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Waste Growth Challenges Local Democracy: The Politics of Waste Between Europe and the Mediterranean: A Focus on Italy

Alessandro Mengozzi

“Is it so fragile? Is democracy so fragile as to be menaced by waste?” This was the comment of a friend of mine on the title of this paper. Actually, waste production is a wealth indicator; it grows at the same rate as GDP. It can be an unpleasant effect in terms of environmental sensitivity, but it is a sign of great expenditure and power. Paradoxically, the countries that are most advanced in terms of a partly mythologized environmental protection as well as in democracy are the same ones that have been producing more waste despite their advanced policies of prevention and reduction.

In this article, I consider the emergence of waste issues as a global political challenge for processes of democratic government. Governments must deal with the everyday growth of waste, not only in terms of where to put it, but also because of the space that the subject continues to occupy in public discourse and the attention given to the topic by the mass media. Until now, waste challenges have not menaced democracy’s policy-making cycle or its law enforcement cycle, simply because there is not any developed democracy in these phases of the political cycle. Democracy is still halved. Real participation in decision making has always been low, restricted to a few actors around boardroom tables behind closed doors and subsequently broadcast through a confusing network of mass media communication. The Naples waste crisis and the waste wars that are occurring elsewhere in Italy, Spain, Ireland, and Britain show that democracy, beyond the trivialization of NIMBYism, is still too weak in certain phases of the political cycle (policy and law enforcement powers) because confusion, authoritarianism, and violence are still dominant. Indeed, waste, and the wars waged to manage it, universally challenges and elicits the democratic side of our society (most developed in the politics and policy cycles) to conquer more space locally.

Introduction: The geographical construction of waste

It is difficult to define what waste is. When we try, we are faced with a sort of Chinese box. According to John Scanlan (2005, 10), there is “good reason that its utterances refer to the excrement of meaning itself. For example, when something means nothing to you then it becomes ‘filth,’ ‘shit,’ ‘rubbish,’ ‘garbage,’ and so on.” Ideas as well, in Scanlan’s argument, follow the phenomenology of waste: some are recycled, others are buried in landfills for years, some vanish into thin air, and others disappear without a trace. Modern intellectual activity can be viewed as a history of the removal and cleansing of ideas. The category of refuse is what makes culture possible. A culture that keeps its distance from death keeps its distance from its “disposable bodies” as well.

Available quantitative information can contribute to understanding the phenomena of waste and are the main materials upon which waste managers and policy makers base their plans. However, this same information suffers from a lack of reliability and different methods of classification. This is related to the different kinds of definitions that pertain to production sources (agricultural, mining, construction, industrial, service, clinical, household), material forms (liquid, dusty, oily, gaseous, sludgy, solid), safety classifications (nonhazardous,

hazardous, toxic, radioactive), controlled accountability systems (special or municipal), public planning or market-oriented waste management, the designated targets for material or energy recovery (mixed, paper, plastic, organic, electronic, metals, chemicals, vehicles parts, wood, batteries, expired medicines). Waste can follow almost transparent paths of legal disposal – public or private – or it can enter into the obscure business of illegal disposal. In this last case, the environmental impact often surfaces before the economic one, and even before the social impact. While in a normal and transparent situation, even if not fully democratic, the sequence of impacts is reversed. These flows are intertwined and continuously redefine themselves. From waste, other new waste is always generated; the work involved in the continuous generation of waste is immense. It is a huge commodity taxonomy that represents the entire system of production in reverse.

The first issue I will deal with here, with the help of Michael Thompson's early exploration into the anthropology of waste, is that defining waste is not so much a problem of control, which could be solved with more surveillance, as an effect of the category of waste itself and the essence of the analysis itself (Thompson 1979).

In a recent conference organized by Italian community-based environmentalist groups against incineration, a manager of a material recovery facility (MRF) for plastics from the Veneto Region, declared: "The word 'waste' should not exist. We need to abolish this word!" Likewise, a branch of the environmentalist movement supports such radical solutions, arguing that all discarded materials could be fully recovered and exploited in other processes.

Visions between what is and what is not waste are often loose and in opposition to each other. Such visions foster the political struggles generated by the question of where to localize treatment and disposal of a huge amount of objects that are called waste. The point of view, adopted here, of social geography is not so much interested in which waste management system is best, or whether waste is or is not an urgent environmental problem. Several social scientists have recognized that waste management, with its inherent politics and struggles, is an excellent arena for fieldwork that will help us to understand how groups of social actors enact the concept of territoriality. Fieldwork will help us to understand how these groups identify with, are assigned to, and claim political control of a discrete (trans-scalar) area; how they negotiate strategic choices regarding the perceived risks generated by them and confront political agency experts with NGOs or community-based experts (Osti 2002; Pellow 2002; Davies 2003, 77; Davies 2005, 375; Davies 2008). In other words, by understanding how a culture manages its waste, we can improve our understanding of how democracy and modernity have been developing.

The connections between excrement, death, and territoriality are not new, neither for animals nor for human beings. Excrement and corpses are means used to mark territorial boundaries and centers and to distinguish permanent and temporary objects. The central thesis of this paper is that waste is not a simple residual unwanted effect derived by processes of production and reproduction, but it is also one of the main signs of the relation between societies and space. It is a social relation of space appropriation and expropriation. Waste has always been a social fact, even if it was only with the occurrence of industrial development that, in various forms, it has become a permanent conflict zone.

The waste theme is applicable to all ecological issues, but I am going to restrict my argument to solid wastes (in particular the municipal ones) because they reflect the general problem and because in this period they appear to be the most important environmental issue in Italy. Such waste definition and disposal elicit relevant mobilization events (locally scattered) and trans-scalar forms of activism with important political influence at both national and European level. By studying management and disposal models, it is possible to

explain particular territorialities, while principles, cultures, and policies – coming down from upper levels – tend to homologate lower-scale configurations.

Since the scope of my analysis is mainly European, I will end by introducing a few of the amendments that were made to the European Union Waste Framework Directive that was approved June 17, 2008. I will also add to the debate about the “Mediterranean Syndrome.” This label is assigned to Italy and Southern European countries, apportioning blame to them for the delayed or missed achievements of European environmental policy objectives. It implies that these delays have been caused by backward cultural and political conditions, originating from a weak civil society, and by pathological politics that have been characterized by patronage, clientelism, and a lack of respect for public authority and laws. This syndrome is said to have ancient origins and to be so deeply rooted that change is almost impossible (La Spina 1993).

Waste management in the Campania Region, popularized by Roberto Saviano’s novel *Gomorra* (2007) as well as by the documentary *Beautiful Country* (Calabria, D’Ambrosio, and Ruggiero 2008), could be considered an emblematic example of that negative evaluation. The rise of this state of emergency, due to the collapse of the disposal system, has marked a passage, but not yet a turning point, towards a strong civil society mobilized by grassroots activism in that area, which since 1989 has become a swamp full of vast amounts of waste that have been deposited from legal and illegal streams of all kinds, predominantly toxics, from the north of Italy (Cianciullo 1995; Isenburg 2000).

