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The Seveso Disaster Legacy

Laura Centemeri

1. Introduction

In the history of the environment as a public problem, industrial disasters have been insufficiently explored.[1] Such disasters are nonetheless crucial because their collective interpretation weaves technical and scientific issues with problems of social justice and controversies concerning conflicting "common goods", by destabilizing the equilibria that has formed between these elements.[2] These disequilibria open the way for episodes of normative and cognitive uncertainty, and thereby become windows of opportunity for social critique and social change, especially by opening public debates on rules, institutions, and representations about technical progress. In short, industrial disasters become opportunities for rethinking the types of "compromise" between "orders of worth"—in particular industrial and civic--upon which a society rests.[3]

Yet there is still little acknowledgment of the social change that industrial disasters can trigger. What kind of social change industrial disasters produce in the mid- to long-term, and how these disasters produce such changes, are questions that often go unaddressed.[4] Moreover, an industrial disaster occurs in a specific locality even though its potential social and political effects can reach far beyond that locality. The environment affected by a disaster is usually limited and circumscribed, but as threat to the Environment--to Nature—the damages disasters can cause raise widespread concerns.[5] The collective explanation of the industrial accident, and of its specific character and narrative, takes place at different scales. The specific scale shouldn't be considered simply a reflection of the researcher's lens. Every scale implies a need to address a different stage of the disaster as event that requires different collective solutions.

Starting from these premises, this chapter focuses on the local social dynamics triggered by the Seveso disaster: how was the immediate town of Seveso affected in the long- term by this 1976 dioxin spill?[6] This topic is usually overlooked in the literature devoted to the disaster, which to date has focused mostly on how this event led to stricter EU policies about environmental responsibility.[7] Indeed, Seveso is considered a kind of symbol of European environmentalist struggle; yet for Italy's own environmental movement, this event has overtones of defeat because of the failure to match the "general stakes" of the disaster with its "local sensibility".[8] As I aim to show here, this defeat has prompted local environmentalist strategies to change toward a "localist pathway"[9] that sought in the 1990's to recreate, at least partially, the composition that failed at the time of the accident.

After a concise reconstruction of the disaster dynamics, I shall focus on the local forms of mobilization in response to the crisis, pointing out the processes that support the prevailing interpretation of dioxin damage as a threat to the local culture and identity. I then turn to how this connection between environmental damage and local identity has been at the heart of the renewal of political action for a group of Seveso environmental activists, engaged in promoting local green policies and practices. By way of conclusion, I will then address the key role played by the construction of a shared memory of the disaster in an effort to promote more sustainable paths of local development.

2. The Dioxin Crisis in Seveso and its Management

Seveso is a town of 20.000 inhabitants located north of Milan, the regional capital of Lombardy, in the area known as *Brianza Milanese*. The Brianza is a subregion with a strong catholic cultural tradition, specializing in the manufacture and design of furniture, together with a tradition of small, family-owned firms.[10] After World War Two, chemical

industries began to install their plants in this area, given the rich water resources and good infrastructure.

The accident at the origin of the Seveso disaster occurred in the chemical plant of the ICMESA company (located in the adjoining town of Meda), owned by Givaudan, a subsidiary of the Swiss multinational Roche. On Saturday July 10, 1976, at around 12:30 a.m., the ICMESA trichlorophenol reactor released a toxic cloud of dioxin and other pollutants due to a sudden exothermic reaction that caused a failure of the safety valve. Various poisons were dispersed by wind to settle on buildings and backyards in the towns of Meda, Cesano Maderno, Desio, and the most heavily afflicted, Seveso.

As the Italian Parliamentary Commission on the Seveso Disaster has documented, the accident can be traced to Roche making inadequate safety investments in ICMESA plant.[11] This negligence is made more serious when one realizes that the health risks of trichlorophenol were well known from previous industrial accidents. These risks revolve around the chemical produced in the process of synthesizing trichlorophenol: dioxin.

In 1976, the extremely harmful effects of dioxin on human health were predicted largely on the basis of toxicological evidence. Epidemiological studies with dioxin were still scarce and limited to tracking cohorts of industrial workers (all adult males) accidentally exposed to high concentrations of dioxin.[12] Seveso's large-scale dioxin contamination affecting an entire population was without precedent: scientists were unable to anticipate the damages (on the environment, animals, men, women, children, and human fetuses) and unable to identify procedures for decontamination. There were no instruments yet available for measuring dioxin levels in human blood.[13] As a result, there was a "radical uncertainty"[14] in the consequences of dioxin contamination on human health and the environment, and in their duration in space and in time. Only dioxin's extreme toxicity had been shown with laboratory proof.

