Piotr Zańko
University of Warsaw, Poland
ORCID 0000-0003-3931-2928

The slow violence of air pollution: an educational challenge to what is potentially invisible

Abstract: In the article - starting from the personal experience of a person living every day in Warsaw, a city struggling with the problem of smog in the autumn and winter - I consider the issue of air pollution in terms of Nixon's 'slow violence' as a violence dispersed in time and space, and potentially 'out of sight' (Nixon, 2013). Then, following Thom Davies (2018), treating slow violence as a form of Mbembe's necropolitics (Mbembe, 2003), I reflect on possible, from the educational point of view, actions that could make slow violence visible and at the same time help citizens to emancipate themselves from the shackles of politics subordinating life to the power of death, reducing it to existence of the 'living dead'. Referring to the critical reflections of Henry A. Giroux (1988a, 1988b) and the literary reflections of Olga Tokarczuk (2019), I put forward the thesis that critical education, which would be able to create a parabolic story, universalize human experience and thus transcend the boundaries of the ego, has the potential to live up the representational and narrative challenge posed by the relative invisibility of slow violence.

Keywords: Air pollution, Slow violence, Necropower, Critical pedagogy, Parabolic story.

> It is not what goes into the mouth of a man that makes him
> unclean and defiled, but what comes out of the mouth; this makes
> a man unclean and defiles [him]
>
> Matthew 15:11

Introduction: smog as a silent and slow killer

The author of this article lives in Warsaw, the capital of which in the autumn and winter is shrouded in deadly smog, a slow and silent killer. Warsaw, like other cities in Poland, has been at the forefront of the most polluted regions in Europe for years. According to the World Bank Group data cited by Wojciech Nazar and Marek Niedoszytko, as many as '36 out of the 50 most polluted cities in the European Union are in Poland' (Nazar & Niedoszytko, 2022, p. 1). In November 2022, Warsaw – next to Cracow – was also in the top ten most polluted metropolises in the world according to the *iqair.com* ranking (Gruszczyński, 2022).

The smog in Poland is mainly London-type smog. It appears in the heating season and contains chemical substances harmful to health: mainly PM2.5 and PM10 suspended dusts; nitrogen and carbon oxides; sulphur dioxide (Adamkiewicz & Matyasik, 2019). The formation of London smog is also influenced by weather conditions, in particular the phenomenon of thermal inversion appearing, resulting in a gradual increase in air temperature with height. Thermal inversion contributes to the equalization of the air temperature with the temperature of the rising smoke. As a result of this process, the pollutants accumulated in the smoke lie low above the ground, in a layer with uniform temperatures. The phenomenon of thermal inversion is usually accompanied by windless weather, which prevents the blowing away of accumulated pollutants.

The name 'London smog' is not accidental and refers to the tragic event that took place at the beginning of December 1952 in London. Within eight days (from December 2 to 9, 1952), a thick layer of smog accumulated in London because of mass heating of apartments with coal (the smog episode was preceded by cold and humid days) and the emission of industrial pollutants. The smog paralyzed the entire city. Due to poor visibility, public transport stopped working. Not only outdoor sports events were cancelled, but also cultural events organized in buildings (concerts, theatre performances, etc.), as polluted air penetrated even into their interiors, making it impossible to watch them. At first, the smog did not cause panic among Londoners, who were used to the sight of dense fog. It was only the medical statistics published a few weeks later that shocked the public opinion. It turned out that 4,000 people died because of the 'Great Smog', although

in fact the mortality rate among Londoners remained at an elevated level for several months (Dawson, 2017; Logan, 1953; Mishra, 2017). The tragic events of 1952 led four years later to the adoption of 'The Clean Air Act' and to increasing environmental awareness and taking specific pro-ecological actions (Dawson, 2017). Although today London is not completely free of smog, the air quality is getting better every year. Unlike Great Britain and other Western European countries, Poland, as I mentioned at the beginning, is still one of the world's leading countries with the most polluted air. The main emitters of smog in Poland are households that use low-quality fuel (mainly coal) and municipal waste for heating, road transport and industry ('Skąd się bierze smog?', 2021). This situation is correlated with higher morbidity and mortality. For example, in Warsaw, pollutant emissions – the main pollutants being PM 2.5 and PM10 particulate matter 'cause approximately 1600 attributable deaths and 29,000 disability-adjusted life-years (DALYs) per year and that about 80% of this health burden was due to exposure to PM 2.5' (Holnicki, Tainio, Kałuszko, & Nahorski, 2017; quoted in: Nazar & Niedoszytko, 2022, p. 4). The aforementioned DALY coefficient 'expresses the years of life lost as a result of premature death and the years lived with a disability of a certain severity and duration. One DALY is (…) one year of healthy life lost' (Murray, 1996, p. 7). In the capital of Poland, in Warsaw, 'a short-term exposure to increased PM2.5 and PM10 concentrations by 10 µg/m3 results in an increase of relative risk (RR) of death by 0.7% and 0.3%, respectively' (Maciejewska, 2020; quoted in: Nazar & Niedoszytko, 2022, p. 4).This is worrying data.

