The Impossible Neutrality of a Disaster in Seveso 1976

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Abstract: The Seveso disaster in 1976 is considered one of the worst environmental and health catastrophes of contemporary times. Because of its dramatic consequences, it opened a new phase of reflections on the use of science and technology in Italy in the second half of the troubled 1970s. This paper aims to explore the problem of the neutrality and non-neutrality of science by investigating the public narrative of the Seveso incident reported by two ideologically opposed newspapers such as the communist *l'Unità* and the center-right bourgeois daily *Corriere della Sera*. Through this comparison, it is possible to highlight the socio-political and ideological influences that affected public opinion on a disaster that was on the one hand environmental and sanitary, and on the other social and economic. In conclusion, the paper casts a transnational glance at the *New York Times* analysis, to highlight the differences in the narratives and to show how deep the Italian political background was in conditioning the reactions, including on the scientific level.

Keywords: history of ecology, neutrality of science, radical science movements, Seveso, science communication.

Introduction

Our reader is a calm, honest, order-loving man who works, produces, and creates income [...] He opens the newspaper to find a serene and balanced word [...]. Our reader opens the newspaper, looks at it, and decides if he wants to read it or throw it away. Without the feeling that we want to break his balls!

1972: At the peak of his career, the Italian actor Gian Maria Volonté was cast to play Giancarlo Bizanti, editor-in-chief of the right-wing newspaper *Il Giornale*. The film, *Sbatti il mostro in prima pagina*, directed by

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Marco Bellocchio[1], tells the relationship between public opinion and mass communication during the controversial 70s in Italy. The film attempted to display the manipulation of the news, the overused "journalistic malpractice"[2]. A political-ideological clash was animating the Country: one of the main purposes of the protesters was to restore the proper value to truth and knowledge, and to draw attention to the non-neutrality of dominant narrative in influencing public opinion. Following this shared belief, also the scientific debate had been affected by original critics. Several cases would provide an analysis about socio-political influences in Italian scientific context[3].

The Seveso disaster should be considered as illustrative to delve into the issue of non-neutrality of science in its public use. Many studies have already examined the event from other points of view[4]. The aim of this study is to investigate the Seveso case through the public narrative of the disaster offered in two important counterposed daily newspapers, both ideologically biased. Furthermore, this paper attempts to show which values and themes have distinguished the different narratives, comparing the communist *l'Unità* and the industrial bourgeoisie newspaper, the liberal *Corriere della Sera*. Was the public given a consistent and objective account of the catastrophe? Or was the reporting not exactly neutral – even medically – due to the effects of socio-political imperatives? This article tries to answer these questions through an analysis tracing the year following the accident. As a last resort, the issue investigates the description of the Seveso catastrophe that emerged in the liberal and democratic *New York Times*, in order to obtain a transnational perspective and identify differences.

[1] Marco Bellocchio, *Slap the Monster on Page One*. Jupiter Generale Cinematografica, UTI Produzioni Associate, Labrador Films, 1972.

[2] *Segnalazioni cinematografiche*, vol. 75, 1973.

[3] The Italian 1960s and 1970s had already offered controversies concerning the use of science and power: Mauro Capocci and Gilberto Corbellini, *La politica della scienza nel secondo dopoguerra*, in *Il Contributo italiano alla storia del Pensiero - Scienze*, Treccani, Roma 2013, pp. 556-562; Daniele Cozzoli and M. Capocci, *Making biomedicine in twentieth-century Italy: Domenico Marotta (1886-1974) and the Italian Higher Institute of Health*, "The British Journal for the History of Science", 44, 4, 2011, pp. 549-574; John Foot, *The Man Who Closed the Asylums: Franco Basaglia and the Revolution in Mental Health Care*, Verso Books, New York 2014; Gerardo Ienna, *Fisici italiani negli anni '70 fra scienza e ideologia*, "Physis", 55, 1-2, 2020, pp. 415-442; Fabio Lusito, «*Diamo l'assalto al cielo!*» (*«Let's assault the sky»): science communication between scientists and citizens and Lombardo Radice's television in Italy in the years of the protests*, "JCOM – Journal of Science Communication", 19, 03, 2020, pp. 1-22.

[4] Laura Centemeri, *The Seveso disaster legacy*, in Marco Armiero and Marcus Hall (eds.), *Nature and History in Modern Italy*, Ohio University Press & Swallow Press, Athens 2010, pp. 251-273; Bruna De Marchi, *Seveso: From pollution to regulation*, "International Journal of Environment and Pollution", 7, 4, 1997, p. 526-537; B. De Marchi, Silvio O. Funtowicz, and Jerome R. Ravetz, *Seveso: A paradoxical classic disaster*, in James K. Mitchell (ed.), *The long road to recovery: Community responses to industrial disaster*, United Nations University Press, New York 1996, ch. 4.

Recently, several scholars have studied the historical coverage of science in national newspapers during different ages. The focus has often been on the analysis of popularization practices, the inclusion of scientists in the press and the rise of science displayed in the public sphere[5]. Mostly, these studies concern the area of science communication and its history. Some papers have already reviewed similar topics in the Italian background[6]. The aim of this paper is to assess the socio-political features of the use of science in the public context by examining, from a historical perspective, the consequences of an event that affected both the scientific and the medical as well as the social spheres and, by doing so, to emphasise how challenging it has been to follow an unbiased and objective attitude in communication.

