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Political ecologies of a waste incinerator in Turin, Italy: Capital circulation and the production of urban natures

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A B S T R A C T

The article focuses on the urban political ecology of the Gerbido waste incinerator in Turin, Italy. The analysis focuses on the relations between spaces of profitability, economic flows, capital fix and the production of urban natures. The case study allows a discussion on the hybrid nature of the processes of capital circulation and production of urban natures, emphasising how waste incineration plants generate social and environmental injustices regarding the production, simultaneously of social subjects and urban spaces benefitting from environmental policies, as well as marginal spaces and marginal subjects whose everyday living space has been modified without listening to their voices.

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1. Introduction

The aim of this article is to analyse how capital may produce urban natures. The argument is developed through the analysis of the so-called 'Gerbido' waste incinerator located in Turin, Italy. The theoretical framework of urban political ecology is mobilised in order to develop this analysis (Heynen, Kaika, & Swyngedouw, 2006; Swyngedouw & Heynen, 2003).

The political ecologies of cities essentially concern the relations between capital, urban spaces and nature. This is not new: urban political ecology has been mobilised, for example, as a theoretical framework for the analysis of the hybridisation between the two categories of the urban and the rural (Wolch, Pincetl, & Pulido, 2002) and the relationship between ecological modernisation and sustainability (Gibbs, 2002).

This study focuses on the relationship between capital and the production of urban natures, in relation to an incineration plant known as 'Gerbido', named after the area, in the metropolitan area of Turin, where it is located.

Incinerators are basically used for the management and disposal of waste, by a process of high-temperature combustion that gives off, as a final outcome, heat, gasses, ashes and dusts. Many scientific debates oppose those scholars arguing that the incineration process is dangerous for human health, and those arguing that recent hi-tech plants do not cause any risks. But, independently

from the development of these scientific debates, it is a matter of fact that the perception and the suspicion of potential risks makes the location of waste incineration plants a highly conflictual matter, as local communities often fight against the construction of these plants, generating NIMBY (Not In My Back Yard), NIMN (Not In My Neighborhood) and NIABY (Not In Anyone's Backyard) phenomena (Murray, 2009; Tipaldo, 2011). This article analyses the relationship between the area of economic profitability connected to the incineration plant, and the production of urban natures, intended as networks of metabolic relations connecting the plant with other local and supra-local spaces. In this sense, unlike the analysis of the Gerbido incinerator currently available in literature (Bobbio, 2002; Tipaldo, 2011), this article will only focus indirectly on the nature of social conflicts.

From a methodological point of view, the article was developed between November 2014 and January 2015, through the analysis of texts (previous works in literature, research reports, websites, videos and blogs), in-depth semi-structured interviews with twelve relevant actors, and the participatory observation of several local events connected to a local protest movement named *Comitato No Inceneritore*.

The article is organised as follows. The next section briefly introduces the theoretical framework and some features characterising waste incinerators. The third section introduces the city of Turin, and then it develops the core of the analysis through three sub-sections. Section 3.1 focuses on the spaces of economic profitability triggered by the incinerator; Section 3.2 concerns the embedding of capital in the urban space; Section 3.3 discusses

the relationships between city, nature and the incinerator. Finally, Section 4 summarises the main points emerging from the analysis.

2. Political ecology in urban studies and waste incinerators: a short review

Political ecology has originally been used, as a theoretical framework, in order to study soil degradation in rural spaces (Blaikie, 1985), but more recently it has been used for the analysis of urban environmental problems (Broto & Bulkeley, 2013; Evans, 2007; Heynen et al., 2006; Keil, 2003, 2005; Monstadt, 2009). Specifically, urban political ecology has been used in order to explore the relationships between city and nature (Gandy, 2004; Heynen et al., 2006; Swyngedouw, 2006); the management of water and air (Gandy, 2004; Kaika, 2006; Swyngedouw, 2004; Véron, 2006); green areas (Heynen et al., 2006; Kitchen, 2013); land reforms (Myers, 2008); urban risks (Pelling, 2003); urban redevelopments and transformations (Bunce & Desfor, 2007; Hagerman, 2007) and environmental justice (see the classic contribution of Bullard, 1990; see also Pellow, 2006).

Urban political ecology is grounded in Marxist theoretical perspectives, focusing on the logics of circulation and reproduction of capital (Gandy, 2005; Heynen et al., 2006; Swyngedouw & Heynen, 2003) with the addition of suggestions from actor-network theory, and specifically insisting on the idea of a hybrid and inseparable nexus between nature and culture (Latour, 1999). These two concepts, in fact, are considered socially constructed conventions, and the city itself is a hybrid entity, a cyborg (Loftus, 2012; Swyngedouw, 2006), an assemblage of socio-spatial processes that intertwine and overlap the local and the global, the human and the physical, the cultural and organic planes (Heynen et al., 2006; Kaika & Swyngedouw, 2000; Pincetl, 2012). In fact, the supposed juxtaposition of the two categories of city and nature is misleading. Rather, it is necessary to propose the urban environment as a complex socio-ecological process, hybridising the organic and the cultural: Kaika and Swyngedouw (2000, pp. 123–124) define the city as both a space of 'urbanization of nature' and 'naturalization of the urban' (cf. Loftus, 2012). Specifically, on the basis of the theoretical contributions of Harvey (1996), it is possible to link the production of urban natures with processes of capital fix, intended as the incorporation of capital in the urban space as a means for generating, investing and reproducing economic surplus. However, the conceptualisation and investigation of the relationship between nature and capital depends on the epistemological assumptions mobilised by the researcher. Two main approaches have to be mentioned.