The issue of air pollution is not only a problem of science dealing with environmental protection or public health. This problem can also be analyzed in the context of humanities and social sciences, including education. In this article, I consider the problem of air pollution in terms of Nixon's 'slow violence' (Nixon, 2013) and related Galtung structural violence (Galtung, 1969). Then, following Thom Davies (2018), treating slow violence as a form of Mbembe's necropolitics (Mbembe, 2003), I reflect on possible, from the educational point of view, actions that could make slow violence visible and at the same time help citizens to emancipate themselves from the shackles of politics subordinating life to the power of death, reducing it to existence of the 'living dead' (Mbembe, 2003). Isn't the life of citizens exposed to breathing polluted air actually a form of experiencing death while living?

Slow violence: 'out of sight' and in sight

The term 'slow violence' refers to Rob Nixon's book: *Slow Violence and the Environmentalism of the Poor*, published in 2011. Let's look at its most important theses.

Focusing on the world's slow-moving environmental disasters, Nixon defines slow violence as the kind of violence that 'occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all' (Nixon, 2013, p. 2). In contrast to violence, which is usually perceived as spectacular, immediate (fast violence), imposing, sensationally visible; slow violence is a form of violence that is rather incremental in nature, and its catastrophic effects are felt on different time scales (Nixon, 2013).

According to Nixon, the invisibility of slow violence poses representational challenges to how we construct narratives and strategic planning: 'Climate change, the thawing cryosphere, toxic drift, biomagnification, deforestation, the radioactive aftermaths of wars, acidifying oceans, and a host of other slowly unfolding environmental catastrophes present formidable representational obstacles that can hinder our efforts to mobilize and act decisively. The long dyings—the staggered and staggeringly discounted casualties, both human and ecological that result from war's toxic aftermaths or climate change—are underrepresented in strategic planning as well as in human memory' (Nixon, 2013, pp. 2–3). In the society of the spectacle, which feeds the viewers with sensational information and images, it is difficult to break through with a narrative about slow violence. In order for what is hidden and dispersed in time and space to become visible, as Nixon suggests, a change in the way of creating a narrative is needed. Therefore, the author of *Slow Violence* proposes to focus on the following questions and consider possible answers to them:

- 'How can we convert into image and narrative the disasters that are slow moving and long in the making, disasters that are anonymous and that star nobody, disasters that are attritional and of indifferent interest to the sensation-driven technologies of our image-world?
- How can we turn the long emergencies of slow violence into stories dramatic enough to rouse public sentiment and warrant political intervention, these emergencies whose repercussions have given rise to some of the most critical challenges of our time?' (Nixon, 2013, p. 3).

The conceptual antecedent of Nixon's slow violence is structural violence. This concept was coined in 1969 by Johan Galtung, who extended the concept of violence beyond direct contact between people (subject-object relationship) and pointed out that if a structure or social institution harms people by preventing them from meeting their basic needs, then we are dealing with structural violence (Galtung, 1969). As Galtung explains: 'when one husband beats his wife there is a clear case of personal violence, but when one million husbands keep one million wives in ignorance there is structural violence' (Galtung, 1969, p. 171). The common denominator of structural violence and slow violence is drawing attention to the broader, systemic determinants of violence. The difference between the two theories is that slow violence has a distinct spatio-temporal element.

The spatio-temporal dimension of Nixon's slow violence is also noted by Thom Davies, who states that this concept encourages us to expand our imagination about what constitutes harm to us; looking beyond what is immediate and obvious in social injustice (Davies, 2022). Nixon's concept of slow violence, writes Davies, 'invites us to include the gradual deaths, destructions, and layered deposits of uneven social brutalities within the geographic here-and-now. At the same time, by unchaining our geographical imaginations from the shackles of the present, (...) provokes us to delve into the past to unearth the violent structures of inequality that saturate contemporary life, and may well lay waste to the future' (Davies, 2022, p. 410).

