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Bread and Poison

Stories of Labor Environmentalism in Italy, 1968–1998

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This chapter tells the story of the encounter between a generation of Italian experts in industrial hygiene (physicians and sociologists) and factory workers, and how that encounter translated into new forms of knowledge and political action. The chapter aims to highlight the material relations existing between occupational, environmental, and public health as they were experienced by subaltern social groups, who knew industrial hazards through their bodies and through the environments where they worked and lived. This material reality—the organic relationship between humans and nature through work—has been politically obscured by dominant social forces and by the divide between the labor and environmental movements. The case of labor environmentalism in Italy, however, shows how, in particular places and at particular times, the possibility emerged for a reunified consciousness of industrial hazards, one that challenged alienating forms of scientific knowledge and political-economic power.¹

The experience of labor environmentalism in Italy began when what I call “militant science”—the new Italian industrial hygiene born out of the 1968 student movement—interacted with the knowledge of environmental hazards embodied by factory workers. During the seventies, starting from a platform of health grievances based on a mix of scientific and lay expertise, the Italian labor movement drew up a comprehensive strategy of struggle for occupational, environmental, and public health. That early coalition of labor with “militant” industrial hygiene in Italy eventually produced legislative reforms of great social and environmental

significance, such as the Labor Statute (1970) and the national public health system (1978). Yet, as this chapter also shows, the actual impact of those institutional reforms on workers' bodies, work environments, and local landscapes came to be biased by a history of political-economic differences.

In dealing with workers and the environments around them, I aim to contribute to the building of an “embodied” and environmentally conscious working-class history. I start by showing how, during the transformation of the country into a highly industrialized economy (1958–1978), workers' bodies bore the marks not only of capital but of the Industrial State, especially in the petrochemical sector. At the same time I emphasize how, once they joined with “militant” experts, those same bodies (and minds) openly challenged and counteracted dominant ways of knowing and regulating industrial hazards.²

The Economic Boom and Its Social Costs

Between 1955 and 1970, roughly four million people from southern Italy migrated to the northern industrial regions, searching for factory jobs. From the 1960s onward, they found work in the fast-growing petrochemical, steel, and mechanical industries. By the end of that decade, and during the 1970s, the Italian government implemented a new policy of transfer of industrial jobs to the South by locating a number of publicly controlled companies, mainly in the petrochemical sector, along the shores of the southern regions.³

In consequence of such massive changes, the country experienced the epidemiological shift typical of advanced industrial economies—namely, from infectious to degenerative diseases, especially those correlated with environmental poisoning from mercury and benzene hydrocarbons. Research in industrial hygiene began to be sponsored by the INAIL (the Workers' Compensation Authority) and by the European Community for Carbon and Steel, but it was mainly focused on risk insurance and clinical pathology rather than on prevention in the work environment. Facing an impressive worsening of work conditions and a steady increase in occupational accidents, the Italian unions adopted a defensive strategy, mainly based on the attempt to increase compensation and strictly enforce it. Compensation law, however, was a major obstacle to the prevention of industrial hazards, for the same law sanctioned the total nonliability of employers in the matter of both workplace accidents and long-term health risks⁴.

Expertise and Militancy: The “Environmental Club”

This typically market-oriented approach to workers' safety was to be abandoned and completely revised during the 1960s—a period in which union confederation was particularly strong politically—and gradually led to the passage of a very advanced piece of legislation, the Labor Statute of 1970. Coming after a decade of tremendous changes in the cultural and political climate of the country, the statute granted workers the right to exercise direct

control over working conditions. This principle was revolutionary in the sense that it emancipated employees from the oppressive control of “company doctors,” whose behaviour was strongly conditioned by their being on the company payroll. Furthermore, the Labor Statute introduced a radically new conception of workers as assigners of physicians’ services and thus entitled them to control over employers’ choices. To enforce this right, workers were allowed to bring independent experts into the workplace to test its environmental conditions and to examine the workers’ exposure to risks.⁵