Arguments comparing Italy and other Southern European cases with Northern European countries, here exposed, question the pathology of this “irreversible situation,” and in accordance with other political, sociological studies (Kousis 2008), they recognize a strong and growing movement of grassroots environmentalism. In addition to the strengthening of the environmentalist movement, since the year 2000, some Italian waste management cases have demonstrated such high performance in waste sorting (70-80%) that they have surpassed the most efficient Northern European systems. Furthermore, Italy is witnessing the beginning of local participatory decision making practices that, while being strongly pursued, to date have only been partially achieved (Bobbio 2002, 101). Despite these efforts, environmental activists rarely appreciate them.

Waste as a modern issue

Waste has always accompanied societies as an effect of their metabolism. However, by the 1400s, it became the focus of political concerns only in the biggest urban agglomerations. Then, with the coming of industrialization, issues of waste management proliferated in public discourse. The word ‘waste’ as “a sense of a refuse matter” was recorded around 1440, but the term ‘waste basket’ did not appear until around 1840 (Online Etymology Dictionary).

Several cases show how human and animal excrement, the residues of craft manufacturing discharged into rivers and lakes, and the smoke and ashes of coal firing began to generate the first environmental movements as well as the first organized environmental controls and waste management agencies. The first environmental movements on waste (1880-1915) were started by women in England and in the United States (Melosi 1981; Sori 2001; Pellow 2002).

Initially, environmental issues were mainly restricted to hygiene concerns and aimed at improving urban life and encouraging cleaner cities. This quickly led to the first environmental justice claims, which were grounded upon the evident correlation between the locations of polluting dumps, factories, or incinerators and the poorer ethnic minority neighborhoods. In Chicago at the beginning of the twentieth century, these were the “black

neighborhoods” (Pellow 2002); in Milan, during the same period, rural immigrants from the outlying province of Brianza erected a settlement near a large dumpsite and fostered a thriving trade around the recovery of paper, rags, bones, and metals (Berti 1993). In Bologna, like everywhere else, “dustmen” were a very neglected population (Brizzi 1998). Prato’s industrial textile cluster was built upon the recycling of rags coming from harbors all over Europe and shipped to Livorno for recovery.

This social ecological segregation of production, recovery, and disposal is evident. The new incinerator (or waste-to-energy plant) in the Alpine city of Bolzano, which boasts a mixed population that according to the 2001 census is 26% German speaking and 73% Italian speaking, is located in the industrial district near an Italian working-class neighborhood on the southernmost edge of the city. Milan’s incinerators are located in working-class neighborhoods, Forlì’s incinerators have been situated in an industrial district characterized by small and medium craft manufacturing firms mixed with some households inhabited by the local small-business owners, workers, and immigrants with a low level of education. In Copenhagen as well as in Berlin, incinerators are in the working-class districts. In the Italian province of Romagna, one of the biggest landfills of Europe has been set up in a local authority area (Sogliano al Rubicone) that suffered strong urban flight and is currently home to the long-time, retired residents. This area has a high percentage of uncultivated land as well as low-income residents who practice what is known as “backward” or “niche” agriculture. These cases about municipal waste, as well as the cases on toxic waste migrations, demonstrate that waste today still follow established routes from socially wealthy towards weaker neighbourhood, regions and countries (Bournay 2004, 26).

A process of social negotiation (implicit and not egalitarian) is what transforms an object into waste. This ongoing process creates and destroys the values related to things, not only goods but also the environment, the landscape, the space (social, architectural, psychological, etc), and human beings as well. The category of waste, according to Thompson (1979), is positioned at the middle of two other categories of value: the *transient* and the *durable*. Transient values affect objects such as common circulating goods in the market. They lose their value over time, and once their value is strongly reduced, they must pass through the category of waste. If they succeed in crossing it, then their value is increased, and they have become *durable*. This is the destiny of many objects that become collectibles, rarities, or those ruins that become sites of national heritage or cultural patrimony. So *durable* goods, at the end, can exit from their original orbit of circulation and enter into dedicated disposal facilities called museums, much in the same way that rubbish enters a waste management facility. Rubbish is what did not manage to overcome the rubbish category. It has no value. It has no meaning. Its presence is unpleasant due to its stink or filth. It is an obstacle to mobility. It must be left behind, diluted or dispersed into the air, kept apart, or disposed of somewhere.

What will constitute waste and how this waste will subsequently be disposed of involves an ongoing process of public discourse that plays out on several levels and is fostered by a variety of (often disparate) philosophies, scientific notions, and practical issues. It has matured since the days of the urban hygiene congress and expositions (the first was in London in 1931), and today we talk of waste management, recycling, and recovery, as well as a whole range of ecological issues. The discourse around waste can be found in many academic and professional journals, in environmental agencies, in communication campaigns organized against particular waste management choices (Zero Waste!), and at public meetings where communities rise up against a new waste treatment facility. Around this trans-scalar discourse, there are several key stakeholders: scholars, consultants, machinery

and service providers, environmental agencies, environmentalist NGOs, and worker and professional unions and grassroots activists.

Finally, this discourse also flows to a public arena at many trans-scalar levels: through the major summits on environment and climate, through international agreements such as the Basel Convention (1992) on transnational waste movement, through the federal policy frameworks such as U.S. congressional legislation (Resource Conservation and Recovery Act, 1976) or E.U. directives (Dir. 442/1975/EC updated with Dir. 98/2008/EC), through national and regional strategies, through county or district level spatial and waste plans, and through local authorities' management (pricing, collecting, disposal) objectives and controls.

If we look more closely at the historical progression of this process, we can notice at least three important changes.

The technical scientific change of the second phase of modernity

The first shift in the discourse on waste recognizes that the definition of waste has become more and more formalized, complicated, and bureaucratic, in keeping with similar trends in industrialization. With the coming of industrialism, a key institution of modernity, man has substituted most of the labor intensive activities that were once carried out by sheer manpower with a series of operations carried out by fossil-fueled machines (Giddens 1994, 10-17). Packaging too is a large part of this process of increased production of disposable goods, which not only sustains industrialism as we know it, but also allows the worker/consumer a variety of opportunities: the extension of space and time, fatigue reduction, work-time reduction, and an increased life expectancy.

According to environmental advocates – the counterbalance of industrialism – the perceived achievements of industrialism are a danger to themselves, and it is urgent that we review this development model. In other words, we must reexamine our relationship with the environment. Environmentalists have suggested and pushed for policies that increase the value of unanimated energy sources and aim at reducing their exploitation through the promotion of a cautionary approach to their use. In order to counterbalance that loss, policies suggested should aim at making animated sources competitive; indeed, renewable sources pollute less and require more, smart, qualified, manual work.

Focusing on the solid waste issue, the discussion could be approached from two perspectives, in a similar way to what is outlined above. The industrialist's trusty view argues that waste disposal does not pose a problem of space for modern societies; space, especially uncultivated land, is abundant. Furthermore, with technological progress and economic growth, the space needed each year to dispose of waste has been decreasing. Indeed waste-to-energy plants and recycling have improved efficiency and reduced the need to occupy space. However, a total waste reduction is not automatically translated into environmental improvement because the costs of such radical choices can be so expensive that the investment may not justify an environmental benefit that might have been achieved through other lower-cost projects. Furthermore, such an investment could remove resources from other more important political targets (Lomborg 2001, 206). Therefore a list of global priorities is the main concern of the Copenhagen Consensus, a series of international conferences promoted by Bjørn Lomborg since 2004.

