



The Archive and the Lake

Labor, Toxicity, and the Making of Cosmopolitical Commons in Rome, Italy

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Abstract Located in the Prenestino neighborhood of Rome, Italy, the former chemical-textile plant Ex-SNIA Viscosa has been a site of labor exploitation, toxicity, and struggle since the 1920s. Comprising postindustrial ruins, an urban lake, and myriad species, the area has been reclaimed by activists engaged in a project of governance from below. This essay begins by exploring how the entwinement of fascist biopolitics and the chemical industry that occurred at the Ex-SNIA from the 1920s to the 1950s affected human and non-human bodies. Building on insights from feminist science studies and histories of industrial hazards, the author examines how memories of toxic labor, environmental transformation, and workers' resistance have been reactivated in the ongoing project of reclaiming the Ex-SNIA and keeping it off-limits from urban speculation. Drawing on archival research, interviews with activists, and sustained attention to the human and nonhuman entities that make up the area, the essay argues that the intimacy with past contestations of labor toxicity is key in the production of the Ex-SNIA as a commons. What has been emerging in Rome, is a *cosmopolitical commons* that points to the transformation of dominant regimes of property and governance, while also challenging approaches to the commons that rely on the distinction between active human collectives and malleable resources.

Keywords toxicity, chemical infrastructures, cosmopolitics, commons, eco-memory, urban political ecology, feminist science studies.

In the late-afternoon light the area recalls the drowned worlds imagined by science-fiction writer James Ballard.¹ The vegetation reclaims decaying industrial buildings. Next to the ruins, thick brambles, rushes, and willows flank an urban lake. The skeleton of a car park is half-submerged in glimmering water, peopled by a myriad of birds, insects, and reptiles. This uncanny landscape is part of the Ex-SNIA Viscosa, a former chemical-textile complex in the densely populated Prenestino neighborhood in Rome, Italy. In this article I explore forms of toxicity and modes of living otherwise that have emerged from this site of labor exploitation and political struggle.

1. See Ballard, *Drowned World*.

From 1923 until its closure in 1954, the industrial complex used highly toxic carbon disulfide for manufacturing rayon. As the scene of capitalist discipline, exposure to chemical mixtures, and workers' insubordination to a suffocating organization of work, the Ex-SNIA provides a window into the emergence of what the feminist scholar of technoscience Michelle Murphy calls a "chemical infrastructure."² Drawing on Murphy, I use this concept to refer to the spatial and temporal distribution of chemical agents as they circulate through systems of production, consumption and waste, producing effects on bodies and landscapes. As volatile chemicals move within infrastructures, they permeate human and nonhuman beings, thus producing forms of "chemical embodiment."³ Chemical infrastructures comprise physical systems and social sedimentations that bind together humans and nonhumans. Writing on toxicity, reproduction, and time in relation to native populations in Canada, Murphy notes that social sedimentations include the legacies of settler colonialism, capitalist relations, and hierarchical distinctions of race and sex. At the SNIA in Rome, chemicals circulated within and outside the factory walls, through bodies and machines, air and water, in an enclosed and yet porous space where the capitalist organization of labor intersected with fascist governance. I argue that this case study suggests the importance of understanding chemical toxicity as deeply connected to the toxicity of labor within historically situated ways of governing the life of populations.

Murphy focuses on the afterlife of chemicals, their wildly uneven temporality and intergenerational effects on particular populations. Some chemicals elicit immediate responses in human and nonhuman organisms. Others dissolve and others still produce a slow and delayed violence whose causes are difficult to trace.⁴ The attention to latency and time is invaluable for tracking the differential distribution of chemical violence across populations. But Murphy is also interested in a different kind of intergenerational reverberation, that is, the use of memories of the past for creating more just futures. She asks, "Which pasts need to be pulled out of the sediment into activity? What pasts can be drawn into new action?"⁵ This essay takes up these questions by examining the role played by memories of toxicity in ongoing activist practices at the Ex-SNIA. The exploration of this particular site has drawn my attention to how the memories that arise from this situated chemical infrastructure interact with memories of struggle that have been reactivated in ongoing activist projects.⁶

From the mid-1950s to the early 1990s, the Ex-SNIA remained fenced off, left to time and the elements. Then, a property tycoon unveiled plans to build a shopping mall. Soon, the project moved to construction but when the excavators struck a source of mineral water, a flow of water submerged the construction site and formed the

2. Murphy, "Chemical Infrastructures of the St. Clair River"; "Distributed Reproduction, Chemical Violence, and Latency."

3. Murphy, "Chemical Regimes of Living."

4. Nixon, *Slow Violence and the Environmentalism of the Poor*.

5. Murphy, "Distributed Reproduction, Chemical Violence, and Latency."

6. Foucault, *Society Must Be Defended*.

urban lake now bordering the factory ruins. Around the same time, local activists started to reclaim the area. At first, they occupied some of the abandoned buildings and opened a social center, a laboratory for culture and politics.⁷ Then, a broader alliance of neighborhood associations negotiated the creation of a city park called Parco delle Energie, managed by the Forum Parco delle Energie beginning in 2008. A form of governance from below, the Forum meets once a month as an assembly open to everyone who makes collective decisions about the park and the lake. An archive, established by the Forum to collect documents found in the abandoned factory, has been sustaining a process of remembrance about living and struggling in a chemical infrastructure. Contesting the collusions between real estate developers and public administrators, the Forum has been reclaiming the factory and the lake as commons, that is, a site of cooperation and a mode of living alternative to the pursuit of profit and corrupted public policies. In 2014, when new plans for residential construction were announced, the Forum launched a mobilization to oppose the project. Struck by how the lake had transformed the landscape, the activists referred to the body of water as the “lake that resists,” evoking its power to act.

Drawing on philosopher of science Isabelle Stengers, I suggest that what has been emerging at Ex-SNIA is a *cosmopolitical commons*, an experimental project brought into being by the “becoming with” of the activists, the lake and the memories of vulnerability and resistance to the toxicity of factory work.⁸ Influential approaches in critical theory frame the commons as the product of human cooperation that has the potential to generate radical projects of self-governance.⁹ Complicating these frameworks, I show how the Ex-SNIA provides a glimpse into a mode of commoning that exceeds human activity,¹⁰ a situated instance of impure and messy commons that strives to persist in an urban context marked by the increasing precarity of labor and livelihood.