Those “experts,” on whom workers relied for their empowerment in the workplace, were mostly young physicians and labor sociologists, coming from a student movement that in Italy was strongly hegemonized by the radical left and considered itself—in Gramscian terms—an intellectual army at the service of the working class. During the 1968 university protests, students and researchers in industrial hygiene were invited by union representatives to collaborate with the union confederation in breaking a history of subordination of medical doctors to employers. “Socialising Culture,” the slogan of the student revolt in general, became particularly meaningful in the case of workplace injuries and diseases. Medical students neglected their university courses to study in the factories, learning from workers’ testimonies.⁶

This was the golden age of the movement for workers’ health in Italy. A permanent workshop, formed by sociologists and “new” industrial hygienists under the political hegemony of the union confederation, elaborated a new scientific paradigm for the work environment based on the translation of complex analysis into a few simple principles of political action. These were embodied, mainly, in the slogan “Health is not for sale” and in the principle of nondelegation in the matter of health issues, implying the workers’ direct control over knowledge and practices regarding the workplace. Soon renamed the “Environmental Club,” this group helped to redefine the new confederate political strategy for safety and health. Meanwhile, at its thirty-sixth congress held in 1972, the Italian Association of Industrial Hygiene officially recognised the “objective” value of the workers’ experience and the utility of a “participative” methodology for the collection and recording of environmental and biostatistical evidence at the work group level. This was a methodology on which the Environmental Club had been working for a few years, based on the direct production of knowledge within the workplace through a series of practical measures that workers could carry out during their workday—such as monitoring noise, dust, temperature, and so forth.⁷

Between 1969 and 1972, unions’ grievances directly regarding safety and health grew from 3 to 16 percent. Most interesting, however, is that this struggle did not concern the work environment only: it was directed toward broader reform in national health policies, since unions and the left parties were calling for a new system of public health services directly controlled by the State. A series of industrial accidents occurring during the seventies, mainly in the petrochemical sector—and particularly the Seveso disaster of 1976—were instrumental in keeping public opinion focused on the relationship of industrial hazards to environmental and public health. Risk prevention,

cancer epidemiology, exposure standards, right to know, and participatory decision making became widespread ideas, leading to the formation of the organisation *Medicina Democratica*—a grassroots action/research movement that was to become instrumental in a number of occupational and environmental health controversies in the following decades.⁸

The importance of this particularly positive period of struggle and social alliances can be seen in its major accomplishment, the Public Health Reform Bill passed in 1978. This legislation mandated locally based public health services (USL) that would supervise both environmental and health quality within factories and communities. With it the principle of the internal relationship between workers' and citizens' rights to health obtained institutional recognition at the highest levels. The most important meaning of the workers' health struggle, therefore, was as a primary test for broader social reform, affecting the whole of Italian society. By struggling for a redefinition of pollution-related diseases, factory workers not only sought greater safety for themselves but also aimed for more comprehensive sanitary protection for their families and the entire national community. This story represents in some way the success of what unions, and the political left in general, defined as "the political strategy of class alliances and solidarity."

The Italian public health system was born at the end of a long battle for occupational health and represented that battle's most significant victory. At the core of the fight was a new consciousness about the material and political unity of work, environment, and public health—or labor environmentalism—that had first been tried on the shop floor.

Health Struggles North and South

The encounter between labor and environmentalism in Italy began at the heart of the country's most industrialized area, between Torino and Milano, in the core years of the Italian economic boom and in the middle of a revolutionary cultural transformation related to the student protests of 1968 through 1977. Where the joining of occupational with environmental and public health produced its most advanced results was the province of Milano in the period 1972 through 1977—with the experience of the SMALs, which is the topic of the following paragraph. The chapter then moves through space and time toward a rural area of the South—Manfredonia, Apulia—where a very different scenario of labor environmentalism took form.

Milano: Reforming from Below

In 1972, the regional government of Lombardia instituted SMALs—*Servizi di Medicina per gli Ambienti di Lavoro* (Medical Services for the Work Environment), giving it the task of supporting the implementation of the fifth and ninth articles of the Labor Statute, which concerned workers' right to control the enforcement of safety and health measures in the workplace. At the demand of the "factory board" (a union representative committee),

SMAL physicians entered the workplace to investigate the health conditions of the workers by measuring levels of hazard and compiling and updating “environmental data” registers and personal sanitary journals for each worker. On the basis of their research, they made nosological inquiries in collaboration with public health agencies, and instructed employers regarding compulsory risk prevention measures. Most important, both the results of the SMAL physicians’ research and the countermeasures they proposed were formally discussed with workers, through a “health committee” overseen by the factory board. The SMALs were a public health service mandated by law with the purpose of integrating the work of existing public health services (namely the Labor Inspectorate and INAIL), as these agencies had proved ineffective in halting the worsening of workers’ health during the previous two decades.