The Seveso emergency is considerable a classic example of risk communication in science[7]. Hence the abundant use of evocative terms such as 'disaster', 'calamity' and 'catastrophe'. Subsequently, reference can be also made to the

[5] Casper Andersen and Hans H. Hjermitslev, *Directing Public Interest: Danish Newspaper Science 1900-1903*, "Centaurus", 51, 2009, pp. 143-167; Geoffrey Belknap, *From a Photograph: Authenticity, Science, and the Periodical Press, 1870-1890*, Bloomsbury, London 2016; Adrian Bingham, *'The monster'? The British popular press and nuclear culture, 1945-early 1960s*, "The British Journal for the History of Science", 45, 4, 2012, pp. 609-624; Suzanne de Cheveigné, Eliséo Veron, *Nobel on the front page: the Nobel physics prizes in French newspapers*, "Public Understanding of Science", 3, 2, 1994, pp. 135-154; Matiana González-Silva, *With or Without Scientists: Reporting on Human Genetics in the Spanish Newspaper El País (1976-2006)*, in Faidra Papanelopoulou, Augustì Nieto-Galan and Enrique Perdiguero (eds.), *Popularizing Science and Technology in the European Periphery, 1800-2000*, Routledge, London & New York 2016, pp. 217-236; A. Nieto-Galan, *From Papers to Newspapers: Miguel Masriera (1901-1981) and the Role of Science Popularization under the Franco Regime*, "Science in Context", 26, 3, 2013, pp. 527-549; Marianne G. Pellechia, *Trends in science coverage: a content analysis of three US newspapers*, "Public Understanding of Science", 6, 1, 1997, pp. 49-68; Jeffrey R. Wigelsworth, *Bipartisan politics and practical knowledge: advertising of public science in two London newspapers, 1695-1720*, "The British Journal for the History of Science", 41, 4, 2008, pp. 517-540; Isabel Zilhão, *The rise and fall of science for all: Science for children voiced by a Portuguese daily newspaper (1924-1933)*, "History of Science", 52, 4, 2014, pp. 454-488.

[6] Massimiliano Bucchi, *La scienza nella stampa quotidiana*, in Francesco Cassata and Claudio Pogliano (eds.), *Scienze e cultura dell'Italia unita, Annali 26*, Einaudi, Torino 2011, pp. 297-320; Id., *Visible Scientists, Media Coverage and National Identity: Nobel Laureates in the Italian Daily Press*, in Bernard Schiele, Michel Claessens and Shunke Shi (eds.), *Science Communication in the World*, Springer, Dordrecht 2012, pp. 259-268; Id., *La scienza e i mass media: la «fusione fredda» nei quotidiani italiani,* "Nuncius", 11, 2, 1996, pp. 581-600; M. Bucchi and Renato G. Mazzolini, *Big science, little news: science coverage in the Italian daily press, 1946-1997*, "Public Understanding of Science", 12, 1, 2003, pp. 7–24; Andrea Candela and Federico Pasquarè Mariotto, *Italian news coverage of radiation in the early decades of the twentieth century: A qualitative and quantitative analysis*, "Public Understanding of Science", 25, 2, 2016, pp. 236-251; F. Lusito, *Divulgare la scienza, rivoluzionare la società: gli interventi giornalistici di Lucio Lombardo Radice*, "Physis", 55, 1-2, 2020, pp. 325-347; Nico Pitrelli, Federico Manzoli, Barbara Montolli, *Science in advertising: uses and consumptions in the Italian press*, "Public Understanding of Science", 1, 2, 2006, pp. 207-220.

[7] Giancarlo Sturloni, *La comunicazione del rischio per la salute e l'ambiente*, Mondadori, Milano 2018.

notion of 'crisis' (in climate, in biodiversity, in the environment), as implied in an Anthropocene horizon nowadays[8]. As has been pointed out lately, "disasters should be understood as stemming from a mixture of environmental, technological, and human factors"[9]. Therefore, the Seveso explosion can be considered entirely appropriate to this definition.

In the aftermath of Covid-19 pandemic, we are particularly aware of what it means to delay assistance and influence the citizens. In this regard, it can be recalled that "science and politics cannot be separated, as the case of pandemic management in history shows", and this also applies to other crises, including environmental one[10]. In this assessment, the human factor played such a significant role that it affected not only safety operations but also the opinion of readers. In fact, the Seveso catastrophe occurred at an intense phase of the public debate on science, and at the climax of the Italian political agon – these aspects often ran in parallel. In this context, non-neutral stances found fertile land.

Silence, please!