These brutal, veiled structures of inequality, that Davies mentions, are not only linked to environmental catastrophes, but they can also be extended to other dimensions of social life. Jenna Marie Christian and Lorraine Dowler (2019), for example, propose that Nixon's slow violence be viewed through the lens of feminist research, denaturalizing binary divisions, and suggest a relational policy in which slow and spectacular violence would be treated as one complex: 'Slow and routinized harms of racism and sexism accumulate in deadly ways, even as the long-term consequences are detached from their public causes. Everyday discourses of hate and xenophobia can fuel racist hate crimes. Routinized and naturalized forms of rape culture produce the conditions for actual rape. The slow march of economic and political exploitation can incite explosive and violent responses, like an act of terrorism, and an act of terrorism can then be used to justify a generation of oppressive changes to immigration or policing policy with violent impacts that stretch across time' (Christian & Dowler, 2019, p. 1072). According to Christian and Dowler, revealing the co-consistency of these binaries (slow *versus* fast), showing how slow forms of violence are related to fast ones, and

how the latter shapes the slow ones, would make slow violence more visible. Going beyond this binary division, which de facto depoliticizes and thus removes slow violence from the field of social vision; by combining rather than separating the consequences and causes of slow violence, it could be a way to politicize it and challenge the impunity of its scattered perpetrators (Christian & Dowler, 2019).

As I mentioned, Nixon defines slow violence as being 'out of sight'. This raises an epistemic question: for whom, exactly, is slow violence out of sight? This problem was pointed out by Thom Davies, who, referring to his many years of ethnographic research conducted in 'Cancer Alley' (this is an area in the United States, in the state of Louisiana, along the lower section of the Mississippi River, where numerous petrochemical plants emitting strong toxic substances such as benzene, formaldehyde into the environment. This more than 100 km long 'petrochemical corridor' is called 'Cancer Alley' because there are large concentrations of people suffering from cancer because of contaminated air), put forward the thesis that the communities living in this area are beginning to see the impact of the slow violence of polluted air on everyday life (Davies, 2022). In other words, the slow violence they experience is not entirely out of sight. According to Davies, the slow violence in 'Cancer Alley' does not exist because of its invisibility. It persists because the stories, narratives of the victims of this violence do not count, they do not matter to political decision-makers (Davies, 2022). It should be added that this toxic area is inhabited mainly by ethnic and national minorities, people with low economic capital, which prevents them from changing their place of residence. Davies argues that ignoring these local, informal claims about the environmental injustice experienced by 'Cancer Alley' communities 'helps create a self-reinforcing cycle of brutality', that is not only slow and structural, but also epistemic (Davies, 2022, p. 421). The politics of brutality understood in this way leads to the creation of 'sacrifice zones', places where some communities are exposed to the possibility, the risk of dying while alive (Davies, 2018, 2022). I will develop this topic in more detail in the next section of the article.

The politics of the 'death worlds'

The theoretical discussion about the slow violence associated with polluted air can be extended - as proposed by Thom Davies (2018) - by referring to the concept of necropolitics created by Achille Mbembe (2003), which Mbembe built on Foucauldian criticism of the concept of sovereignty and its relation to war and biopower (Foucault, 2003; Mbembe, 2003). The

basis of my considerations in this area will be mainly the research findings of Davies, supplemented with my own references to the theories of Foucault and Mbembe.