The creation of the SMALs gives us an idea of the extent to which the action/research methodology elaborated by the Environmental Club since the late sixties had become culturally hegemonic and politically feasible. We might consider them a successful example of what science scholar Sandra Harding defined as the philosophy of “strong objectivity”—that is, a research method that intentionally assumes the standpoint of victims and marginalized others. Supported by physicians and labor clinicians from the University of Milano and overseen by local and regional administrations, the SMALs were granted authority based on scientific rationality, and unions could use their findings as a solid basis for labor disputes.

In fact, the SMALs were a form of “militant’ science.” Their methods reversed the traditional industrial hygiene approach: now it was not workers as guinea pigs for occupational medicine, with scientists reading their bodies to extract “scientific” data from them; it was the other way round, as workers themselves solicited the experts’ intervention to give scientific support to their empirical observations about health hazards on the shop floor. But workers could only realize this in an organized way, through their factory boards. It was the factory boards—that is, the unions—that called for a SMAL intervention and finally decided what initiatives to carry out on the basis of the SMAL’s recommendations. The control of the unions over all SMALs activity is clear: they had pressed local administrations to create the SMALs and had lobbied for the passage of the regional bill; they organized courses and training activities for would-be SMAL physicians, selected candidates, and put them in contact with workers; and they set the SMALs’ agenda and coordinated their activities at the regional level.⁹

It was not just a practical and political hegemony, however. The language of the SMALs’ reports shows how physicians fundamentally shared with the unions a militant conception of knowledge as a form of empowerment, as well as a militant conception of health as part of the broader conflict between labor and capital. The SMALs interpreted their relationship with employers not in a defensive, but in a counteractive, way. They entered the structure of production, starting at the plant level, and discussed the scope and regulation of technological change that is the very core of industrial production.

In the SMAL vision, in line with the insights of the “new” industrial hygiene and the “Environmental Club,” technical progress and economic growth had produced in Italy, as in other advanced industrial countries, not a general improvement in health conditions but a shift in disease patterns. The types of pathology had changed, not their social incidence. This was true within the factory, where the classic distinction of risk factors (dust, chemicals, and physical conditions) was to be aggravated by new factors, such as rhythm and position of work, standardisation, repetition, and automation. Furthermore, given that most occasional illnesses tended to become chronic, “the opinion that any health professional felt to give about the dangerousness of some work environment,” according to a SMAL document, “would be deficient and partial if not confronted with the opinion of those who live there eight hours a day.”¹⁰ The workplace was to be seen as an (unnatural) environment, and workers were the ones who knew it best.

The SMALs’ self-conception as militants is also shown by their behaviour as rank-and-file activists rather than as impartial, disinterested science professionals. In Cinisello Balsamo, for example, the local SMAL dealt with a complex social conflict, fostering local opposition to the Terzago steel plant because of a noise issue. It proved in this case to be much more than a health professionals’ service, instead acting as an intermediary in an environmental conflict while also accomplishing its task of mandating stricter health and safety measures. SMAL physicians quickly connected the noise pollution issue in the community with the existence of a serious health hazard within the workplace, and acted to eliminate both at their source. That was not an easy task, however, because the situation was exacerbated by the factory owners’ response to citizens’ protests—forcing workers to close the plant’s windows and thus aggravating the effect of the noise on workers’ ears and the lack of ventilation in the plant. Furthermore, in this small-scale factory the union’s presence was weak, so SMAL intervention had been called for by the local public health official responding to the demand by a citizens’ anti-noise committee. The physicians’ official entrance into the workplace as a bureaucratic agency could have upset the employees, who were worried about the employer’s threat of shutting the plant down.

