



Work, Bodies, Militancy

The “Class Ecology” Debate in 1970s Italy

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During the two and a half centuries since the industrial revolution, health risks in the factory have not been eliminated, or even radically reduced, compared to the nineteenth century: they have simply changed.¹ Older pathologies have been replaced by newer ones mostly derived from the large-scale spread of organic chemistry, especially in the petrochemical sector, and the marketing of an impressive quantity of products with high content of CMR substances. Workers' bodies have thus become sites of social struggles that have, on occasion, led to legislative reform in the broader field of environmental policy (Elling 1986; Rosner and Markowitz 1986; Berlinguer 1991; Sellers 1997; Carnevale and Baldasseroni 1999; Johnston and McIvor 2000; Bartrip 2001; Markowitz and Rosner 2002).

Diseases induced by the petrochemical industry, however, were less easily recognizable as occupational diseases because the number of synthetic substances produced in chemical laboratories increased at very high rate every year, and it was hence virtually impossible for medical science to keep track of them and ascertain their dangerousness preventively. Thus workers often found themselves playing the role of human guinea pigs until the environmental toxicity of some widely used material or substance was clearly identified.²

Although much ecological criticism of contemporary society is founded on the exposing of the environmental damage caused by modern industry (Massard-Guilbaud and Scott 2002; Allen 2004; Platt 2005; Santiago 2006), environmental history has not yet dealt with this subject systematically. It seems that environmental historians so far have had trouble seeing the factory as something lying within their sphere of interest (McEvoy 1995; Meisner Rosen and Sellers 1999). The story told in this chapter, however, shows how the workplace and workers' bodies lay at the core of the new environmental consciousness of the 1970s.

Italy's Labor Environmentalism (1961–1978)

In Italy, scientific expertise and political regulation on CMR substances have been forged out of the experience of what I call “labor environmentalism,” i.e., the coalition between workers’ organizations and “militant” scientists in the struggle for the recognition and regulation of industrial hazards, eventually producing important social reforms such as the Labour Statute (1970) and the Public Health System (1978) (Barca 2006; Barca 2012). Focusing on the work environment, that peculiar type of environmentalism was based on the recognition of the centrality of the industrial manipulation of nature in determining the deterioration of both occupational and public health (von Hardenberg and Pelizzari 2008). Such new ecological consciousness arose from the totally new conditions of production and reproduction that were formed in the country’s tumultuous economic boom of the late 1950s, during which Italians experienced such a rapid and massive industrialization that all aspects of social life were revolutionized. From 1951 to 1971 the agriculture sector expelled almost five million people, 2.3 million of whom entered the factory gates; in the same period, industrial employment in different sectors grew from 40 to 55 percent of the total workforce. The core of this cycle of expansion was the crucial five-year period of 1958–1963, the “economic miracle” during which the GNP doubled and industry surpassed agriculture as a source of income for the first time in the Italian history (Signorelli 1995; Crepas 1998; Musso 1998).

In the aftermath of economic boom, the country experienced the epidemiological shift typical of advanced industrial economies, namely, from infectious to degenerative diseases. Yet, a clear vision of the new risk factors was hardly produced within medical science and public health institutions. Among the occupational diseases recognized by the Workers’ Compensation Authority (INAIL) there was a gradual shift from silicosis and lead poisoning to pathologies related to the manipulation of mercury and benzene hydrocarbons. Nevertheless, national statistics severely underestimated cases because often workers did not disclose their illnesses for fear of being fired. Compensation, however, was the very obstacle to the prevention of hazards: the law, in fact, still sanctioned the total non-liability of employers in the matter of industrial accidents and health hazards (Berlinguer 1991; Calavita 1986; Carnevale and Baldasseroni 2009: 138–39).

Spurring from the “economic miracle,” the Italian experience of “labor environmentalism” was generated in the cultural context of the 1960s and 1970s, marked by a strong cultural hegemony of the left parties and the labor movement, but also by student protests and new political movements pressing for radical changes in the organization of social life. This new Italian environmentalism was also crucially influenced by the spread of a new international environmental movement (Luzzi 2009: 95–114), much less devoted to con-

servation than in the past and more concerned with the toxicity of industrial production, especially of petrochemicals (Gottlieb 1993; Rome 2003). What marked the Italian experience, however, was the much stricter link existing between the new environmentalists and the labor movement, unions in particular, which makes it appropriate to speak of a very “labor environmentalism.” This had begun to take shape in the early 1960s, when a group of sociologists at the University of Turin formulated what was to become the new methodology of research on occupational health. Soon renamed the “environmental club,” this group categorized the four main factors of work-related risk: unspecific risk (noise, microclimate, radiations, vibrations, etc.), risk specific to the work environment (exposure to toxic or explosive substances), risk related to fatigue (physical effort and posture), and psychological risk (linked to labor relations within the workplace). In addition, the group theorized a new methodology of research, based on the direct production of knowledge on the part of workers. Having been successfully tested in 1961 at the plant of Farmitalia, a consociate of the powerful petrochemical group Montedison, those theories were accepted by the Italian labor movement and became the core principles of labor environmentalism. Courses and lectures on the ecology of the work environment were organized throughout the country by the Trade Union Confederation. In 1970, with the passing of the new Labour Statute, the principle of workers’ direct control over the work environment became law. A golden age for labor environmentalism had started (Calavita 1986; Tonelli 2006; Tonelli 2007).

