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No Environmental Justice Movement in France? Controversy about Pollution in Two Southern French Industrial Towns

Abstract: This paper describes the emergence of a controversy concerning pollution and environmental and health risks in two southern French towns, Viviez and Salindres, which are both known for their long industrial history. It explores some of the reasons why the majority of the local populations resented the fact that the issues raised were addressed publicly. It also examines some of the coping strategies residents may have developed to avoid talking about risks and to distance themselves from them. It goes on to discuss the differences and similarities in the development of concerns for environmental inequalities in the North American and French contexts, asking, in the manner of Werner Sombart on socialism in the USA at the end of the nineteenth century, why environmental justice is not a strong concern (either as a social movement or frame of analysis) this side of the Atlantic.

1. Introduction

'Pollution' covers many different phenomena, including the emissions, effluent and organic and chemical waste that are generated by human activity such as industry. Some of the substances involved are of natural origin but others are manmade. Their uncontrolled dispersal into the environment, and their subsequent accumulation and concentration in specific places, puts us at risk. Indeed, they may act as poisons with immediate or delayed, visible or invisible, direct or indirect effects on human health. Uncertainty about the extent of their real impact in time and space is an additional source of anxiety for the people concerned (Erikson 1994). Their presence creates ontological insecurity (Giddens 1994), particularly because the effectiveness of clean-up attempts is far from sure. Living in an area that is thought to be contaminated becomes more difficult as 'normal' practices that increase exposure, like letting children play outdoors, can be called into question. As underlined by William R. Freudenburg (1997), beside its toxic effects on the biology of most living beings, pollution also has corrosive effects on the social order.

This article is based on two recent case studies conducted in two southern French towns where concerns about the health-related consequences of more than a century of industrial activity and pollution led to the intervention of the

French institute for public health surveillance (InVS). In the first town, Viviez, in the department of Aveyron, the health authorities conducted an investigation on their own initiative. In the second town, Salindres, in the department of Gard, they reacted to complaints from a small number of residents. The aim of the epidemiological surveys undertaken by the InVS was to assess whether pollution was causing additional discontent and health problems. Their interventions generated considerable controversy and took place in an atmosphere of relative or even outright hostility.

Most of the literature on protests against the environmental and health hazards of pollution focuses on mobilisation, documenting its origins and success or failure. However, in Viviez and Salindres concerns prevailed which prevented criticism from growing outwardly. Most people who expressed themselves publicly were eager to recall their attachment to the factories, leading some to denigrate the surveys and in some cases refuse to take part. The two French case studies therefore stand in strong contrast with grassroots environmental justice movements in North America (Gottlieb 1993). They call into question the use of frames of analysis that were elaborated in a different context (Shrader-Frechette 2002; Schlosberg 2007; Walker 2012), particularly in France where this type of mobilisation is rare to the point of being almost unheard of.

In this paper I describe the socio-historical context of the two case studies mentioned above and the controversies concerning environmental and health risks that emerged in the two towns when the InVS started its investigations. I explore some of the reasons why the majority of the local population resented the fact that the issues of pollution and its consequences for health were addressed publicly. I also examine some of the coping strategies residents may have developed to avoid talking about risks related to pollution and to distance themselves from them. I go on to compare the development of concerns for environmental inequalities in terms of exposure to risk in the North American and French contexts. To do so I question, in the manner of Werner Sombart on socialism in the USA at the end of the nineteenth century (1976), why environmental justice is not a strong issue (either as a social movement or frame of analysis) this side of the Atlantic Ocean.

2. Enquiring about a Controversial Issue

2.1 Methods and Theoretical Framework

Qualitative sociological methods of inquiry were used in both Viviez and Salindres. In the former, fieldwork was conducted over a period of three years (2009 to 2011). It was carried out in the framework of a larger interdisciplinary research project that aimed to study cadmium contamination of the Riou Mort and Lot rivers by a zinc factory over the previous 150 years.[1] I conducted thirty-five in-depth interviews with state officials and elected representatives of

[1] The Re-Syst project was funded by the French National Agency for Research (ANR 08-CES-014).

the Midi-Pyrénées region, as well as industrialists from the Vieille Montagne plant (today owned by Umicore, one of the largest ore extraction corporations in the world) and with local residents. I also attended public meetings organised by the district subprefecture where the InVS epidemiologists and regional health authorities (Regional Health Agency, ARS Midi-Pyrénées) informed the public of the results of their survey. One should underline that, despite being conducted concurrently, the scientific project and the InVS intervention were in no way related, showing how disconnected action by the state services and research projects can be. (For a representation of French administration regarding the issues tackled here see *figure 1.*) In addition to fieldwork I consulted the Aveyron departmental archives with a colleague, Ariane Debourdeau, to find out how industrial impacts on the environment and health had been dealt with in the past.

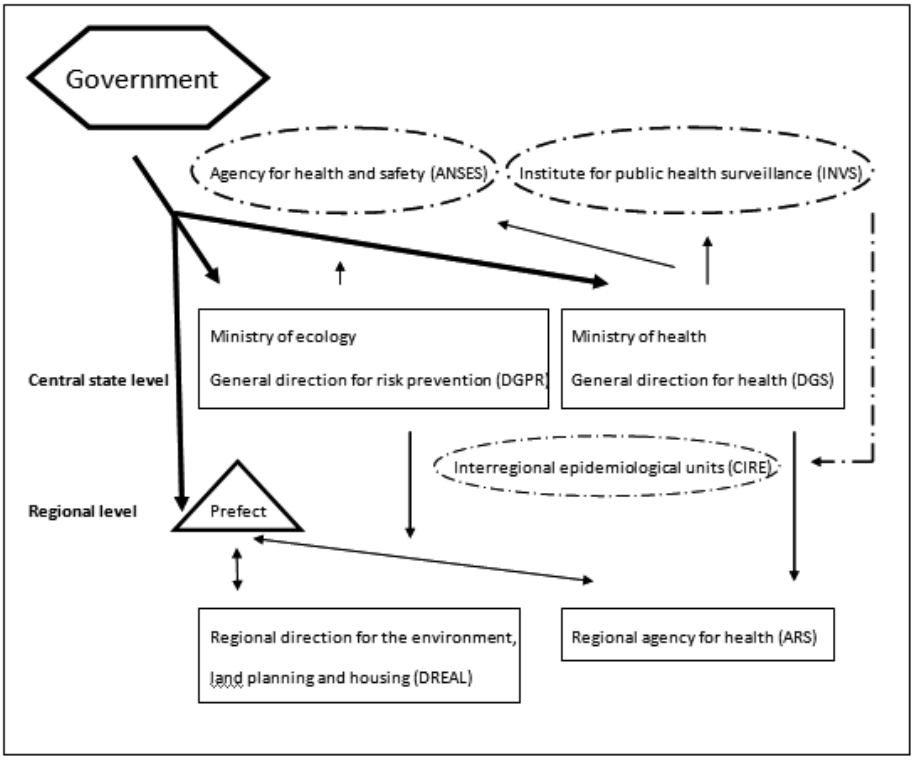

Figure 1: Environmental and health administration in France[2]

[2] Only services connected with the purpose of this work are included here. The 1810 act, which distinguished three classes of factory depending on their expected impact on the environment and health, and subjected the most polluting ones to administrative authorisation

The inquiry in Salindres began in 2012 at the request of the InVS epidemiologists I had met in Viviez. I conducted twelve in-depth interviews with elected representatives and local residents to help them understand the socio-historical context and to prepare their own survey. Twelve supplementary in-depth interviews were conducted by Clémence Pinel, a political science Masters student. In addition, I had access to some of the preparatory documents that the InVS and regional health authorities (ARS Languedoc Roussillon) had collected. These included anonymous testimonies by local physicians and an environmental risk assessment report that was being prepared for local industrialists by consultants under the supervision of the regional authorities responsible for the environment and the regulation of industrial activities (Regional Office for the Environment, Development and Housing—DREAL Languedoc Roussillon). I also attended meetings in the subprefecture town of Alès where officials and the main stakeholders gathered to discuss protocols and preliminary data. Unlike in Viviez, the pollution under investigation in Salindres was produced by several organic chemistry plants such as Rhodia (a pharmaceutical and food processing factory) and petrochemical activities such as Axens, a chemical catalyst factory that had taken over sections of the original Pechiney company. However, the industrial trajectory of the two towns, which continues today, originated in 1855 on the joint initiative of engineers and investors who decided to locate plants in the rural Aveyron and Gard departments due to their natural resources and the development of the railway at the time.