In order to examine the multilayered struggle developed at the Ex-SNIA, this essay builds on a robust body of work in feminist science studies and interdisciplinary research on industrial hazards and socio-environmental conflicts. Feminist scholars of science, such as Murphy, Stengers, and others, have been drawing attention to the interactions and the uneven distribution of power linking a variety of asymmetric agencies, human and nonhuman. In considering how toxic chemicals move in and through bodies that are hierarchically arranged by structures of race, gender, and class,¹¹ feminist

7. On Italian social centers, see Mudu, “Resisting and Challenging Neoliberalism.”

8. On cosmopolitics, see Stengers, “Cosmopolitical Proposal.” I borrow the notion of “becoming with” from Haraway, *Staying with the Trouble*. Feminist geography has also contributed to the rethinking of more-than-human commons. See Gibson-Graham and Roelvink, “An Economic Ethics for the Anthropocene,” and Singh, “Becoming a Commoner.”

9. Hardt and Negri, *Commonwealth*; Harvey, *Rebel Cities*; Dardot and Laval, *Commun*, De Angelis, *Omnia Sunt Communia*.

10. *Commoning* is a term introduced by historian Peter Linebaugh. See Linebaugh, *Magna Carta Manifesto*.

11. For analyses of toxicity in relation to gender, race, and sexuality, see Alaimo, *Bodily Natures*; Chen, *Animacies*; Agard-Jones, “Spray.”

scholars contribute to crafting “counter-hegemonic narratives” about industrial hazards and socio-environmental conflicts.¹² Central in this endeavor are interdisciplinary methods that pay attention to the entanglements between human and nonhuman actors in the ruins of capitalism.¹³

Working through these theoretical and methodological insights, this article weaves together archival research, interviews with activists, and the sustained attention to the force of the nonhuman entities that compose the postindustrial ruins of the Ex-SNIA. I begin by sketching a brief history of carbon disulfide in a chemical infrastructure where the fascist governance of populations and biological life (what Foucault calls biopolitics) coalesced with the political economy of chemicals to produce forms of toxic embodiment.¹⁴ Then, I discuss the unfolding project of remembrance and reinvention enacted by Ex-SNIA activists. I propose that this political experience points to the necessity of transforming dominant regimes of property and governance while at the same time altering approaches to the commons that rely on the distinction between active human collectives and malleable resources.

Carbon Disulfide

A brief examination of carbon disulfide (CS₂) is in order. What is it, how did it start circulating, and with what effects? At the molecular level, this chemical is made of two sulfur atoms joining a central carbon atom. In its purest form CS₂ is an extremely volatile, colorless liquid with a sweet odor. The industrial version is yellowish and smells like rotting cabbage. Tiny amounts are released in volcanic formations and produced by oak trees, both populated by microorganisms that, unlike human bodies, are capable of metabolizing the substance and thriving on it. First synthesized by a German chemist in 1796, carbon disulfide has been used in industrial manufacturing since the 1850s. Initially employed in the cold vulcanization of rubber for making condoms and balloons, it became a widely promoted pesticide and a key ingredient in the manufacturing of rayon, the fabric also known as artificial silk. Patented in France in 1892, the viscose process employs chemicals to turn wood cellulose into rayon. Cellulose is treated with caustic soda and turned into pulp. When carbon disulfide is added to the mix, it creates a viscous syrup that is aged, filtered, and then forced through spinning nozzles into a chemical bath. Here, the filaments get ready for bleaching, washing, and spinning. A similar process is used for producing cellophane, the transparent, flexible wrapping that made the fortune of the chemical multinational DuPont.¹⁵

12. Barca, “Telling the Right Story.”

13. Tsing, *Mushroom at the End of the World*; Van Dooren, Kirksey, and Münster, “Multispecies Studies.”

14. For “biopolitics,” see Foucault, *History of Sexuality, Volume 1*.

15. The American chemical giant Dupont has a long history of chemical hazards. In 2017 the company agreed to pay \$671 million to settle thousands of personal injury claims linked to exposure to C8, a chemical used in the manufacturing of Teflon, the popular anti-sticking product. See Lerner, “Teflon Toxin.”

Recent work by Paul David Blanc, professor of occupational and environmental medicine at the University of California, San Francisco, provides strong historical evidence of carbon disulfide poisoning in industrial settings.¹⁶ The effects of carbon disulfide on human bodies range from sensory damages to debilitating neurological symptoms. They include fatigue, irritability, hallucinations, depression, and suicidal impulses. Prolonged exposure also causes high risks of heart disease and Parkinsonism. These symptoms have been associated with carbon disulfide since the mid-1850s. The Parisian physician August Delpech examined cold vulcanization workers detailing mental disturbances and major damage to their nervous systems. Considerable attention was given to sexual disturbances following toxic exposure. Delpech, for example, described the case of a twenty-seven-year-old worker whose “sexual desire and erections were abolished.”¹⁷ The famous French neurologist Jean-Martin Charcot further discussed the psychosexual manifestations of carbon disulfide intoxication. In an 1888 lesson, he told the audience about a worker in the rubber industry who had to manually clean vulcanization vats containing carbon disulfide. The man, claimed Charcot, experienced a burning sensation in the scrotum and then collapsed on the job. His convalescence was filled with hallucinations and dreams of dreadful animals. Charcot concluded that the worker was affected by toxic hysteria, thus extending to men a diagnosis usually linked to femininity. By affecting the nervous system, carbon disulfide reduced men to a condition that, according to much medical literature of the time, was limited to women.¹⁸ These nineteenth-century medical concerns about toxicity and “abnormal” sexual desires manifest anxieties about gender and sexuality, particularly within the working class. Interestingly, they also seem to anticipate anxieties over the disruption of normative gender and sexual patterns within contemporary mainstream discourses on toxic effects on human and nonhuman bodies.¹⁹

As Blanc details, carbon disulfide poisoning became more frequent with the rapid expansion of the rayon industry, one of the first multinational corporate enterprises. By directing attention to the transnational industries promoting the circulation of carbon disulfide across borders, Blanc’s work is a useful starting point for connecting forms of toxic embodiment to expansive chemical infrastructures that emerged with industrial capitalism since the mid-nineteenth century. Already established before World War I, the viscose industry boomed in Europe, the United States, and Japan in the interwar period. Through international exchanges of technical knowledge and patent agreements between Europe and the United States, it gave rise to multinational industrial giants. The British textile company Courtauld, for example, purchased the