Saturday, July 10, 1976, around 12:30 p.m., Italy: in Meda, Lombardy – in the center of the so-called "industrial triangle" – at the ICMESA chemical company, the malfunction of a reactor's control system caused its explosion. A cloud of tetrachlorodibenzo-p-dioxin (TCDD), a highly toxic dioxin, was released. Seveso – not far from the site – was the city most affected by the harmful smoke. A few days later, the first effects on the surrounding flora and fauna became apparent: crops were compromised and some animals died. However, in the media, it seems that nothing happened near Seveso. On July 14, the very first evidence of the toxic release was shown. The next day, the first institutional measures were taken[11]. The situation was surreal: the toxic cloud was being released into the air, but there was absolute silence in the media.

Citizens, who were directly exposed to the risk, were kept unaware of the incident for a week. The first newspapers to report the story were the *Corriere*

[8] Jürgen Renn, *From the History of Science to Geoanthropology*, "Isis", 113, 2, 2022, pp. 377-385; cf. John Robert McNeill and Peter Engelke, *The great acceleration: An environmental history of the Anthropocene since 1945*, Harvard University Press, Harvard 2016.

[9] Julia F. Irwin, Jenny Leigh Smith, *Introduction: On Disaster*, "Isis", 111, 1, 2020, pp. 98-103, pp. 98-99.

[10] Flavio D'Abramo, Giulia Gandolfi, G. Ienna, Pietro Daniel Omodeo and Charles Wolfe, *Political epistemology of pandemic management*, "Mefisto", 5, 1, 2021, pp. 121-146, p. 142.

[11] L. Centemeri, *Ritorno a Seveso. Il danno ambientale, il suo riconoscimento, la sua riparazione*, Bruno Mondadori, Milano 2006, pp. 22-23.

della Sera and the Milan daily *Il Giorno* only on 17 July[12]. At first, catastrophic headlines and poor scientific knowledge worried the population. But the press was quiet by reporting late about the tragic event. *La Stampa*, for instance, in its first article, completely skirt the issue, merely stating "It all started last Saturday" and nothing else[13]. Other newspapers did not report the news: they learned about the ICMESA explosion only through the articles in *Corriere della Sera* and *Il Giorno*, both informed by the Mayor of Seveso.

What caused this long-lasting silence? The communications had all been filtered by the company responsible for the incident, the Swiss *Givaudan*. Even the first checks and tests were on their charge. Referring to a category conceptualized by historians of science Erik Conway and Naomi Oreskes, they were akin to the "Merchants of Doubt": scientists ready to deny the truth and hold "opinions [that] sometimes express ill-informed beliefs, not reliable knowledge"[14]. The company had no interest in spreading the news and alarming the public, nor was it communicated that the issue was dioxin; it was thought, perhaps, that everything would be fine, without the urgency of compromising business.

The Communists' perspective

The unconventional silence soon became an allegation by the communist newspaper *l'Unità*: "ICMESA managers […] had first kept quiet about the malfunction and then downplayed the level of dangerous air pollution". When referring to the dioxin, the journalist was sure: "The gas is similar to that used in Vietnam by the Americans". Until then, dioxin's effects caused skin burns that injured ten children[15]. The similarity to the situation in Vietnam was functional in equating the leadership of ICMESA and the United States foreign policy: both reprehensible in the communists' view, as the former represented a supporter of the cynical industrial bourgeoisie, the latter as the political-ideological enemy *par excellence*. Suffice it to say that a few years earlier the moon landing had been politicised by invoking comparisons with Vietnam[16]. A similar reference appeared again in the following

[12] Editorial, *Un intero quartiere di Seveso inquinato da gas tossici*, "Corriere della Sera" [CdS], 17 July 1976, p. 7; Editorial, *Bimbi rossi e gonfi per una nube di gas*, "Il Giorno", 17 July 1976.

[13] M. F., *Intossicati 20 bimbi da una nube chimica a Seveso ed a Meda*, "La Stampa", 18 July 1976, p. 11.

[14] Erik Conway and Naomi Oreskes, *Merchants of doubt*, Bloomsbury Press, New York 2010, p. 240.

[15] Paolo Zucca, *Fabbrica che avvelena: arrestato il direttore*, "l'Unità", 22 July 1976, p. 6.

[16] It was the head of the PCI's Central Press and Propaganda Section Achille Occhetto who proposed a provocative parallel between the moon landing and Vietnam. cf. Achille Occhetto, *La Luna e il Vietnam*, "l'Unità", 26 July 1969, p. 1.

days. This time, the contributor insisted about the possibility that dioxin could kill even years after, providing evidence:

> Scientists from Vietnam and other nations have presented, in numerous scientific forums, the results of research on the frightening experiences in their Country, which were sprayed with heavy amounts of dioxin. […] Dioxin […] can cause serious liver and kidneys damage and appears to cause liver tumors, congenital malformations in infants, and genetic alterations[17].

Authoritative scientists had also recalled some comparisons with Vietnam[18]. Stirring the pot, some journalists exaggerated by calling the cause of the accident a "dioxin bomb"[19]. The opinion of the Health Commission, which did not exclude the possibility of deformed births, was also being juxtaposed to the Vietnamese precedent[20]. Even long after the fact, articles about Vietnam and Seveso were shrewdly paired on the same page[21]. Scientific explanations appeared useful to justify ideological opinions.