I used a mainly empirical approach to the two field surveys. I knew I could not endorse experts' definitions and views on pollution in general on the one hand and on the local situations on the other. Borrowing from the sociology of scientific and technical controversies (Callon 1986; Wynne 1996; Collins/Pinch 2001; Latour 2001), I decided to pay attention symmetrically to the accounts different stakeholders made of the issues being disputed, the effects of their discourses on others and the ability of some of these stakeholders to cut down on uncertainties or, on the contrary, to stress them in order to impose their views. At the same time I avoided confronting them with figures or data, since controversies play a great part in the creation of knowledge and do not result from a simple lack of understanding, especially because data were being produced at the time of my inquiry and are still the subject of debate at the time of writing. It was also important to acknowledge the limits of quantitative risk assessment methods (Frickel/Edwards 2014) as well as of epidemiology (Tesh 2000). Both are suspected to produce as much ignorance as knowledge about

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and control, is often described as the first French environmental law. Yet historians have expressed many doubts about it (Le Roux 2009). Indeed, the act could be interpreted as an attempt by the state at the time of the industrial revolution to protect industrial activity from any protest against an increase in fumes, noise and other nuisances. Indeed, once industrialists received administrative approval their factories could operate with little constraint. Neighbouring landowners could only claim damages if they could produce evidence. Since the beginning of the twentieth century several specific laws were passed limiting pollution. However, no control was actually implemented prior to the 1976 act on the protection of nature. This was completed a year later by the acts on classified factories, which for the first time were subject to thresholds set by the prefect, and which included penalties for offenders.

the phenomena they aim to document. Just as a lack of evidence about a hazard is no guarantee of harmlessness, other perspectives, methods and instruments, some as yet unavailable, could potentially prove otherwise later (this is not to mention situations described in the sociology of science literature, where some stakeholders may conceal information or distort it in their own interest.)

Furthermore, knowing from preliminary research that pollution was a controversial issue which could not be brought up without tensions and which was able to fuel criticism as well as reservations or silences, I avoided using the term itself. Instead I let the interviewees bring up the topic while I referred to the role of industry in the town, changes over time in the relationships between the factories and the local population, and the recent press coverage of risks of contamination. I wanted people to describe, in their own words, their experience as inhabitants of a place in which dwelling conditions, in the critical sense of Tim Ingold, could be seen as impaired (2005).

To be able to analyse the development and circulation of alerts, I referred to the abundant literature on environmental movements (Gottlieb 2009), risk and whistleblowing (Bernstein/Jasper 1996; Tierney 1999; Chateauraynaud/Torny 1999), while, to understand other attitudes such as the refusal to speak out against pollution or reluctance to take part in the epidemiological surveys mentioned above, I turned to Albert Hirschman's works. This author examined situations in which consumers had to deal with the deterioration of goods or services, for example, education in a state-run school (1970). He distinguished three options: the voicing of concerns, i.e. mobilisation, loyalty as active or passive support for the organisation responsible, and exit, which can mean either standing back or quitting. I found this model helpful in analysing the variety of reactions inhabitants may have when confronted with the degradation of their environment and the potential health hazards involved. It has been discussed in different ways since it was first defined. Elaborating on material on homosexuality, for instance, Guy Bajoit proposed the addition of a fourth possibility: apathy. He described this as a form of non-participation that results from resignation or the assumption that any other position could lead to more prejudice (1988). It helped him to stress the difference between full and active allegiance, feigned acceptance or approval and indifference.

In a domain closer to my topic, Anthony Giddens identifies four possible types of response to the many uncertainties engendered by modernity (1994). The first is pragmatic acceptance, when one considers nothing can really be done (which could also imply numbness and anxiety); secondly, cynical pessimism is expressed as disillusioned humour to soften the blow of emotions; radical commitment involves protest and fighting adverse consequences; and finally obstinate optimism is explained as the belief that technical progress will provide a solution. I would like to connect these categories to Valérie November's reflections on risk and place, in which she has shown that the capacity or incapacity to escape a town liable to flooding, or the will to stay there and the impossibility of doing so, were of great significance (2012). Indeed, this author underlines the inequality of inhabitants. Some may be tied to a place for material or sentimental reasons and remain captive, either feeling powerless or deciding to speak

up in defence of their interests, while others may be expelled against their will by the authorities as protection zones are implemented. Others may choose to move away. This may also apply in the case of pollution, where, unlike with a rise in the water level, the hazard at stake and the possible harm it may cause are mostly invisible and without a definite beginning or end.

As we will see below with the empirical material I have collected, besides social, economic and political factors, such as the degree of confidence in the authorities or the level of dependence on or acquaintance with the factories' activities, the relation to one's territory influences people's reaction greatly and may help us understand some of the reservations about risk they may express. Further, I would like to recall Françoise Zonabend's analyses of denial strategies she observed near the La Hague nuclear plant in north-western France (1993). She noticed that technical arguments and the limited probability of an accident, as well as arguments that diverted attention towards other causes and problems were frequently used. She also stressed the effects of fatalism, which, in her opinion, could induce considerable unspoken suffering. Her conclusions, as those mentioned above, invite us to take seriously, and to document and discuss, a wider range of subtler attitudes towards pollution and its environmental and health risks that exist alongside overt criticism and mobilisation. They also suggest that ambivalence in people's attitudes should be analysed not as a sign of inconsistency but as evidence of the complexity of the risk issues and their consequences for people (Duclos 1987).

2.2 The Emergence of Environmental and Health Concerns in Viviez and Salindres

Viviez is located close to Decazeville, a town that before the last pit closed in 1966 was well known for its coal mines. At the end of the nineteenth century engineers and investors believed they could turn the area into a French Manchester, despite its remoteness and rural features. A few industrial plants were constructed in Viviez, including a zinc factory in 1855. It had a foundry until 1987 when the Belgium-based company Vieille Montagne reduced its activities to finishing zinc. From 1855 to 1987, two million tons of dry waste and mud containing heavy metals (arsenic, cadmium and lead) were released and, depending on the type of industrial process used at the time, stockpiled in slag heaps or basins. As later acknowledged by the DREAL Midi-Pyrénées, this resulted in chronic contamination of the soil and rivers, on top of which accidents occurred; for instance, a major spill in 1986 generated significant pollution.[3] It took several decades before any action was taken in this matter. Eventually state services put pressure on Vieille Montagne to clean up its waste. However, while around 200 residents from the Lot department downstream filed a complaint after contaminated water directly hit their professional and leisure activities, the inhabitants of Viviez did not express any form of open criticism. Rather, those

[3] The accidental destruction of an industrial wastewater pipe released 13,000 tons of toxic mud containing heavy metals in Riou Mort, a tributary of the Lot river which runs into the Gironde estuary 400 km further on.

who did express themselves did so in favour of the industry as they were already aware of rumours concerning possible job cuts at the time.