16. Blanc, *Fake Silk*.

17. Blanc, *Fake Silk*, 11.

18. Showalter, “Hysteria, Feminisms, and Gender.”

19. Di Chiro, “Polluted Politics?”

American patent rights for rayon in 1909. In the following decades it became the dominant player in the US market and acquired stakes in rayon firms in France, Germany, Italy, and India.²⁰

Although in Italy industrial development was late and slow, the Italian rayon industry grew so fast that by the mid-1920s it was second only to the United States in terms of quantities of rayon produced, but was first in terms of exports. The leading firm was the SNIA Viscosa funded by Riccardo Gualino, a Piedmontese financier supported by Mussolini and the Bank of Italy. The first Italian company to be listed on foreign stock exchanges, the SNIA fully participated in the transnational expansion of the artificial fiber industry. However, the revaluation of the lira, which took effect in 1926, dealt a blow to the company that exported the large majority of its production. No longer controlled by Gualino, the SNIA recovered only in the mid-1930s when Mussolini's autarchic policies provoked increases in the domestic consumption of artificial silk. SNIA's close relationship with political powers was not unique. The other key player in a highly concentrated and politically connected chemical industry was the Montecatini company, producer of nitrogen fertilizers. These firms played an important role in laying the ground for the creation of chemical infrastructures that greatly expanded with the economic boom of the 1950s and early 1960s. The rapid and uncontrolled process of industrialization brought with it asbestos pollution, major dioxine spills, chemical waste mismanagement, and illegal dumping of toxics.²¹

By the mid-1920s, with the meteoric rise of the rayon industry and the multiplication of manufacturing facilities, medical literature started to report the effects of carbon disulfide on artificial silk workers. In Italy, Giovanni Loriga, chief medical inspector for the Ministry of Labor, published the 1925 investigation titled "Hygienic Conditions in the Artificial Silk Industry." The report described unwholesome working conditions and detailed the risks of carbon disulfide intoxication for each phase of the viscose process. Loriga mentioned "an epidemic of nervous disease" affecting women working in the fiber twisting department. Some physicians, he added, diagnosed the outbreak as "collective hysteria, while by others it was judged to be due to carbon disulfide."²² Blanc notes that the Italian occupational medicine was one of the most advanced in the study of carbon disulfide intoxication.²³ However, this needs to be understood within the larger context of occupational medicine under Mussolini. While physician-patient relationships became more limited and bureaucratized, the fascist support for research in the field was part of the effort to increase workers' efficiency in a factory regime seen as indispensable to the growth of the nation. This shift was eloquently evoked by a

20. Cerretano, "Multinational Business and Host Countries in Times of Crisis."

21. For an account of asbestos pollution in Italy, see Ziglioli, *Sembrava nevicasse*; on the infamous dioxine spill in Seveso, see Centemeri, *Ritorno a Seveso*; on the illegal dumping of toxics in Campania, see Armiero and De Rosa, "Political Effluvia."

22. Loriga, "Le condizioni igieniche nell'industria della seta artificiale," 89.

23. Blanc, *Fake Silk*, 38.

prominent occupational doctor at the Seventh National Conference of Occupational Medicine: “Doctors have to trust more than ever a government that has full knowledge of the value of life and its productive power.”²⁴

Using the Ex-SNIA as a case study, the next section examines carbon disulfide as harmful agent, object of medical knowledge, and ingredient in economic processes and practices of state making. I read the Ex-SNIA as a chemical infrastructure built through the appropriation of nature and the exploitation of labor.²⁵ This enclosed and yet highly porous space produced forms of chemical embodiment connecting state structures and imaginaries, gender asymmetries, and transnational economies.

Toxic Labor

On September 5, 1923, the siren screamed out for the first time, calling workers to enter the new rayon plant in Rome’s Prenestino neighborhood.²⁶ One of the few industrial areas in the city, the artificial silk factory was built on a swamp. Four elements made it attractive for industrial development.²⁷ First, there was the presence of water, a key element in processes of industrialization and urbanization. As the Ex-SNIA activists found out studying hydrogeological maps from the late nineteenth century, a water stream, known as Fosso della Marranella, flowed next to the plant, excavating tunnels in the volcanic rock, and then merged with the Aniene River. The plant appropriated the water by funneling it through a pipe, used it in the viscose process, and then dumped chemical waste back into the stream and the land.²⁸ This was the same aquifer body that in the early 1990s would erupt from underground to stand in the way of urban speculation. Second, the Prenestino neighborhood was just outside the city walls, where there were no restrictions on building. This meant that, based on urban planning rules, the viscose firm did not have to pay real-estate taxes. Third, the area was close to the railroad that transported workers and materials. Fourth, it was populated by a cheap workforce, people living in a chaotic aggregate of brick huts and shacks. From the late eighteenth century, urban plans in Rome promoted the relocation of the lower classes outside the city walls, far from the centers of political power. With Mussolini, forced re-settlements became official policy. Starting in 1924, thousands of houses in the city center were demolished, their inhabitants forcibly relocated to peripheral slums.²⁹ The Prenestino was one of them, home to displaced people and migrants from southern Italy, small artisans, peasants, the unemployed, the poor, and petty criminals. Pier Paolo Pasolini’s *The Street Kids* describes a neighborhood crowded by “peasants from Puglia or the Marches, Sardinia or Calabria, young and old . . . returning drunk and ragged.” Kids

24. Carnevale and Baldasseroni, *Mal da lavoro*, 71.

25. Moore, “Capitalocene Part II.”

26. Sotgia, “Sul filo della pazzia,” 196.

27. Forum Parco delle Energie, “Storia dell’area.”

28. Flavia Sicuriello (activist, Forum Parco delle Energie), interview by author, Rome, May 10, 2017.

29. Insolera, *Roma Moderna*, 136–51.

filled the streets, “disorderly as a swarm of flies above a dirty table.”³⁰ For many Prenestino’s dwellers the new rayon factory was the only source of wages.

