départements* or states (Switzerland or Italy) if disposal is more cost-effective or «ecological» (e.g. incinerators with energy recovery, rail transport).

3.3. Contested proximity: the perimeter of waste management contested and a source of conflict

Creating a perimeter within which a deposit of waste is managed and treated by a facility (landfill or incinerator, existing or planned) is one of the most sensitive points of the planning process. Implementing the principle of proximity promoted by the regulations clashes with the argument of proximity put forward by neighbouring residents to contest the validity of a project for a facility or to report nuisances caused by a facility in operation. This is one of the main sources of conflicts. The project adapts the area by giving it a functional purpose and characteristics that determine its future: for example, the presence of a landfill site or incinerator for household waste will make organic farming impossible within a specific perimeter; an industrial waste treatment centre will have repercussions on the develop-

ment and use of a given area. This leads opponents to attempt to apply different values in the debate than those promoted by the project sponsor or the operator of the activity concerned. These values are based on principles, such as the sacred, historical or heritage character of a place, environmental protection and health. Proximity as defined in the plans does not ensure the acceptability of the facilities; the conflicts and debates that ensue can lead to the definition of new areas of proximity. At this level, another effect of proximity can thus be seen that constitutes a factor of conflict, and the use of the notion of proximity has become an argument for opening a debate on waste management. In the Indre-et-Loire *département* (France), a project to build an incinerator in the urban district of Tours in 2004 met strong opposition and was abandoned. The incinerator, with a capacity of 200,000 tons, was expected to treat a considerable percentage of locally collected waste. Activists from various local and regional organisations, notably in the municipalities that were directly concerned, created a collective opposed to incineration, using the slogan «Non à l'incinérateur, ni ici ni ailleurs» (No incinerator, either here or elsewhere). Opposition was based on different arguments, first and foremost the health risks, but also on financial and environmental repercussions (Rocher, 2016). Very recently, a project to triple the capacity of a non-hazardous waste storage site, decided after the incinerator project was blocked and in response to the risk of a lack of disposal sites (Genot, 2016), was taken to court by a local environmental organisation and the municipal council of the municipality concerned. In another case in Vienne (Isère), opposition to the extension of a landfill site by local residents, lasting more than ten years, also led to the project being abandoned (Cirelli, 2016). In both cases, the groups involved (associations and inhabitants) in the conflict asked the authorities to be included in the waste management decision-making process through participation in the work of the advisory committees to draw up and monitor the plan, and by organising discussions at local level.

However, it is noteworthy that this opposition by local residents to the installation of waste treatment plants in the neighbourhood also resulted in initiatives by the local population to introduce forms of management aimed at waste prevention and reduction. In Catalonia, opposition to the construction of an in-



ter-municipal incinerator at the end of the 1980s split the population of the municipality of Tona (Barcelona province). The group that was opposed to the incinerator project eventually won the battle, and the municipal council, which had meantime been taken over by the incinerator opponents, undertook a very ambitious project to reduce local waste production (Alió Torres, 2016). Tona was one of the first three towns in Catalonia to adopt a selective door-to-door collection system in the early 2000s, and it now has a sorting rate of about 80%. Similarly, in the 2000s, the opponents to a new landfill site project in the Voiron district (Isère) demanded a more ambitious local policy to reduce waste at source, promoted the creation of *ressourceries* (repair and recycle centres), and urged the municipality to launch an individual composting programme. In some cases, and in very different national contexts (France, Italy), opposition prevented the construction of infrastructures that are now considered to be unnecessary by waste management policies that give greater priority to reduction and recycling (Bobbio, Melé and Ugalde, 2016). The conflict situations described here thus show that while residents oppose waste treatment facilities in the neighbourhood on the grounds of the associated risks and nuisance factors, these conflicts can sometimes lead to a desire for active participation in the local management of waste. Studies of proximity have examined spatial proximity regarding waste facilities (incinerators) as a source of tension and vector of conflict (Caron and Torre, 2004). Spatial or geographical proximity is defined here in terms of physical distance, which is both relative (based on time and cost of transport), and subjective (based on personal representations and frames of interpretation).

3.4. *Activist proximity: collective action regarding proximity to waste*

The public authorities count increasingly on residents to sort their waste (to be sent to an ever increasing number of selective collection centres), and to reduce production «at source». These activities are typically carried out close to residential areas: the collection points for various materials (glass, cardboard, textiles, etc.) and recycling centres are generally found within the radius of residents' normal everyday activities, thereby modifying the day-to-day use of space.