Positions more oriented toward environmentalism sustain a "Zero Waste" objective. They think it is possible to put an end to waste if organizational changes, in the collection methods for municipal waste and in symbiotic design for industrial systems, are adopted. Local authorities should address stronger efforts to assist and control the waste-sorting activity of their citizens. Curbside or "door-to-door" (so called in Italy) systems should be

widespread because they greatly improve material separation collection by 70-80%. Reuse of recovered materials makes this method less expensive; the stronger relation between who collects and who disposes of recovered materials waste, not only increases the tasks of the workers, but also their qualification and status, and it aids in educating the citizens about waste. Moreover, valuable materials are not only recycled, but refuse sorting is better exploited through recycling than by thermal recovery. For example, in a plastic materials recovery facility located in the Veneto Region (managed by the entrepreneur mentioned in this article's introduction), the discards, which are very tiny pieces formerly packed in bale (RDF – Refuse Derived Fuel) and sent to a waste-to-energy plants, are now processed in extruders and then by shredders from which a synthetic sand is produced. This sand is usable as inert material in the construction sector, in filling operations, or in concrete building blocks. Consequently, according to most environmentalists, thermal recovery from waste is expensive, it is a waste of resources and it is hazardous to our overall health because it generates dioxins and nanoparticle dust (Viale 2008; GAIA 2007), and (implicitly) it is not preferable to a sanitary landfill, even if the real alternative is to “reduce, reuse, and recycle.”

The individuals who manually sort waste or work in mechanical biological treatment (MBT) or indoor composting plants are rarely the subject of debate. In the opinion of our Venetian entrepreneur as well as that of her environmentalist fans, her workers are well paid and safeguarded from harmful exposure. They are all male immigrants from Sub-Saharan Africa. When I spoke to the local union executive, I learned that the entry of unions in that firm was unwelcome and hampered. Indeed, there are no workers' representatives in that firm; if requested by employees, workers' representative elections are compulsory in Italy, and this is quite common amongst firms with more than 50 employees. Furthermore, no questions were ever raised about the quality of work and the health impact of MRF/MBT activities that have been identified by environmentalists. Danish, in particular, and British studies have recognized that there are serious health problems associated with collection and recycling of household waste inside MRF/MBT, especially for workers involved in hand sorting (Hester 2002), so mitigation and – I would add – workers' civil rights should be guaranteed and encouraged.

Another complication to this discourse is the intervention of assessment experts. However, as I noted, they have never joined local public debates, and they rarely appear in the popular media spotlight. Instead, they present their considerations in specialist sector congresses at international rather than national levels (ISWA; ACR+). Assessment studies, presented in the meetings, are based mostly on two methodological instruments: life cycle assessment (LCA) and cost-benefit analysis (CBA). The first one is an ecological evaluation, which compares waste management options and provides a set of indicators about emissions (CO₂, dusts, organic compounds, etc.) and energy consumption. CBA is a scenarios-comparative assessment aimed at drawing an economic and financial budget with indications of public and private costs. Such congresses are an opportunity for researchers and scholars to present their papers and to network. Some assessment experts (De Boer 2005) have proposed introducing a more complete approach that includes the added sphere of the social impact assessment (SIA). A triadic approach integrating economic, ecological, and social concerns is not new. One of the most well-known sustainability models came out of the study of the Brundtland Commission in 1987. The study developed by De Boer with EU research funds set up an evaluation model in order to assist decision making on waste management options, delivering a handbook and a software package completely free of charge and designed to help municipal personnel carry out their assessments in a facilitated but rigorous way.

At the moment, however, single assessment studies are mostly carried out in only one single sphere, or in two at the most (LCA and CBA), and they are used by interest groups to

increase pressure on decision-makers. For example, WRAP UK commissioned a very authoritative review of LCA studies on all materials except organic waste. If one only reads the executive summary, one can glean that it has been crafted to give full support to WRAP positions, namely material recycling (WRAP 2006). However, when reading the entire text, it becomes evident that recycling is not always the best solution. Other Scandinavian studies of LCA paired with CBA have in fact brought adverse outcomes to Waste Hierarchy: the policy principle that prioritizes waste treatment options (Reduce, Reuse, Recycle, Recover, Dispose). An important example could be the LCA-CBA study carried out by the Danish Environmental Agency, which demonstrated that state-of-the-art composting or anaerobic gassification is not better than state-of-the-art incineration. This study has contributed to the phasing out of some of those options (Jesper 2004). Other paired LCA-CBA studies commissioned by the Environmental Assessment Institute of Copenhagen, whose first director was Bjørn Lomborg, argue that beverage container reusing or recycling implemented through the Danish Return System and paper and cardboard recycling are not reasonable either for the environment or for the economy; they are not competitive with incineration options (Vigsø 2002; Petersen 2002). Another review of CBA studies embarrasses the Hierarchy, arguing that landfill is economically and environmentally better than incineration (Dijkgraaf 2003).

It is important to observe the many evaluation parameters of these studies. Basically, most knowledge produced by these studies increases uncertainty rather than reducing it. A typical example could be illustrated by an LCA on three management options for residual waste (what remains after recycling) designed for the Campania Region waste plan. The conclusion reported that incineration of unsorted waste was the best option for almost all parameters (CO₂ emissions, organic compounds and energy consumption), while for dust emission it was the worst. In fact, the incineration fed by Refuse Derived Fuel (RDF) was relatively better (calculating a dust output of 0.006 grams per Kilo of waste input for RDF scheme versus 0.39 g/Kg in the case of traditional incineration fed by mixed waste; considering the need to manage an amount of approximately 500,000 tonnes per year, it results in 3 tonnes of dust per year for the RDF incinerator against 195 tonnes of dust per year for the mixed waste incinerator). However, the sanitary landfill option (obviously with biogas recovery) although producing worse results on almost all parameters, resulted in the best scenario on whole dust emissions, obtaining a savings of 20 tonnes of dust per year (Arena 2004). The chosen scenario was the RDF incineration. The issue of the disposal system's collapse in Campania, which consisted of several pyramids of 2.5 million tonnes of eco-bales (bales of pressed waste) stacked in open countryside, will be dealt with in the next paragraph.