Viviez enjoyed an era as a busy industrial town. Its economic and social dynamism increased with the zinc factory which employed up to 2,000 workers in the first half of the twentieth century. Its influence was regional, and it competed with the capital of the Aveyron department, Rodez. After the closure of the foundry, which had been affected by fluctuations in the international market price, Viviez's influence rapidly declined. Today, finishing zinc is again profitable, but the factory only employs around 160 workers. A few other factories, whose creation was encouraged by Vieille Montagne to find employment for some of its former workers laid off in 1987, are still running, but the good years are long gone. The unemployment rate is lower than in the rest of the area, but the average income is not high. Many shops have closed. Several houses are vacant. Social life has also declined with the aging of the population. What is most striking in the discourse of the older inhabitants is nostalgia for the smoking chimneys of the past—symbols of full employment—and longing for the social services and goods once provided by the company Vieille Montagne as part of its paternalistic policy. As noted by P. Phillimore and P. Bell, memory is rather selective and people are inclined to celebrate their own skills, achievements and past before stressing more difficult experiences, as witnessed by the creation of a workers' association for the conservation of industrial heritage (2013). This situation is replicated in Salindres where there are two amateur historians' associations. The associations all publish books and leaflets which stand as positive narratives, reinforcing the industrial image and destiny of the towns.

Salindres is also near a former great coal-mining town, Alès, in the Gard department. In 1855 a sodium factory opened there, followed by an aluminium and chemical factory. Before other branches were created elsewhere it was on the verge of developing into the largest of its kind in France. By the middle of the twentieth century the company, later known internationally as Pechiney, employed up to 1,700 workers. This leading chemical corporation was owned by the French state in the 1980s. The name changed after several restructuring moves and some of its activities split off; most of these are now run by Rhodia and Axens. Rio Tinto, another large corporation in the ore business, owns the land where eleven million tons of waste and possibly many fluoride and organic chemical compounds are stored. It is now responsible for the management of the dump site. The nature and potential hazards of the waste are at the core of the protest against the industrialists, the DREAL Languedoc-Roussillon and the mayor of Salindres and his sympathisers by members of the *Association de défense des intérêts salindrois et limitrophes* (ADISL).

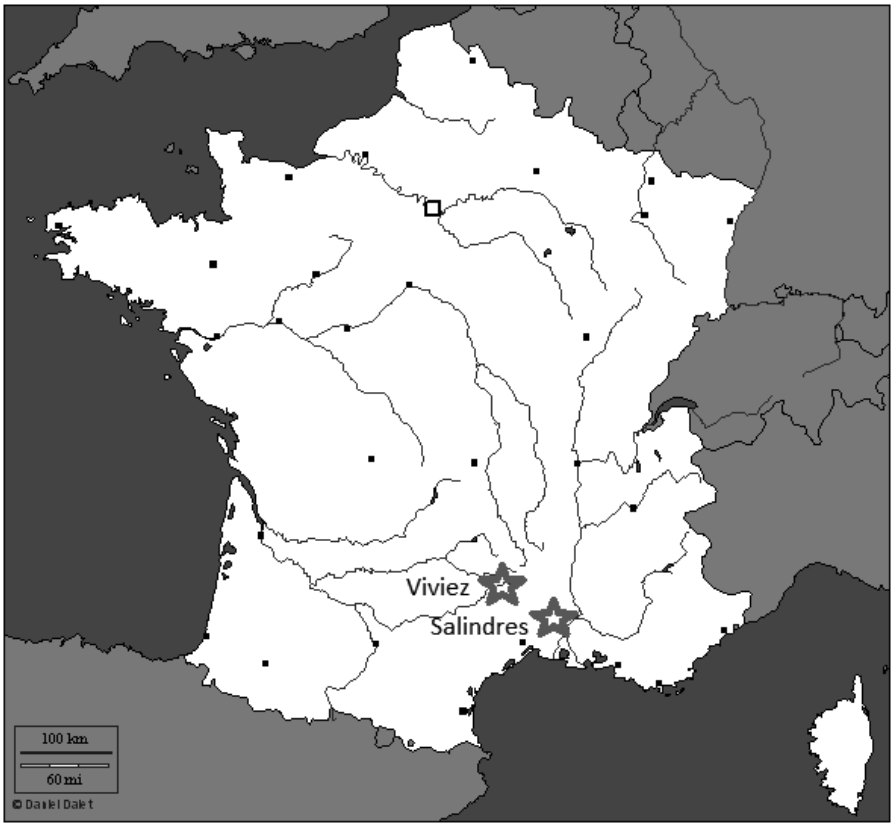

Figure 2: Location of the two case studies

The ADISL was first established in 2005 to oppose the creation of a new domestic waste treatment plant in the neighbourhood and was successful in garnering local support. However, once it started targeting the historical factories of the city the sympathy it was receiving from many residents was withdrawn. Nonetheless the ADISL expressed serious concerns about toxic organic substances produced by Pechiney in the past, as well as current pollution and the cumulative impact of these on the local environment and health. In a challenging context, with most inhabitants refusing to take an open stand, the ADISL's members began gathering data on unusual diseases such as glioblastoma and thyroid malfunctions, which they found to be worryingly more prevalent than in other towns of the same size.[4] Nonetheless, the alert does not seem to have diminished the support people tend to show for the factories. Altogether, industrial activity provides

[4] The ARS Languedoc Roussillon is also currently verifying some of the evidence gathered by the ADISL.

around 400 jobs in Salindres. Other plants have also recently opened, including the much more unanimously rejected waste treatment facility. Nonetheless the town has remained attractive despite a higher unemployment rate than in Viviez. Its continued popularity is partly due to the town council's social policy, which counterbalances the high unemployment rate and low average annual income.

Both Viviez and Salindres are industrial towns built by and for industry at a time when new metals such as zinc and aluminium were being produced.[5] They are both characterised by years of industrial paternalism, which is still apparent in town planning structure. Like Vieille Montagne, Pechiney built blocks of houses for its workers along with more wealthy-looking cottages for its executives and engineers. It ran a private school and funded cultural and sports equipment until the late 1950s.

Town	Viviez	Salindres
Department	Aveyron	Gard
Region	Midi-Pyrénées	Languedoc-Roussillon
Number of inhabitants	1,300	3,100
Surface area of district	6.5 km^2	11.5 km^2
Origin of pollution in question	Zinc factory	Chemical factory
Most visible evidence of pollution	Two million tons of waste	Eleven million tons of waste
Variation in the population of the towns in the last 10 years	-0.8%	+0.1%
Place of industry in the local economy	17.9%	13.6%
Unemployment rate (France: 10.5%)	9.5%	17.7%
Local annual mean income / regional	17,624 € / 23,160 €	18,721 € / 21,560 €

Figure 3: Main data about the two towns[6]

As can be seen in the table above, the towns resemble each other in many ways. However, Viviez is currently enjoying slight industrial growth, although its population remains in decline, whereas, despite a higher unemployment rate, Salindres is attracting new residents. In Viviez the risks represented by pollution have been publicly acknowledged both by the State at national and local levels and by the company Umicore. This has enabled a partial remediation project to start, whereas in Salindres the risks are still debated. In Viviez an average of 27 mg/kg of cadmium, 450 mg/kg of lead and 140 mg/kg of arsenic were found in private gardens. Further, an epidemiological study revealed that 23% of the population had high levels of cadmium in their urine (and 5% had

[5] Zinc can be considered (for that period) as a modern material *par excellence*. Ignored by metallurgists until 1790, this strong but light and inexpensive metal rapidly replaced brass, copper, lead and also earthenware and slate in the making of many commodities during the industrial revolution, a time when consumption increased rapidly. Viviez was the first place in France to begin production, just as Salindres was for aluminium, another new profitable metal that was celebrated at the Paris Universal Exhibition in 1855.