This dimension of proximity is moreover highlighted and encouraged by environmentalists, who see in it the application of the principles of local democracy via the involvement of citizens in decisions regarding local waste management policy. Citizens are called on as producers and consumers, who must be involved in these public issues that are seen by environmental movements as essential aspects of collective life. Finally, new initiatives have emerged, complementing or providing alternatives to the actions implemented by the public authorities. For example, *ressourceries*, composting, recycling and sorting activities enable waste to be managed effectively at local level. Here, we analyse these initiatives to understand how individuals take possession of policies and principles, and to what extent these initiatives contribute to a more efficient management of waste.

First of all, sorting involves proximity and physical contact with the waste material. This leads to a major reversal, by obliging users to take micro-decisions about waste. For a long time, waste was something that had to be hidden, made invisible, and kept at a distance, whereas sorting obliges us to keep it close to us, to look at it, touch it, handle it, wash the packaging, to take part in the sorting activity. While personal proximity to waste in the private space is characterised by getting physically close to it (as described above), social proximity concerns collective initiatives aimed at making individuals aware of waste as a resource, and to enhance their recycling and reuse practices.

The case of *Les Compostiers* in Lyon is a good illustration of these new collective waste management experiences, typifying activist proximity in relation to waste. This organisation and its composter were set up in 2009 in a communal garden in the 7th arrondissement of Lyon. It was the first composting site in the city. According to the organisation's website, about 130 households and two restaurants use the composter, with 200 tons of waste treated per year. In association with the members of communal gardens and AMAPs (associations for the preservation of small farmers), *Les Compostiers* campaign with other collectives for a different model of urban living, notably by encouraging the development of urban agriculture as an alternative to the global agricultural model geared towards production (Dumain and Rocher, 2016). For them, it is a question of redeveloping spatial,



cognitive, sensitive proximity between producers and consumers. They see compost as an alternative to incineration and a means of acting collectively for the advent of a new policy for waste (Dumain and Rocher, 2016). In Grenoble, *Objectif Zéro Déchets* is an organisation that campaigns for the management of waste by the citizens and seeks to make collection sites (recycling centres, voluntary collection points) places where residents connect socially (Cirelli, 2016). Another example is the experience of *Triciclo* in Turin (Italy), an organisation that sells second-hand objects, organises exhibitions, sets up awareness-raising workshops, as well as involving people in difficulty to help their social integration. The aim is to stop seeing waste as something to be got rid of, and instead to become aware of it as a resource that plays a role in everyday life (Dansero and Pettenati, 2016). In that way, waste-related activities (composting, selective collection and reuse) become a tool for engaging in collective local action.

Composting in Lyon, selective collection in Catalonia, and the *ressourcerie* in Turin can also be analysed at the level of «institutional proximity» as described above, showing that the forms of proximity can overlap. The authorities and technicians – the real professionals of proximity (Alió Torres, 2016), consider composting, selective collection and reuse as efficient ways of participating actively in the achievement of the waste-reduction objectives laid down at the Grenelle Environment Forum in France, by the General Programme for Prevention and Management of Waste and Resources in Catalonia, and by the Regional Plan for the Management of Urban Waste in Piedmont. These situations are useful for our analysis, enabling us to examine a means of expressing and experiencing citizenship in which (local) management of waste is a subject and a framework for action. In this context, the «small» (*small* gestures of composting and sorting) and the humdrum «become objects of worth» (Dumain and Rocher, 2016, p. 115). It should also be noted that the position of the people involved here, as in conflict situations, is one that the economy of proximity identifies as organisational proximity, which is both relational proximity – linked to the interactions between stakeholders – and proximity related to a sense of belonging – linked to sharing the same cognitive framework (Bouba-Olga, Caris and Carrincazeaux, 2008).