Now it is necessary to introduce social science instruments to complicate further the framework. Through social impact assessment (SIA), social scientists tell us that an efficient technical system is not enough and it should be sustained by the people who work with it (workers and users), otherwise it could be opposed by protestors, local citizens demonstrations, worker strikes, user boycotts, environmentalist lobbying, and other bureaucratic obstacles. According to the social theory of risk introduced by Ulrich Beck (1986), it is not enough to take into account only the probability of a potential damage when we appraise risk of a collective action, but we should consider also the perceived opportunities of an action without taking these for granted as if they were widely desired. On waste, consequently, regarding the two perspectives mentioned above, there are some groups proposing new facilities (e.g. incinerators) who do not see the dangers because – they say – risks are actually very low in respect to other common pollution sources, such as vehicle traffic. Mobilizing groups perceive that risk as too high because they do not see its opportunities: they do not recognize an improvement in their living conditions, such as a reduction in housework (in terms of fatigue and time); they have simply adhered to the waste

separation rationale and habit, a rationale promoted for years by all scale policies and by education campaigns funded by local authorities and waste management companies. People, consequently, do not understand why, if not for restricted private interests, expensive new polluting plants should be built. Additionally, incinerators are generally located closer to a city than landfill sites, so they can create a higher loss in housing values because they affect more people. Thus, even with a low probability, the worst case is always possible. This confirms that there is not just one best technical solution, but a democratic controversy that awaits canalization.

It is very difficult to find real SIA about any topic, at least in Europe. However, we can consider opinion polls carried out by large marketing/opinion research corporations or small firms as SIA substitutes. A well-conducted SIA can deliver a good representation of risk perception with its relevant related variables (distance, neighborhood, social status, attitude and behavior toward waste sorting and toward more controlled delivering, participation indicators, waste workers' perceptions and preferences, etc.). Some surveys indicate that collecting methods, such as "door to door" (a curbside with bag scheme), are negatively received in larger cities or when citizens are polled about these possibilities before their implementation, while they are welcomed in smaller towns and in follow-up surveys carried out after their implementation. Household distance from the plant (e.g. incinerator) is not a relevant variable in determining the attitudes, but in the behaviors. Basically the mobilized citizens are those who live in the same neighborhood or nearby to the questioned plant. They are the activists who provide the main input of organizational resources (coordination, communication, control), a detailed knowledge of place, networking activities, and deploy a wide range of lobbying or demonstrative actions. Cognitive resources, like experts or literature, are generally more scarce and available at higher scales even if some are activated locally as well. Greenpeace is a particular exception because, in general, it takes care and control of the whole process and the resources employed, from scientific argument to political position, from advertising to fundraising, from prior sensitive target analysis to demonstrative action, from negotiation to media campaign.

Another important SIA item is the trust expressed by people toward local actors (institutions or civil society). In this relation, the key variables are time and discussion methods, that is to say, what people have previously experienced and how political authorities have organized the dialogue. Basically citizens have been accustomed to predetermined decisions and to a defensive communication strategy with no inclusion. A lot of hearings and discussion boards have often been activated but without anyone with relevant capabilities to lead them and without any intention of negotiating or giving people the opportunity even to make the wrong choice. In a case that I investigated in 2006 through observation of focus groups, it was clear that issues of participation are key factors determining the quality of urban life. Besides environmental quality, traditional welfare services, and economic wealth taken for sufficiently achieved at that moment, the participation issue was unsatisfactory.

This triadic eco-technical assessment (economical, ecological, and social) has made the Waste Hierarchy more and more manipulated by the lobbies and a stressed reference no longer useful to channel and mediate conflicting worldviews. However, an eco-technical assessment, even if perfectly carried out, would hardly manage to deliver a clear result, able to drive consensual policy decisions. Parameters on a single sphere often enter into conflicting dilemmas with each other, and it is also highly probable that the same happens for results from other spheres. Therefore a trade-off is necessary. As we will see in the concluding section, eco-technical assessment could be a very useful tool if inserted in a participatory governance of waste but dangerous if used singularly by a local authority (as recommended by the new Directive just for LCA) or by a single stakeholder.

Timing in the public mobilization on the politics of waste

The second change concerns the process of defining waste, which has progressively included more actors, particularly as it pertains to the decision-making processes involved in waste management. This is most strongly evidenced by citizen mobilizations, which generally begin before any official decisions are made. These actions are co-determined by improvements in living conditions and education levels, which underpinned the previous expansion of civil and political rights such as the freedom of speech and association, as well as the right to vote.

At the end of the sixties, people in Italy, along with the rest of the world, rose up in a massive cycle of protest. Yet with regard to environmental issues, complaints generally came after the environmental impact was felt or were spurred by dissatisfaction with the lack of facilities, namely open sewers, open dumps, and polluting factories that were harming the local population. Industrial development itself was rarely questioned, rather the expansion was welcomed. Only later did a new kind of protest begin. Instead of reacting to wrongs that had been inflicted on them, groups started to organize proactively around what they believed they needed to accomplish.

In Italy, an emblematic case dating back to 1978 concerns the City Council of Milan, which was led by a red coalition of communist and socialist parties. The Council had a project that entailed building several new incinerators, one of them located in Vimodrone in the eastern suburbs of the city, near the new housing development “Milano Due” (Milan Two). Milano Due was erected by Silvio Berlusconi, at that time a building contractor and today leader of the right wing coalition and Italy’s prime minister. It is a neighborhood of four- and five-story buildings with a park, ponds and fountains, sporting facilities, several commercial spaces, and the requisite security guards. It was a planned community, designed with particular attention to separate vehicle traffic from footpath and bicycle paths in order to improve road safety and livability. This concept was deployed in opposition to the awful suburbs that existed at the time; it was the consequent destination of the up-and-coming middle class, affluent and ambitious, tired of the chaos and the bad environment of the city center. Meanwhile, at the end of the seventies, with the rise of national terrorism, the cycle of protest calmed down, and what has been called simply *riflusso* [tr. reflux or return] began: a return to private life, to the warmth of the family home, to materialistic certainties and their related consumerism. Waste accompanied that shift. Waste was growing.

Just a couple of years before, in 1976, near Milan, a little-known town hit the headlines. Seveso’s disaster is now a milestone of the environmental movement; from this we learned of the dangers of dioxin, and today a European Directive on relevant industrial risk is named after this town: The Seveso Directive. The people of Vimodrone and Milano Due were initially very concerned only about the potential devaluation of their valuable property (Frigerio 1979, 185). Somehow, people knew about the incinerator project; they had obtained information even if they had not been informed. In the meantime, a young, brilliant chemist who had been investigating around the Seveso disaster, discovered that Dutch colleagues had discovered traces of dioxin escaping from a couple of Dutch waste incinerators. After that, an intense debate began in newspapers and in scientific and public meetings. A good number of Italian and international scientists, waste management experts, and politicians intervened. Local authorities in Milan were directly involved, and an intense struggle divided the red coalition with socialists in favor and communists against the incinerator, while the early environmental organizations played a marginal role. Further investigations revealed a sizeable quantity of dioxin in many municipalities, and much like in Milan, the construction of planned incinerators was aborted. In fact, in Ancona it was stopped even after the

incinerator construction had begun. The existing incinerators started to adopt new refitting measures, which were burdensome adjustments that hindered their further development. From this debate, the sanitary landfill option came out as the winner, and material recovery facilities as well as composting plants regained favor, at least as theoretical arguments; the original shift away from recycling and composting directly correlates to the great economic miracle Italy experienced in the late 1950s.¹