[6] Source of statistics: French National Institute of Statistics and Economic Studies, INSEE (2011–2014).

signs of kidney disorder), 54% of which cases were explained by environmental factors. Despite these results there has been no protest (and only slight opposition to the InVS survey and a rather low participation rate to it). In Salindres many substances with different potential toxicities were found in the air, soil and surface and groundwater (including aluminium, arsenic, copper, manganese, nickel, vanadium, thallium, fluorides, chlorides, trichloroethylene, sulfates, molybdenum and phenols), and some concentrations were higher than permitted by environmental quality standards (for example, 1.5 mg/l fluoride were found in the river Avene when the maximum permitted threshold is 0.37 mg/l). Nonetheless, the risk assessment report concluded that the danger for the population was limited considering its practices, the patterns of exposure and the experts' calculations (Golder Associates 2013). In any case the industrialists refused to accept responsibility for the pollution, blaming past activities. Even before the health poll analysis was complete and its final results published they denied any possible impact on health. In so doing they may have added to the confusion of the inhabitants, who were confronted with conflicting statements on the situation. This consequence is probably intentional, according to authors who examine the setting of political agendas and possible placating of issues (Cobb/Ross 1997). It was therefore not surprising that most local people preferred to remain silent while a minority confronted one another over the significance of the information (participation to the InVS survey was average).

3. Avoiding Talking about Pollution and Distancing Oneself from Health Risks

3.1 Controversies over the Epidemiological Surveys

The Viviez epidemiological survey was commissioned after the Aveyron regional health authorities were asked for their opinion on a public redevelopment project in 2006. A former industrial wasteland was to be used for the construction of a new fire brigade building, but the concentrations of heavy metals found in the soil were of such concern that they decided to ignore the wishes of other stakeholders, including the DREAL Midi-Pyrénées, and referred the case to the InVS.

Two years later, after further geological studies, the survey was launched. It had two parts: the first was a study of the accumulation of heavy metals in the tissues of the town's inhabitants and the second was a statistical analysis of risk as a function of location, socioeconomic data and practices.[7] The survey aroused mixed feelings in the population. Although local physicians and pharmacists

[7] In Viviez, as it was possible to identify specific heavy metals, a survey of their presence in human tissues was conducted alongside the epidemiological one using statistics. Local residents were tested for the presence of cadmium, arsenic and lead. Kidney problems were investigated because, among other impacts, cadmium is known to have harmful effects on the kidneys. A precise biomarker, the creatinine rate in urine was used. Previously the InVS had used a broad study on morbidity and mortality to determine if life expectancy was lower than in the rest of the country.

were informed, they tended not to get involved. As I was told in interviews, they preferred to reassure their patients. This appears to have been prompted by a somewhat catastrophic tone in the InVS communication: "*Lead, cadmium and arsenic in the soil of Viviez-Le Crouzet can penetrate your body*", announced the public notice asking residents to take part in the survey (people from a nearby town were asked to be in a control group, see Durand et al. 2011). In fact, the announcement had the opposite effect. Not enough volunteers signed up and efforts were required to reach the minimum quota of 650 participants. The population did not understand why the survey was taking place after so much time had passed as the main source of pollution dried up after the zinc foundry closed in 1987. The public did not like the way the survey was designed or that it seemed some inhabitants would be excluded from its remit according to the zones it covered. The legitimacy of the approach was also questioned by the local press. The elected representatives, who had not expected the survey, felt trapped. On one hand, the industrialists and DREAL were trying to downplay any risk, and stressed the fact that Umicore was already financing a thirty million euros clean-up of its slag heaps and waste basins and would not be able to support further constraints. On the other hand, the national and local health authorities insisted on the need to investigate, take precautions and extend the remediation process. The mayor, a middle-aged man who worked for the departmental land planning and road service, and was a trade-unionist and member of the French socialist party, took his own samples of soil and had them analysed to help make up his mind. He later tried to gain room for manoeuvre by negotiating an adjustment of restrictions on land and resource uses. However, the population showed little interest. Very few inhabitants came to the public meetings at which the results of the epidemiological survey were presented.

In Salindres, things started differently. The ARS Languedoc-Roussillon were called out by members of the ADISL and especially its president, a local dentist on sick leave who saw himself as a whistle-blower (Chateauraynaud/Torny 1999) and did all he could to raise awareness. In 2010, for instance, he managed to get journalists from the second national television channel to cover the case. He organised witnesses to testify that they had seen or been involved in the burial of suspicious barrels that may have contained toxic substances in the stockpile of waste near the city centre. (Salindres was named 'French capital of pollution' in the report on the evening news.) The ADISL president also created a website called '*Salindres, ville poubelle*' for 'garbage town'. The consequences were huge. The mayor, a retired teacher and member of the French communist party (known for its support of industry workers and production), declared it was untrue. He defended the town's image and great industrial heritage, adding only that children should avoid putting their hands in their mouths when playing outdoors because of residual pollution. Many of the town's inhabitants were shocked. The situation became antagonistic, with the formation of two opposing factions. Some members of the ADISL left the association because they thought it had gone too far. They feared that emphasising the problem of pollution caused by the most established factories could lead to job cuts or the outsourcing of industrial activity (a threat indeed brandished by the companies implicated). To calm

the situation the State regional authorities decided it was time to conduct an environmental and sanitary survey. The industrialists agreed to hire an independent consultancy to conduct a risk assessment study. The InVS and ARS took charge of the epidemiological survey after having questioned local physicians about their opinion on residents' exposure to pollution and health hazards.[8] In 2013 the first calls were made by the pollsters on the inhabitants of Salindres and of four neighbouring towns for the sake of comparison. Although the rate of participation was quite high—1,495 inhabitants agreed to answer questions about their quality of life, health and experience of pollution, and 600 people refused—some people expressed fierce opposition to the survey itself, either because they saw it as a sham in favour of industry or contrarily they thought it threatened the continuation of industrial activities. A few stated that their refusal to respond to the questions was to avoid fuelling the controversy.

How can one account for and explain the reluctance of the townspeople to accept a public survey of environmental and health risks without reducing their attitudes to false consciousness? Certainly, the asymmetry of forces is significant between large companies with international reputations and small-town populations that depend almost exclusively on the local job market. A coalition of interests can also prevent such concerns from being taken officially into account. It could also mean that the concerns are dealt with hastily, with investigations going no further than standard procedures (even though those procedures may not be able to resolve all uncertainties, as many knowledge gaps and blind spots often remain). In both Viviez and Salindres it was striking that, even before the InVS and ARS had presented the results of the epidemiological surveys, certain stakeholders who identified with the industrialists' interests claimed in the local press that there was no risk at all to the population.

The two case studies are in many ways comparable: the majority of the populations would apparently prefer to turn a blind eye to pollution that may have already impaired and be continuing to affect their living conditions and health. Those harbouring private concerns would rather keep them to themselves. In Viviez no grassroots association was formed to make claims. In Salindres the ADISL could only count on a small number of members, and otherwise had to face the apparent indifference if not outright hostility of their fellow inhabitants.

3.2 From Place Attachment to Coping Strategies

The residents of both Viviez and Salindres are very attached to their small towns and the green rural surroundings (the proximity of the Lot valley in Viviez and the Cevennes hills in Salindres); they appreciate the property prices and job prospects in the industrial sector. They would not, for the majority, consider moving out. In Salindres the level of enthusiasm was noted as even higher than in

[8] In Salindres the difficulty involved in identifying a particular chemical among many and linking it with a particular set of symptoms led InVS epidemiologists to choose a health declaration survey as a first step, i.e. wider and less focused screening. At the time the InVS had given up broad studies on morbidity due to the difficulty in linking organic malfunctions or disease with specific pollutants.