4. Uses and implications of the principle of proximity

4.1. *The impossible territorialisation of proximity in waste management*

Our case studies highlight the indeterminate character of the principle of proximity and its scales of use. The notion of proximity does not define the relevant perimeter, nor the relevant scale. Nevertheless, it does allow the possibility of establishing transactions between what is considered close and what is considered distant. And yet, the dilemma «it's too far/too near» can only be solved in the context: the waste container at the end of the street is too far when people think of waste management as a neighbourhood service, but the incinerator is too near, because the presence of this facility can affect their living space. Our case studies also highlight the difficulty, if not impossibility, of finding a territorial definition⁷, due on the one hand to the technical characteristics of the infrastructures that impose constraints on where they can be located, and on the other hand to market forces; due to their commercial value, some waste material is transported over long distances because the resources are recovered far from the source, as in the Swedish and Catalan cases. While regulations promote the principle of treating waste as close as possible to where it is produced, in practice this is far from the case; proximity is in fact redefined according to the cost and value of the material. The environmental rationale promoted by Directive 2008/98 is at variance with the economic rationale because recovery targets takes priority over local treatment. This aspect is particularly evident in the Swedish case, which reveals how incinerators are the final destination of waste material coming from far away. It allows some cities with waste disposal problems (such as Naples for example) to find a temporary solution to their waste management difficulties and evade the current regulation for local treatment of domestic waste. Exporting its waste enables it to bypass the constraints of local treatment, at a time when sub-contracting management to other Italian regions has become impossible. Sweden also benefits from this situation, by supplying its incinerators while the quantity of waste produced is decreasing as a result of prevention and non-energy recovery (material recovery).

The principle of proximity is thus a flexible notion, a value to strive for and a desirable



framework for action, but whose application is essentially determined by the implementation and territorial conditions of local waste management policies based on the criterion of waste catchment areas (as in France), of living areas (as in Belgium), or of applying the principle of economies of scale. We can observe a dual movement: establishing decision-making and action perimeters on the one hand, and a breach of these perimeters by the flow of waste partly in response to other interests. In this way, it is the waste-related interactions that produce the space of its management and implicitly its proximity or distance, based on its perceived properties (resource, product or scrap). Thus, while proximity is a framework for action, it does not have a fixed perimeter. The unstable management perimeter seems to be determined according to the interactions between the stakeholders and the search for a balance negotiated between different imperatives (economic, institutional, environmental and ideological) whose scale remains ill-defined.

The different functional scales are constructed by taking into account not only geographical continuity and the needs of the infrastructures, but also institutional proximity or distance (in Isère, for example, an inter-municipal syndicate and a municipality failed to reach agreement for a shared facility because their elected representatives were of different political persuasions). Waste lies at the heart of multi-scale organisation, in which the principle of proximity is more or less salient depending on the management phase (prevention, collection, recycling, disposal and treatment) and the recycling channels or solutions. Thus, it seems that this principle does not provide a measurable solution; rather, it is the result of a series of transactions with distance based on different variables: the commercial value of the material and price control, stabilisation of flows, local constraints to installing facilities and acceptance by the local residents, the role of territorially based regulations. The effects of applying the principle of proximity are influenced by trends in the domain of waste (new sectors, treatment techniques, regulatory requirements). These changes can modify the organisation of management and the functioning of markets and flows.

4.2. A «regime of proximity» in waste management

We postulate the existence of a waste management regime that we define as a «regime of proximity» (with reference to the «regimes of engagement» defined by L. Thevenot (2006), in which the

space defined as *local* is endowed with values by different stakeholders (industrial operators, local authorities, collectives, users) on which they base their actions and establish their positions in public debates on waste management.

By using the idea of *regime*, we do not thus wish to conclude that proximity is a sort of over-riding guiding principle, dictating all the rules concerning waste management. It is rather a question of a regime in the sense of a method of government, a way that public action is conducted, obliging stakeholders to act on the basis of a regime of proximity. This does not mean that all actions should be directed and entirely governed by an imperative of proximity. However, stakeholders should take it into account and sometimes even argue the case for proximity and acting locally, while at the same time taking an international approach, as in the Swedish case presented here. It is not therefore a new institutional regime that we wish to describe, but a form of multi-actor coordination based on references and values – in this case, proximity – used in public debates or in justification situations (Thévenot, 2006).

These actions may diverge but, when combined, they produce specific conditions for establishing public waste-management policies at local level and within territorial boundaries. The notion of «regime of proximity» is used here as a tool to identify the multiple forms of experience of proximity related to public waste-management policies, and to establish links between different views of distance – sometimes concurrent or even conflicting – from the standpoint of institutions, residents and industrial operators, at different scales and different times.

The existence of this regime in no way means that all groups comply with the demands of proximity; nonetheless, they act in a context in which proximity constitutes a means of justification, a rule that is more or less binding, or a value that can be used to advance different or even competing projects. Likewise, the existence of the principle of proximity can also be identified through the strategies of certain of these stakeholders to bypass or undermine it⁸.