Firstly, it is possible to assume 'nature' as a reality ontologically independent from the social and the cognitive spheres. This is in line with realist approaches (Mäki, Marchionni, Oinas, & Sayer, 2004; Yeung, 1997), which do not deny the socially-constructed nature of human institutions, but at the same time they assume that reality exists independently from human consciousness.

In a different way, it is possible to embrace a constructivist approach by emphasising how nature and humans are imbricated and mutually reproduced through a number of material and symbolical metabolic exchanges. In this sense, it is possible to use the plural 'natures': the blurring of the boundaries between the human and the artificial, the technological and the natural, the nonhuman and the cyborg-human, and this suggests that there are many possible 'natures' (Loftus, 2012; Swyngedouw & Heynen, 2003).

The relation between the two approaches is controversial: according to the scholars promoting constructivist approaches, the interpretation of natural elements as 'external' to human societies may degenerate, ultimately promoting capitalist and conservative logics (Swyngedouw, 2006), while on the other hand constructivist approaches may fall into absolute relativism and lack of coordinates for orienting empirical investigations for distinguishing truth from falsity, and for fostering social action.[1]

As mentioned, urban political ecology is closer to constructionist perspectives since it emphasises how capitalist hegemonic discourses propose an understanding of natural resources as commodities (Kaika & Swyngedouw, 2000). In this way, the private sector is allowed to make profits through the exploitation of public goods and processes of 'accumulation by dispossession' (Harvey, 1996). For example, scholars have shown how many cases of privatisation of urban water management have determined a rise in local tariffs which, ultimately, produced social stratification in terms of access to water (Heynen et al., 2006; Swyngedouw, 2004). Particular attention should therefore be given to the socio-ecological processes – based themselves on socio-metabolic relationships – through which specific social and environmental conditions are produced, conditions that can be positive for some social subjects and for some places, but not for others (Walker, 2009; Schlosberg, 2013). Debates on urban political ecologies therefore strongly resonate with discourses on environmental justice (see Bickerstaff, Bulkeley, & Painter, 2009; Reed & George, 2011).

In this scenario, capitalist logic plays a leading role (Harvey, 1996). The pursuit of profit, in fact, often implies the identification of vulnerable subjects and marginal spaces for downloading negative externalities (Heynen et al., 2006). This generates problems of socio-spatial and environmental justice strictly connected to the distributional aspects of environmental harms (Reed & George, 2011): minorities or groups with a low endowment of economic, cultural and social resources bear the negative externalities of an entire city, as in the case of the proximity to unpopular structures such as incinerators (Desfor & Keil, 2004; Loftus, 2012; Swyngedouw & Heynen, 2003).

Waste incinerators are relevant elements in the so-called "geographies of waste governance" (Davies, 2005, p. 375). The European Union has stressed the importance of multilevel governance in shaping policies that are sufficiently accepted (Davoudi, 2006). Still, waste management is conflictual, due to social feelings and ideas of fear, risk, injustice and resistance (Calo & Parise, 2009; Davies, 2005; Hsu, 2006). In this framework, waste incinerators have been analysed in relation to the public perception of risk (Davies, 2005; Lima, 2004; Snary, 2004); recycling practices (Murray, 2009; Wilts, 2012); sustainability (Corvellec, Zapata Campos, & Zapata, 2013; Leonard, Fagan, & Doran, 2009); social movements, community activism and NIMBY phenomena (Murray, 2009; Tipaldo, 2011).

3. The Gerbido incinerator

The Gerbido incinerator is located in Turin, in the northwest of Italy. The Turin metropolitan area had a population of about 1.7 million people in 2014; it is the capital of the Piedmont region (4.5 million inhabitants), and the fourth Italian city in terms of population, after Rome, Milan and Naples. With a high degree of generalisation, Turin's evolution in the last century has been quite similar to that of other major urban areas in Europe, whose growth has been connected to industrialisation and immigration. Turin grew side by side with the FIAT automobile industry, but since the 1980s, the progressive crisis in the manufacturing sector pushed local policy makers towards the quest for economic differentiation (Vanolo, 2015a). For this reason, over time Turin has tried to brand itself as a techno-city, a cultural and creative city, and recently as a green, smart city (Crivello, 2014).

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[1] Realist and constructionist approaches do not have anyway to be imagined strictly in opposition, as they share many features, such as the rejection of positivism, reductionism and grand narratives in general (Yeung, 1997).