The Italian experience was also connected to that of other affluent societies in the same period, especially from a cultural point of view. The translations of Rachel Carson’s *Silent Spring* (1962) and of Barry Commoner’s *The Closing Circle* (1971) were instrumental in the making of a new cultural scenario, demanding more attentive consideration of the social costs of economic growth, and especially of oil-related production.³ In this context, the relationships among industrial pollution, ecology, public health, and politics were conceptualized by the Italian Left for the first time in the country’s history. The debate involved individual scientists and politicians, but it also required some effort in reorienting the strategy of well-structured organizations such as the Communist Party, the confederation of unions, a number of university labor clinics, and the Association of Industrial Hygiene.

Due to the rapid industrialization experienced in the preceding decade, the 1970s were also a time of significantly increased CMR risk in Italy, affecting not only the workforce, but the Italian population at large, through widespread and largely uncontrolled pollution. Given the favorable trend for Italian organic chemistry and oil-related productions, petrochemicals—and the Montedison company in particular—came to occupy a top position among the new polluting industries. The Bormida river valley in Lombardy, the Tyrrhenian

coast near Scarlino in Tuscany, Porto Marghera in the Venice lagoon, the Sicilian coast in the area of Gela, the area of Sarroch in Sardinia, and the area of Manfredonia in Apulia were only some of the places where Italians started to become familiar with petrochemical contamination during the 1970s. A public health disaster was openly recognized in 1972 in Cirié, Piedmont, where forty-one workers of a dye factory were stricken by cancer of the bladder and the river Stura got seriously contaminated with sulphuric acid and other chemical residues. In contrast, no such recognition was granted to the area of Manfredonia, Apulia, when an accident occurred at the ANIC petrochemical plant causing some 32 tons of arsenious dioxide to fall upon a population of fifty thousand, also seriously compromising local agriculture and fisheries (Di Luzio 2003; Tomaiuolo 2006; Luzzi 2009: 152–55; Barca 2012).

In the rising awareness of chemical risk as the dark side of economic growth, falling upon both workers and the environment, a turning point was the accident that occurred at the ICMESA chemical plant near Seveso, in Lombardy. On 10 July 1976, the explosion of a chemical reactor caused a cloud of dioxin to rise over the town and its rural hinterland, directly affecting a population of ten thousand (Centemeri 2010). Among all industrial disasters, the one occurring in Seveso no doubt spurred the greatest attention on the part of the Italian government and the media, national and international. Urging collaboration among labor physicians, professional ecologists, public health agencies, and elected representatives from the local to the national level, the ICMESA disaster turned out to be a remarkable experiment in the interaction of science and politics in the country. It also played a crucial role in the birth of a new ecological consciousness in the Italian Left (Centemeri 2006; Luzzi: 2009: 140–55).

Laura Conti: A Working-Class Ecologist in Seveso

In the convulsive post-disaster scenario that fell upon Seveso between July 1976 and April 1977, a scientist and regional councilor for the Communist Party, Laura Conti, found herself at the forefront of the battle for citizens' right to know and participative science that characterized the political relevance of the accident. As a participant observant with a dual identity of scientist and politician, Conti clearly exposed government's pro-corporate policies, systematically excluding citizens from participation in knowledge formation and the management of risk. The whole point of Conti's political activity, in Seveso and beyond, was exactly that of struggling against "deceit and denial" politics (Markowitz and Rosner 2002) played by corporate as well as government agencies. This was not an easy task, considering that Conti was a communist representative in an area of solid Catholic traditions and politically dominated

by the Christian Democrats, also the strongest government party in the country (Ziglioli 2010).⁴

More than anything, however, it was the “politics of low doses and limit values”—as defined by Soraya Boudia and Nathalie Jas—clearly appearing in the public arena for the first time in the country’s history, that became a central concern for the communist councilor. Dioxin, Conti observed, seemed to have “*all* the characteristics of the most terrible poisons that modern chemistry spreads over the planet”: stability, the tendency to accumulate in organisms, extreme toxicity (such that no micro quantity can be considered innocuous), embryo-toxicity, mutagenicity on bacteria (implying the possibility that it be mutagenic and carcinogenic in humans), and immuno-depressivity. Moreover, its effects can manifest over long time periods. “These aspects, outlined before my eyes in the first few days, made up to the most typical ecological catastrophe that can be imagined,” Conti (1977a: 20–21) wrote in her journal. Uncertainty, which the government claimed as the single most important reason for underplaying the risks, was not a case in point: what was uncertain, Conti remarked, was not the dangerousness of dioxin, but the extent to which the environment and the people of Seveso had been contaminated.⁵