Opened by the artificial silk firm CISA, the plant would later become part of the SNIA Viscosa. Initially the factory employed about 2,500 workers, half of whom were women, a figure that went up to 70 percent between 1938 and 1954. A few hundred workers with previous experience in the viscose process came from northern Italy.³¹ Labor was organized along gender lines. The chemical department employed a mainly male workforce while women, many of them as young as thirteen to sixteen years old and paid much less than the men, were the majority in the textile plant. On a hill next to the factory there were workers’ dorms and other services, including a grocery store and a small daycare. The management organized a variety of courses and recreational activities. Women practiced sports for improving their health and attended sewing lessons and other courses designed to foster the development of “female capacities.”³² As medical anthropologist Niso Tommolillo notes, these policies were in line with fascist programs of social assistance aimed at neutralizing class antagonism by creating relations of dependency linking workers to the factory.³³ In Mussolini’s words, “Smart capitalists are not only concerned with salaries but also with housing, schools, hospitals and playgrounds for their workers.”³⁴ The production of wealth, in other words, had to be integrated within the biopolitical control of populations under the nationalist state. From this perspective, the establishing of social services within the factory served the purpose of better controlling the workers by tightly organizing their lives.

Chemical agents, ubiquitous in SNIA workers’ everyday lives, played a significant role in the fascist imaginary of modernity. Commentators close to the regime heralded the factory, and the rayon industry as a whole, as a symbol of the dynamic Italian spirit, an icon of modernization, economic progress, and technological innovation.³⁵ According to Karen Pinkus, artificial fibers, particularly rayon, were “a central obsession for the regime.”³⁶ Advertised as a fabric available to rich and poor, man-made rayon fitted well with the interclassist, technocratic, and masculinist vision of the fascist nation. It replaced the delicate and expensive silk, a material marked as feminine and exotic. Used for manufacturing uniforms and backpacks of Italian soldiers during the colonial war in Ethiopia and World War II, rayon came to be associated with militarized masculinity. Together with steel and plastic, artificial textiles were identified with the form of embodiment of the new fascist man. As the literary critic Jeffrey Schnapp writes, these

30. Pasolini, *Street Kids*, 91–92. I wish to thank Luigi Ortolano for drawing my attention to Pasolini’s description of the Prenestino. See Ortolano, “Capitale sociale territoriale e beni comuni.”

31. Forum Parco delle Energie, “Storia dell’area.”

32. Nerbini, “Industrie romane,” 61.

33. Tommolillo, “La Viscosa di via Prenestina.”

34. Tommolillo, “La Viscosa di via Prenestina,” 45.

35. Nerbini, “Industrie romane.”

36. Pinkus, *Bodily Regimes*, 213.

materials became “a site for elaborating a complex physics and metaphysics of sovereignty that celebrated, on the one hand, a limited and limiting national/natural landscape (imbued with attributes of heroism and moral superiority) and, on the other hand, the unlimited power of technology, culture, and the national will to transform that very lack into abundance, beauty, and strength.”³⁷ The symbolic investment into artificial textiles corresponded with the robust state support for the industry. Rayon, defined as “the most modern of Italian fabrics and the most Italian of modern fabrics,”³⁸ was one of the newly developed materials fueling Mussolini’s drive toward economic autarchy.

The power of chemicals and machines inspired the futurist poet Filippo Tommaso Marinetti, an ardent supporter of the fascist project, to write several poems celebrating the transmutation of trees into artificial textiles. In the viscose industry, the poet, guided by “the haunting sickly-sweet scent of sulphur,” witnessed a “molecular drama”³⁹ in which the furious mingling of raw materials, human labor, chemical baths, and weaving machines produced “distinct mechanical and chemical personalities.”⁴⁰ In the futurist imaginary, chemical personalities were technologically enhanced “heroes to be praised and sung,”⁴¹ figures of militarized masculinity capable of overcoming nature and transcending bodily limits. The chemical embodiments emerging out of viscose factories, however, diverged profoundly from fascist superhuman fantasies.

In the Prenestino factory, production was organized through the Bedaux system, a method for speeding up work and enhancing the power of management. Carbon disulfide was released into the air, traveled the poorly ventilated factory from one room to another, and leaked into the porous bodies of workers through inhalation or skin contact. The effects of toxic chemicals combined with the toxicity of factory work: the impact of long hours, repetitive tasks, machine noises, strict managerial supervision, and punishments. Many viscose workers from the SNIA factory were brought to the Policlinico, a large university hospital, with symptoms of chemical poisoning including psychosis, mood changes, hallucinations, and fatigue. Working at the Policlinico, the prominent physician Aristide Ranelletti reported several cases of carbon disulfide intoxication.⁴² An occupational medicine expert, Ranelletti described his work as aiming “to induce industrialists to improve labor systems.”⁴³ In the fascist state, occupational medicine was embedded in a biopolitical project aimed at reducing risk both for building consensus and increasing national productivity within the scientific organization of labor.

37. Schnapp, “Fabric of Modern Time,” 195.

38. Maxwell, *Patriots against Fashion*, 127.

39. Marinetti in Schnapp, “Fabric of Modern Time,” 243.

40. Marinetti in Schnapp, “Fabric of Modern Time,” 209.

41. Marinetti in Schnapp, “Fabric of Modern Time,” 209.

42. Ranelletti, “Il solfocarbonismo professionale I.”

43. Ranelletti, “Solfocarbonismo,” 73. Translation from Italian by the author.

According to the historian Francesco Cassata, this field was informed by a constitutional approach that placed emphasis on individual psychophysical predispositions to illnesses rather than toxic exposure in the workplace. Accordingly, each worker had to be placed in the profession that minimized risks of contact with toxic and infective agents to which he or she was already sensitive.⁴⁴ Constitutional medicine underpinned the introduction in the late 1920s of preventive measures for workers exposed to hazardous agents. People with nervous system complications, for example, were exempted from working in the viscose industry. Additional measures were also introduced that insured workers of chemical departments diagnosed with carbon disulfide intoxication. Such legislation was extended to include workers from textile departments only in the mid-1950s.⁴⁵ By then the rayon factory in the Prenestino had already been shut down.