The frightening scenario didn't take shape immediately after the accident. The toxic cloud passed by largely unnoticed, considered by inhabitants of Seveso and Meda as a typical nuisance (in a long series), though one that was perhaps a bit more annoying because of its nasty smell. Givaudan engineers reassured local authorities that everything was under control:[15] the rest of production work continued normally in the ICMESA plant. A "week of silence" passed.[16] In the meantime, strange events were taking place in the area near ICMESA: sudden falling of leaves; death of small animals such as birds and cats; a mysterious skin disease that affected children (chloracne). Anxiety grew in the population and Roche's efforts failed to avoid a "desectorialisation of the crisis" on technical to political fronts.[17] On July 19--nine days after the spill--Roche experts informed Italian authorities that the accident at the ICMESA plant had caused widespread dioxin contamination. Evacuation of part of Seveso's and Meda's population was highly recommended.

The evacuation began on July 24: 700 inhabitants of Seveso and Meda were forced to leave their houses and all their personal belongings. 200 people never returned to their houses that were eventually demolished during clean-up operations. "Risk zones" were created, based on the estimated trajectory of the toxic cloud and random tests of dioxin concentration in the ground, but also based on practical feasibility, so that toxic boundaries turned out to be oddly rectilinear.[18] Given the suspected teratogenic effects of dioxin, pregnant women of the contaminated area (within the third month of pregnancy) were given "free choice" to ask for a medical abortion, even if abortion was still considered a crime in Italy. In fact, the Italian movement for decriminalizing abortion was at its peak.[19] In an emotionally-packed atmosphere, about thirty women from the contaminated area decided to voluntarily interrupt their pregnancies.[20]

The Lombardy regional authorities management of the dioxin crisis was marked by bureaucracy and technical dependency.[21] Committees of experts were created and asked to supply solutions with respect to health risk, decontamination, and socio-economic problems. Each committee was required to give its advice unanimously so that the only thing the Regional Council had to do was to approve them, and no discussion on alternative technical choices was allowed. Decisions of a true political nature were therefore taken inside the committees, meaning that these were not just advisory committees. Likewise, a special technical body was created (The Seveso Special Bureau) in order to implement the adopted measures. Lastly, government stability at regional and national levels was a priority, thereby narrowing the windows of opportunity for institutional change opened by the crisis.[22] In the end, there was little visibility in the decision making process, which offered few opportunities for input from ordinary citizens, even if such decisions strongly affected their everyday life.

Given the enormous scientific uncertainty surrounding dioxin, it was clear to everyone that most decisions taken at Seveso could not rely on much objectivity. Nevertheless, scientific controversies about dioxin hazards were widely discussed in the media. The insistence by public authorities that decision criteria were purely scientific and technical, followed by a period of erratic and contradictory decision-making, convinced the public that dioxin was mainly a false scare and political trick. Allowing abortions despite uncertainties about the risk to fetuses was considered to be evidence of the manipulation of the crisis.

Abortion became the central issue in the public debate, so that more general health issues surrounding dioxin, including risks from pollution damages, slipped into the background. The dioxin catastrophe became a question of "allowing women to abort or not," and not about the hidden costs of industrialisation.[23]

Considered from the perspective of government-citizen dialogue, management of the dioxin crisis in Seveso was a good example of a bad way to handle a chemical emergency. Environmental recovery was nonetheless successful, with a complete clean-up of the contaminated area with little transformation of the local socio-economic fabric.[24]

3. From Disaster to Cultural Conflict: Rival Interpretations of the Dioxin Crisis

In Europe, the dioxin crisis at Seveso marked the appearance of a new kind of environmental damage: one that might produce delayed rather than immediate effects. Damaging chemical effects might extend to future generations.[25] The specificities of the damage and the supranational features of the disaster accelerated the process of assigning environmental responsibility to the European Union, an issue that was not envisioned in the 1957 Treaty of Rome. The Seveso disaster was especially influential in establishing the category of "major accident hazards of certain industrial activities" regulated through Directive 82/501/CEE (or "Seveso Directive"). In its design, this 1982 Directive echoed some of the issues brought out by the Seveso disaster and, in particular, the crucial role played by information in risk management.[26] The Seveso disaster is widely interpreted as an "information disaster," given the secrecy of what was happening inside ICMESA: public authorities had insufficient information for intervening in a timely manner. At the local level, too, the lack of information was crucial, especially because there was little information generated by citizens for use in making public decisions.