Any doubts were dispelled with a further accusation made by the leftist newspaper: *L'Unità* raised the question of the delay in evacuation and assistance. It was said that evacuation from the site had been delayed by seven days despite the urging of the health officer: two workers had warned the authorities of the accident, but the factory managers had only called for generic caution[22]. This situation led the Communist Party to launch an inquiry, which generically focused its attention on health-threatening industries[23]. The newspaper considered ICMESA to be the benchmark of the system: moralist and rhetorical articles were published, filled with eloquent headlines such as "The death in the factory" or "ICMESA continues to produce poisons in our country", disapproving of the very role of the factories, defined as a "trap" for health and a "problem for the society"[24]. It turned into a trial

[17] Paolo Sassi, *La dioxina può uccidere anche a distanza di anni*, "l'Unità", 26 July 1976, p. 5. Cf. Marina Rossanda, *La particolare esperienza del Vietnam*, "l'Unità", 2 September 1976, p. 4.

[18] As the genetist Adriana de Capoa, *La genetica non c'entra*, "l'Unità", 18 August 1976, p. 3.

[19] Orazio Pizzigoni, *Il primo turno di operai è al lavoro a disinnescare la 'bomba alla diossina'*, "l'Unità", 10 August 1976, p. 4.

[20] Bruno Enriotti, *Possibili le nascite deformi*, "l'Unità", 11 August 1976, p. 4.

[21] Massimo Loche, *Vietnam: prime risposte sui micidiali effetti della diossina sull'uomo*, "l'Unità", 22 November 1976, p. 5; Editorial, *Mangiò erba contaminata la mucca morta a Seveso*, "l'Unità", 22 November 1976.

[22] Ennio Elena, *Fu spostata di 7 giorni l'evacuazione sollecitata dall'ufficiale sanitario*, "l'Unità", 26 July 1976, p. 5; Id., *Già 800 milioni i danni della nube*, "l'Unità", 27 July 1976, p. 4; Id., *Silenzi e colpevoli ritardi dietro il dramma di Seveso*, "l'Unità", 28 July 1976, p. 4; Bianca Mazzoni, *Ignorati gli allarmi dei lavoratori*, "l'Unità", 13 August 1976, p. 4.

[23] *Il PCI apre un'inchiesta sulle industrie che attentano alla salute*, "l'Unità", 5 August 1976, p. 4; Michele Urbano, *Il PCI chiede un'inchiesta parlamentare sulle responsabilità del disastro all'ICMESA*, "l'Unità", 1 August 1976, p. 4.

[24] O. Pizzigoni, *La morte in fabbrica*, "l'Unità", 9 August 1976, p. 5; Editorial, *I tentacoli di una*

of the industrial system, awakening controversies over political and public control, the use of toxic substances, and preventive measures for workers[25].

Some scientists and academics tended to support this narrative. According to the anthropologist Ettore Biocca "uncontrolled industrialization in a dependent Country without adequate protective legislation, such as Italy, is turning into the most tremendous pathology humanity has known", and Seveso was a striking example[26]. For the physician Giovanni Berlinguer, a senior member of the Communist Central Committee, Seveso could be a crucial moment to renew the "contribution to the fight against environmental degradation of the Country" caused by wild development[27]. For critics, this meant reconsidering the entire national industrial program[28]. The same emphasis was placed on how pollution affects the cost and welfare of citizens[29].

As contributors or scientists criticized the industrial network, environmental issues emerged, which themes were advancing around the world and had previously been discussed by the Communist Party[30]. The debate was vigorously pursued in the pages of the newspaper by physician, activist and regional communist councillor Laura Conti[31]. Her thoughts, which often start from a technical point, concern the relationship between the industrial use of science and the regard for the "general laws of living nature"[32]. As she stated, "When political decisions have to be based on scientific data, it is absolutely necessary to clarify the relationship between science and politics", to avoid the risk of compromising the correct method[33]. These articles, which were often based on a critical examination of the role of science, turned into explicit political accusations.

multinazionale, "l'Unità", 27 July 1976, p. 4.

25 Guido Manzone, *Processo ai veleni*, "l'Unità", 5 August 1976, p. 3.

26 Ettore Biocca, *La nube di Seveso: dobbiamo tollerare ancora?*, "l'Unità", 7 August 1976, p. 1.

27 E. Elena, *Ricostruire la vita dove si è seminata la distruzione*, "l'Unità", 30 August 1976, p. 4.

28 Giancarlo Angeloni, *Caos nei controlli: ecco come dall'Icmesa 'nasce Seveso'*, "l'Unità", 12 September 1976, p. 5.

29 G. Manzone, *Quanto costa l'inquinamento*, "l'Unità", 20 August 1976, p. 3.

30 Istituto Gramsci, *Uomo natura società. Ecologia e rapporti sociali*, Editori Riuniti, Roma 1972.

31 About the figure of Laura Conti in relation to Seveso, see Stefania Barca, *Lavoro, corpo, ambiente: Laura Conti e le origini dell'ecologia politica in Italia*, "Ricerche Storiche", XLI, 3, 2011, pp. 541-550; Id., *On working-class environmentalism: a historical and transnational overview*, "Interface: a journal for and about social movements", 4, 2, 2012, pp. 61-80; Serenella Iovino, *Dioxin, Power, and Gendered Bodies in Laura Conti's Narratives on Seveso*, in Greta Gaard, Simon Estok and Serpil Oppermann (eds.), *International Perspectives in Feminist Ecocriticism*, Routledge, New York 2013. Conti was also the author of several technical articles, useful to promote immediate and efficient emergency relief policies: Laura Conti, *Le faticose tappe alla ricercar della tremenda diossina*, "l'Unità", 6 August 1976, p. 4; Id., *Come e quando decontaminare*, "l'Unità", 14 August 1976, p. 4; Id., *Defoliazione e scortecciamento per fermare la diossina*, "l'Unità", 26 August 1976, p. 4.