In her study of carbon disulfide exposure at SNIA in Rome, historian Alice Sotgia asks whether workers knew about the hazards. Crossing records from the factory and the psychiatric hospital Santa Maria della Pietà, she identifies several cases of poisoned viscose workers stretching from 1927 to 1940. Sotgia reports the case of a thirty-five-year-old man who was hospitalized in 1927. Although the doctors did not identify carbon disulfide as the cause of the patient's acute paranoia, he associated his symptoms with poisonous gases inhaled in the factory. Another man, who had been hospitalized in 1929, "complained he had been poisoned by acids."⁴⁶ This suggests that workers were aware of health risks from chemical exposure in the factory. These risks, however, were part of an experience of work where toxicity extended beyond the effects of chemicals, to the capitalist organization of labor under the fascist regime. Workers, water, trees, and other raw materials were vital resources in the viscose productive process. The chemical violence welded to the rayon industry reduced workers to a kind of waste that was discarded and moved from one enclosed space to another, from the factory to the hospital.⁴⁷

Chemical violence on SNIA workers has been widely documented. Ample traces of it are available at the Ex-SNIA archive. Yet, no clear indication remains of industrial contamination of water and soil linked to the chemical-textile complex. It is possible that carbon disulfide and other chemicals dissipated in the stream of water, and dissolved in the soil and the air. The urban lake that emerged from underground decades after the factory's closure bears no trace of past toxicities. In this sense, the latent, delayed violence that defines chemical infrastructures, shaping the future of the people and the other-than-human beings inhabiting them, does not seem to be central here. What has been emerging at the Ex-SNIA, I suggest, is a different kind of intergenerational effect, one made possible by a project of remembrance that weaves together the memory of resistance to labor toxicity and ongoing struggles.

44. Cassata, *Building the New Man*, 192–213.

45. Sotgia, "Sul filo della pazzia," 199.

46. Sotgia, "Sul filo della pazzia," 205.

47. Foucault, *Discipline and Punish*.

The Archive of Eco-Memories

At the SNIA Viscosa, the effects of industrial chemicals were not limited to the enclosed space of the factory. Carbon disulfide and other chemicals traveled outside the factory walls, permeating urban spaces and bodies. Thus, they produced various instances of chemical embodiment. Matilde Fracassi, a seventy-one-year-old Ex-SNIA activist, offers an account of transient olfactory sensations related to the factory. She recalls, "I have always lived in this neighborhood. As a child I would sense the smell of the factory brought by the north wind. It wasn't particularly strong or unpleasant; it was a sugary smell, probably caused by chemicals. It was a presence."⁴⁸ Carried by air, chemical agents were volatile entities that infused the urban landscape and deposited in bodily memory. Although Matilde never set foot in the factory, smelling chemicals was part of her childhood experience of the city. She mentions other forms of chemical embodiment, "A local hairdresser told me that she would guess which clients worked at the factory by smelling their hair. She could sense the chemicals."⁴⁹ Chemical sensations, whether experienced directly or through other people's stories, assume a new significance in the context of Matilde's participation in ongoing struggles. As Murphy points out, "Quotidian acts of breathing, drinking, and smelling can become knowledge-making moments in chemical infrastructures."⁵⁰ Matilde's sensory interaction with industrial chemicals contributes to a collective memory that brings together human and nonhuman entities. Such olfactory engagement participates in the making of an archive of eco-memories that has emerged out of the struggles within an expanded chemical infrastructure. The memories of smell enrich the archive, extending the bodily experiences of the past into the present and creating intergenerational links between the political struggles of factory workers and current activism.⁵¹

After the factory shut down in 1954, Matilde could see the walls and the top of the trees from her apartment window, "It was like seeing the woods, dark and thick with trees, a world of magic and mystery."⁵² She entered this world only many years later, in the early 1990s, when a real-estate developer named Antonio Pulcini unveiled the plan to convert it into a shopping mall and activists reclaimed it as collective space. At the time, the Prenestino was a somewhat run-down neighborhood where formal, informal, and illegal economies overlapped. Former SNIA workers mingled with people who had been involved in 1970s radical movements, younger students facing labor precarization, the unemployed, and a variety of people skilled in the art of making do. Some local residents had begun to explore the industrial ruins and were scavenging for what they

48. Matilde Fracassi (Forum Parco delle Energie activist), interview by author, Rome, May 3, 2017.

49. Matilde Fracassi (Forum Parco delle Energie activist), interview by author, Rome, May 3, 2017.

50. Murphy, "Distributed Reproduction, Chemical Violence, and Latency."

51. Writing about socio-environmental struggles over toxic waste in Naples, Italy, Marco Armiero and Salvatore Paolo De Rosa argue that the sense of smell can trigger political activism. My focus here is the role of bodily sensations in nourishing political activism across generations. See Armiero and De Rosa, "Political Effluvia."

52. Matilde Fracassi (Forum Parco delle Energie activist), interview by author, Rome, May 3, 2017.

could: glass, metal tubes, and other materials to recycle.⁵³ In an office building, they found documents left behind by the factory management that became the core of the Ex-SNIA archive.

Officially opened in 2012 in a former SNIA building renovated with public funds and now part of the Parco delle Energie, the archive has been the labor of love of a group of historians, archivists, urbanists, and local residents, many of whom are also members of the Forum Parco delle Energie, the assembly of activists reclaiming the Ex-SNIA. The archive collective has been slowly organizing, studying, and making accessible piles of dusty documents from the rayon plant including maps and pictures, administrative papers, medical records, and workers' files. Among the medical registers preserved in the archive, one reports cases of suspected carbon disulfide intoxication observed in male workers between 1930 and 1938.⁵⁴ This confirms that the factory administration was well aware of health complications whose symptoms could be particularly disruptive of the workflow. The medical notes, handwritten by factory physicians, report workers' descriptions of fatigue, impotency, hallucinations, and depression. Some workers collapsed on the job; others were irascible and prone to anger with supervisors. Several were hospitalized. Many were sent to the INFAL, the industrial accident insurance fund instituted by the fascist regime, which often dismissed the suspected diagnosis, thus rejecting insurance claims. This, for example, is the case of a worker, whom I will identify as A. B., who, in January 1938, reported fatigue, impotency, and mental confusion. The INFAL sent him back to the factory noting that he presented "no signs of professional illness."⁵⁵ Three months later, he showed up again at the factory medical office with his wife. She stated that he "would tell her rambling stories that scared her."⁵⁶ A. B. was transferred to the hospital and from there to the psychiatric clinic for treatment for depression and hallucinations. He went back to work in September of the same year.