Thom Davies points out that in contrast to biopolitics, understood as a form of exercising power, control over the proportion of births and deaths, reproduction, fertility of a given population; a form of regulating power that has the ability to 'make die' and 'let die' (Davies, 2018; Foucault, 2003); the source of the slow violence responsible for environmental damage is not a single, exclusive power of the sovereign, but a power that – as Mbembe, quoted by Davies put it – emerges from 'a labyrinth of forces at work' (Davies, 2018, p. 1539; Mbembe, 2001, p. 174). In other words, we are dealing here with forces that are dispersed, incoherent, entangled in 'a complex assemblage of corporate power, state authority, local regulations, and capitalist structures of accumulation' (Davies, 2018, p. 1539). The gradual experience of slow violence through, for example, exposure to polluted, toxic air, which – as I showed at the beginning of this article – can lead to greater morbidity and premature death, is not the result of deliberate actions of biopower, but the result of dispersed forces and actions of necropower, which subordinates life to the power of death (Mbembe, 2003). According to Davies, this subordination of life to the dictates of death is something more than Foucault's idea of the law of sentencing to death. In the field of necropower and necropolitics, citizens are exposed to the possibility of death (Davies, 2018). This distinction outlined by Davies is convincing and clear until the author tries to explain it by contrasting the expressions 'make die' and 'let die'. It is worth noting that both expressions refer to Foucault's reflections on the changes and transformations that took place within the political law in the 19th century. The expression 'make die' is related to the classical theory of sovereignty cited by Foucault, whose basic attribute was – let us recall – the 'right of life and death'(Foucault, 2003, p. 241). In other words, life and death are not natural phenomena, they belong to the area of political power, the sovereign can condemn to death and let live (Foucault, 2003). In the nineteenth century, however, this right was supplemented, as Foucault notes, by a new right, a form of power that was exactly the opposite: 'to "make" life and to "let" die' (Foucault, 2003, p. 241). Thus, Davies contrasts the necropolitical idea of 'exposing people to the possibility of death' with the idea of 'make die' from the classical theory of sovereignty, while at the same time associating the former with the new law of biopower, which speaks of 'let die', which as a result, blurs the proposed distinction. Regardless of these ambiguities, what distinguishes the idea of exposing people to the possibility of death from the

classical theory of sovereignty and the theory related to biopower technology is that in the former, people who experience slow violence experience it, as Davies writes, 'at the hands of an unlocated, dispersed perpetrator. No one is directly killed by pollution as a means of biopolitical control. Rather, communities (…) are allowed to suffer the attritional violence of environmental pollution, often through the "violent inaction" of regulating authorities' (Davies, 2018, p. 1540).

Mbmembe theorizing about necropolitics (as those forms of action that subordinate life to the power of death) refers, among others, to slavery – 'one of the first instances of biopolitical experimentation' (Mbembe, 2003, p. 21). The author of the concept of necropolitics points out that while a plantation slave is kept alive, he is kept alive 'in a state of injury' (Mbembe, 2003, p. 21). His existence is in many respects 'a form of death-in-life' (Mbembe, 2003, p. 21). Referring to this reflection, Davies puts forward a rather bold thesis that the life of a slave experiencing gradual mutilation on plantations resonates with the equally slow experience of polluted air by people living in the modern, globalized world: 'just as […] the colonized bodies [of slaves – P.Z.] were kept in a state of gradual injury through processes of imperial domination, Nixon's interpretation of slow violence shows how the uneven spread of globalization and pollution similarly keeps marginalized groups in situations and spaces of wounded subjugation' (Davies, 2018, p. 1540).

While the common denominator of both these experiences (the slave and the person experiencing the effects of polluted air) is the policy of inaction created by necropower, the difference is that the slave experiences violence from a visible, specific perpetrator. And the perpetrator or perpetrators of the slow violence of polluted air are, as already mentioned, dispersed, difficult to locate. Of course, it is debatable whether it is possible to equate the violence experienced by slaves working on plantations with communities experiencing the effects of long-term exposure to polluted air. As Mbembe points out, the overseer on his plantation behaves in a brutal, cruel way. He can whip a slave and he can take his life - often it depends on the whim of the master and ruler, whose aim is to 'instilling terror' (Mbembe, 2003, p. 21). The slow violence of polluted air takes a less obvious (less visible) form of brutality, e.g., in the form of upper respiratory tract and heart diseases, which can also lead to death. Regardless of these differences, both experiences of violence are the result of policies that create 'death worlds' in which the lives of vulnerable communities are more like those of the 'living dead' (Davies, 2018; Mbembe, 2003).

Revealing the (in)visible: slow violence as an educational challenge

The slow violence representational challenge mentioned by Nixon is actually an educational challenge. However, in order to undertake this challenge, thinking about education should first be freed from the neoliberal-instrumental paradigm that dominates in its area, reducing educational institutions to the role of factories serving economic efficiency. Let us recall with Giroux that schools are more than storehouses of enterprises. They are also social forms of life, which should, among other things, shape people's ability to think and act critically (Giroux, 1988b).