This case clearly shows the internal contradictions in the relations between workplace and environment and between labor and community in the matter of health. These contradictions led to a kind of intervention that was scientific and political at the same time, that was able to reconnect the two fundamental loci of the struggle (within and beyond the factory gates), and that was able to act at different material and political scales. Reassuring the workers and looking at ways of eradicating the noise problem required the SMAL physicians to adopt a militant vision of their institutional and professional task: it required them to accomplish tasks not strictly inherent in their mandate, such as setting up a series of community-worker meetings with the participation of experts from the Otolaryngology Clinic of the University of Milano and members of the local government.

In their final report, the SMAL physicians diagnosed partial deafness in 30 percent of the workers and chronic acoustic shock in another 36 percent, mostly women. These results, based on “objective” audiometric measurements and international standards, could not be denied by the employer. The SMAL intervention, though, did not stop at the workers’ health conditions; the physicians sought the collaboration of “democratic technicians and engineers,” as they wrote in their report, meaning the voluntary support of external experts in solving the interrelated problems of vibration and transmission of acoustic waves. As a result, the SMAL was finally able to suggest a whole variety of technical solutions for limiting noise and preventing future injuries, at the same time resolving the community/workplace conflict.¹¹

Another case, that of Metal-Lamina, a metal-mechanical plant in Assago, illustrates further the interconnections between the work environment, worker health, and community health. In this case, too, SMAL intervention had been demanded by public officials at the local level, starting with the Municipal Ecology Service, on the grounds of complaints coming from workers in a neighboring plant about Metal-Lamina’s discharges of smoke. The SMAL physicians found that the presence of lead dust within the workplace was ten times the legal standards and ordered the immediate hospitalization of eight out of thirteen smelters. The workers reported that five dogs had died in the plant in the course of one year, probably by the ingestion of lead dust deposited on the ground.

The stopping of the foundry blocked production, and management threatened to shut down the plant; eventually, however, the company decided to implement all of the SMAL’s requirements and those of local public officials concerning the abatement of lead dust and smoke, and it installed a water purification system. The managers also asked the SMAL experts to become the company’s consultants in the matter of health and safety regulations.¹²

This case opens up the question of managerial and entrepreneurial behaviour. The only reported cases of continued opposition to the SMALs’ work are those involving the plants owned by Montedison, the most important partially State-owned chemical corporation in the country, producing synthetic fibres and pharmaceuticals in a number of plants. Montedison had merged with the ENI group (the State Agency for Hydrocarbons), forming Enichem, a powerful petrochemical company that came to own a number of plants for the production of fertilizers and plastics spread along the Italian coast. Its behaviour was representative of the particular contradictions that marked the Italian experience in the matter of worker and environmental health. In opposing the entry of SMAL experts into its plants, the Montedison management claimed the protection of workers’ health as their exclusive business, accomplished by its medical service. The existence of such a company service and its partial control by the State were, in management’s view, sufficient reasons to present the company’s workers as a privileged category, which did not need supplementary oversight.¹³

The idea of the Montedison-Enichem workers as a privileged group was grounded in the State’s involvement with the petrochemical sector, which

was perceived as strategic production in the Italian economy. It was also the result of the power relations between unions and the State, which allowed Italian workers in public companies to have permanent, secure jobs. This complex mix of conditions gave the petrochemical industry in Italy immense social power, as we will see in the next case, concerning an Enichem plant in Manfredonia. Here the entrepreneurial State dealt with a rampant internal conflict of interests and functions, centred on the problem of risk definition and distribution of social costs.

Manfredonia: State Chemicals

The ENI group first arrived in Manfredonia—a fishing town on the Adriatic coast—in the late sixties, under the name ANIC (Azienda Nazionale Idrogenazione Combustibili, State Company for the Hydrogenation of Carbons) to explore the methane layer in the area with the intention of building a plant for the production of urea and ammonium sulphate (used as fertilisers) and caprolactam (a raw material for synthetic fibres).¹⁴

From 1972 onward the ANIC plant saw a series of accidents, which had the long-term effect of changing the collective local psychology and transforming residents into citizens of the “risk society.” These accidents allowed Manfredonians to see and clearly perceive—by their noses, ears, and hands—what was being produced within the factory besides salaries and income. Ammonia, arsenic, nitrous acid, sulphuric acid, and other pollutants were visibly released in a series of fallouts amounting to several tons each, provoking collective intoxication, mass escapes, and panic. The most serious fallout occurred on a Sunday morning in September 1976 (two months after the more famous Seveso accident), when an explosion in the arsenic column caused the dome-shaped roof to blow off the plant, falling on a shed on the opposite side. Soon after, people walking downtown could see a wide brown cloud coming from the plant and moving toward them, followed by a yellow slush that gently fell like snow all around. That snow was arsenious dioxide, and it was later calculated that some thirty-two tons of it had fallen on the town.¹⁵