Measuring the presence of tetrachlorodibenzodioxin (TCDD) in the soil and the vegetation of the affected area and, on the other hand, establishing a Maximum Allowable Concentration (MAC) for dioxin became, in fact, the most important political tasks in the following weeks. How local and national authorities arrived at establishing such limit values, affecting the definition of different zones of dangerousness, and consequently the lives of thousands of people and future generations, is the topic of the fascinating story that Conti narrates in the book she published roughly a year later, reporting on the decision-making process at the local and regional level. Here I choose to concentrate on one particular aspect of that story, which exemplifies the crucial link existing between working-class history and the history of the environment: the fact that, in explaining *how* the MAC of dioxin in Seveso had been decided, government officials claimed to have relied on “US standards for farm work” (Conti 1977a: 56).

As a labor physician by training, and as a communist representative, Laura Conti could not help but develop an immediate interest in getting as much information as she could concerning the MAC of dioxin in American farming, and she insistently pressed the regional council to reveal the source of their knowledge on the matter. Answers were vague and elusive, referring to a book on which someone had orally reported, but whose title and author(s) never materialized. To complicate things, Conti heard from Barry Commoner, who was in Seveso in September following the disaster, that no such standards existed in the United States. In any case, and whatever the source, the scientific information to which government officials referred appeared reasonably

dubious to Conti. First, she observed, why the need to establish a maximum concentration of dioxin in the soil—a volatile standard, difficult to measure, and subject to local variations—being much easier to do it for the pesticide? Second, a document released by NATO officials in Italy advised a MAC of 50 micrograms per acre, that is, a much lower dose than that established by the Lombardia regional government on the basis of “US farm-work standards.” Why should the American military authorities suggest standards so different from those accepted for farm workers in their own homeland? Conti asked. It soon became clear that the “standards” were nothing more than a pseudoscientific justification for decisions made in obedience to political considerations and organizational issues: in particular, the decision to circumscribe a “zone B,” from which evacuation was not necessary.

The American farm-work standard, however, was soon appropriated by Italian labor physicians, who reinterpreted it as a starting point for further negotiations: having known that the techniques for measuring dioxin in the soil had improved up to the point of being able to detect 1 part per 70 billion, they obtained that the MAC within workplaces be lowered to 0.75 ppm for the ground and to 0.01 micrograms per square meter for indoor walls and equipment. “Good job!” Conti (1977a: 61) commented, “Now, we must extend that to the whole population...” She took on the work of the Medicine and Epidemiology Commission of the Lombardia regional council to advance the idea that, on the day on which cleanup of the area would start, workers’ MACs become the general accepted standard for backyards, roads, public parks, playgrounds, and all open spaces, especially those frequented by children, as well as for indoor spaces, public and private.

Conti’s connections with Italian “militant” medicine were instrumental for her understanding of dioxin contamination and for her political activity. Colleagues of the “communist cell” within the Istituto Superiore di Sanità—the country’s higher scientific authority for public health—informed Conti that the official MACs adopted by the regional government, advised by two academic toxicologists, were based on incorrect calculations. From the scientist Nora Frontali, who directed the industrial hygiene lab of the same institute, Conti obtained precious information about the MAC of dioxin in humans. Those values were incomparably lower than those accepted in Seveso: in fact, they were counted in picograms, a measurement that is one-millionth of a microgram. However, “militant,” and woman-led, science was not granted the authority of official medicine: the report that Dr. Frontali and her team had sent to the Lombardia regional government in March of 1977 had been ignored, with the pretext that it was not an official document and it only represented the opinion of one group of scientists.

In relying on occupational medicine to establish a safety standard for the whole population, Laura Conti was applying an approach quite common to

environmental health science, which had developed internationally since the times of Alice Hamilton (Sellers 1997). But she was doing it with a particular emphasis: that of a “militant” scientist, committed to the working-class political cause and to the articulation of a working-class ecology. In other words, she was also applying a Gramscian vision of the hegemony of the working class over Italian society and following the Communist Party’s strategic view of “progressive democracy,” that is, the coincidence between working-class interests and needs and those of the nation. Conti’s crucial contribution to the development of a new environmental consciousness in Italy was the clear perception of how working-class needs and interests crucially included environmental health.⁶

Born in Udine in 1921, Laura Conti had actively participated in the anti-Nazi resistance and, at age 23, was interned in a camp near Bolzano. That experience inspired her first novel, *La condizione sperimentale* (Conti 1965), and alimanted a writing vocation that she cultivated throughout her life.⁷ After the war she graduated in medicine and started working as a traumatologist at the Workers’ Compensation Authority and as children orthopedist in the public schools of the Milan district. At the same time, she enrolled in the Italian communist party (PCI), where she started her long political career. She was an elected councilor of the Milan district between 1960 and 1970, then of the Lombardia regional government between 1970 and 1980, and a deputy in the national parliament from 1987 to 1992, where she worked at the Agriculture Commission.