Social movements already active in the Italian political scene along with several left-wing political parties mobilised in Seveso. One result was the establishment of a "Scientific Technical Popular Committee" (STPC) for looking after the interests of the victims. One of the most important actors in this mobilisation was *Medicina Democratica* (MD), a movement which arose out of a large coalition between scientists and workers for

lobbying issues related to health damages stemming from industrial production, within and beyond plants.[27] Underlying this agenda was a social critique of capitalistic exploitation and its hidden costs. But this frame found little to no reception among Seveso victims, thus reducing the weight of MD's public arguments and, more generally, its influence at the national level.[28] How does one explain this failure?

The leftist activists upheld the Seveso disaster as a typical "capitalistic crime," as a clear example of the capitalist system of injustice.[29] Seveso people were asked to join an existing cause, that of the class struggle. In the way leftists were framing the crisis people from Seveso could exist in the public space only as victims of irreparable damage. In this respect, leftist activists were as incapable as public authorities in comprehending what Seveso people considered to be the priority in responding to the dioxin crisis: preserving their town as a specific community. Neither public authorities nor radical leftists, given their interpretative frames, were able to account for this dimension of "attachment"[30] to place and community.

Appealing to the scientific uncertainties of dioxin risk, there emerged a grassroots mobilization of people from a strong catholic background. They asked public authorities to consider not only the seriousness of health risks but that of their community's uprooting as well. Yet no arenas to publicly discuss and mediate these issues were opened, causing intense grassroots protest.

In this protest a central role was assumed by activists of the catholic movement called "Comunione e Liberazione" (CL)[31]. For CL, the disaster was not a crime but a "test" for the community. They felt themselves under attack as a community, and needing to stick to their values, territory, and tradition as response. CL asked public authorities to recognize the community right to actively be part of the response to the dioxin crisis, appealing to the subsidiary principle. In actual fact, CL activists organised their own

services for supporting families harmed by the disaster, and tried to maintain a communitarian spirit based on shared values such as religion and family. The harm done by dioxin was thus seen as damage to a community and not to individuals. From this perspective, the return to good community life was considered the best indication of recovery from the dioxin horror, beyond the actual clean-up of contaminated areas. This idea of dioxin damage as a community threat parallels the idea of recovery based on privatising the disaster's controversial implications, in particular, its future health effects. Such health damages are left to individuals to bear alone. In the collective effort to "resist and move on," the problematic issues revealed by the event (especially as measured by ongoing chemical pollution of the territory) seemed to be erased.

4. A Come Back to Seveso: Activist Trajectories

After the accident, only a small number of inhabitants chose to leave Seveso, among them, a small group of young Seveso activists who had participated in the mobilisation promoted by the STPC. The accident had pushed them into political action, yet the reaction of most Seveso people made them believe that “in Seveso it was not possible to carry on the struggle necessary to change the institutional system so as to avoid repeating a similar accident” (Interview LB).

In fact, from the perspective of the political ecology of STPC, industrial damage of the environment was proof that the capitalist system needed radical changing. Concern for nature or territory was of dubious validity because such issues were a matter of “bourgeois conservationism”.[32] Needing to face conflicts stirred up by the disaster in the people of Seveso, these young activists lacked a vocabulary capable of translating into political issues the attachment to place that their fellow citizens claimed to be a “common good”

needing protection. Indeed, their political culture condemned this very attachment as an obstacle to join the general cause of the class struggle.

During the 1980s, these young activists embraced new political agendas, in particular, international cooperation and feminism. These political experiences shared the belief that practice was a form of political engagement.