The symptoms of widespread contamination soon became apparent: the day after the explosion, many barnyard animals died and large quantities of arsenic dust were found on leaves. In the following hours, the first one hundred people were hospitalised with strong symptoms of arsenic intoxication. These were mostly workers from the plant and residents from the Monticchio neighbourhood, a former rural area surrounding the factory that had become a crowded settlement of 12,000 poorly housed people who had migrated from the countryside in search of jobs. The management of the ANIC denied the existence of any risk and put the employees back to work as if nothing had happened. The only action it took was sending in a special team of maintenance workers, to clean up, who were given no protection and had no idea of what they were handling. These workers swept away the arsenic dust day and night so that the plant could resume regular operations the following Monday. Soon after the accident, in October 1976, six top managers from

the ANIC plant were investigated for “negligent slaughtering,” but the preliminary inquest did not even get to the courtroom. In fact, the slaughtering was not evident, yet it would become so only a couple of decades later, when a number of workers who had entered the factory in the early seventies came to suffer illness and death by a variety of serious ailments related to the acute arsenic intoxication of 1976.

The Manfredonia accident occurred when the golden age of labor environmentalism in Italy was coming to an end; moreover, it happened in the South. There was no SMAL in Manfredonia nor any public health officials, students, or even unions willing to counteract ANIC’s overwhelming contamination of both human bodies and social values. The politics of “deceit and denial” were easily implemented in this case; in fact, the Manfredonia accident is still mostly unknown in the international literature and even to the Italian public. The existence of a well-consolidated knowledge/power assemblage connected to the Italian State was materially experienced by the victims of the 1976 accident in the form of delayed and misinterpreted data coming from laboratory tests and the deliberate manipulation of scientific standards with the aim of altering test results. Well-known and respected industrial hygienists, at the Labor Clinics of both Bari (the closest city) and Milano—all employed as consultants on ENI’s payroll—denied public access to test results for nine precious days, then revealed levels of urine contamination from arsenic that were twenty to fifty times the maximum standard for several hundred cases. Local hospitals, however, were not able to receive so many people at once, and a number of victims were sent home having received no care. Company doctors decided to arbitrarily raise the levels of allowable urine contamination by one hundred and two hundred times so as to declare most of the employees “able to work.”¹⁶

The 1976 accident gave rise to no wide or significant reaction from the community. The attempt to minimise hazards, by delaying test results and by recalling almost all of the workers to work, had the effect of reassuring a population still largely unaware of the real consequences of the contamination. Only a radical left, grassroots organization, Democrazia Proletaria (DP), attempted to keep public opinion alert to the “lock on information” enacted by the government in Manfredonia—a practice already manifest in the Seveso experience. A few hundred people participated in a public demonstration set up by the DP some weeks after the explosion. The participants were not mere observers but people directly affected by the environmental consequences of the ANIC operation. These protests did not represent the voice of isolated and elitist environmentalists, but came from the world of work. Factory employees denounced having been sent to work with high levels of arsenic in their urine and no protection against the environmental contamination within the plant; local fishermen—a group that in the past had been strongly representative of the community identity and that continued to produce a significant part of the town’s income despite the growing threat to their livelihoods from the ANIC plant—claimed that the Harbour Office had kept evidence of marine pollution in the bay area secret in order not to create

alarm and disturbance in the local economy. Most interesting, however, are the voices that came from the Monticchio neighbourhood, where a Citizens' Committee for the Defence of Health was created and where a march of more than ten thousand on City Hall began on October 17. Nevertheless, DP was not a powerful organization with thousands of affiliates, nor could its social influence grow much given its clearly declared loyalty to the extra-parliamentary Marxist left.