Viviez. Some interviewees told me that the quality of life was excellent there, the town having a large public swimming pool and a public library. The economic and social life is quite dynamic, with over fifty shops and about fifty functioning sports and cultural associations, all within walking distance. Community events are organised throughout the year by the municipality. As the wife of a retired worker in Salindres put it:

> "*We are fine in Salindres. When it comes to quality of life and price, we're winners.*" (Female pensioner, Salindres)

As mentioned above, the town council has an active welfare policy. Salindres's resources and expenditure, like those of Viviez, are higher than most towns of comparable size thanks to the large industrial factories present on its territory.[9] The recent renovation of the centre helped improve the town's appearance in an attempt to regain the prestige that had once been conferred by local industry. For these reasons some inhabitants were offended when Salindres was labeled the 'French capital of pollution'. They resented that the place where they lived should be so stigmatised, as if they felt this would impair its attractiveness and by extension reflect badly on them. Similar concerns led the residents to oppose the siting of a domestic waste plant in their neighbourhood (which they feared would turn the town into the 'rubbish heap of the whole Gard department'). Such responses, as underlined by scholars in similar cases following seminal works by Irwin Goffman (Bush et al. 2001), are thought to have symbolic consequences in terms of social credit further to material effects. Not only do homeowners understand that the value of their property can go down (or sales can fall through, as I was told happened in Viviez following the announcement of the epidemiological survey), but publicity surrounding environmental and health risks could give an area a reputation as dirty, unsafe or 'faulty', to borrow Irwin's term, which then discredits its inhabitants alike (Irwin et al. 1999).

When confronted with such a threat, members of a community can withdraw into themselves or react negatively. People who behave otherwise are often dismissed or ostracised, for instance those who choose to 'escape' or even those who stand up to protest or voice a concern. For example, I was told of a family in Viviez, still new to the town, who chose to move away, as they had not yet developed strong ties to their home. They had rented rather than purchased a house, and preferred to leave. The other inhabitants did not consider them part of the community.[10] An elected representative described them as 'strange', seemingly to discredit their attitude or to point to their naivety, as illustrated in the following except from the interview:

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[9] There was a recent reform of the business tax paid by companies on land, in accordance with their profits, to the municipalities. Not only did the financial act 2010 change the calculation in order to protect investment but it transferred most of the proceeds to newly created, inter-communal bodies. The losses for smaller towns are nonetheless mostly compensated (making them far better off than other towns with less business).

[10] It is rather complicated to question former residents who may have chosen to move away. In general, people in an 'exit situation' cannot easily be identified and questioned. By chance I met someone who grew up in Viviez and told me that the day after his father received notice of his retirement the whole family moved away, in part due to the pollution (which his father referred to as the 'poison' coming from the factory).

> "*Some people left, but they were rather strange [...]. They said they couldn't hang their laundry outside because of pollution, dust [...]. They were here for three months and then left [...]. People who were born here, lived here, worked or had family working for the factory, know it's polluted. We know [...] I have always known!*" (Male elected representative, Viviez)

In Salindres, the radicalism of the ADISL as displayed on the association website, was the main target of disapproval, if not for the content at least for the style. On the contrary, I was told that former workers who had been forced to leave for professional reasons chose to return to Salindres to spend their retirement. Neither are newcomers discouraged from moving there despite the fact that in both towns factories are located a few hundred metres from the first houses. The ones I could meet said that they knew about the industry before settling there and often refused to express any criticism as they did not feel justified to do so. I heard several times that only families who had settled in Viviez or Salindres before 1855 were entitled to protest (despite the legal requirements that apply to the factories and the possibility of suing companies that do not respect them).

Captive residents, in November's terms, especially so-called loyal ones, as Hirschman would have named some of them, may have very diverse and complex motives. Inhabitants who remain in a town either because they are unable to leave, for example for financial reasons, or because they feel attached to their home, town or community, may be doubly penalised when the risk of pollution and contamination becomes a public issue. Firstly, these inhabitants have no choice but to cope with the most visible industrial nuisance and to live with the fear that one day they or their relatives may fall ill. Secondly, their property may go down in value and their social life and practices may be jeopardised. They may feel trapped when faced with further constraints or restrictions. In Viviez and Salindres, for instance, there was a major dispute over whether they should continue to use the river to water their gardens, and over the safety of gardening itself. Backed by the InVS, the regional state services said it would be necessary to issue a ban on wells. The health authorities advised reducing the consumption of locally produced vegetables, eggs and meat. Yet, when faced with two different risks with opposing timelines, i.e. the risk of suffering an illness related to environmental exposure in a decade or more versus the immediate loss of one of life's pleasures, the inhabitants logically felt more concerned about the second, which was the only one over which they had any control.

In this context, any action undertaken by state services, considered to be remote from local interests, is often called into question. Their intervention is also seen to be temporary, whereas companies that have been present for many years and put down roots in the two towns are considered to be part of the local community. The loyalty they inspire in the cases of Viviez and Salindres is based to a great extent on the memory of the goods and services Vieille Montagne and Pechiney provided in the past in the framework of their paternalistic policy. Even if the current industrialists no longer hand out direct subsidies (or higher wages than elsewhere as they used to do), they still derive a tacit advantage

from their behaviour up to the 1960s, as if the pollution had been dismissed definitively as an issue (Debourdeau/Gramaglia 2012).

As a consequence of people's loyalty to longstanding, local businesses they do not like alerts to start circulating. They fear that the companies' reputation and profitability would be undermined, resulting in their own decline (Shriver/Kennedy 2005). This is not to say that they are not aware of the risks. Several of the interviewees worked either for Vieille Montagne, Umicore, Pechiney or for the new owners of these factories (in particular Rhodia and Axens). They witnessed—or took part in—activities which, in retrospect, they realize could be considered suspicious. In Viviez toxic mud collected at the time of a spill was dumped on top of a nearby hill; while in Salindres barrels containing unknown chemical substances were buried. Such reference to the past, although possibly tinged with a kind of guilt, is a way of minimizing the sense of danger by contrast with the present situation. According to these interviewees, nothing like this could ever happen again. Moreover, the waste that was once abandoned is thought to have lost its toxicity. For these inhabitants the impressive status of the industrialists is a guarantee that everything is more or less under control (obstinate optimism in Giddens's terms). This impression is paradoxically at least as strong as that based on the discouraging evidence that little can be done against the industrialists (leading to pragmatic acceptance), as illustrated by the following comments:

> "*It's over. There is a 100 times less pollution than when I was working there.*" (Male, former worker, pensioner and member of a heritage association)

> "*The members of ADISL aren't crazy [...] it's true. Some barrels are buried in the wasteland. But they will never be clean. It is too much. There is enough work for 100 years [...]. There's everything. The ADISL is right. But it's inert now. It doesn't act [...]. There's sodium, acid, dangerous substances, organic compounds [...]. The organic compounds are very bad [...]. There's brome, chlorine, everything [...]. They didn't know what to do with it. They dumped most of it or sent it to be burnt on offshore oil rigs [...]. The members of ADISL aren't crazy. But I will never testify for them, you know [...]. I dumped some of them myself! My boss used to tell me, 'take these barrels and throw them away'. We went to the slag heap or basin and dumped everything discreetly. You know, I had orders.*" (Male, former worker, pensioner, Salindres)

Other interviewees had family members or friends who worked at the factories. They shared these ideas and preferred to avoid talking about pollution even though they admitted industrial activities had and still have an environmental impact. In private they more readily agreed to provide details about the phenomena they used to face, and in some cases still face.