At the beginning of the 1990s, the group of activists returned to Seveso with a new political project, that of making the experience of the disaster a basis for social and economic change toward green values, produced within the local community. Since the time of the accident, and thanks to their recent political experiences, their previous way of conceiving political action on environmental issues had changed dramatically, largely because of feminist influences.[33] The emphasis that Italian feminism puts on the "practice of relationships" as a form of "primary political action" led to a redefinition of the very terms of the issue of environment, far from the frameworks of both political and conservationist ecology.[34] The idea here is that of *taking care* of a concrete and local environment through practices that give birth to new relationships between human beings, and between human beings and their environment. The emphasis is no longer on the concept of political duty, nor on the abstract concept of the right action to be taken as a guide for political engagement. Political action must be rooted and must take shape in everyday life practices that are political per se, because they build and change contexts through changing relationships.

One of the Seveso activists described this change in focus of political action, and the need for change, as follows:

> At the time of the accident, we were unable to understand the importance of the "practical" dimension. We launched into an ideological extrapolation of the environmental

> question in order to fight a global struggle. We didn't consider, or didn't consider enough, the vital interests linked to everyday life, that were affected by the dioxin event. This is the reason why we did not succeed in our attempt to interact with the people. This is the reason why I decided to leave Seveso, because my political action at that time was intended to change a lot of things: it was not enough for me to change a small aspect of living in my neighbourhood. But after a few years, I began to see my political action as rootless. There was a sort of gap: my political action was becoming more and more universal, but every time I came back to Seveso I had less and less to share with the people living there (Interview MM).

The new political attitude of the group became consolidated through a series of local experiences of new political engagement. First of all, the creation in Seveso of a local section of Legambiente, named after Laura Conti, one of the preeminent figures in the STPC, and a communist, environmentalist, and feminist activist.[35] Then in 1991-1992, the group became engaged in restoring a small wooded area in Seveso, "Fosso del Ronchetto," which was being used as a waste dump. The "Fosso del Ronchetto" experience was a turning point. Legambiente activists made themselves visible in the eyes of the local community; the restoration project provided the opportunity for meeting citizens and getting them interested in Legambiente activities. At the same time, the activists established a new kind of relationship with local institutions: they assumed a direct and formal responsibility in doing things for the community, an attitude far from their former critical and conflictual logic of action. In fact, the town council gave the local

Legambiente section formal responsibility for the recovery and management of the wood. From this point, the Legambiente activists gave birth in 1995 to Natur&, a "social enterprise" meant to offer "innovative environmental and social services" (Statue of the Natur& Association, art 4). This choice marked the shift of Legambiente activists toward a model of "localist and access organizations"[36] very similar to that of some of the organizations linked to the CL movement.

Direct action in the local context, through supplying services, is considered by activists as just one of the ways to promote a greener model of economic development. Direct involvement in the local political arena is the other. In 1996 the group of activists turned to the local political arena, as a local branch of the national Green Party. But in 1999 the group left the Greens and contributed to the creation of a "civic list" not directly linked to any national political party in order to support a candidate for the election of the town mayor; this candidate was a bridging figure, strongly linked to the catholic movement CL but also to local environmentalism. The civic list won the elections and one of the activists was put in charge of the municipality's social and environmental policies. One of his first decisions had been to promote an Agenda 21 process together with the other municipalities involved in the accident of 1976 (Cesano Maderno, Desio, Meda). In Agenda 21, the work on the collective memory of the disaster is explicitly promoted as a milestone in the local change toward a more sustainable model of development. These developments are why, in 2002, the Agenda 21 process sponsored the project "Seveso Bridge of Memory," which was promoted and realised by the Seveso section of Legambiente.

5. The Construction of "Discreet" Memory

The issue of the memory of the ICMESA accident is especially linked to one place, "The Oak Wood," a 42-hectare plot of forest in the urban center of Seveso that was artificially created over the most contaminated area, site of two subterranean dumps filled with the toxic wastes produced during the decontamination procedures. In 1996, the wood was opened to the public without any kind of "memory inscription"[37] testifying to its origin. Legambiente activists highly criticized this kind of "indiscriminate opening":

> We never agreed with the choice of an indiscriminate opening of the park, composed of folkloristic and purely recreational events. Instead, we proposed since 1996 to make it a space of environmental education for preserving and safeguarding the memory of the disaster. The idea that one could forget what was hidden under its soil, and perhaps even build houses on it, has always been greatly disturbing for us (Interview GB).