During all her public life, Conti was, at the same time, a politician and an engaged scientist. Not having a family, she devoted most of her uncommon energy endowment to her two main interests: (1) the popularization of ecology as a science of political and social relevance and (2) the inclusion of citizens and ordinary people in scientific decision making, especially as regarded public and environmental health. Probably the most significant example of her commitment to social inclusion is her direct involvement into the post-crisis management of the Seveso disaster. Conti’s action/research investigation into the politics of industrial hazard in Seveso was a result of the reflections and experimentations conducted within the Italian labor environmentalism in the previous decade; nevertheless, her own reflections also constituted the beginning of a new ecological consciousness, reaching out from the factory into the larger web of the country’s ecological relationships and political-economy scenario.

In the very same year of the accident, Conti was completing her first ecology book, which was to become a seminal reading in Italian environmentalism: with the title *Che cos’è l’ecologia. Capitale, lavoro e ambiente* (Conti 1977b), the book represented a first comprehensive account of relationships between ecology and politics in Italy. From the first page, the author posits organic chemistry

and CMR risk at the center stage of her clear, vivid explanation of what ecology is. The book started with the image of a petrochemical plant, which—during the production of artificial fibers—released polluting substances that damaged the health of workers first, then of nearby residents. This first level of ecological relations, from the factory to the body through work, was then intrinsically connected to a broader level, that of bio-geo-chemical cycles: from the factory to the living and nonliving world, and eventually to humans, through water and the food chain. She continued: “As living organisms have similar physiology and biochemistry features the polluting substances produced in the making of artificial fibers enter the watercourses which irrigate pastures, damaging livestock that feeds on those pastures; when gathering into a river they damage fish, and in so doing they eventually damage a source of proteins indispensable to man” (Conti 1977b: 7). The third level of Conti’s vision of ecology was the one concerning the limitedness of resources and the non-renewability of mineral matter—the entropy vision. Once consumed in the production of petrochemicals, oil was not available anymore for other human needs; furthermore, the increasing replacement of cotton, linen, flax, and mulberry with artificial fibers would eventually lead to a significant reduction of biodiversity and the loss of age-old human abilities to cultivate and process natural fibers.

After this brief introduction, the author structured her explanation of ecology into four chapters: (1) water, (2) the cycle of matter and the flow of energy, (3) agriculture, food, and population, and 4) ecology and politics. CMR substances and organic chemistry were core topics throughout the chapters. Organic chemistry was vividly described as the science that—like nature itself (which Conti called “life”)—could link carbon, hydrogen, and oxygen into an infinite variety of different structures. Unlike nature, the author pointed out, organic chemistry produces totally new molecules without producing enzymes that can degrade them; thus, these new molecules can be unnaturally stable. Conti insisted this was a fundamental break with the laws of evolution: if only one molecule existed that could escape degradation, the world today would be full of it; similarly, the human body functions on the equilibrium between hormones and enzymes. Organic chemistry, in sum, acted as an endocrine disruptor in the environment just as in the human body (Conti 1977b: 32–39).

The major successes of organic chemistry, Conti remarked, were also its greatest hazards. Among those, chlorinated hydrocarbons took the lead: PCB, PVC, and DDT were all highly toxic for humans. One of them, trichlorophenol, when brought to high temperatures released another chlorinated hydrocarbon, dioxin. Toxic substances, Conti explained, acted on the organism according to quantities, and their effect varied from molecule to molecule and also according to the age and general health condition of the organism. Mutagenic substances were a different matter, for there was no threshold under which contact may be innocuous.

That said, the point in Conti's book was to understand by which political system CMR substances were allowed to make their way into human and environmental health. To do so, she chose DDT to exemplify "how the mechanism of profit exploits the mechanisms of nature" (Conti 1977b: 39). The paradoxical aspect of DDT, Conti explained, was how, by killing birds who ate great quantities of poisoned insects, it had indirectly caused the increase of the number of insects themselves. In the meanwhile, insects easily developed resistance to DDT (but not birds, which were far more complex organisms). While ecological reasoning would suggest stopping this vicious circle and restore that of natural predation, the existing structure of political-economic opportunities in capitalist countries encouraged chemical industries to invest in the marketing of newer and newer poisons. In short, by eliminating birds, industry created a virtually endless market for insecticides. In this way capitalism made profits out of the manipulation/destruction of life.