This reflection on education, although known for many years and repeatedly articulated by critical educators, still seems to be losing not only to the neoliberal-instrumental narrative, but also to positive education, which is becoming more and more popular among educators. The term is used to describe scientifically (empirically) proven interventions and programs in the field of positive psychology that contribute to the development of well-being among students, parents, and educational institutions (White & Murray, 2015). Developing mental well-being including positive emotions (pleasure of life), commitment (a state in which we devote ourselves to a task that gives satisfaction), interpersonal relationships (developed e.g. in the workplace), a sense of meaning from the task performed and the awareness that it is needed; achievements and the ability to appreciate them (Seligman, 2011), carries the risk of excessive individualization of educational discourse, separation from the outside world, from social and cultural 'being' (Folkierska, 1990). In other words, this risk of excessive individualization may lead to students withdrawing into the private sphere (closing within the limits of their own ego) and not engaging in activities in the public sphere for the common good. Paradoxically, positive education is 'water for the mill' of neoliberal ideology, which willingly uses (by way of interception) slogans about well-being and self-development to build an even more effective policy of transforming citizens into *homo consumens* (Barber, 2008). In fact, these two approaches are the embodiment of Huxley's 'Brave New World', where all people are happy, focused on developing well-being, and possible existential anxieties are mitigated by *soma* (Huxley, 2006).

Let us imagine the pedagogies that could meet the representation and narrative challenge of slow violence. Who, then, during school and university classes, but also outside of them, in other public spheres, not only institutional ones, could create such sensitizing (Nixon would say - 'thrilling') stories containing images and symbols that this elusive, but ubiquitous form of violence, has become as visible to our students as fast violence? I believe

that such a person could be, for example, a 'transformative intellectual', to refer to the concept coined by Henry A. Giroux (Giroux, 1988a). I will now try to transfer this figure to the ground of my previous reflections on slow violence and to specify it a bit in this context.

According to Giroux, a transformative intellectual is a politically engaged person, an interpreter enabling a critical understanding of the surrounding reality, a pedagogue developing an educational discourse that 'unites the language of critique with the language of possibility, so that social educators recognize that they can make changes' (Giroux, 1988a, p. 128). In the context of the slow violence' problem that I am analyzing, a transformative intellectual could explain to students and discover with them (through a critical discussion) the multidimensionality of this phenomenon, considering the complexity of slow violence raised by Christian and Dowler (2019). Its close links with spectacular violence, as well as its connections - referring to Davies' considerations (2022) - with structural and epistemic violence. In the latter case, the very discussion about disregarding the voice of those who are aware of slow violence and its disastrous effects on health and the environment would strengthen their narratives, extracting these stories from the abyss of discourse dominated by the narratives of 'fast thinkers' (Bourdieu, 1998) often at the service of postmodern necropower. A transformative intellectual as a translator, or one who reveals in the course of a critical discussion what is potentially invisible (such as slow violence) would thus create an educational space that would be a counterbalance to the aforementioned neoliberal and positive pedagogies, giving students the opportunity to become 'citizens who have the knowledge and courage' (Giroux, 1988a, p. 128) to fight against slowly violent environmental injustice; the struggle that would make it possible to transform the 'worlds of death' into 'worlds of life' in which citizens would have equal access to an unpolluted natural environment. Unveiling slow violence by a transformative intellectual might look like creating a parabolic story that universalizes human experience. 'When a reader follows along with someone's story written in a novel' – writes Olga Tokarczuk – he can identify with the fate of the character described and consider their situation as if it were his own, while in a parable, he must surrender completely his distinctness and become the Everyman' (Tokarczuk, 2019, p. 6). This resignation from his individuality does not mean that man ceases to be himself: he 'is at once himself, a person living under specific historical and geographical conditions, yet at the same time he also goes well beyond those concrete particulars, becoming a kind of Everywhere Everyman' (Tokarczuk, 2019, pp. 5–6).

The aim of critical discussion understood in this way would therefore be to empower the student, i.e., to develop both the ability to think critically (as the ability to perceive contemporary world problems in a parabolic perspective) and the ability to act. Let us make it clear, referring again to Giroux, that empowerment applies not only to individuals but also to the social field: 'The Freedom and human capacities of individuals must be developed to their maximum but individual powers must be linked to democracy in the sense that social betterment must be the necessary consequence of individual flourishing' (Giroux, 1988b, p. 92). Thus, the educational process understood in this way goes beyond individualistic, deuniversalizing human experience, neoliberal and positive pedagogies – it is closely related to acting for the common good.

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