Those I questioned in Viviez mentioned acid rain that had attacked buildings and burned vegetation, crops and their throats in the past, while in Salindres

they more often mentioned continuing noise, bad smells and brightly coloured smoke. Nonetheless, they all denied that these had or could have a serious impact on their health. It was as if they wished to convince themselves as much as their interviewer. Instead they said they had got used to these phenomena and only noticed them when visitors pointed them out. Many interviewees also refused to get involved in the controversies created by the InVS epidemiological survey, by the members of an association like the ADISL or both, whatever their personal impressions or worries. However, their decision not to speak up should not be too hastily attributed to numbness. Indeed, it requires a substantial effort to ignore a topic that is so central to one's daily life, as Nina Eliasoph showed in the case of people in the USA refusing to talk about politics publicly, not out of apathy or a lack of concern, but because they mistrust strong opinions which cannot do much to help with their problems but have the capacity to divide their community (2003). Hence they prefer to limit the expression of their discontent to private settings, in the name of cordiality which they think is a more reachable public good. For similar reasons I was told that at one of Salindres's sports and cultural associations people were requested not to talk about problems connected with industrial activity in the interest of good relations between members. A few interviewees knew of families who had quarrelled about the purpose and meaning of the InVS epidemiological survey. Such anecdotes show that there was a conscious attempt to counter the corrosive effects of pollution and contamination risks on the social order as described by Freudenburg (1997).

I noticed that people in both Viviez and Salindres had also developed strategies to distance themselves from the reality of the dangers, as described by Zonabend in a different case (1993). They tended to praise any safety measures undertaken by the industrialists as if they had fully integrated the official discourses on technical control (again, a case of obstinate optimism balanced with pragmatic acceptance). They also used their own age or physical state and those of their relatives as evidence for the harmlessness of pollution. I was told about the many people in their eighties, nineties and even over a hundred years old in Viviez and Salindres (as if these could make up for the many premature deaths I also heard about). The difficulty in linking exposure to toxic substances and disease, even for professionals, added to these people's confusion.[11] Some who were ill did not know what to think. Others doubted that the health problems of their fellow inhabitants were caused by the factory—or rather they wished that they were not. Such statements were sometimes tainted with contempt as shown below:

[11] Both in Viviez and Salindres, local health professionals (physicians and pharmacists) did not feel competent to discuss environmental health problems with their patients or customers respectively. However, when questioned, some of them said they personally had worries.

> "*As a joke, I told my physician: 'Vieille Montagne poisoned me because I worked there until I retired [...] As soon as I did, I became ill.' She laughed and said: 'no, it's not because of this. It was just meant to happen.'*" (Male, former worker, pensioner, Viviez)

> "*We hear rumours like: 'my husband died because of a brain tumor he caught while working at the factory. This is nonsense!*" (Male, former engineer, pensioner and member of a cultural association, Salindres)

In the same interview, cited above, the person stated that she thought there was no health hazard in Salindres. However, she confessed that she knew there was no data to confirm this, and then burst out laughing, saying everybody has to die of something. On one hand there are people who apply a kind of cost-benefit analysis, balancing the advantages they see in living in the proximity of factories with the disadvantages this implies. On the other hand there are those who turn to humour as if to ward off any danger to themselves. These strategies are identified respectively by Baxter and Lee in another case study of contamination (2004). Other scholars have observed that joking in particular has positive effects as it can provide relief from stress and a feeling of symbolic victory (Parkhill et al. 2011). These reactions result in many ambivalent statements that in turn maximise or minimise the perception of danger, depending on the occasion. In Viviez, Vieille Montagne was described to me both as the cash cow and the poisoner. People admitted they had taken advantage of the plant but that, in return, they knew they had sacrificed part of their well-being. This was especially evident with former workers who vacillated between frank pride for having taken part in a great industrial history and discontent, which they expressed only indirectly. In Salindres some inhabitants said they thought pollution was real but not serious enough to be a source of harm, adding that they would not 'do their dirty washing in public'; no matter what befell them they would not engage in an open dispute for fear it would have adverse effects on the community. However, as suggested by Edelstein (2004), at the personal level they are seeking strategies to cope with risks.

Other ethnographic details suggest that people want to regain control over the situation and their lives. This desire was expressed in arrangements I was told about, such as those made by a couple in Viviez who had decided to cook two separate meals, one with vegetables from their own garden in which significant concentrations of heavy metals had been found for the healthy husband and one with vegetables from the shop for his wife who suffered from kidney problems attributed to cadmium. In Salindres some members of a sports club decided to train elsewhere under certain conditions, for instance when the sky was cloudy and fumes would not be blown away by the wind (hoping to protect themselves from the most adverse effects of pollution without giving up the advantages they found in using the town's equipment).[12] Can these strategies be linked to what J. C. Scott termed 'weapons of the weak' (1985), i.e. hidden criticism in a situation of extreme domination and dependency? The models developed by

[12] Testimony collected by Clémence Pinel.

Hirschman and Giddens do not say enough about forces' asymmetries or the cost of options like voice or radical commitment and exit or the very possibility of changing one's position depending the situation, i.e. in public or private. They also seem to ignore people's ability to accommodate risks with their own means. Paying attention to ambivalence in discourses and practices, and the stages on which they are enacted, could help us understand what obstructs the making of pollution and health hazards a public issue (Gilbert/Henry 2009). Not only could this approach prove useful if we want to identify the subtle changes a risk of contamination has on people's experience of where and how they live, they would also help us to understand why larger mobilisations about environmental inequalities do not form easily.

4. Why Is Environmental Justice Not Really an Issue in France?

4.1 Epistemological and Political Factors

Observations made in Viviez and Salindres contrast with the majority of cases discussed in the social science literature which concentrates on social movements, borrowing from various frames of analysis such as environmental justice and approaches focusing on popular epidemiology in North America (Bullard 1993; Gottlieb 1993; Brown 1997; 2007; Allen 2003; Sze 2007; Blum 2008). Environmental justice refers both to northern American grassroots movements, and the claims they make, and academic understanding of these mobilisations. The issue originated in protests against the siting of waste facilities and polluting plants in disadvantaged neighbourhoods in the USA in the early 1980s but now encompasses a wide range of other types of environmental inequalities in various parts of the world. The social science literature distinguishes between first- and second-generation environmental justice concerns. The first generation relates to the uneven socio-spatial distribution of environmental harms calculated and mapped from census data. The second gather larger demands for responsibility, recognition and participation in more diverse environmental matters at the national and international levels (Schlosberg 2007; Walker 2009). The distinctive historical feature of these demands is that they were raised by people suffering economic and social marginalisation as well as racial discrimination. Despite the fact that many protestors had no previous political commitment, they benefited from the experience and support of civil rights movements. They could also rely on pastoral networks such as that of pastor Chavis, Jr. of the United Church of Christ. Having taken part in a mobilisation against the dumping of chemical waste in Warren County, North Carolina, from the mid 1970s, Dr. Chavis went on to conduct a national survey which pointed to the fact that minority communities were more likely to be exposed to polluting industrial plants (see Bullard 1993 for a discussion of environmental racism). A further feature of historical environmental justice movements when compared to other forms of environmental dissent is the place taken by personal experience in the domestic

sphere (such as noticing bad odours, foul-tasting tap water or subtle changes to one's surroundings) as a trigger for action, rather than theoretical convictions. Love Canal, New York (Levine 1982; Blum 2008), and Woburn, Massachusetts (Brown 1997; 2007), were two pollution cases in the late 1970s. They were revealed thanks to the perspicacity of female residents, whose lay observations (according to enquiry methods then named 'lay epidemiology' by Phil Brown in an attempt to underline their originality in contrast to expert knowledge and viewpoints) connected children's health problems to bad smells and foul-tasting tap water. These concerns led to the first neighbourhood enquiries about the source, extent and effects of pollution. Rapidly building on this experience, one woman, Lois Gibbs, created the Citizens' Clearinghouse for Hazardous Waste to support other individuals or communities facing similar environmental and health problems (now called the Center for Health, Environment and Justice). Institutional change followed and the Comprehensive Environmental Response, Compensation, and Liability Act, known as 'Superfund', for cleaning up waste sites was voted into law in 1980.