Things being this way, chemical industry had already completely pervaded agriculture, a problem dramatically felt in Italy, where DDT content in human tissues, Conti reported, was 20 ppm, the highest among industrialized countries (Conti 1977b: 38).⁸ The result, was that "Water is poisoned, fish die, frogs have almost disappeared, birds are disappearing, man gets intoxicated, children get mercury in the womb and suck DDT with breast milk. Insects, instead, are thriving, and so is chemical industry" (Conti 1977b: 42). In 1976, to limit the poisoning of Italy's rivers by organophosphates, the parliament had passed a "clean water" bill—the so-called *legge Merli*. Conti was highly disappointed with it, as the law clearly exemplified the paradoxes of the political economy of low doses: while it established a table of maximum concentrations of pollutants in industrial effluents, it did not pose any limit to the quantity of total discharge from each plant. In practice, pollutants had to be diluted, but they could be released into the environment in any amount by an ever-increasing number of plants. Moreover, in order to comply with the limits imposed by the law, industrialists diluted not only the non-filterable pollutants, but also those that were filterable, mixing all effluents in the same drainage. As a consequence, filtering and purification processes would become more costly. A chemical plant near Milan, for example, released yearly 120 kg of mercury mixed with other pollutants, making the purification of its effluents very difficult. The European Community was aware of such paradoxes, Conti observed, and in fact it had adopted the criterion of "quantity of pollutant per unit of product," albeit equally unsatisfactory—for, if industry can produce as much as it wishes, then it can also pollute as much—at least this "polluter payer" principle spurred industrialists to invest in cleaner technologies (Conti 1977b: 43–44).

The *legge Merli* treated the environment as the ultimate, unlimited sink where Italian industry flushed away its poisons. However, Conti remarked,

the environment (the sea in this case), did not have its own “environment”: it couldn’t get rid of toxins. It would become filled with them. By passing a bill on industrial effluents based on the concentration principle, the Italian legislator had acted like a physician who instructs her patient to dilute a bit of salt in each glass of water, without considering that the patient has diabetes—thus drinks a lot—and does not have kidneys (Conti 1977b: 44–45).

Eventually, by the very functioning of natural cycles, poisons would return to society in the form of mercury accumulated in fish, or eutrophication—which caused tourists and swimmers to avoid popular recreational sites along the Adriatic Coast in the summers of 1975 and 1976. An effect of discharging the excess of human and animal waste into surface water, eutrophication was of course exponentially increased by the discharge into runoff waters of chemical fertilizers used in agriculture. As such, Conti considered it an indirect effect of organic chemistry. Moreover, since chemical fertilizers had replaced animal excrement in agriculture, the latter had become “waste” to be discharged into the sea. When agriculture and raising livestock are organically connected and use the same soil, no water pollution occurs, she emphasized; once separated, each becomes a polluting activity (Conti 1977b: 96–101).

Such a complex web of interrelationships between natural and social mechanisms needed a good dose of environmental planning. The book’s final chapter, “Ecology and Politics,” contained Conti’s proposed measures to counteract the environmental crisis that was occurring in the country. Taken as a whole, her proposals made no eco-technocracy; rather, they were based on a philosophical-Marxist view of social relationships as intrinsically and organically ecological. The struggle against those who damage nature, “the life of our and other species,” Conti wrote in the conclusion, must have society as a protagonist, and specifically one social class: the one that opposes capital, that is, the working class. In defending not only its own interests, but those of humanity itself as belonging to the sphere of nature, the working class would find substantial solidarities and coalitions in society—or at least so Laura Conti believed.

As this overview of the book reveals, Conti’s ecology was profoundly human-centered. At the core of all ecological relations lay the manipulation of nature by human work and the human body. The human body was also a recurrent metaphor through which the author—a medical doctor by training—evoked and explained the environment itself in physiological terms. Focusing on CMR risk, but also enlarging the view to society, Conti’s ecology was very similar to that of another woman scientist who had convincingly argued that petrochemicals posed a terrible menace to all living creatures including humans: the American biologist Rachel Carson. Unlike Carson, however, Conti was also a politician. Her idea of ecology must be linked to her political militancy as a communist. As her numerous publications testify, her engagement

on environmental issues was never disentangled from her political engagement, the two linked in a unique vision of the relationships between society and nature that might be described as radical, or political, ecology (Merchant 2005). In fact, Conti explained, the science of ecology was much broader than the three levels laid out in her first chapter. It was the science of interrelationships among all living and nonliving matter, independent of human interactions. Only part of this vast science was relevant to economic activities, and thus to political choices. Preserving environmental and human health from toxic contamination, saving water not only for industry and agriculture, but for recreation and enjoyment as well, and conserving nature for future generations were matters concerning the sphere of political action. Politics was, to Conti, the realm of “will,” counterbalancing the impersonal “mechanism” of economic laws. “A blind mechanism is all is needed to degrade the environment,” she concluded. “In order to rebuild it, will is needed. A will based on science and finding expression into well coordinated political action” (Conti 1977b: 10).