The notion of «regime of proximity» thus provides a framework for analysis through which it is possible to conceptualise the multiple forms of experience of proximity linked to public waste management policies. While these forms of experience can be divergent, they nonetheless combine to produce specific means of organising and



territorialising waste management. The public or collective actions linked to waste management cannot be reduced to this «regime of proximity». Other action regimes exist alongside it, and other interests can also oppose the implementation of proximity as a value and framework for action, including those of the market (it can be cheaper to treat waste in more distant facilities) or of political positions. Thus, the spatial organisation of waste management sectors is not so much the product of flow management as the expression of issues and the interests of the various stakeholders involved locally; if the flows of waste follow certain directions and not others, it is in fact because of the different approaches, objectives and interests at stake. Like the regimes of historicity defined by François Hartog (2003), it is important to analyse situations in terms of their coexistence with other regimes, and not in terms of mutation or exclusion.

We can find direct use of proximity when the distance covered is used to evaluate the environmental impact of different infrastructure locations. As a measurable criterion that can be incorporated into models, distance becomes a generalised equivalent of carbon dioxide emissions, allowing different scenarios to be compared on the basis of the number of kilometres travelled, as in the Indre-et-Loire plan. However, the cases in Indre-et-Loire and Isère show that distance is only one element in a more complex equation, which also includes the quality and cost of resource recovery, justifying for example the decision to send waste to be treated elsewhere for greater efficiency in terms of the environment (an incineration plant with energy recovery for example).

The instability is one of the specific features of waste management. The nature, volume and production of the waste, the treatment techniques, and the conditions of resource recovery change constantly, which has an impact on the application of the principle of proximity and on the very notion of proximity. It is difficult to organise the collection and treatment of matter that is not stabilised. This is the case for example of waste catchment areas. From the standpoint of ecological transition, any stabilisation of a facility's catchment area, constituting a self-sufficient space, is considered as incompatible with the imperatives of reduction that will have an impact on how much material is available, and will thus eventually oblige the facility to import waste, looking ever further afield. If the volume of waste decreases, the catchment areas will have

to be extended. This implies the impossibility of stabilisation, but rather the continuation of instability in relation to a strict territorial definition of proximity. What we observe is thus not the implementation of waste management at a relevant scale based on the imperatives of the circular economy or optimal resource recovery. Proximity as defined in the plans, essentially based on a territorial approach, does not guarantee the acceptability of the facilities; the conflicts and debates around it can lead to a modification of the perimeters and to a new definition of the areas to be managed.

5. Conclusions

The principle of proximity emerges as a flexible regime of action that is not strictly measurable, or even an objective to be attained within a policy-based territorial approach. It is rather a framework to understand the interactions related to waste, where the notion of proximity reflects a principal of empowerment, accountability, and commitment on the part of the stakeholders (residents, elected representatives, private enterprises) with regard to the ultimate arrangements for waste disposal, as waste «has to go somewhere». The principle of proximity has the capacity to make individuals proactive in finding solutions that they see as acceptable. While the principle of proximity is a pivotal element of public waste management policies in Europe, the latter provide no formal definition of it. The cases investigated here are all confronted by the same dilemma: enforcing compliance with the principle of proximity between the total volume of available waste and waste management facilities, but with a regulatory framework that is sufficiently flexible to allow flow. What these injunctions produce in practice are situations of local debate, in which local stakeholders and public authorities interact to define the outlines and conditions of implementation. The imputation of responsibility as close as possible to the production of the waste introduces a new role for individuals and households. But we have also shown that territorialisation of proximity involves a shift from individual to collective responsibility at a local level; actions in the name of proximity thus contribute to the construction of a sense of collective belonging to a territory, and hence to a feeling of solidarity and responsibility regarding waste management. For



a local group, the regime of proximity is a way of assuming responsibility for the waste it produces, but also of ensuring the control of the local effects of management, treatment and recycling (the Catalan, Belgian and French cases), even when it is only a ploy – actions whose effects on the global flows of waste are very limited – or activist engagement embodying integration and politicisation through the composting activity, symbolising a reappropriation of waste by society and a sort of symbolic reconciliation with the earth (the case of Lyon).

Our results also highlight the importance of innovations by the groups involved in the refusal or promotion of waste management solutions. These groups are constructed as local operators of a means of engagement, whereby the relationship with waste is seen as an expression of a *new* way of relating to the environment and to politics. By implementing collective actions in their immediate neighbourhood through face-to-face relationships with other participants, the waste issue enables certain actors to establish solid links with groups accepting responsibility and seeking to contribute at their level to ecological transition and the construction of neighbourhood citizenship.

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