32 Id., *Se il veleno si accumula*, "l'Unità", 27 July 1976, p. 3; cf. Id., *Scetticismo e sconforto: due atteggiamenti sbagliati,* "l'Unità", 23 August 1976, p. 4.

33 Id., *Chi indaga e chi provvede*, "l'Unità", 21 September 1976, p. 3.

All reflections converged in a polemical essay published on the first anniversary of the scandal, with the provocative title "When profit constrains science". Conti stressed the "urgency of making the productive uses of environmental resources compatible [...] with the defence of living conditions". For her, science could not be inhibited and instrumentalized to the logic of profit; it must "explore […] the problems caused by the instrumentalization to which it has been subjected, and rigorously expose their gravity"[34]. It means to choose for a non-capitalistic science, as Conti has asserted on several occasions by proposing an alternative model based on the idea of a working-class science[35]. As it has been said, "Conti's eco-socialism had to be constructed at the point of production"[36]. Only starting from this background would it have been possible to think of a new approach, the ecological one: all reflections that were later arranged in the book *What is ecology* and recalled in the more evocative *Seen from Seveso*[37].

The principal themes emerged from *l'Unità*'s analysis were the same as those close to the Communist party's awareness: affinities over the Vietnam war, severe criticism of the capitalist system, and the defence of the working-class' health. All in favour of environmental protection[38]. Although biased, the leftist narrative was critical against the dominant (bourgeois) narrative; indeed, the leftist narrative drew attention to the sociological characteristics of the Seveso disaster, but from a scientific perspective. The result was a criticism of the neutrality of science that, whilst not explicitly mentioned, was clearly implied.

The bourgeoise's perspective

The arguments advanced by the bourgeois and pro-industrial press were different, even though Pietro Ottone was in his final stage as editorial director of the *Corriere* and had, earlier, taken the newspaper on a less conservative direction. However, the debut of the *Corriere della Sera*, after the first confusing news, was equally dramatic: with the aim of showing the health consequences, the first photographs of a poisoned citizen were reported with the scaremongering headline "A mysterious gas that kills plants and animals

[34] Id., *Quando il profitto condiziona la scienza*, "l'Unità", 10 July 1977, p. 9.

[35] Id., *Il topo e la scienza*, "l'Unità", 19 October 1977, p. 3.

[36] S. Barca, *Labour and the ecological crisis: The eco-modernist dilemma in western Marxism(s) (1970s-2000s)*, "Geoforum", 98, 2019, pp. 226-235, p. 230.

[37] L. Conti, *Che cos'è l'ecologia*, Mazzotti, Milano 1977; Id., *Visto da Seveso*, Feltrinelli, Milano 1977.

[38] E. Elena, *Il flagello della diossina*, "l'Unità", 10 July 1977, p. 9.

invades a city: fourteen children intoxicated"[39]. It was underlined how the gas had been lethal[40]. From the outset, the potential environmental and health damages were highlighted, renaming the toxic cloud "poison" on several occasions. According to scientists, the toxic substance was considered to be "the most toxic poison in the world", words reported in the insert *Corriere d'informazione*[41], and even the gas was believed to be more dangerous than the others used in the war[42]. However, there was very little scientific and medical knowledge to make such an accurate statement.

The *Corriere* editorial staff didn't need to compare the toxic substance to the gas used in Vietnam, or at least without the obsessiveness usually displayed by left-wing newspapers[43]. But Umberto Eco, in the pages of the *Corriere* itself, claimed that the lack of discussion was startling, admitting: "it is surprising [...] that sixty thousand tons of [...] dioxin were dropped on Vietnam, and in the end, it did not shock anyone"[44]. In their later analyses of the scandal, journalists thought it was more advantageous to blame other western countries: they were accused of espionage operations, of not sharing medical knowledge, of lack of interest in the Italian problem, of suspicious partnerships with ICMESA, and were seen as determined to limit the economy of Brianza[45].

The problems highlighted by the Milanese newspaper were others: not only scientific, ecological or health-related, but also economic[46]. Some companies were so threatened by the consequences of the toxic cloud that journalistic rhetoric went so far as to call the drama a "psychosis": "The craft industry has been severely hit by the toxic cloud [...] The future of our craftsmen is threatened and, with it, one of the productive activities for which we still have reason to be proud"[47]. Sometimes unwise measures were taken to completely shut down factories that were absolutely in order[48].

[39] Andrea Bonanni, *Un gas misterioso che uccide piante e animali invade un paese: quattordici bimbi intossicati*, "CdS", 18 July 1976, p. 1.