As Laura Centemeri (2006: 120) remarks, the Seveso experience added to Conti’s vision of ecology a sense of the role of culture and symbolic meaning into the shaping of human-nature relationships: places and people’s connection to them must find their way into the science of ecology. Such a vision was probably what led Conti to join the effort that others were making in those same years to build a new environmental movement in Italy. In 1979 she participated in the creation of the *Lega per l’Ambiente*, today a highly established environmental organization; born as a subsection of the Communist Party’s cultural/recreational activities, the organization was mainly concerned with the problems originating from industrialization—from energy to pollution and food contamination, from the impact of automobiles to waste management (Della Seta 2000: 46). The novelty of this organization, in respect to other preceding experiences of Italian conservationism, was its being a “popular” environmentalism, initially much connected to the politics of the Left. Conti was not the only militant scientist to participate in the making of this new organization: she was joined by the chemist and communist deputy Giorgio Nebbia, the urban ecologist Virginio Bettini and the public prosecutor Gianfranco Amendola (both of whom later become Green deputies), and the American biologist Barry Commoner, who played a key role in the formation of an environmental consciousness in the Italian Left. Probably the most authoritative among the founders of Legambiente (also for generational reasons), Laura Conti was also the “organic” intellectual of the movement. Her numerous publications, and especially *Il dominio della materia* (Conti 1973) and *Questo pianeta* (Conti 1983), were the basic readings of a generation of Italian environmentalists. With a series of articles published in *l’Unità* and *Rinascita* (respectively, the newspaper and cultural magazine of the Communist Party),

Conti articulated the environmentalist reasons against nuclear energy and for a stricter regulation of game hunting, as well as those for sexual education in schools, for public health reform, for the pro-abortion law. Various prizes, a number of Legambiente's territorial sections, a laboratory of environmental education of the University of Milan, and a school of environmental journalism are now dedicated to her. Her personal papers are conserved at the Fondazione Micheletti in Brescia.

“Class” vs. “Power”: A Tale of Two Ecologies

In delineating her political ecology vision, Conti's sources of inspiration were Marx and Engels themselves, but also a few seminal works published in those same years.⁹ In fact, Conti was not alone in her search for ecological Marxism: in the fall of 1971, at its yearly cadres' school in Frattocchie, the Italian Communist Party had held its first national meeting on the theme “Man, nature, society.” Opening the conference, physician and party executive Giovanni Berlinguer admitted the need to update Marxist orthodoxy in order to take into account the concept of natural limits; he also highlighted how toxicity had become the existential condition of global capital. Berlinguer, along with other top-ranking cadres and “organic intellectuals,” compared ecology to socialist planning and emphasized the need for the party to consider the environment a working-class priority (Luzzi 2009: 100–01; von Hardenberg and Pelizzari 2008). A landmark in the making of an ecological consciousness among a generation of militants, the conference had an enormous symbolic meaning—certainly greater than the sum of its speeches—for it implied the possibility of developing a totally new line of critique of capitalist society, *and* a new kind of environmentalism. In a sense, the whole experience of labor environmentalism in Italy can be considered a product of that meeting, which had encouraged communist activists to link ecology and class struggle. In 1972, one year after Frattocchie, a national conference of the confederation of unions was held in Rimini on the theme “Industry and Health.” Many other signals throughout the 1970s testify to both intellectual and activist ferment in linking Marxism and ecology. The publisher Gian Giacomo Feltrinelli, for example (he also being one of the most prominent leftist intellectuals of the period) initiated a book series dedicated to “Medicine and Power,” collecting books on health risks in industrial societies. Even more radical was the position of another leftist intellectual, the journalist Dario Paccino, author of *L'imbroglione ecologico* (Paccino 1972) which exposed nature conservation as an elitist concern and put workers' bodies firmly at the center stage of a true environmentalism.

Among Conti's references, there was a collective volume in the philosophy of science called *Lape e l'archietto. Paradigmi scientifici e materialismo storico*,

published by Feltrinelli; edited by the physicist Marcello Cini, and destined to become a landmark contribution to the dialogue between the social and the natural sciences in Italy, the book posited the Marxist critique of science as a search for the imprint of class relationships within the very methods and contents of scientific practice (Cini 1976). Conti commented that a thorough contestation of capitalism's use of science could only come "from that global outlook over the world which is ecology." In fact, *political* ecology, that is, "the study of how social relationships within the human species influence the natural world and other species," seemed to Conti even more relevant as a critique of capitalism itself (Conti 1977b: 135–36).