The archival records of individual workers are preserved in crumbling orange folders. For each worker, the management collected information about work trajectory, level of instruction, family information, general health conditions, and behavior on the factory floor. The managerial control over the workforce combined with fascist surveillance over individual morality and political orientation. After the regime introduced racial laws in 1938 and 1939, the factory was required to keep a certificate of membership to the Arian race and Catholic religion for each worker. This was part of the effort to

53. Alessandra Conte (Forum Parco delle Energie activist), interview by author, Rome, May 19, 2017.

54. The medical data preserved at the Ex-SNIA archive are the fruit of managerial control of workers' health. But the constitution of the archive privileges critical viewpoints on factory work and its role in structuring neighborhood life. In grappling with the ethical implications of researching medical information regarding people who worked in the factory, I followed the activist practice of identifying them by initials only. Further, this article has been shared with the local activist community.

55. SNIA Medical Register, accessed by the author on June 14, 2017.

56. SNIA Medical Register, accessed by the author on June 14, 2017.

monitor and govern conduct through a capillary disciplinary apparatus. But the archive also contains traces of counter-conducts and ways to disrupt the flow of production. In the orange folders one finds detailed lists of punishments. They reveal that workers were fined, suspended, and fired if they were too slow, too sloppy, or undisciplined. Some were punished for insubordination, others for chatting too much and chanting aloud, for being late, washing hands, smoking, and taking breaks without permission.

Produced as a means of monitoring workers, this body of papers acquires different meanings in the hands of activists who are keenly aware of the power-laden relations involved in the constitution, interpretation of, and access to the archive.⁵⁷ By connecting managerial files with larger urban histories, the archive functions as an incubator for memories of struggle buried in the urban unconscious of the city. The rayon factory and the Prenestino neighborhood had been a hotbed of labor disruption and antifascist resistance. The first major strike occurred in 1924, launched by eight hundred women workers demanding salary raises and the improvement of working conditions. In 1949 the workers occupied the factory for over a month as a protest against layoffs. Once again, women were at the forefront of a protest that was widely supported by neighborhood residents.⁵⁸ Not by chance, the archive is named after Maria Baccante, a former partisan and factory worker who had a leading role in the 1949 protest. Alessandra Conte, an activist who spent years reconstructing the life of Maria, explains, “She kept coming up in our research as if she was demanding attention. It was impossible to ignore her.”⁵⁹ Originally from L’Aquila, raised in a well-off household, Maria moved to Rome on her own, perhaps to escape suffocating family rules. She never got married, became a partisan, and participated in the armed struggle against fascism thus contradicting the entrenched notion that women had mainly supporting roles in the war of liberation. In 1947 Maria started working at the SNIA, one of few women employed in the chemical department. Alessandra continues, “Her archival file shows that for four months in a row she asked for new shoes, probably because they were corroded by chemicals. Her file is full of insubordinations and punishments. She was not alone in this; there were many Maria Baccantes in the factory.”⁶⁰

At times workers’ contestation of managerial control acquired a striking bodily quality. This is the case of a young woman whom I will identify as M. M. who was caught urinating on the shop floor. A report in her file reads, “Not only did she admit the fact without shame and regret, she also showed animosity toward the bosses who deny everything to workers, even the permission to use the toilet. From a complex of elements, it appears that the action was undertaken as a manifestation of a general intolerance to discipline.”⁶¹ The young woman turned improper bodily exposure into a

57. Derrida, *Archive Fever*; Burton, *Archive Stories*, 4.

58. Forum Parco delle Energie, “Storia dell’area.”

59. Alessandra Conte (Forum Parco delle Energie activist), interview by author, Rome, May 19, 2017.

60. Alessandra Conte (Forum Parco delle Energie activist), interview by author, Rome, May 19, 2017.

61. SNIA Workers Files, accessed by the author on May 10, 2017.

means of insubordination. She enacted bodily resistance against the disciplinary regime of the chemical infrastructure. The materials available at the archive do not point to workers' protests specifically addressing chemical poisoning. But they provide insights about embodied forms of resistance to the toxicity of labor in this chemical infrastructure. The embodiment of toxicity produced not just victims but bodily instances of refusal and disruptions of the smooth flow of production.

Maria Baccante and M. M. are ghostly presences that exert a powerful force on the activists. These haunting figures evoke instances of insubordination and refusal whose power has been revitalized in the present. As Matilde Fracassi puts it, "As I researched the workers' files, they began talking to me. Their voices help us to protect this area from speculative interests. There is a common thread running through their struggles and ours."⁶² But what is the common thread? Does it make sense to speak of commonalities given that, at least in Western contexts, the Fordist factory, the paradigmatic model for the organization of labor in the industrial age, has been relocated to other places and largely supplanted by forms of precarious labor that blur the divide between work and life? I want to argue that memories of struggle, stories of toxic embodiment and bodily resistance to the toxicity of labor, function as intergenerational reverberations arising from the postindustrial ruins of the Ex-SNIA. Through the effort to sustain remembrance, the Ex-SNIA archive connects local critiques and knowledges from below developed within the chemical infrastructure of the factory and the neighborhood.⁶³ In the archive, activist research, enriched by countless conversations with former rayon workers and elderly neighborhood residents, intersects scholarly work on labor history and the effects of toxic exposure. Taken together, these perspectives allow the Ex-SNIA "to constitute a historical knowledge of struggles and to make use of that knowledge in contemporary tactics."⁶⁴ The intimacy with past contestations of labor toxicities made possible by the Ex-SNIA archive bespeaks the possibility of refusing the capitalist organization of labor and life at a time when the doctrine that "there is no alternative" to capitalism has taken hold of the contemporary imagination. Such intimacy, moreover, may be useful to raise questions about new forms of toxic labor and chemical infrastructures. If in Western postindustrial cities the factory is no longer the heart of the productive process, what other forms of chemical embodiment and toxic labor have emerged in the European social factories?⁶⁵

The political potential of the Ex-SNIA project of remembrance is enhanced by the ways in which it brings together the past of the factory and the present of the lake, industrial history and natural history. The work of the archive collective is intertwined

62. Matilde Fracassi (Forum Parco delle Energie activist), interview by author, Rome, May 3, 2017.

63. For critiques and knowledges from below, see Foucault, *Society Must Be Defended*, 7.

64. Foucault, *Society Must Be Defended*, 8.

65. The work of Franco "Bifo" Berardi is useful for exploring novel chemical embodiments and forms of toxic labor in post-Fordist contexts. See, for example, Berardi, "Exhaustion/Depression."