The "Seveso Bridge of Memory" project was developed in 1999-2000 by these activists as a way to oppose what seemed to be a sort of collective pressure to erase the disaster's memory, starting from the normalization of the Oak Wood. They then asked local town councils to finance the creation of an archive of the disaster as well as a "memory footpath" in the Oak Wood complete with displays telling the accident's story through texts and photos.

Given the aim of defining a commonly shared memory of the event, the texts and photos were written and chosen by Legambiente activists together with an oversight committee composed of 10 people from Seveso. These people were considered representative of the different walks of life of the local community and uninvolved in politics or public institutions at the time of the accident. Once the displays were created,

they were presented to the larger community of Seveso for further opinions and suggestions.

The process that led to the opening of the "memory footpath" in 2004 showed how Legambiente activists aimed to place the IMCESA event at the center of a new collective identity of the Seveso community. The inscriptions on the displays fixes the ICMESA accident as a test for the local community, successfully overcome. According to one of the project's organizers, the inhabitants of Seveso now acknowledge the importance of what happened in more general issues--such as sustainability--in order to make better future decisions. The dioxin incident is therefore considered a tragedy as well as an "opportunity for change": the attachment to place shown by Seveso inhabitants at the time of the accident could now be the starting point for promoting a green model of local development (Interview MM). Thus, the people of Seveso can "positively" identify themselves with the ICMESA event, confirming that this was not merely a painful tragedy but also a moment in which the community recognized the value of its attachment to the land, making it an active instrument of change. The Oak Woods is celebrated as a victory, a symbol of a community rooted in the territory and of an environmentalism dependent on this same attachment to the land, thereby opening it to broader issues of sustainability.

Yet this process of "memory building" has also made it evident that conflicts continue in the community, and that even today it is rather difficult to speak publicly about what happened in 1976--especially concerning compensations, abortions, and health effects. In the words of one of the committee members:

> The memory we are writing here must be a *discreet memory*, respectful of personal suffering. In this process, we must try to avoid reopening old wounds, avoid forcing people to confront painful or sorrowful things they want to forget. We must avoid

> the nihilism that assumes recovery from this damage is impossible, stressing instead the resilience of civic community.

From this perspective, one of the main problems that the Seveso disaster made collectively obvious is that health and environmental damages stemming from chemical plants in Brianza have never been adequately addressed or compensated, either politically or symbolically. In spite of that, the health and environmental aftermath of industrial pollution is a question that the local community does not wish to address, today as yesterday.

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[1] Marco Armiero and Stefania Barca, *Storia dell'ambiente. Una introduzione* (Roma: Carocci, 2004), 156-164.

[2] Sheila Jasanoff (ed.), *Learning from disaster. Risk Management After Bhopal* (Philadelphia: University of Pennsylvania Press, 1994).

[3] On this see: Luc Boltanski, Eve Chiapello, 1999, *Le Nouvel Esprit du Capitalisme* (Paris : Gallimard, 1999) [Eng. Trans. *The New Spirit of Capitalism* (London:Verso Books, 2005)]; Luc Boltanski, Laurent Thévenot, 1991, *De la Justification* (Paris: Gallimard, 1991) [Eng.Trans. *On Justification* (Princeton: Princeton University Press, 2005)].

[4] The sociological literature on industrial disasters is abundant but mainly oriented toward disasters as organisational phenomena; see, for instance, Charles Perrow, *Normal Accidents: Living With High Risk Technologies* (New York: Basic Books, 1984) and Diane Vaughan, "The Dark Side of Organizations: Mistake, Misconduct, and Disaster," *Annual Review of Sociology* 25 (1999): 271-305. On industrial disasters as moral and political objects of analysis see Barbara Allen, *Uneasy Alchemy: Citizens and Experts in Louisiana's Chemical Corridor Dispute* (Cambridge: MIT Press, 2003) and Paul Jobin,

Maladies industrielles et renouveau syndical au Japon (Paris: Editions de l'EHESS, 2006).

[5] As pointed out by Chateauraynaud and Torny catastrophes can be "localized" or "distributed," as was the case at Chernobyl; in Francis Chateauraynaud, Didier Torny, *Les sombres precurseurs. Une sociologie pragmatique de l'alerte et du risque* (Paris: Editions de l'EHESS, 1999), 48. See also Laurent Thévenot et al., "Forms of Valuing Nature: Arguments and Modes of Justification in Environmental Disputes," in *Rethinking Comparative Cultural Sociology: Repertoires of Evaluation in France and the United States*, eds. Michèle Lamont and Laurent Thévenot (Cambridge: Cambridge University Press, 2000).