The most relevant novelties in the field of occupational/environmental health consciousness in Italy, however, had taken place in the couple of years immediately before the Seveso disaster (1974–1976), with the birth of the grass-roots organization *Medicina Democratica* (MD), whose founder and inspirer, Giulio Maccacaro, was also directing the major Italian scientific magazine *Sapere*.¹⁰ MD was destined to have a key role in several judicial inquiries concerning Italian industrial plants in the following decades, including that in Porto Marghera, the biggest petrochemical area in Italy, located in the Venice lagoon. The articles published in *Sapere* during the 1970s—some of which were written by Barry Commoner—testify to the remarkable level of political-ecological consciousness within the country's new generation of militant scientists, and also to the hegemonic capacity that the Italian Left exercised in the realm of scientific culture (if not at the governmental level).¹¹

The Seveso experience also inspired another seminal book of the Italian radical ecology, significantly entitled *Ecologia e lotte sociali. Ambiente, popolazione, inquinamento*, also published by Feltrinelli in 1976.¹² Coauthored by Virginio Bettini and Barry Commoner, the book linked environmental hazard to a Marxist analysis of the capitalist economy, highlighting the toxicity of most industrial productions and the need to democratize the management of risk. In his introduction, Bettini theorized a distinction between "power" and "class" ecology: the first was represented by company experts and government agencies, the second by the "popular scientific committees" organized in Seveso by the Communist Party, coalescing working-class people and militant scientists. These committees were an advanced experiment in working-class ecology in the sense that they practiced a participated and emancipatory form of knowledge production (Terracini 1977). Their point of reference was the methodology practiced in those same years by the *Servizi di Medicina per gli Ambienti di Lavoro* (SMALs), the Medical Services for the Work Environment, where material evidence and bodily experience of toxicity were actively recorded by the workforce and elaborated with the help of militant experts into officially recognized "science," of practical relevance in the public arena (CGIL-CISL-UIL Federazione Provinciale di Milano 1976, Calavita 1986,

Barca 2012). In Bettini's view of ecology, industrial pollution represented the most compelling and politically relevant aspect—in contrast to those who approached problems of environmental contamination as if these were not borne and paid primarily by subaltern social groups. In his view, “the debt towards nature is a debt towards the working class” (Bettini and Commoner 1976: 6).

It is not clear, however, how much the working class, and even the workers of the ICMESA plant, actively participated in Seveso's “popular scientific committee,” or whether this only comprised a number of “militant experts,” including university researchers, SMAL personnel, and organic intellectuals.¹³ Despite their generous efforts at helping local people to struggle for their rights (and not only for monetary compensation), communist activists in Seveso met with diffidence and even open resistance, which was also significantly related to their pro-abortion stance. A political battle of great significance, the passage of women's right to abortion was being fought over at the national level during those very years by the government and the left oppositions. Seveso became one crucial terrain of that battle, a place of enormous symbolic power—and local people did not like that. Furthermore, there was the issue of evacuation: accepting safer MACs, like those proposed by the Left, would imply that the authorities would revise the zoning, and that the thousands of residents of zone B must leave their homes forever, a price that Sevesians were not willing to pay (Centemeri 2006).

The problem with the strategy of working-class ecology was that, however ideally correct, it met with a dual challenge: it had to overcome political-economic constraints, corporate/governmental resistance, and power-science coalitions, but it also met the inevitable noncompliance of real working-class people, who struggled for things different, and also thought differently, from what was expected. As Laura Conti wrote in an illuminating passage of her *Visto da Seveso*: “People had never been put in the condition to understand that, to have a healthy environment, it is necessary to sacrifice something: everything has always been done to get more salary, more cars, more highways, even—in the best cases—more hospitals and schools, but almost nothing to get cleaner air, cleaner water, safer food. At this point, why expect that all of a sudden the *Brianzoli* recognize that living in a healthy land is worth a mass exodus?”¹⁴ (Conti 1977a: 54).

On this point—an issue of enormous relevance such as the formation of ecological consciousness, and, implicitly, its relationship with class consciousness—Conti's critique was directed against her own party, which had never taken a real stance toward the protection of nature. She found it outraging that only the people of Seveso were stigmatized as “immature” or “stubborn,” and concluded, “none of us has the right to criticize the *Brianzoli*” (Conti 1977a: 54).

Conclusions

The chapter has shown the existence of a working-class ecology in the making in 1970s Italy. This radical political ecology was an intellectual project that heavily rested on the organizational support of the Communist Party and was also partially constrained by ideology. It nevertheless introduced into the Italian environmental debate and political scenario a perception of ecology as something having to do with the human body and its situatedness within the configuration of power relationships, both inside the factory and in the local space. Consciousness of the political link between occupational, environmental, and public health was not a philosophical speculation for a few militant scientists; in fact, it was largely shared throughout the Left and in the confederation of unions, and led to a period of intense struggle for the recognition of workers' control over the work environment, eventually leading to the creation of the National Public Health System in 1978.