[40] Editorial, *Nube tossica: le immagini del dramma di Seveso*, Ivi, p. 15.

[41] Sergio Angeletti, *È il veleno più potente del mondo*, "Corriere d'informazione", 27 July 1976, p. 1.

[42] A. Bonanni, *Così pericoloso che non si usa nemmeno in guerra*, "CdS", 22 July 1976, p.1.

[43] *L'Unità* was not the only newspaper spreading this comparison; for example, it was usual for *Il Manifesto*, representative of the radical Left universe.

[44] Umberto Eco, *Dodici pensieri su Seveso*, "CdS", 17 August 1976, p. 3.

[45] Augusto Pozzoli, *Manovre di spionaggio internazionale intorno al filo spinato della zona A*, "CdS", 11 August 1976, p. 7; Anon., *La Nato smentisce ogni rapporto con l'ICMESA*, "CdS", 5 August 1976, p. 5; M.B., *La Svizzera rifiuta le derrate brianzole provenienti da Seveso*, "CdS", 5 August 1976, p. 5; Anon., *L'antidoto? Gli americani ce l'hanno ma è un segreto militare e tacciono,* "CdS", 5 August 1976, p. 5; Anon., *Documento segreto Nato sui danni della diossina*, "CdS", 24 August 1976, p. 9.

[46] Francesco Cevasco, *Chi paga per la nube*, "CdS", 12 August 1976, p. 2.

[47] Barbara Visentin, *La psicosi della diossina minaccia l'attività di trentamila artigiani*, "CdS", 14 August 1976, p. 7.

[48] Giuseppe Di Stefano, *La psicosi del veleno*, *Ibidem*.

In the *Corriere*, the State was put under accusation instead of the industrial system: a paradoxical turnaround from the Left's thesis. For example, the absence of regulations was an argument for blaming Italian politics: "Italy is totally caught off guard in the presence of these dangers. These are of two types: health and economic problems"; thanks to local laws, "ecologically problematic productions are made in Italy" rather than abroad. The conclusion was clear: "Instead of complaining about the misconduct of others, it will be better to take legal remedies, but first of all on the cultural ones, [...] which is the essential precondition"[49]. In this scenario, scientific aspects become secondary in most cases.

After all, science was reassessed in order to defend the goodness of a few technology-driven industries. Liberals asked themselves: Why condemn everyone? Wise scientific policies would be enough: the problem was related to regularize the relationship between science and politics. Scientific uncertainty was caused by political compromises: poor research, expensive instruments and mediocre libraries, even in Milan, "the capital of research and of the pharmaceutical industry"[50]. As the scientists pointed out, the USA provided a proper model to follow[51]. In the *Corriere*, the question of the neutrality of science and its political use was also discussed, but from an opposing point of view and often in the "Science and Technology" pages.

In March, seven months after the accident, the newspaper hosted a panel discussion on Seveso, involving scientists, technicians and politicians. Most recently, the militant left-wing magazine *Sapere* has published a monograph on "alternative" information about the Seveso debate. The meeting was also attended by Luigi Mara, a member of the journal, who was one of the founders of the *Medicina Democratica* movement in 1976[52]. For him, who contested the industrial system, information was all filtered by *La Roche* (the multinational corporation that controlled ICMESA): for this reason, he was convinced that newspapers and other mass media were exclusively reporting misinformation. This meant supporting "owner's science"[53]. Seen as an extremist, Mara was easily dismissed as a demagogue who distrusted scientific methods. After all, he had to deal with moderate politicians and private researchers.

[49] Luciano Caglioti, *Vita difficile in Svizzera per una fabbrica come l'ICMESA*, "CdS", 13 August 1976, p. 2.

[50] Angelo Di Nicolin, *L'incertezza della scienza sulla tragedia di Seveso*, "CdS", 1 September 1976, p. 16.

[51] Vittorio Sgaramella, *Controllo pubblico negli Stati Uniti sulle ricerche rischiose per la comunità*, *Ibidem*.

[52] Cf. L. Centemeri, *Medicina Democratica and the Seveso Disaster: lights and shadows of the Italian movement for environmental health in the 70's*, "HAL", 2009, pp. 1-18.

[53] Editorial, *C'è disinformazione? Accusa e difesa*, "CdS", 17 March 1977, p. 17.

As it turned out, the *Corriere*'s narrative was evidently positioned in such a way as to support industrial prerogatives and bourgeois ideology: pointing at those scientists who were not in line with the dominant view (and reporting such political statements) as "protesters" was functional in politicising and polarising the discussion[54]. However, the actual issue was that scientists and technicians were facing something scientifically unknown: dioxin. Probably, despite the biased evidence, there was a lack of certainty. By defending the capitalist view, the *Corriere* seemed less sensitive to environmental and health issues. The newspaper undoubtedly showed its affinity with people's problems and local obstacles, its concern for health risks (of citizens, not workers), but often preferring the economic and political implications.