with that of ecologists, engineers, and botanists who have been producing and sharing knowledge from below about the lake's water quality, the geology of the area, and its rich biodiversity. Rosanne Kennedy proposes the concept of "eco-memory" to refer to frames of remembrance that, in the context of indigenous histories of dispossession in Australia, link together human and other-than-human beings in narratives of vulnerability and survival.⁶⁶ To be sure, the memories and narratives elaborated at the Ex-SNIA should not be conflated with indigenous eco-memories of interspecies kinship. Kennedy's concept, however, is valuable for thinking how labor history, chemical interactions, and the transformation of urban ecologies are layered into the memory of the postindustrial habitat comprising the factory and the lake. Flavia Sicuriello, an ecologist and Ex-SNIA activist, argues, "Creating narratives that intertwine the histories of viscose industry workers with the life of plants and birds is what makes this mobilization so powerful."⁶⁷ Crafted and shared through a variety of activities including guided tours, urban beekeeping, projects with schools, bird watching, parties, and conferences, these narratives convey the "experimental togetherness"⁶⁸ of the Ex-SNIA as an urban ecosystem and a site of contestation and affirmation. In this context, eco-memories nourish political action, forms of conviviality, and self-organization. The lake, a recalcitrant entity capable of standing in the way of urban development, has been a central figure in this project.

The Rebel Lake

At first the lake looked like a postdisaster zone. Pictures from the early 1990s show a massive excavation partially filled with water, clogged with debris and construction materials. The frame of a building, with scaffoldings wrapped in mesh, stuck out into the water. Alessandra Conte recalls, "It was ugly, it showed the violence on the environment and the reaction to that violence, the eruption of water that forced the closure of the construction site."⁶⁹ The sudden emergence of underground currents is seen as the environmental response to real-estate development. The landscape was devastated. Then, it slowly changed. The water level rose and stabilized; plants began to grow inside and around the lake; fish, birds, and foxes showed up and stayed. The fenced property became a land of adventures for the neighborhood's kids. Rewilding was a slow-moving, steady process leading to the formation of a highly biodiverse habitat that currently includes about three hundred plant and sixty-two bird species.⁷⁰ Quietly, the lake, whose waters continue to move and flow, began to exert its force of attraction on the many who learned to care for its existence.

66. Kennedy, "Multi-directional Eco-Memory in an Era of Extinction."

67. Flavia Sicuriello (Forum Parco delle Energie activist), interview by author, Rome, May 10, 2017.

68. Stengers, "Introductory Notes on an Ecology of Practices."

69. Alessandra Conte (Forum Parco delle Energie activist), interview by author, Rome, May 19, 2017.

70. Battisti, Dodaro, and Fanelli, "Paradoxical Environmental Conservation."

In 2013, the activists assembled in the Forum Parco delle Energie learned that the developer Antonio Pulcini had a new plan for the construction of a residential complex in the area. When studying the development project (which had been leaked to them by a municipal politician) the Forum found out that part of the land had been expropriated in 2004 for public use. This meant that no construction was allowed. But there was a problem. According to Italian law, if expropriated land is not utilized within ten years, it must be returned to the previous owner. After months of protests and grassroots events, journeys through the maze of bureaucracy, and negotiations with the city, the activists came close to a victory. The city administration, then guided by a center-left coalition, pledged to block Pulcini's plan and work with the Forum. It even allocated money for equipping the area around the lake and making it accessible to urban dwellers. The funds, however, were quickly diverted elsewhere. Since April 25, 2016, the lake area has been accessible thanks to the collective organization of the activists who keep laying claims to the place.⁷¹ The struggle is ongoing and it has been unfolding on the terrain of the commons.

As Matilde Fracassi aptly notes, “the lake has confounded the boundary between public and private property.”⁷² In Italy deep waters are inalienable; they cannot be bought or sold as they belong to the state. The Forum Parco delle Energie has been putting pressure on the city council and the regional government demanding the recognition of the lake as public domain (*demanio*) and the institution of a “natural monument” including the factory and the watery formation. So, on the one hand, the activists are proposing to establish the primacy of the public over private real estate interests. On the other hand, they have been experimenting with enduring and evolving practices of assembling, reclaiming, and collective decision making that point to the commons as alternative to both state power and neoliberal regimes of governance.⁷³ In the Ex-SNIA, practices of commoning engage the public and its institutions in a conflictual way. They reclaim the public as a platform for building alternatives to the logic of the market.

David Harvey observes that radical groups often resort to a mix of property arrangements and modes of governance to procure access to space and keep it off limits to commodification and market exchange.⁷⁴ Insofar as the public is often the expression of state power working in alliance with market forces, activists' relations to it can be highly complicated. The reclaiming of public goods and resources, however, can provide an opening for the creation of new modes of commoning arising from the political action of the people. As Harvey aptly notes, the making of the commons “are contradictory and therefore always contested.”⁷⁵ In this nuanced formulation, commoning is

71. April 25, the day that marks Italy's liberation from fascism, is usually celebrated with a parade in the Prenestino neighborhood.

72. Matilde Fracassi (Forum Parco delle Energie activist), interview by author, Rome, May 3, 2017.

73. For a reading of commoning projects in Italy that involve issues of toxicity and urban development, see Armiero and De Angelis, “*Anthropocene*.”

74. Harvey, *Rebel Cities*, 67–88.

75. Harvey, *Rebel Cities*, 71.

presented as a process situated in places and histories, faced with the enormous challenge to reproduce and expand across a variety of scales, and constrained by neoliberal forces that use decentralization as a vehicle for deregulating markets and increasing inequalities. Yet, this approach largely relies on the distinction between active social collectives and malleable environmental resources. Harvey argues against the divide between “natural commons” (water, land, and forests) and “social commons” (ideas, images, code) on the grounds that “all resources are technological, economic, and cultural appraisals, and therefore socially defined.”⁷⁶ This position resonates with Michael Hardt and Antonio Negri’s definition of commoning as the cooperative social interactions that constitute both the field of capitalist capture and the terrain for building alternatives to it.⁷⁷