Other political forces, including the left parties, were largely absent from the social construction of community opposition to the plant, on this as well as later occasions. In understanding such a position, the "job-versus-the-environment" discourse is probably the most relevant explanation: no party or union wanted in fact to be identified as contesting an agency offering employment, even if only 850 people effectively worked in the plant in 1976 and the total number in the following decades would never exceed a thousand.¹⁷ Even more deafening—for what concerns us here—was the silence of the unions in Manfredonia. No SMAL was mobilized to assess the effects of the 1976 accident or the long-term effects of urea and caprolactam production on ANIC workers and their families in the surrounding area. Such a striking difference between the politics of the union confederation North and South is still in need of a historical explanation, hopefully achieved by future research.

Nevertheless, the lack of initiative on the part of (male-led) unions left open the possibility for another agency to come to the fore: women. It was a group of forty local women, those most affected by the accident's fallout while living in proximity to the plant and the wives of its workers, who mobilized. Embracing an ecofeminist approach, they formed a Women's Citizen Committee and succeeded in bringing the ENI group to court. Not the Italian court, though, but the European Court for Human Rights in Geneva, which, hearing the Manfredonia case in 1988, eventually came to rule against the company in February 1998. The court declared Enichem guilty of moral damage by highlighting the relations between the toxic wastes and emissions from the plant and the women's private/family life. The ruling was centred on the "right to know"—that is, the idea that the plaintiffs were entitled to access to information strictly concerning their own and their relatives' properties (house and body) and that the company had illegally withheld that information. The court also declared the Italian State guilty for not protecting the plaintiffs from the violation of their privacy. The "right to know" theory, however, does not imply the liability of a company (or the State) for the direct consequences of production. While the women of Manfredonia had asked for a huge, collective settlement for "biological damage," the court granted each plaintiff an individual sum as compensation for "moral damage," for a total amount of one-fiftieth of the original request. Even more striking, the court rejected the request of the plaintiffs that the Italian State be compelled to clean up the area, to establish an epidemiological study of the entire Manfredonian population, and to open an enquiry into the environmental impact of the Enichem plant¹⁸.

And yet something happened in Manfredonia that again set up the possibility for industrial hazard to translate into social, and legal, action. In 1995, a disabled and retired worker from the Enichem plant, Nicola Lovecchio, casually met a physician at the Labor Clinic of the University of Bari, Maurizio Portaluri, for a routine medical check. At the time Lovecchio was already suffering the consequences of the strategy of denial played by company doctors from 1976 onward: He had lung cancer that, had it been diagnosed a couple of years before when it was already visible by an accurate X-ray, could have been effectively treated. Lovecchio, instead, was declared “able to work” until the cancer was widespread, and he died at age forty nine, twenty-one years after the accident of September 1976.¹⁹

Portaluri represented the “democratic physician” the movement for workers’ health in the seventies had called for, being allied with the workforce against employers and company doctors. Some years before, he had read a dossier filed by the organization *Medicina Democratica* about another Enichem plant located in Porto Marghera, near Venice. The dossier documented the investigation that another worker, Gabriele Bortolozzo, had started against management detailing the criminal responsibility of the company doctors for the death and disability of many workers from various forms of cancer, all related to the production of VCM and PVC, as well as for environmental devastation in the Venetian lagoon (noted in Barbara Allen’s essay in this volume). Bortolozzo’s investigation had opened up a new possibility for labor environmentalism in Italy, one that may be termed “workers’ epidemiology.” This led Portaluri to think that something similar could, and indeed should, be done in Manfredonia. Together, the physician and Lovecchio, before his illness overcame him, decided to carry out a bottom-up investigation: Portaluri asked for help from the “militant” experts of *Medicina Democratica* (medical doctors, biologists, engineers), while Lovecchio interviewed his colleagues (and their widows), collecting memories of the 1976 Manfredonia accident and any relevant data concerning the work environment; he also solicited his fellow workers to ask the company for their clinical files. The final result of this research was a trial, involving hundreds of plaintiffs, a number of organizations, the town of Manfredonia, and the Italian State, which, sadly enough, was concluded in March 2011 with the dismissal of all charges against the company.²⁰

Conclusion

The stories told in this chapter offer particular insights into the historical agency of labor in environmental matters. As well, it meets the call of scholars for an “embodied environmental history.”²¹ First, by combining with union action for the recognition of the objective value of workers’ knowledge about industrial hazards, the militant new industrial hygiene of the seventies translated into political change with general social, and environmental, impacts. Many improvements in occupational and environmental health, and even the encounter between Portaluri and Lovecchio at a public hospital in

Apulia and all that came afterward, would not have been possible without that extraordinary season of Italian labor environmentalism, creating both the cultural and the material conditions for a public health system and for the enforcement of workers' right to know about the hazards of production.