The coming to force of new directives² and national laws, which require more transparency by local authorities, have made preventive mobilization a common phenomena. In Italy, 60% of the public works proposed and contested in the last three years are waste management facilities. The highest number – 56 out of 96 – are waste-to-energy plants. Every year, a significant number of proposals are cancelled for various reasons elicited by protests (political tactics or petitions to administrative courts). Among the contested projects, besides incinerators, in 2006 there were 18 landfills (plus 27 that were aborted the year before), eight composting plants (plus 15 that were aborted the previous year) and four RDF plants (plus one that was aborted the year before) (Blanchetti 2006).³ If in the struggles over incinerators there are strong trans-scalar movements by both parties, in landfill and composting there are many more locally grounded issues. Namely, there are new expansions of poorly managed existing plants. In some cases, there are local political rivalries. In other cases, people protest against the whole local strategy, which has determined that choice or because there are concerns for the locations. However, the Italian NIMBY watch (NIMBY Forum), which

¹ At the beginning of the twentieth century, scavengers were still intensely active; it was a spontaneous phenomenon and later, even in the cities where organized sanitation had begun in the late nineteenth century and continued through to the end of the WWII period, reuse, recycling, and sometimes incineration played a relatively important role together with garbage dumps (Melosi 1981; Sori 2001). In Italy the first experiment with incineration began in Bologna in 1908, but it was abandoned immediately after a couple of tests. It was a Doerr German furnace, made in Stettin by The Rottenbach Company, which was already operating this model in Viesbaden. It was supposed to provide electric energy production and heat recovery in domestic or public facilities. However, in the initial testing phase it appeared that the waste from Bologna was not suitable for incineration due to its low calorific compounds, such as unburned coal residues and particles, which were instead abundant in northern industrial cities, namely London, Manchester, or Hamburg (Brizzi 1998, 15-16). Some municipal dunghills were also operating, and some cities like Florence adopted a local patented system of closed bio-cell composting. In Milan, a large material recovery facility was erected in 1929, during the Fascist autarchy. There were 300 people employed in hand sorting the waste. (It is possible to download a Luce newsreel of the period, with propagandistic emphasis it illustrates a renewed version of this process; Luce 1943.) This facility was shut down in the sixties with the adoption of the black plastic bag collecting method, following a strong mechanization, and thus the first Italian incinerator (Milan, Zama Street) was ignited (Berti 1993). In Italy, therefore, incineration with energy and thermal recovery began to spread at the beginning of the seventies, beginning with Milan, where the first one had been operating since 1968 and the second since 1975 (Berti 1993). Then Bologna built its furnace in 1973 (Biblioteca Sala Borsa), Forli in 1976 (Balzani 2002, 212), and soon other towns followed. In 1978, 170 incinerators were reported as erected in Italy, but only 60% appeared as actually operating. This was always due to the kind of waste input that lacked calorific power, and so emissions exceeded the limits. Newspapers of this era reported this data and featured interviews with locals that depicted a context of hasty trust in technological solutions and also possible patronage or corruption (Frigerio 1979, 124-128). One such interview, with a doctor who lived during this period and was involved in the debate, states that most of these incinerators appeared to be small clinical plants used to destroy *in situ* hospitals' special residues.

² The Environmental Impact Assessment on single project was introduced in 1985 by the EU and adopted in Italy in 1986. The Aarhus Convention is the most relevant agreement about the right of information and participation on environmental issues; it was chaired by UNECE and signed in 1998 by several member states and came into force in October 2001 as an EU Directive. The Strategic Impact Assessment on plans and policy programs was introduced in 2001 by EU and adopted in Italy in 2008. These laws, bringing more transparency to decisions on development options, have elicited public participation.

³ It is possible to view an updated online map of Italian contested public works at “Non nel mio giardino” (L'Espresso).

produces and compiles the data, exaggerates these kinds of contestations because it picks up cases from the press. In other words, while we do not necessarily need to discount this data, we should consider these NIMBY conflicts as representative of the people's concerns and requests for information, which occurred because the local authorities' style of communication was, and remains, non-inclusive.

Spatialization in the politics of waste

The comparative observation of European cases is a basic approach to understanding the waste phenomena. The following classification is an approximation based on Eurostat data, which are often incomplete or imprecise, but it should be considered a starting point for future studies. There are three management models in Europe:

- Burning oriented – Incineration (waste-to-energy) is most highly developed in Denmark and Switzerland, where shares have abundantly exceeded 50%, followed by Holland and Sweden. In these countries, incineration is strongly integrated with combined heat and power (CHP) systems, namely district heating systems and steam turbine generating electric power. Landfill is the very last option, with a medium-low recycling target for household discarded materials and a very low composting target for household kitchen refuse. However, there is a strong commitment on packaging-container reduction and reuse policies (e.g. Danish return system).
- Recycling oriented – Material and organic recovery is most highly developed in Austria, Belgium, Germany, Holland, and in some local municipalities of Italy. It is characterized by high shares of recycling and composting, a good number of mechanical biological treatment (MBT) and some bio-gassification plants. Austria's recovery is around 60% while Germany, Belgium, and Holland near 55%. However, in these cases, this approach is integrated by a balanced mix of incinerators and landfill, as well as a strong commitment to reduction and reuse policies.
- Burying oriented – This basic option is widespread in the new EU member states of East Europe, Finland, the Mediterranean Area, Portugal, and the islands (UK, Ireland, and Iceland). Landfill is largely used with several degrees of improvement (e.g. biogas recovery, pretreatment of organic fraction called bio-oxidation, waste compacting, and so on). Generally reduction and reuse packaging policies are weak in those countries. However, in Northern Italy and Northern Spain, management patterns are closer to the first model and sometimes to the second. In Greece, some MBT plants have also been set up.

It is not completely correct to talk about an advanced North and a backward South. Regarding performance and all the limits this term implies (see above), there are some local areas in Italy where a door-to-door collection program is well developed: in Piedmont (Province of Cuneo), Lombardy (Milan East Province), Veneto (Padua, Treviso, and Vicenza provinces) also in Campania (Province of Salerno, Benevento and Avellino) and Calabria, as well as in other small local authorities. But warning and contradictions are never enough. Although these cases are introduced as environmentally friendly, economically efficient, and socially welcomed, all the territories that have implemented them are almost completely lacking in disposal plants, so waste has to be exported to other local authorities. For example, most waste from the Province of Salerno is moved to Naples' or Caserta's landfills; those from Milan East are burnt in Brescia's incinerator; those from Treviso and Padua Province's local councils are moved to central local authorities' plants or, for example, some RDF bales from the Treviso Province are moved a great distance to Viterbo's incinerator in the Lazio Region. Another example is the blue PET bottles, selected in Vedelago, (Province of

Treviso), which in pressed bales are exported to Holland for recycling. The environmental and economic costs and benefits have yet to be calculated in these situations. Moreover, although some surveys demonstrate that citizens welcome these collecting methods in small towns, in mid-size cities they have been rejected (Pisa) or there has been large support for the incineration option.⁴

Besides these models, it is useful to focus on the production side. There is still a strong correlation between GDP and waste generation (see figures 1, 2, 3) and consequently with incineration and recycling. Some countries recycle and recover more, though basically they are the same countries that generate more waste. Among European countries, only Germany has managed to obtain some results from prevention and reduction policies. From 2002 to 2006, the German Ministry for the Environment declared a decrease in municipal waste production from 636 Kg/year per capita to 563 Kg, with a reduction of 11.5% over four years. This trend was followed also by industrial waste (BMU 2008). These results have required costs,⁵ and despite this, German waste production per capita is still one of the highest of Europe.