Although these perspectives have played an important role in reintroducing the commons in political thought and social movements, they tend to overlook the imbrications of human and nonhuman entities (including water, land, and chemicals) that provide the conditions of possibility for commoning. While I build on formulations of the commons as collective human activity, I also want to direct attention to the cosmopolitical dimension of commoning practices developed at the Ex-SNIA. Isabelle Stengers offers *cosmopolitics* as a concept that troubles the Western understanding of politics as a gathering of bounded human subjects capable of making judgements in the interest of the community.⁷⁸ The prefix *cosmo-* is meant to make explicit the presence of disparate entities and beings that do not have a political voice or do not even want to have one, and yet come to matter politically. As I have shown in the previous section, the Ex-SNIA archive reactivates the memories of those who resisted labor toxicities in the factory. Their ghostly presences, I argue, have been vital for nourishing the intergenerational time of struggle. Here I focus on the recalcitrant lake as a prime actor in the mobilization rather than a resource around which human collectives coalesce. To be sure, the people “who build and sustain urban life”⁷⁹ have been playing a key role in the struggle directed at preserving the Ex-SNIA, the factory and the lake, as an accessible urban ecosystem. But they are not alone.⁸⁰ Ex-SNIA activists often describe the lake as an entity with “a soul,” capable of effectively blocking real-estate development. For Alessandra Conte water “created a habitat that allowed us to fall in love with it.”⁸¹ She recalls that when the activists began regular visits to the lake in 2014, they “felt like guests of a rarefied, regenerated space. These sensations translated into the imaginary of the lake that fights back.”⁸² What does it mean to think of the lake as a source of

76. Harvey, *Rebel Cities*, 72.

77. Hardt and Negri, *Commonwealth*. For a feminist criticism of Hardt and Negri’s formulation of the common, see Tola, “Commoning with/in the Earth.”

78. Stengers, “Cosmopolitical Proposal.”

79. Harvey, *Rebel Cities*, xvi.

80. Haraway, *Staying with the Trouble*.

81. Alessandra Conte (Forum Parco delle Energie activist), interview by author, Rome, May 19, 2017.

82. Alessandra Conte (Forum Parco delle Energie activist), interview by author, Rome, May 19, 2017.

regeneration? And how do sensations translate into politics? In stark contrast with the image of the violence of urban development evoked at the beginning of this section, regeneration refers to the lake's capacity to transform urban geographies in ways that have created propitious conditions for struggle. Sensations can function as the basis of enduring *attachments* that Stengers defines as "what cause people . . . to feel and think, to be able or become able."⁸³ Attachments generate problems and pose questions; they may propel transformations that could not be enacted by humans alone.⁸⁴ The lake, I argue, enabled attachments, thought, and collective action that counter dominant regimes of property and governance.

The hip-hop song *Il lago che combatte* (*The Lake That Fights Back*), the theme song of the protest composed by the militant groups Assalti Frontali and Il Muro del Canto, is a powerful expression of the cosmopolitical experiment taking place at the Ex-SNIA.⁸⁵ The song evokes the encounter between the lake and those who learned to care for it, "the lake invaded the reinforced concrete and asked for help / we learned to imagine, love, and experience it." For some this may conjure up the image of an innocent nature that turns against plunderers to form commons that activists are called to defend. I do not wish to subscribe to such a romanticized understanding of nature. But the definition of the lake as "second nature" produced by capitalist development is not satisfying either.⁸⁶ While this concept captures the capitalist fabrication of nature for profit purposes, it runs the risk of eliding the ways in which second nature alters the beings that press on it. It seems to me that Anna Tsing's "third nature," that which "manages to live despite capitalism,"⁸⁷ is more effective for thinking the lake and the political project of which it is part. I understand the rebel lake as an instance of produced nature that manages to live in the context of advanced capitalism. Amidst uneven conditions of environmental and labor precarity, it holds open space for transformation in the form of the commons. This, I suggest, is a process in which it is hard to tell where the natural ends and the social begins. While it does not make sense to think of the lake's water as natural commons in that its existence is fully integrated in the web of human activities,⁸⁸ it is likewise important to pay attention to the ways in which water flows, obstructs movements, dissolves some chemicals and reacts with others, and enables the life of myriad beings.⁸⁹ The distinction between natural commons and social commons, I argue, breaks down not just because human activities constantly mobilize material resources. Rather, what makes up the commons are socio-natural dynamics in which

83. Stengers, "Introductory Notes on an Ecology of Practices," 191.

84. See Muecke, "Attachment."

85. The video for *Il lago che combatte* is available at https://www.youtube.com/watch?v=Dcb_Thrq2P8, (accessed December 28, 2018).

86. Smith, *Uneven Development*.

87. Tsing, *Mushroom at the End of the World*, viii.

88. Mezzadra and Neilson, *Border as Method*.

89. Braun, "Environmental Issues."

other-than-human entities act as forces of change. By bringing into the fore some of these dynamics, the struggle unfolding at the Ex-SNIA points toward a more capacious sense of the commons than the dissolution of the natural into the social commons engendered by human interactions.

Conclusion

Building on feminist insights on chemical infrastructures and cosmopolitics, in this article I have shown that histories of toxicity have been reactivated in the ongoing project of turning the Ex-SNIA into a site of commoning that counters urban privatization. The memories of past chemical embodiments and workers' resistance to the toxicities of labor compose a frame of remembrance that sustains the making of what I define as cosmopolitical commons. This concept complicates the prevalent understanding of commoning as a product of human activity in that it foregrounds, and politicizes, attachments across time, species, and elements. Specifically, it calls for considering how the assemblage of eco-memories that emerged out of the activist archive and the startling force of the lake come to matter in the making of the commons at the Ex SNIA. By mobilizing feminist perspectives for attending to past chemical embodiments and the urban lake as crucial for this particular activist project, I have demonstrated how feminist science studies, broadly conceived, can both enliven the politics of the commons and incorporate its vital insights about capitalist forms of appropriation and exploitation. Struggles that bring together issues of economy and ecology, labor exploitation, and environmental destruction provide fertile openings for pursuing such exploration.

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Acknowledgments

Many thanks to the activists of the Forum Parco delle Energie. I am grateful to Alessandra Conte, Matilde Fracassi, and Flavia Sicuriello for sharing memories, knowledge, and images of the factory and the lake. Thanks to the lake for its generative force that, among other things, inspired this research. The generous feedback of reviewers Stefania Barca and Roberta Biasillo (who graciously disclosed their names to me) was invaluable to clarify my argument.

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