Conclusion: The American difference

As expected, the events had an international impact. It is interesting to notice how the events in Seveso were debated in the United States, following the liberal and progressive view of *The New York Times*, representative of the instances of the Democratic Party. Consciously simplifying this complex issue, it could be considered a 'balanced' position, suspended between the demands of the bourgeoisie and the representation of the American soft Left. This cannot be compared to communist ideology or even the industrial perspective of the Italian center-right. It represents an additional point of view with different prerogatives.

The *NYT* did not report what happened in Italy until July 25, even though it was widely known that "an explosion at a chemical factory produced a toxic cloud a fortnight ago"[55]. The information was launched as a flash news. In the following month, all the news was reported with the purpose of informing about updates abroad, with no particular point of view: the situation was described, improvements in damage limitation were emphazised, and developments in health and environmental issues were accounted for[56]. It was also

[54] eg. Anon., *Golfari: 'I ritardi di Seveso sono colpa degli scienziati'*, "CdS", 2 January 1977, p. 11; Editorial, *Le due verità su Seveso a confronto*, "CdS", 16 March 1977, p. 17; Silvio Garattini, *Polemica tra scienziati sulla lotta alla diossina*, "CdS", 9 Aprile 1977, p. 9; Francesco Metrangolo, *Contro la diossina tutto da rifare?*, "CdS", 21 April 1977, p. 1; Anon,, *Il prof. Liberti chiarisce i termini della polemica*, Ivi, p. 13.

[55] Reuters, *179 Italians to Be Moved From Poison Gas Area*, "The New York Times" [NYT], 25 July 1976, p. 15.

[56] Editorial, *20 More Evacuated From Area in Italy Hit by Poison*, "NYT", 29 July 1976, p. 3; Christina Lord, *Italian Leaders Take Up Poison Chemical Problem*, "NYT", 31 July 1976, p. 3; Editorial, *Italian wrangle over poison issue*, "NYT", 4 August 1976, p. 9; Steven V. Roberts, *Poisonous Cloud's Effects Still Baffle Italy's Officer*, "NYT", 13 August 1976, p. 3.

possible to find a reference to the situation in Vietnam in the *NYT*, which indulged in a kind of self-criticism. Reporting the Italian government's request to consult a Vietnamese expert, a reporter stated: "During the Vietnam war, Dr. Ton That Thut of Hanoi's Viet Duc hospital developed a method of treating persons afflicted by chemicals used by United States forces to defoliate jungle hiding places of Communist troops"[57].

The use of the defoliant (the infamous and long-hidden "Agent Orange", composed of dioxin) was clearly admitted[58]. And it happened again a few times later, defining the gas "one of the most toxic substances known"[59]. Perhaps the war, which had ended a year earlier, was now considered frozen in the recent past. In addition to this, much attention – probably due to the juxtaposition of Italy and Catholicism – was devoted to a controversial issue: the right to abortion. For the first time ever, the Italian government was granting the possibility to interrupt a pregnancy because of the risks of the effects of dioxin on newborns. As the newspaper reported, this topic, which used to be a *classic* on the political agenda, came to its peak: "The theological and legal issues surrounding abortion have become a major theme in the wake of last month's spill of highly poisonous chemicals from a factory near the northern city of Milan"[60].

The Italian backwardness of the debate – admittedly complex – was judged reactionary by Americans' progressive and imperialist gaze. For example, the Catholic newspaper *L'ossevatore romano*, published in the Vatican and widely read in Italy, launched its provocations against "insistent laic propaganda"[61], reiterating to its readers that "any kind of abortion is considered illicit because it is the killing of a human being" according to Catholic morality[62]. Even for medical reasons. But the legal-religious topic was not the only one dealt with.

Ecology became gradually central to the narrative proposed by the *NYT*. There was a different sensitivity to environmental issues in the United States; a keen consciousness had arisen since the post-war period and, more recently, was linked to post-1968 criticism[63]. For this reason, the newspaper stressed

57 Editorial, *Italy seeks hell in Hanoi on fumes*, "NYT", 2 August 1976, p. 2.

58 Cf. Peter Sills, *Toxic war: the story of agent orange*, Vanderbilt University Press, Nashville 2014.

59 Editorial, *Seveso's People, Long After Blast, Still Live in Fear*, "NYT", 25 November 1977, p. 48.

60 C. Lord, *Abortion Debate Heats Up in Italy*, "NYT", 9 August 1976, p.7.

61 Editorial, *A Seveso cento giorni dalla nube*, "L'osservatore della Domenica" [OD], 14 November 1976, p. 7.

62 Federico Alessandrini, *Seveso e l'aborto*, "OD", 29 August 1976, p. 3.

63 Cf. Scott H. Dewey, *Working for the environment: organized labor and the origins of environmentalism in the United States, 1948–1970*, "Environmental History", 3, 1, 1998, pp. 45-63.

that "Seveso has been the scene of an ecological disaster that sounds the alarm about humanity's fatally laggard approach to the problems of chemical contamination"[64]. At the same time, concern also increased due to the explosion of another chemical plant in Manfredonia, southern Italy, which occurred a while later and was described as a potential "new ecological disaster"[65]. The Americans' hope was that these accidents would "raise to new levels Italy's awareness of the environment as a problem, and lead to new questions about the course of industrialization"[66].