[6] The analysis I develop in this contribution is a synthesis of my PhD dissertation about the collective responses to the Seveso disaster; see Laura Centemeri, *Ritorno a Seveso. Il danno ambientale, il suo riconoscimento, la sua riparazione* Milano: Bruno Mondadori Editore, 2006).

[7] Bruna De Marchi, "Seveso: From Pollution to Regulation," *International Journal of Environment and Pollution* 7:4 (1997): 526-537; and Bruna De Marchi, Silvio Funtowicz, and Jerome Ravetz, "Seveso: A Paradoxical Classic Disaster," in *The Long Road to Recovery: Community Responses to Industrial Disaster,* ed. James K. Mitchell (New York: United Nations University Press, 1996).

[8] Andrea Poggio, *Ambientalismo* (Milano: Bibliografica, 1996), 54. See also Mario Diani, *Isole nell'arcipelago. Il movimento ecologista in Italia* (Bologna: Il Mulino, 1988), 73-74; Giovanni Lodi, "L'azione ecologista in Itala: dal protezionismo storico alle Liste Verdi," in *La sfida verde. Il movimento ecologista in Italia*, eds. Roberto Biorcio and Giovanni Lodi (Padova: Liviana Editrice, 1998).

[9] David Hess, *Alternative Pathways in Science and Industry* (Cambridge: The MIT Press, 2007).

[10] Arnaldo Bagnasco, *Tre Italie: la problematica territoriale dello sviluppo italiano* (Bologna: Il Mulino, 1977).

[11] Relazione conclusiva della Commissione Parlamentare di inchiesta sulla fuga di sostanze tossiche avvenuta il 10 luglio 1976 nello stabilimento ICMESA e sui rischi potenziali per la salute e per l'ambiente derivanti da attività industriali, Atti Parlamentari, VII legislatura, doc. XXIII, n.6, 1978; Jörg Sambeth, *Zwischenfall in Seveso* (Zurich: Unionsverlag, 2004).

[12] S. Zedda, "La lezione della cloracne," in *Icmesa. Una rapina di salute, di lavoro e di territorio* (Milano: Mazzotta, 1976).

[13] Paolo Mocarelli, "Seveso: A Teaching Story," *Chemosphere* 43 (2001): 391-402.

[14] Michel Callon, Yannick Barthe, and Pierre Lascoumes, *Agir dans un monde incertain. Essai sur la démocratie technique* (Paris: Seuil, 2001) [Eng. Trans. Cambridge: The MIT Press, forthcoming].

[15] Francesco Rocca, *I giorni della diossina*, Supplemento a "Quaderni Bianchi" 2 (1980) (Milano: Centro studi A. Grandi, 1980).

[16] Massimiliano Fratter, *Memorie da sotto il bosco* (Milano: Auditorium, 2006).

[17] Michel Dobry, *Sociologie des crises politiques* (Paris : Presse de la FNSP, 1986).

[18] Zone A (108 hectares, 736 inhabitants) was evacuated; Zone B (269 hectares, 4.600 inhabitants) was not evacuated but inhabitants forced to follow strict rules of conduct (including "abstention from procreation"); Zone of Respect (1.430 hectares, 31.800 inhabitants) no one evacuated but inhabitants forced to follow some precautionary rules of conduct.

[19] Only in 1978 with Law 194, were voluntary pregnancy terminations legally admitted.

[20] Marcella Ferrara, *Le donne di Seveso* (Roma: Editori Riuniti,1977).

[21] Laura Conti, *Visto da Seveso: l'evento straordinario e l'ordinaria amministrazione* (Milano: Feltrinelli, 1977).

[22] Centemeri, *Ritorno a Seveso*, 87-96. In 1976 the Italian government was based on a coalition of "National Solidarity." This was a government lead by the Christian Democratic Party with external support by the Communist Party. The necessity of this large coalition was in part explained by the growing terrorist menace to Italian institutions. On this see Paul Ginsborg, 1989, *Storia d'Italia dal dopoguerra a oggi. Società e politica 1943-1988* (Torino: Einaudi, 1989) [Eng. Trans. New York: Penguin Books, 1990].