Second, and equally important, is the great historical significance of the workers' (bodily) knowledge of industrial hazards and the ways in which this could translate into political action beyond (and even possibly against) that of labor organizations. The case of Manfredonia, in particular, shows how the encounter between militant science and this embodied knowledge, and thus the possibility of socio-environmental change, is not necessarily confined to the context of organized labor or even to the political hegemony of the unions, for it can arise from the initiative of individuals. Predicated by the Italian left in the seventies, and then abandoned under the pressure of economic recession, the Gramscian strategy of class solidarities became itself embodied in the story of a personal encounter: that between Lovecchio and Portaluri in the impoverished and heavily polluted Manfredonia of the mid-nineties.

One final point of methodological significance for an environmentally conscious working-class history emerges from the chapter. Environmental historian Arthur McEvoy once suggested that workers' bodies be seen as meta-texts on which the political ecology of industrial societies has been written—and in many ways this perspective is reflected in the stories told in this chapter. But the chapter has also shown workers as self-reflective agents of environmental change and workers' bodies not simply as biological machines but as historical actors endowed with cultural and symbolic tools and producing not only commodities but knowledge and political agency as well. In the Italian case, the knowledge of work/nature relationships embodied by factory workers has become a powerful lever of environmental consciousness and action. In association with militant expertise, working-class people North and South, men and women, have historically acquired the ability to read the work environment and their own bodies, and take action for a stronger science and a more just society.²²

NOTES

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1. On the relationship between labor and the environment (especially in the United States) see, for example, Richard White, "Are You an Environmentalist, or Do You Work for a Living?" *Work and Nature*, in *Uncommon Grounds: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton, 1996), 171–185. See also Scott Dewey, "Working for the Environment: Organized Labor and the Origins of Environmentalism in the United States, 1948–1970," *Environmental History* 1 (1998): 45–63; Scott Gordon, "Shell No! OCAW and the Labor-Environmental Alliance," *Environmental History* 4 (1998): 460–487; Brian K. Obach, *Labor and the Environmental Movement: The Quest for Common Ground* (Cambridge, MA: MIT Press, 2004); Gunter Peck, "The Nature of Labor: Fault Lines and Common Ground in Environmental and Labor History," *Environmental History* 2 (2006): 212–238.

2. On the topic of “embodying working-class history,” see Ava Baron and Eileen Boris, “‘The Body’ as a Useful Category in Working-Class History,” *Labor: Studies in Working-Class History of the Americas* 2 (2007): 23, and the following debate in the same journal issue. In particular, in this chapter I refer to Baron and Boris’s remark on “how bodies come to ‘matter’ and how they can cause ‘trouble’” (26), and to John F. Kasson’s call to “keep our eyes on the ‘marks of capital’ on workers’ bodies” (46).

3. See Amalia Signorelli, “Movimenti di popolazione e trasformazioni culturali,” in *Storia dell’Italia repubblicana*, vol. 4., *La Trasformazione dell’Italia: sviluppo e squilibri* (Torino: Einaudi, 1995), 589–658; Stefano Musso, “Lavoro e occupazione,” in *Guida all’Italia contemporanea, 1861–1997*, ed. Massimo Firpo, Nicola Tranfaglia, and Pier Giorgio Zunino (Milano: Garzanti, 1998), 485–544; Nicola Crepas, “Industria,” in *Guida all’Italia contemporanea, 1861–1997*, ed. Massimo Firpo, Nicola Tranfaglia, and Pier Giorgio Zunino (Milano: Garzanti, 1998), 287–422.

4. See Kitty Calavita, “Worker Safety, Law and Social Change: The Italian Case,” *Law & Society Review* 2 (1986): 189–228; Francesco Carnevale and Alberto Baldasseroni, *Mal da lavoro: Storia della salute dei lavoratori* (Roma-Bari: Laterza, 1999), 147–229; Giovanni Berlinguer, *Storia e politica della salute* (Milano: Franco Angeli, 1991).