A year after the catastrophe, Barry Commoner, the American biologist sent to Italy to oversee the situation in Seveso, making a comparison between the United States and the world, criticized the petrochemical industry for the risks it was causing. As he stated, "the petrochemical industry, that elegant new alchemy of our times, dramatizes the paradox of modern technology: its blessings are mixed with plagues". The biologist included Seveso, along with Michigan and Virginia, in a list of the worst recent environmental incidents. In his conclusion, it was necessary to "balance between the hazards and benefits of the petrochemical industry"[67]. With regard to health and the environment, this was a public emergency, with implications for the economy and social welfare. Commoner, by the way, was aware of the Italian situation.

Despite a general progressive approach, the American newspaper showed a neutral narrative, characterized by a detached perspective as well as less involvement in the issue. On the other hand, it is worth noting that when there were no direct implications, it was easy to reduce the narrative to facts. This was probably the only way to be neutral, both scientifically and ideologically. This attitude was impossible to find in Italy, at the centre of political confrontation, where attitudes were Manichean. There were too many areas and hegemonic interests to give the public simple *objectivity*, as it can interpreted in modern terms and as a historical category[68]. It was also complicated to build a common front on ecological and medical issues. In Italy, countering the opposing narrative was more important than coordinating the struggle for compelling political and scientific purposes. The loss of neutrality meant a loss of possibilities.

The neutrality of science was a hard problem for Italian intellectuals, culminating in a radical critique of science itself[69]. Based on this assumption, the Seveso debate was only a 'minor' detail, but in line with the widening range

64 *Seveso disaster*, "NYT", 19 August 1976.

65 *New ecological disaster feared in Italian blast*, "NYT", 1 October 1976, p. 95.

66 Melton S. Davis, *Under the poison cloud*, "NYT", 10 October 1976, p. 220.

67 Barry Commoner, *The promises and perils of petrochemicals*, "NYT", 25 September 1977.

68 Cf. Lorraine Daston and Peter Galison, *Objectivity*, Zone Book, New York 2007.

69 I have discussed this issue in detail in Fabio Lusito, *Un marxista galileiano. Scienza e società in Lucio Lombardo Radice*, Meltemi, Milano 2023, pp. 267-313

of critics. Strongly arguing about the use of science in a capitalist society, the controversy led to fratricidal disputes between militant scientists and promoted – precisely in 1976 – the publication of controversial books such as *The Bee and the Architect* or *Marxism and natural science*, highly symbolic of this heated cultural season[70]. Nevertheless, there was the exploit of new explanations derived from the socio-political echo that came with 1968. Above all, there was a restoration of history in the reading of scientific phenomena, which emphasised external effects. To retain science' objectivity an ideological invention got usual for a multitude of Marxist scientists attracted by the history of science[71].

The drastic criticism developed in Italy has been considered a model of good scientific practice by foreign observers linked to radical science movements[72]. In a few cases, the crisis has offered the opportunity to rethink the very role of science. In this context, moving away from the exclusive horizon of institutional parties and the mainstream media, the duty to pursue ecological and health fights (i.e., the work of *Medicina Democratica* or the born of the environmentalist association *Legambiente*, in the second part of the 70s) has become a prerogative of youth's movements and non-systematic scientists. The same occurred for the meta-reflection on science. In such a short period of time, thanks to its worldwide resonance, Seveso accident has contributed to the awakening of scientific consciences on various fields and invited institutions to update the environmental law[73]. It was time to abandon the old path.

Acknowledgements: I am thankful to Gerardo Ienna for his intelligent comments and support. I would like to thank Professor Angelo Baracca (1939-2023) for his personal testimony, which has been very useful and precious in addressing my research.

70 Giovanni Ciccotti et. al., *L'ape e l'architetto*, Feltrinelli, Milano 1976; Angelo Baracca and Arcangelo Rossi, *Marxismo e scienze naturali*, De Donato, Bari 1976.

71 Ivi, p. 74.

72 Hilary Rose and Steven Rose, *The radicalisation of science*, MacMillan, London 1976, p. 31; cf. Jean Marc Lévy-Leblond and Alain Jaubert, *(Auto)critique de la science*, Editions du Seuil, Paris 1975.

73 Astrid M. Kirchhof and J.R. McNeill, *Nature and the iron curtain: environmental policy and social movements in communist and capitalist countries, 1945–199*0, University of Pittsburgh Press, Pittsburgh 2019; A. Candela, *Storia ambientale dell'energia nucleare: gli anni della contestazione*, Mimesis, Milano 2017; Giorgio Nebbia, *Scritti di storia dell'ambiente e dell'ambientalismo 1970-*2013, Fondazione Micheletti, Brescia 2014; Donatella Della Porta and Mario Diani, *Movimenti senza protesta? L'ambientalismo in Italia*, Il Mulino, Bologna 2004; Roberto Della Seta, *La difesa dell'ambiente in Italia: storia e cultura del movimento ecologista*, Franco Angeli, Milano 2000. Because of Seveso important environmental European directives were released: European Directive 82/501/CEE, known as "Directive Seveso", adopted in Italy only in 1988 as D.P.R. n.175/1988.