[23] Conti, *Visto da Seveso*, 73-75.

[24] The issue of Seveso's dioxin consequences on health is still controversial; see P.A. Bertazzi et al., "Health Effects of Dioxin Exposure: A 20-Year Mortality Study," *American Journal of Epidemiology* 153:11 (2001): 1031-1044; K. Steenland, P. Bertazzi, A. Maccarelli, M. Kogevinas, "Dioxin Revisited: Developments Since the 1997 IARC Classification of Dioxin as a Human Carcinogen," *Environmental Health Perspectives* 112:13 (2004). Environmental recovery was aided by the rapid and generous compensation voluntarily offered by Roche to a large fraction of the damaged parties, both private and public--even though the compensation issue is still unresolved at Seveso (Centemeri, *Ritorno a Seveso*, 135-158). It is important to point out that Roche never admitted its responsibility for the disaster in front of a court of law.

[25] Patrick Lagadec, *La civilisation du risque* (Paris: Seuil, 1981).

[26] Josée van Eijndhoven, 1994, "Disaster prevention in Europe," in *Learning from disaster. Risk Management After Bhopal*, ed. Sheila Jasanoff (Philadelphia: University of Pennsylvania Press, 1994).

[27] MD is a movement born in the 1970's linking industrial workers, citizens, scientists, and intellectuals. MD saw the importance of developing participatory forms of knowledge production for industrial health issues. On linked health-work issues in Italian industrial history, see Stefania Barca, "Health, Labor, and Social Justice. Environmental Costs of Italian Economic Growth, 1958-2000", *Agrarian Studies Colloquium 2005-2006*, www.yale.edu/agrarianstudies/papers/26italiangrowth.pdf.

[28] Giovanni Bignami, "Se il seme non è morto: Giulio Maccacaro e il Movimento per la Salute," in *Atti del Convegno "Attualità del pensiero e dell'opera di Giulio A. Maccacaro"* (Milano: Cooperativa Centro per la Salute Giulio A. Maccacaro s.r.l. Editore, 1988). On the importance of the mobilization of victims as a form of pressure leading to "external incentives" for political action with regards to health and environmental issues, see Michael R. Reich, "Mobilizing for Environmental Policy in Italy and Japan," *Comparative Politics* 16:4 (1984): 379-402.

[29] Giulio Maccacaro, "Seveso un crimine di pace," *Sapere* 796 (1976): 6.

[30] Laurent Thévenot, "The Plurality of Cognitive Formats and Engagements: Moving between the Familiar and the Public," *European Journal of Social Theory* 10 (2007): 409-424.

[31] "Comunione e Liberazione" is a catholic movement born in Italy in the 1950's and particularly active in Lombardy. One of its distinguishing traits is the development of "opere," or social services made available through voluntary organizations. Relations between CL and the State have always been rather conflictual. In the opinion of CL, the State cannot and should not to take part in society's organisation: "in order for the Christian spirit to develop, the State must limit its presence in people lives"; in Salvatore Abruzzese, *Comunione e Liberazione* (Roma-Bari: Laterza, 1991), 171.

[32] Diani, *Isole*.

[33] The 1980's were marked by a deep change in Italian environmentalism as well as in other political cultures, as reported in Franco Livorsi, *Il mito della nuova terra: cultura, idee e problemi dell'ambientalismo* (Milano: Giuffrè, 2000). The specific characteristic of the Seveso activists is the strong link between feminism and environmentalism. This alliance is not something that exists at the national scale.

[34] Libreria delle Donne di Milano, *Non credere di avere dei diritti* (Torino: Rosenberg&Sellier, 987).

[35] Legambiente is the most important environmentalist organization in Italy today. On the recent development of Italian environmentalism, see Donatella Della Porta and Mario Diani, *Movimenti senza protesta? L'ambientalismo in Italia* (Bologna: Il Mulino, 2004). Laura Conti (1921-1993) has been an important figure in the story of the Seveso accident. She was at the time representative in the regional council for the Communist Party in Lombardy. Laura Conti has been a feminist activist and one of the first Italian environmentalist activists.

[36] Hess, *Alternative Pathways*, 173.

[37] Paul Connerton, *How Societies Remember* (Cambridge, Cambridge University Press: 1989).