Since then grassroots organisations, as well as committed academics, have undertaken studies documenting a wide range of environmental inequalities either through the statistical and mapping methods mentioned above or through more qualitative research. For instance, Kai Erikson conducted several surveys in communities affected severely by pollution (1994). His works were produced in court as evidence of the problems the people concerned had confronted (such as native Americans, whose way of life, with fish and game consumption, makes them particularly vulnerable to contamination).[13] Meanwhile, other social scientists have begun to analyse the forms and effects of environmental justice mobilisation. For example, Barbara Allen (2003) and Ellen McGurty (2009) described the rise of dissent and activism in places where polluting industries had developed or waste had been dumped. They accounted for the difficulties people experienced while seeking support among scientists and state officials as they tried to get their problems addressed (Tesh 2000; Corburn 2005). Other scholars discussed the definitions of justice in different contexts (Shrader-Frechette 2002). The number of polluted sites which became case studies for the social sciences or objects of investigation for journalists increased progressively (Lerner 2010). This could raise the question as to why equivalents cannot be easily found in Europe, unless one could prove that inequalities, whether in access to natural resources or the availability of good quality air, water and soil never existed there, despite the presence of spaces with high urban and industrial density. Notably in France, notwithstanding the theoretical interest of a few scholars (Charles et al. 2010), nothing of a similar kind emerged on any scale, either in terms of concern or academic account. According to the geographer David Blanchon and his co-authors: "environmental justice is still unknown in academic literature and public policies in France; it is a rather cranky object considering that the environment is presented as an apolitical and consensual domain." (Blanchon et al. 2009, 36)

[13] In addition to direct action, environmental justice and lay epidemiology activists filed legal suits or threatened to do so as their chosen form of protest.

This indifference could be explained by epistemological and related political factors. Firstly, national statistics treated the environment as a collection of natural objects (to be managed efficiently), ignoring the complex web of relations which link humans with it, the diverging interests and the possible conflicts that may divide them, especially in urban settings (Theys 2007). There is no French equivalent to the northern American wilderness. Rather, the very idea of environment is of rural spaces exemplified by the cultivated countryside. For Michael Bess, this leads to the formation of a specific brand of Gallic environmentalism which he calls 'light-green' (2003). It is more likely to attract the middle classes longing for their lost or imagined peasant roots or defending their quality of life than actual country or poor suburban populations. With its inability to bridge social and environmental issues, this movement deprived itself of the grassroots support it would have needed to grow stronger. All attempts to do so, for instance with the main unions which in the 1960s widened their claims in matters of waste, nuisance and pollution outside the workplace, failed at the time of the oil crisis and the threat to jobs (Mouriaux/Villanueva 1994; Bécot 2012).[14] Despite the proliferation of alerts on many substances, such as asbestos or glycol ethers, related problems are now still tackled at a rather general level, and treated as professional or consumer issues. A second explanation for the lack of a French environmental justice movement is that although a green political party was set up in the 1970s and some of its leaders gained a political mandate, pragmatism meant that they prioritised issues other than environmental health. Their difficulty in finding a popular base (Sainteny 2000) is due in part to their inability to consider the value of popular uses of the environment, such as hunting, and in part to their failure to connect issues such as economic, social and environmental harms.

France's environmental charter was finally passed in 1995, stating that 'everybody has the right to live in a balanced and healthy environment'. However, until very recently little was done at an institutional level to assess possible injustice in this area.[15] The sole attempt to be found in the literature to tackle this issue is a geographer from the University of Iowa, USA, who used census data and maps. This author showed that foreign residents are more likely to live in the vicinity of hazardous sites. Yet she could not go further and comment whether poorer neighbourhoods attracted industrial plants or whether the latter play a role in degrading the places inhabited by the most disadvantaged (Laurian 2008). The relevance of such research, which failed to demonstrate a link between social problems and exposure to pollution, was furthermore diminished by the absence of statistics on ethnicity in France. Indeed, such statistics are forbidden on the grounds that they may be misused for discriminatory purposes, as

[14] In the 1970s attempts were made by unionists in the chemistry field to make convergent claims about safety in the workplace and neighbouring communities.

[15] Since the 1990s the French state has kept a record of historical and more recent industrial sites where pollution was suspected for further analyses. Databases were created, including BASOL, which lists polluted soils demanding surveillance or action. It contains over 7,770 cases, of which 3,490 are supposed to be under administrative surveillance. A national plan for environmental health was also passed in 2004. In association with regional counterparts it is meant to allocate funding for a series of studies for improved public safety.

in the past (i.e. during the Vichy period and the German occupation). Second- and third-generation migrant families could therefore not be taken into account to find if there was overt environmental racism (an issue which has not yet been raised by the leaders of these communities in favour of concerns over social and economic inequalities and religious rights).[16] Thus the difficulty is apparent of transferring a concern and frame of analysis from a very different context, particularly from one marked by spatial, social and ethnic segregation. It cannot be achieved without allowing for the significance of context and recognising that it can alter the very understanding of injustice and the way it should be assessed and countered.

4.2 Space and the Problem of Commensuration

Differences in institutional organisation and political culture can explain much in terms of people's views and attitudes. For example, Sombart (1976) argues that a positive stance on capitalism, a spirit of competition among the working class and belief in procedural democracy, combined with the stability of a two-party system, prevented socialism from developing in the USA. However, it is critical to note the particularities of the present French case studies to understand fully why environmental justice concerns could not develop. Indeed, the peopling and urbanisation, as well as the dwelling practices, of places like Viviez and Salindres contrast strongly with situations observed in the USA. For instance, B. Allen recalled that the siting of petrochemical industries in Louisiana was made possible when industrialists bought plantations with access to the river Mississippi (2008). Meanwhile African Americans were given plots of land in between these properties, following the abolition of slavery. Large free towns inhabited by ethnically distinct, disadvantaged people developed. These are now massively exposed to industrial pollution without receiving much compensation, either in terms of jobs or taxes. The possibility of comparing differently populated places, especially those with more privileged people of other ethnic origins was certainly a source of indignation in the northern American context. Naming the causes of harm and blaming the interests responsible for the situation were essential steps in the raising of justice claims whether or not they ended up before the courts as shown by sociologists of criticism like Luc Boltanski (2012). Additionally, the possibility of pointing to differences in state legislation—some states in the southern USA having less restrictive environmental laws—was also important in making inequalities not only visible but unacceptable. At the same time, limited access to medical care made the claims even more necessary. People unable to

[16] It is worth noting that land planning after the Second World War took a radically different direction in France. The suburbs of the big cities, inhabited by many second- and third-generation migrant families, have been badly hit by unemployment. They were designed in the opposite way to what had been done before. To avoid a mix of domestic and work places, which played a major role in the rise of late-nineteenth-century social conflicts, as well as to create more pleasant living conditions, architects located council buildings far from the city centre and factories (Donzelot 2008). Nowadays the suburbs tend to suffer more from isolation than exposure to pollution (except in regions where wastelands have been redeveloped).

pay for the care they needed had no other choice but to go to court and claim damages.