The conceptual and political link between anti-capitalist struggles on the shop-floor and outside the factory gates also led many to think in terms of working-class ecology: a political project that did not survive the harsh economic recession of the late seventies, nor the contemporary recrudescence of political conflict in the country, including terrorism. Moreover, by the end of the decade, the political-economy scenario began to change: factory work, especially that employed in big high-tech industry, represented less and less of the Italian workforce, while the political and symbolic power of blue-collar workers started to erode and entered an irreversible crisis by the end of the 1980s.

All considered, however, the radical ecology project did have a durable legacy. Numerous anti-toxic struggles, involving more or less grassroots organizations especially at the local level, have concerned petrochemical sites throughout the country in the last fifty years. The time has come perhaps to tell the story of these struggles, tracing their material and ideal connections with each other and with the story of class ecology in Italy.

Notes

1. According to the International Labor Organization (data from 2010), "every year more than 2 million people die from occupational accidents or work-related diseases. By conservative estimates, there are 270 million occupational accidents and 160 million cases of occupational disease." See http://www.ilo.org/global/Themes/Safety_and_Health_at_Work/lang-en/index.htm.
2. This problem was already highlighted by Barry Commoner in his seminal *The Closing Circle* (Commoner 1971), and has increased exponentially since, as most of these chapters clearly show.

3. Commoner visited Italy frequently between 1975 and 1976, giving talks and publishing articles, and established a direct and durable relationship with Italian environmentalists (Commoner 1975).
4. The battle for citizens' right to know remained a constant in Conti's environmentalist activity: in 1979, for example, commenting on the Public Health Reform approved by the Italian parliament, she opposed article 20 of the law, establishing that industries be compelled to disclose to local authorities the list of substances they manipulated, for the article still granted the "protection of industrial secrets" against public disclosure (Conti 1979).
5. Conti's experience in Seveso also inspired her to write the novel *Una lepre con la faccia da bambina* (*A Hare With the Face of a Girl*, 1978). For an eco-critical reading of that novel, see Iovino, forthcoming. A series of annotations of a more technical and legislative nature are now conserved at the Fondazione Micheletti, Brescia: Fondo Laura Conti. See http://www.fondazionemicheletti.it/public/Scheda_Fondo_Conti.pdf.
6. Such perception was also present in the experience of U.S. environmentalism of the 1960s and 1970s (Gottlieb 1993; Rome 2003; Montrie 2008: 106–12).
7. See: http://scienzaa2voci.unibo.it/scheda.asp?scheda_id=914.
8. That was an average value: in some areas of intensive monocrop cultivation, like the highly mechanized Po Plain, values reached 40 ppm. The average was 11 ppm in the United States, 10 in Israel, and only 2 in the United Kingdom; by contrast, it was 31 ppm in India. This pattern seems to follow the relevance of agriculture in each national context. It is not clear what Conti's source was for these data, but likely enough it was Rachel Carson's *Silent Spring* (New York 1962); thus, they may have been fifteen years old.
9. She quoted Marx's passage in *Capital* on capitalist production as a fundamental break in social metabolism, and Engels's remarks on nature's revenge on human domination in the *Dialectics of Nature*. But she also abundantly relied on Barry Commoner's work and on a collective volume on socialism and the environment published by Feltrinelli a couple of years before.
10. Maccacaro, who died prematurely in January 1977, is considered a father of biometrics in Italy, and was a founder of *Epidemiologia e Prevenzione*, the most important Italian epidemiology journal.
11. The list of articles published by the magazine on the topic of industrial hazards would be long: some examples are articles on the Minamata disaster (K. Myamoto, "Il progresso avvelenato," April 1976, 2–12), on titanium dioxide and the contamination of the Tuscan coast with "red mud" (Gruppo Prevenzione Montedison di Castellanza, "Eliminazione dei fanghi rossi," July–August 1978, 45–46); on air pollution in the petrochemical site of Porto Marghera (G. Mastrangelo and G. Moriani, "Porto Marghera: per la salute contro l'inquinamento," July 1976, 14–17); on asbestos hazard in Trieste (P.M. Biava et al., "Cancro da lavoro a Trieste: il mesotelioma della pleura," August 1976, 41–45); on industrial pollution in the Po Plain (S. Bernardi, F. Mandelli, and L. Mussio, "Inversione termica e nocività ambientale," August 1976, 36–40); and on PCBs (A. Fraser, "I PCB, un'altra Seveso?" December 1977, 29–34). A special issue was entirely devoted to the accident in Seveso ("Seveso, un crimine di pace," November–December 1976), plus various other articles in the following years (for example, the forum "Seveso due anni dopo," July–August 1978, 2–27).

12. The book also included the text of a number of lectures that Commoner had given at the Istituto Superiore di Sanità in 1976 (Bettini and Commoner 1976: 5–6).
13. This is the impression given by the list of members reported by Bettini on page 8 (Bettini and Commoner 1976: 8).
14. See Conti (1977a: 54). *Brianzoli* is the term defining the people of Brianza, a sub-area of Lombardy of which Seveso is part.

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