Greece, Spain, and Italy are actually laggard on waste prevention policies. Nevertheless, they generate less waste, even if in their northern developed areas they are reaching German mean production rates. Explanations about this European diversity can come from several perspectives. One could be related to industrial history. Early industrialized countries have mostly developed incineration, creating some locally based firms, patents, expertise, and consultants, who now export those assets abroad. Among these initiators are England, Germany, Denmark, Switzerland, and Sweden. Though in England, incineration has slackened significantly, probably due to historical circumstances such as a high availability of uncultivated land, exhausted quarries and mines, bad experiences with coal smoke and stacks (see the high rates of cancer in Yorkshire and the Great Smoke of London in 1952) or the discovery of oil and methane in the North Sea.

Another explanation, also related to industrialization and capitalism, could be religious. The Catholic Church discourages cremation and encourages burial after death. Perhaps this religious tradition carries over to secular activities, such as waste burning versus waste dumping. Indeed, it was from industrial centers that cremation spread widely. In Milan, the first European Crematory was erected in 1878, stimulated by liberal, lay, and scientific arguments. Today in Italy, cremation is increasing and has reached a national average of 10% of deaths with a peak in Milan of 50% (Federazione Italiana per la Cremazione). There is a clear correlation between the development of the two practices across Europe, except for Britain, where a high 72% cremation rate is not confirmed by waste incineration, which is under 10% of all household waste collected (around 47kg per capita, the same as in Italy). Cremation has been allowed for Catholic believers only since 1963 under Pope Paul VI. This speculation is interesting, but I do not think it is so relevant. It plays a role, but Britain's exception confirms that it depends more on economic factors than ethical or aesthetic ones. It was grounded more on the kind of early development and urbanism and on garbage composition. In Italy, as we have seen, there was a very early attempt to set up an incineration option, but it failed. Much later, in the 1990s, also in Greece there were a couple

⁴ The Pisa local council released a public enquiry through questionnaires in June 2006. It was made to discuss the option about the withdrawal of the door-to-door system introduced three years before or about the opportunity of its extension to the remaining neighborhoods (Eco dalle Città). In Bolzano, an inquiry was commissioned by the Local Council to Apolliss regarding the new incinerator option in June 2006 (Apollis). In Genoa, an inquiry was commissioned by the Local Council to Eurisko (La Repubblica July 14, 2006), the same happened in Turin, (La Repubblica July 9, 2006).

⁵ As declared by the speaker of the German Ministry at the ACR+, CIWM, London Remade meeting, February 1-2, 2007 (ACR+).

of attempts. They occurred on two islands affected by massive summer tourism. They failed too because of the difficulty of managing summer peaks and RDF relative storage in order to exploit their calorific power, especially during winter. All this plus a lack of expertise is how the chair of the second Hellenic Solid Waste Management Association explained it in a weblog.

A third strong explanation relates to geography. Cold and windy countries with an industrial background and a population accustomed to smoke and stacks have favored waste incineration when other low-cost alternatives were not available, namely: coal, oil, gas, and exhausted mines and quarries, and uncultivated land in Britain; geothermic energy in Iceland (29,000 Kwh/year produced per capita); hydroelectric in Norway (24,000 Kwh/year produced per capita); hydro (20%), black liquor,⁶ peat, coal, wood fuel, and a low rate of arable lands in Finland.

Denmark is a typical case where low-cost alternatives were scarce, but similar arguments affect other countries such as Sweden, Belgium, Switzerland, and Holland. In Denmark – here introduced as a territorial variable – incineration was developed in one of the most advanced welfare states and advanced democracies of Europe. Denmark had strong municipal autonomy and an emerging public sector. Incineration began from Frederiksberg, a municipal enclave located in the territory of Copenhagen Municipality. Due to its harbor, at the end of the eighteenth century Copenhagen became too busy, noisy, and dirty, and Frederiksberg, thanks to its parks, became the location of the King's new palace. Consequently courtiers and a plethora of craftsmen and entrepreneurs transferred there. At the beginning of the twentieth century, it was the richest, the smallest, and the most densely populated local authority of Denmark. This little enclave, thanks to its business opportunities related to the royal court, attracted mostly, a middle- to high-class group of affluent people, who were also the first consumers and producers of garbage.

In the meantime, high housing density caused problems due to the creation of new dumpsites inside the restricted municipal boundaries. So, after some waste tests were carried out at the Hamburg incinerator, in 1903 the first Danish incinerator was started up. It was welcomed as an economic solution that allowed the municipality to be self-reliant and to save for out of boundaries disposals. Furthermore, it enabled the recovery of power and heat for the nearby hospital, houses, and other public facilities. This model was later reproduced in other Danish municipalities and, after the oil shock in 1973, was integrated into the district-wide heating network that was being built then (Kleis 2004). Today, Danish consulting and construction firms are very influential stakeholders both inside and outside of Denmark.

Italy, Greece, and Spain developed this type of infrastructure much later, and development was further affected by the initial fiascos in incineration and a slowdown after the introduction of the dioxin debate.

The environmental movement is not weaker in the south than it is in Northern European countries. As argued by a recent comparative study (Kousis 2008), in southern countries, environmental mobilizations occur around other issues but overall with different organizational models: larger and more structured environmentalist associations are weaker and less integrated into state funds and governance, while community-based groups are the stronger mobilization channel. In locally unwanted land-use conflict and waste struggles, community-based mobilizations are more effective because they directly affect the political consensus linking citizens to decision-makers. In fact, bigger environmental organizations do not always converge on the same positions as local grassroots do. About waste, for example WWF Italy is against incineration, it is in favor of recycling and door-to-door systems, but

⁶ Black liquor is a byproduct of pulp, used in the paper industry. It contains lignite residues, cellulose derivatives and other chemical inorganic compounds.

they think that – although aiming at zero waste – transition policies need to go through landfill disposal rather than to expand incineration capacity. Generally, WWF in northern countries seldom intervenes outside of the realm of nature conservation. Legambiente (the most widespread environmental organization in Italy, politically near the center-left wing) is for recycling, but it is not totally against incineration. Finally FoE (Friends of the Earth) Italy (politically nearer to the liberal-center-right wing, but with a very little rooted presence) is in favor of incineration, while FoE Europe and FoE UK oppose it.