Not only because of its national health service, the situation in France contrasts with the description above. At least on paper, law and environmental standards are the same across the country. A centralised administration is responsible for their implementation and control, making it more difficult to arouse indignation from differences in the rules defining what is safe or risky depending on the location. Evidence that equality is not respected is consequently harder to gather. It would require a significant amount of work to produce, collate and make sense of heterogeneous data showing the contrary. For instance, one should be able to add the values and effects of cumulated industrial emissions of various origins measured in one place to demonstrate that legal standards are inadequate in this very case compared to others (because of local concentration of industries and of specific local features or vulnerabilities). On the contrary, routine surveillance and punctual quantitative environmental risk assessments iron out local particularities in favour of an average mathematical representation with many knowledge gaps and blind spots (Frickel/Bess Vincent 2007). In this case, the commensuration process (Espeland/Stevens 1998) prevents any other type of comparison than the one it aims at for the management of emission permits. Identifying inequalities, and their definition as being unjustifiable, through the connection of variables and experiences is thereby made more difficult.

Another factor explaining why concern for environmental justice cannot be observed in France as in the USA is relative town size and the different relations this may foster. Most French industrial towns are much smaller than their northern American counterparts. Viviez and Salindres's appearance is of rural villages in the hollow of a valley. The houses wind round the factories, having grown in circles around them (posing further problems when the authorities try to apply new laws on the prevention of technological risk).The appearance of the houses, some of which were built by the industrialists for their workers, still denotes social difference. However, the buildings are all located within a few hundred metres of each other and space is not harshly segregated, as it can be in the USA, on racial or social grounds. New homes have been built recently near council houses, especially in Salindres, which is growing. Although pockets of poverty exist, the town centre is a place where people from different backgrounds can mix. This serves to reinforce social cohesion, a public good which those who opposed the epidemiological surveys claimed to be defending. In Viviez the creation of new jobs by the zinc factory allowed the settling of a few younger families. This gave the town's representatives the impression that a period of economic and social recovery was coming. Remediation of the slag heaps and waste basins, along with construction work in the city centre, were carried out to clear away the last traces left by industry in the past. The alert and InVS intervention therefore could not have come at a less convenient time. For similar reasons they were negatively perceived in Salindres.

The potential disadvantages of a rise of environmental and health issues, that are anticipated by many, seem to be greater than the benefits associated with the industries' places in each community in terms of jobs and the professional taxes

which are still funding the towns' welfare policies. Pollution is often regarded as 'a price to pay' rather than an injustice except for a minority of activists. Even the mayors, despite their difference in position, think that, through time, factories which have brought economic and social vitality to Viviez and Salindres can be said to have compensated the communities for the discomfort they may have generated. This deference is certainly accentuated by asymmetries between stakeholders. The chances of success for any form of protest are seen as low. A majority of inhabitants tend to adopt attitudes other than confrontation and look with suspicion at those who choose to do differently. Many interviewees, except members of the association the ADISL in Salindres, put forward empirical evidence they thought they had which helped them diminish or even negate contamination risks as if they were trying to reduce uncertainty and avoid anxiety. References to older people as sign of good living conditions are common. This seems to counteract any indignation that could otherwise have stirred up criticism. The knowledge that the epidemiological data, which may in fact point to environmental dangers, were produced on the basis of a rather small population means they are seen as barely convincing. Even though experts may think clusters of symptoms or pathologies are significant, they are not able to emphasise this publicly as the prefect, in the name of coherence, often obliges the DREAL and ARS (which may not have the exact same findings on the issues) to present a common view. Exactly this happened in Viviez, where figures which the health authorities found quite worrisome when expressed as percentages were ridiculed in the local press as numbers. Furthermore, attempts are made to find equivalents to illustrate the level of potential harm while downplaying it, for example when the air quality in Salindres is compared to that of Montpellier, the regional capital city, which may be impaired by traffic but is not seen as unbearable or deadly. Here commensuration implies that the issue is no longer a political one, particularly when a coalition of industrialists and local authorities states that there is nothing to worry about even before all the results are available, as in Salindres, or when caricature or absurd reasoning is used to describe the situation in Viviez, about which one of its elected representative said:

> "*According to the health authorities, we should all be dead here by now* [to demonstrate the exact opposite]." (Male elected representative, Viviez)

In France there is no equivalent of the Center for Health, Environment and Justice which would help people make their claims. If such a body existed, it could provide alternative knowledge on pollution and be able to discuss official data or lend support to health authorities in their power game against state services responsible for the environment and the regulation of industry at national and regional levels. Considering this absence, associations like ADISL have no other means than to demand further investigation by endlessly raising alerts until a situation of crisis develops which the authorities can no longer ignore. As a result, the transfer of environmental justice as a claim and frame of analysis has not occurred and is not evident. To overcome the difficulties enumerated

here it would be necessary to take into account not only the institutional and cultural context but also the particular history of the location and its urban planning and peopling, as well as dwelling practices and social relations at the local scale. These dynamics, along with the material characteristics and effects of the pollution at stake, influence the way advantages and disadvantages can be defined in comparison to other situations. They guide people in assessing their own conditions to decide whether or not they are acceptable.

5. Conclusion

When speaking of risk society, following U. Beck (2001), one may think that technological hazards have eradicated social difference since there would be no real escape from a major accident such as a nuclear explosion. Yet this is not the case when we look carefully at smaller, chronic types of environmental harms, like pollution, which can have delayed ill effects. People and communities have access to incomplete and sometimes biased information on the problems which they may be confronting. Asymmetries in resources may lead to different strategies, depending on whether people are able to leave, are willing to speak up or think they are better off not saying anything. More evidence must be gathered on possible disproportionate harms already faced by impaired communities living near industrial plants in France and Europe. Critical studies are urgently needed on how standard risk assessment and regulation procedures reproduce ignorance, hiding potential unfair conditions.

However, scholars should not attempt to transfer without precaution a frame of analysis that was designed in a very different context, such as environmental justice in northern America, which can be explained partly by institutional organisation and culture as well as the specific spatial, peopling and urbanisation dynamics. Mapping inequalities from censuses and grids leads to oversimplification and will not be relevant. As encouraged by Gordon Walker (2009), it is necessary to take into account other more complex and fluid spatialities generated by pollution, i.e. those that result from the interaction between an organic or chemical substance (or several) and the environment with its specific features and people. The way the inhabitants relate to each other and become attached to where they dwell, despite its possible degradation, must have direct consequences for their sense of justice. Serious investigation should rely on empirical material to determine how these influence the emergence and handling of environmental and health alerts, or indeed impede their development.

The comparison of case-studies such as Viviez and Salindres, towns with similar backgrounds, invites us to reflect on why some inhabitants, whom one might think would be the main beneficiaries of an epidemiological survey, refused to take part in it and resented the fact that the questions it raised were addressed publicly. Their apparent negative reaction as well as coping strategies should not be denigrated simply as symptoms of powerlessness. They can tell us a lot about people's ambivalent responses to hazards whether in public of private settings, and the conditions that would help the authorities deal with them

better, without reducing them to their technical dimensions or to definitions by experts. My objective was certainly not to add more confusion or to imply that if the majority of people resent the idea of an environmental risk assessment or an epidemiological survey, it should not take place. Quite the contrary, I hope to convince readers that all the possible interests, worries and concerns of the inhabitants of towns affected by pollution need to be taken into account to avoid adding to their problems and possibly increasing their distress. It could also prove helpful if one want to help a community to grasp the problems it faces and think how to alleviate the possible injustice with which it is confronted, not from above but together with those people directly implicated.

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