5. See Carnevale and Baldasseroni, *Mal da lavoro*, 230–282; Patrizio Tonelli, “Salute e lavoro,” in *Il ‘900: Alcune istruzioni per l’uso*, ed. Luigi Falossi (Firenze: La Giuntina, 2006), 45–65; Tonelli, “La salute non si vende: Ambiente di lavoro e lotte di fabbrica tra anni ‘60 e ‘70,” in *I due bienni rossi del ‘900, 1919–1920 e 1968–1969: Studi e interpretazioni a confronto*, ed. Luigi Falossi and Francesco Loreto (Roma: Ediesse, 2007), 341–352.

6. On the 1968 students’ movement in Italy, see Giovanni De Luna, *Le ragioni di un decennio. 1969–1979: Militanza, violenza, sconfitta, memoria* (Milano: Feltrinelli, 2008). On the birth of the “new industrial hygiene” in Italy, see Carnevale and Baldasseroni, *Mal da lavoro*, 238–244. See also CGIL-CISL-UIL Federazione Provinciale di Milano, *Salute e ambiente di lavoro: L’esperienza degli SMAL* (Milano: Mazzotta, 1976), 189–199.

7. CGIL-CISL-UIL, *Salute e ambiente di lavoro*, 12–13.

8. On the Seveso disaster, see Laura Centemeri, *Ritorno a Seveso: Il danno ambientale, il suo riconoscimento, la sua riparazione* (Milano: Mondadori, 2006). See also Saverio Luzzi, *Il virus del benessere: Ambiente, salute, sviluppo nell’Italia repubblicana* (Roma-Bari: Laterza, 2009), 140–155. On Medicina Democratica, see <http://www.medicinademocratica.org/>.

9. For a discussion of the “strong objectivity” approach in the study of industrial hazards, see Barbara Allen, *Uneasy Alchemy: Citizens and Experts in Louisiana’s Chemical Corridor Disputes* (Cambridge, MA: MIT Press, 2003), 6–7, 118, 140, 149.

10. CGIL-CISL-UIL, *Salute e ambiente di lavoro*, 110.

11. *Ibid.*, 74–85.

12. *Ibid.*, 143–149.

13. *Ibid.*, 189.

14. On the ANIC (later renamed Enichem) in Manfredonia, see Giulio Di Luzio, *I fantasmi dell’Enichem* (Milano: Baldini Castoldi Dalai, 2003).

15. On the 1976 accident, see Francesco Tomaiuolo, “1976–2006: Trent’anni di arsenico all’Enichem di Manfredonia,” *I Frutti di Demetra* 12 (2006): 33–41; and Luzzi, *Il virus del benessere*, 152–155.

16. See Di Luzio, *I fantasmi dell’Enichem*.

17. *Ibid.*

18. On ecofeminism and women’s action for environmental justice, see Carolyn Merchant, *Radical Ecology: The Search for a Livable World* (London: Routledge, 1995), 193–222; on feminist science and action research, see also Allen, *Uneasy Alchemy*, 117–150.

19. Maurizio Portaluri, interview by the author, April 2009.

20. On the encounter between Lovecchio and Portaluri, see Alessandro Langiu and Maurizio Portaluri, *Di fabbrica si muore* (San Cesario di Lecce, Italy: Manni, 2008).

21. See in particular Myrna Santiago’s essay in this volume. See also Christopher Sellers, “Thoureaux’s Body: Towards an Embodied Environmental History,” *Environmental History* 4 (1999): 486–514. On labor and workers’ bodies in environmental history, see also Arthur McEvoy, “Working Environments: An Ecological Approach to Industrial Health

and Safety,” *Technology and Culture* 36 (1995): S145–S173; Linda Nash, “The Fruits of Ill-Health: Pesticides and Workers’ Bodies in Post-World War II California,” *Osiris* 19 (2004): 203–219; Chad Montrie, *Making a Living: Work and Environment in the United States* (Chapel Hill: University of North Carolina Press, 2008).

22. See McEvoy, “Working environments.”