Grassroots groups have demonstrated that they are able to mobilize trans-scalar human resources, being advantaged in establishing alliances on single issues with different social forces in respect to their ideological profiles without posing prejudicial barriers (very easy in countries with a dictatorial background and characterized by a still relevant ideological rivalry) and structures: formal neighborhood committees, local party sections, property owners associations, worker and consumer unions, local environmental association sections, medical associations, and so on. Greenpeace has always been against incineration, and it is often the only group that mobilizes people where this option is more developed (Denmark, Sweden) and, furthermore, provides expert knowledge to local grassroots groups everywhere. Local anti-incineration networks (which adhere to GAIA – Global Anti-Incineration Alliance, an international umbrella organization based in the US) are well rooted in Italy (Rete Nazionale Rifiuti Zero), in Spain (Ecologistas en Action and El Instituto Sindical de Trabajo, Ambiente y Salud), in UK (UK Without Incineration Network, Cheshire Anti-Incineration Network, Communities against Toxics Scotland, Friends of the Earth UK), while one network in Hungary and Croatia and one Norwegian group mobilized against an Oslo incinerator (GAIA). Medical associations have also played a key role in France and Italy when they asked for an incineration ban.

This input needs to be developed, however the main considerations are: 1) the protests are more widespread and stronger in burying-oriented countries; Finland and Iceland still have enough space. 2) In these countries, the environmentalist movement is basically grassroots with weaker large environmentalist organizations. 3) Single-issue, community-based, with trans-scalar mobilization are more cohesive local alliances but more radical and less available to mediate their positions with the business sector. These links flourish better where big environmental organizations are less integrated in the governance system, e.g. administration boards, steering committees, sponsorships 4) More neo-corporative governance models like the Danish, Swedish, Dutch, Swiss, or German are more able to mediate positions, to negotiate, or to canalize/marginalize the radical ones (e.g. implementing experiments and demonstrating their irrelevant performance). They adopt both incineration and recycling. 5) In the burying-oriented countries, environmentalist radicals claim – inspired by Waste Hierarchy - like “door-to-door” scheme, sometime succeed in being adopted by local authorities, where grassroots activism makes them stressed and where basically outlier areas, lacking disposal facilities, find export of recyclables less expensive than export of waste. However a sustainability complete assessment on ecological, economical, social, and labor impact of those schemes is waiting to be carried out.

Waste spatialization: From Africa to Gomorrah⁷

As noted before, waste flows from strong territories to weak ones. The higher the disposal costs and the more dangerous the nature of waste, the further waste travels for processing and

⁷ This paragraph is based on the reading of texts (Cianciullo 1995; Isenburg 2000, Saviano 2006; Calabria 2008) and some documents (Camera dei Deputati 1994), news, recent interviews, and reportage (Castaldo 2007).

the more sophisticated the occultation tactics become. Until the end of the 1980s, in contrast to the few expensive and authorized plants, situated mainly in Germany, England, and Finland, Italian and other European waste was shipped to African countries. This was similar to US-produced waste from the heavily industrialized northeastern United States, which were discharged in open sea or in Central America.

In the middle of the eighties, a scandal involving the “poison boats” revealed this traffic to the public at large, whereas Italy was already very engaged in it. Most of those ships sailed through the Mediterranean and Italy. Scandals revealed an ecological post-colonialism, which some African states (such as Nigeria) rejected, shipping back Italian toxic waste with their cargos. Much later, after their arrival, which was opposed by group mobilization in the ships’ ports of call, Italian central and regional governments managed to treat the dangerous loads and the cargo boats only when great resources were assigned for new disposal plant construction and for shipping the more lethal hazardous waste to special plants located in England (Parliamentary Commission on Waste 1994). So afterwards, changes occurred, but the problem – a lack of disposal plants or an effective reduction/recycling strategy – was far from being solved, and there remained a need to find other routes to manage waste.

In those years, criminal organizations such as the Camorra, Calabrian N’drangheta, and Apulia Sacra Corona Unita entered the waste business and began to use their territories, which they controlled pervasively, as waste destinations. They created alliances with entrepreneurs, consultants, and masonry members who connected the network to corrupt politicians while consultants contacted private firms and public-owned utility companies, which needed to dispose of their refuse. In the meantime, firms faced a more restricted, controlled, and regulated market because the European Waste Directives, which was published in 1975, came into force at last in 1982. Many executives found on their desks some very interesting proposals on how to save money through disposing of a nuisance in such a way that would benefit their business interests and this simultaneously raised their level of ecological awareness. Waste, depending on the toxicity level, generally found different destinations, which however were never minimally suitable. In Campania during the nineties, privately owned landfills were still running. They were only authorized to receive municipal waste, but they were not complying with legal environmental requirements for this task. Instead, huge amounts of highly toxic waste were diverted into these landfills as well.

Yet for criminal organizations, the main business is around quarries. The Camorra controls all the quarries from which building and masonry materials are extracted: sand, clay, and gravel. With this primary source under its control, Camorra blackmails all the regular building companies and favors their affiliated firms, thereby gaining most of the contracts. It exploits quarries to an incredible degree, making craters up to 100 meters deep and always digging until they reach the underground water table. At that point, they stop digging and begin a second exploitation cycle, filling these chasms with waste. Toxics in the form of loose sludge, barrels, big bags of fine dust, and even mixed nasty household waste are covered by a final layer of earth. Waste comes from all over Italy – particularly from northern factories and cities – and also from abroad (e.g. Germany). At the end of the filling, they build sporting facilities, horse tracks and farms, golf courses and tennis courts. At times during the hauling, something goes wrong, and extremely hazardous waste is abandoned along country roads, creek slopes, and other unexposed corners of the countryside. Haulers get lost; they have emptied their trucks and have been taken to nearby hospitals poisoned by their loads, or ingenuously they have asked policemen: “Is there a landfill nearby, please?” Some accidental facts like these, followed by serious investigations and Legambiente activists’ work, were brought to the Parliamentary Inquiry on Waste Cycle (Camera dei Deputati 1994), set up in the mid 1990s. Inquiry reports have revealed a disturbing scenario that still today is only partially solved. In Apulia, Lazio, and Sicily, emergency situations

were relatively more restrained, but corruption networks and illegal disposals were also revealed. There is also more than one episode of illegal disposal of radioactive waste released into the sea.⁸

A criminal legacy is evident in the Campania waste management collapse. One of the official arguments about the collapse is the lack of activation of Acerra's incinerator near Naples, which is still expecting the final countdown, because it was under legal investigation and had allegedly been stopped due to violation in the contract assignment to FIBE (a Fiat-linked company). A severe fraud to the state may be revealed. Acerra's incinerator was contested since its initial construction began in 2004. The collapse was announced already at the end of the nineties, and the response was to put all the regional waste authorities under control, and a government-appointed executive officer was put in charge. This move countered the normal democratic process. Landfills were going to be out of capacity, and there was a plan to build new infrastructures for a balanced management system, and a target of waste separation of 40-50% was set. These goals were never accomplished, and all local authorities in charge of the project, as well as the workers, have been relieved of their responsibilities. A sequel of errors characterized the plan's implementation until Spring 2006, when along the streets of Naples loads of waste bags began to be permanently stacked. Prime Minister Romano Prodi's government was strongly attacked, together with all the center-left wing politicians who lead the region and Naples council.

In the meantime, Prodi changed the waste management commissioner, appointing Gianni De Gennaro, who had managed public security in Genoa in 2001 for the G8 Summit. He attempted a dialogue and tried to force the opening of some old landfill sites, using police platoons, a move that people strongly opposed.⁹ Some Camorra infiltrators upset the situation by employing urban guerrilla tactics during these efforts.

The government fell in March 2008, a collapse accelerated by this crisis. Berlusconi's new government held its inauguration in Naples calling for the removal of the incinerator lock and for the completion of the second planned Santa Maria La Fossa incinerator. Moreover, he called for army intervention to protect closed landfill reopenings and new landfill constructions. However, no changes in waste separation are evident with the coming of the new government. Some communities have started their own waste separation programs as a symbolic act of their commitment to pressure the local authorities and the state commissioner. Another disturbing fact was revealed in an interview to the new regional councilor responsible for waste, Mr. Walter Ganapini, former chair of Greenpeace Italy, a waste expert. He accepted the new assignment during the crisis and on the first of June 2008 declared that by chance, while inspecting Santa Maria La Fossa, he discovered a newly

⁸ Since 1994 Legambiente's national watch on environment and legality (Osservatorio Nazionale Ambiente e Legalità di Legambiente) has been investigating toxic waste traffic. Its analysis, deriving from investigations of nine Italian criminal courts, revealed that the phenomena reached its maximum intensity between the mid-eighties and the mid-nineties; all investigation led to the same criminal network, the same people, namely individuals from large corporations, ship-owners, criminal organization leaders, businessmen, shady dealers, warlords, deviant intelligence officers, or government leaders of several countries (especially Somalia). There are valid interpretations and some proof on about 10 ships that sunk in the Mediterranean with their toxic or radioactive cargos (Comitato per la Verità 2007,1). Indeed the murder of reporter Iliara Alpi was related to her enquiry regarding waste and weapon traffic between Italy and Somalia (Osservatorio sull'Informazione). All began from the Jolly Rosso beaching in Formichiche in the Province of Cosenza, in 1990. The story of the cargo Jolly Rosso, a former "poison ship," is still covered in mystery, however it was full of toxic waste and mysterious missing containers (probably containing radioactive materials) that seemed to be have been dropped overboard during navigation (Zona Nucleare). Recently, in September 2009, one of these sunk cargos was discovered off the Cetrano Coast (Cosenza), and there is strong suspicion that it is full of toxic materials and nuclear waste. (<http://www.adnkronos.com/IGN/News/Cronaca/?id=3.0.3773661717>)

⁹ For a photographic reportage see "The Land of Waste" (Castaldo 2007).

constructed and environmentally perfect landfill, with enough capacity to receive all Campania's waste for six months. Beside that, he found two mechanical selection machines, both new and never used, now in a meadow overgrown with wild weeds. This means that the emergency could have been avoided. Of course, the solution would not have been permanent, but it would have provided sufficient time to implement a suitable system and an improved separate collection, which has not yet begun (Incerti 2008). At the moment the government has managed to open new landfills with the help of the army and is waiting for the ignition of Acerra's incinerator.

In a January 3, 2008 interview, Roberto Saviano argued that clans of the Camorra have managed, practically under a monopoly system, the entire waste management cycle: collection and disposal into landfill and eco-bale stacking sites, with a turnover of six billion Euros in two years. The interview with RAI was carried out at the peak of the crisis when the government had attempted to place batches of waste in other Italian regions and also in Germany; several national and local politicians refused to accommodate the batches of garbage, saying that "everyone" had to dispose of their waste on their own, inside their territory. Saviano suggested that the northern regions, which are not at all unfamiliar with illegal trafficking, had exploited Campania's troubles through clan brokerage. This crisis has seen a change in the waste routes in two directions: from a back region, where one hides waste, Campania, like Nigeria before, has become a front region and a player in the international news media. A region once known as a destination for waste, Campania has now also become a region of departure.

Conclusion: Toward a new waste governance

I have attempted to illustrate synthetically some significant changes that have occurred in waste management paradigms that could also be generalized to other areas of environmental research.

Three main changes have been evidenced. From the second phase of modernity, especially as it expanded between the Seveso (1976) and Chernobyl (1986) incidents, the development of modern society, through massive growth in technological and scientific complexity and uncertainty, has seen a parallel growth in non-expert or counter-expert arguments that reinforce the role of cultural values and subjective assumptions. In other words, collective risk became a conflicting desire and therefore a political issue. The subsequent protests called into question the previous totally optimistic belief in technology and opened up the range of possibilities. A second change was evidenced by the (preemptive) mobilizations phenomena. In this model, groups mobilize against a potentially risky, yet-to-be-made decision, rather than against an ongoing one (e.g. an already operating incinerator). This is an effect of welfare improvement and implies an increasing democratic participation. Strong differences and inequalities still exist between countries, regions, and backyards. For quite some time, front regions and back regions have been characterized by all sorts of eco-colonialism, and this situation will continue. Yet even in terms of spatialization, vested assumptions have been questioned, and reverse trends have been evidenced, thus making apparent the geographies of waste as an object in movement and an objective in search of more balance.

The Waste Hierarchy has been weakened from a variety of perspectives. It often appears to be a principle based on dogmatic claims, which homologate geographical complexity to one ideal way. Instead of creating harmony among European countries, this strategy produced many conflicts. Each territory has its own particular framework and dynamics determined by its climate, its people, its infrastructure, and its power legacies. Eco-technical tools like LCA,

CBA and SIA, with all their limitations, have supported that criticism and demonstrated how several scenarios are not always consequent to it.

Managing a change is possible, and some trends can be briefly introduced: 1) reshape territories on specific tasks (waste management is one of these); 2) negotiate choices with self organized territorial actors and make them agree on common inquiries through co-steered and easily accessible eco-technical tools; 3) verify sketched scenarios and strategic choices through direct democracy tools such as citizens' juries, consensus conferences, town meetings, deliberative polls, and so on.

The direction just proposed aims at increasing democracy instead of reducing it due to presumed pragmatic ends. This can no longer be taken for granted. As we have seen in Campania, the current Italian government, like the former one, is and has always been oriented toward the second, pragmatic option. Local citizens and community-based groups are largely ignored as stakeholders, and army intervention is considered the right choice. Nevertheless, territory is still controlled by Camorra.

This authoritarian response and democratic regression have been evidenced, to a smaller extent, in many cases, such as Sheffield, UK in 2002, the Irish case of Galway (Davies 2005), and in Italy around the highly publicized anti-incinerator mobilizations (2002–2008), where inclusive policymaking attitudes were very poor. However, some experiences inspired by participatory democracy on waste facilities siting were carried out in Turin in 2001 (Bobbio 2002) and more recently in Lombardy. The first one, although suffering from some limitations and errors, was a positive experience, while the second one failed.

In Forlì (a mid-sized town in Central Romagna), important signals occurred after a five-year mobilization opposing an incinerator and its related waste strategy designed by a traditional leftist local government. It was a very strongly patronage-based government that was intertwined with a waste management company and most of the local firms. But the power establishment was recently dealt a blow with the introduction of local primary elections held by the Democratic Party, the party that currently leads the local government. An outsider was selected by the potential electors as the next party candidate for mayor, and this result shocked the old party establishment. The new candidate is inspired by participatory democracy. Great expectations will drive further investigations.

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