

TOXIC NEWS

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Toxic News: Editor's Introduction

Dr Alice Mah, Associate Professor, Department of Sociology, University of Warwick, UK



In some way or another, whether up close, within polluted communities, or at a distance, as global consumers, toxic issues affect all of us.

In the age of the Internet, we are constantly bombarded with news. Headlines emerge only to be buried as the next ones arise, with only a few lingering long enough to create lasting impressions.

Much of the mainstream news about the 'toxic' focuses on major environmental disasters or scandals: the [BP Oil Spill](#), the [Fukushima nuclear disaster](#), the [Tianjin chemical blasts](#), the [Volkswagen emission scandal](#). With its love of extreme cases, the media often features exposés on the [world's top polluted places: air pollution in Delhi and Beijing](#); or a [toxic lake full of high tech waste in Mongolia](#). The news also reflects importantly on anniversaries of toxic disasters, marking [the 25th anniversary of the Bhopal chemical disaster in 2009](#), the [10th anniversary of Hurricane Katrina earlier this year](#), and no doubt we will be reminded in April that it will have been 30 years since Chernobyl.

But the media rarely turns its attention to smaller scales or to everyday toxic cases. As the political scientist Shanto Iyengar (1996) argues, the mainstream media is episodic rather than thematic in its framing, so the wider context tends to be ignored. It misses the 'slow violence' (Nixon 2012) of toxic problems that occur gradually, invisibly, and beyond the spectacle of mass media attention. Of course, there are many exceptions, and one can find less well-known cases if one looks hard enough, but this is a difficult task.

With the launch of *Toxic News*, we seek to address these gaps in toxic news, not only in terms of what is reported, but in terms of our analytical focus. Just what *is* toxic, and how can we measure toxic effects on health and the environment? How are toxic effects experienced in different places and times, and for different people?

In some way or another, whether up close, within polluted communities, or at a distance, as global consumers, toxic issues affect all of us.

I have been researching the impacts of industrial decline and post-industrial change for several years now. Toxic legacies have been a key theme throughout my research, from the toxic legacies of chemicals in Niagara Falls to petrochemical pollution near port cities.

But until recently, I never really thought about how my own background has shaped my 'sociological imagination', as C. Wright Mills (1959) puts it. My grandfather worked in a mill in a small forest-dependent community in British Columbia, Canada. Since its six mills closed one after the other starting in 2007, it has now become almost a ghost town. I remember that heavy sulphuric smell of pulp in the air. I remember hearing that our beautiful forest valley had some of the highest rates of respiratory illnesses in the country and puzzling over that statistic. I grew up with a strong sense of the limitations of staying in a northern rural town. Yet when I moved away to go to university, something stayed with me, sparking an interest in the different fortunes of communities and the effects of industry.

Toxic issues are at once personal and political, individual and social, subjective and scientific. As we become more attuned to the toxic in the world around us, we can see it more readily in the places we visit as tourists, in our homes and communities, and in our consumption of news.

In this first issue of *Toxic News*, we trace toxic issues across different times, places, and perspectives. We move from a [leather factory in Soviet-era Chernobyl](#); to a [review of new U.S. refinery rules](#); to recent research in a [polluted asylum camp in Calais, France](#); to a reflection on the [chemical blasts in Tianjin, China](#); to a [high-technology](#)

toxic U.S. town; to an 'outsider's' reflection on what it means to think critically about toxic issues.

(Featured image: credit Alice Mah)

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The Berdichev Leather Factory in the Wake of the Chernobyl Accident

Professor Kate Brown, Professor of History, Department of History, University of Maryland, Baltimore County (UMBC), USA

This sentence in a document sent to Kiev a few months after the Chernobyl accident could read as criminal:

“In the month of May [1986], the meat factories of Zhitomir, Korosten’, and Novograd-Volynsk processed livestock received from the 30-km zone of the Chernobyl Nuclear Power Plant.”(1)

The sentence refers to thousands of farm animals that had grazed outdoors during the days of the most powerful releases of radioactive isotopes from the burning Chernobyl reactor. These animals were deemed too contaminated to save. Some were marked by radiation burns and some already exhibited signs of weakness.

The criminal part is that these animals were not sacrificed and placed in sealed mass graves. Instead Soviet officials had decided to process the meat, most likely into sausage... and release the product into the Soviet consumer market.

The criminal part is that these animals were not sacrificed and placed in sealed mass graves. Instead, loath to waste food in a country of shortages, Soviet officials had decided to process the meat, most likely into sausage, mixed with meat from cleaner animals, and release the product into the Soviet consumer market for mass distribution across the vast USSR. The idea was diffusion. Everyone everywhere would eat a little bit of radiation, at levels too low to cause damage. Everywhere, that was excepting Moscow. Moscow leaders ordered in classified decree that no contaminated food go to Moscow.(2)

Виды продукции	Ветеринарные нормы
Мясо скотина, свинина, птица	5 рад/год (120 рад за весь срок хранения)
Мясо оленей, косуль, лосей	0,5 рад/год
Мясо дичи	0,1 рад/год
Мясо кроликов	25 рад однократно
Мясо зайцев	70 рад однократно
Мясо диких животных	10 рад - 1 год, 5 рад - 2 год, 2 рад - 3 год
Мясо домашних животных	15 рад на 3 года
Мясо птиц	7,5 рад

A document from Kate Brown’s archival research in Kyiv. The document shows how the MAGATE (IAEA) norms start to be introduced in 1989 for maximum lifetime dose of radiation (measured in bers). Photograph by Kate Brown.

Unfortunately, the meat factories were not the last stop for the

polluted carcasses. A first shipment of seven hundred hides, four tons of organic matter, were sent in July and August to the Berdichev leather factory to process into shoe bottoms.

This narrative line of the Chernobyl accident is well known. Thoughtless, mendacious Soviet leaders hid the accident, dissimulated and carried on as if everything was normal in a way that showed an outsized disregard for the health and welfare of the Soviet population. It is fair to say that a portion of the Soviet top leadership, especially the cadres working from the Moscow capital, maintained the posture of “no problem/everything is under control,” a stance that coincided seamlessly with the aspirations of international leaders such as [Hans Blix](#) at the [International Atomic Energy Agency](#). Chernobyl offered up for Soviet leaders an opportunity for genuine collaboration with the West at the very start of perestroika. This early collaboration centered on the minimization of Chernobyl as a technological disaster.

But ‘Soviet officialdom’ was not all of a piece. The archives of the Soviet-era Ukrainian Ministry of Health are filled with dramas that played out across traumatized, post-disaster Ukraine.

In the dramas, there are villains, and there are heroes. The hero of the leather factory is the Berdichev sanitation inspector who wrote the criminal-sounding sentence I quoted above.

In the dramas, there are villains, and there are heroes. The hero of the leather factory is the Berdichev sanitation inspector who wrote the criminal-sounding sentence I quoted above. Directing his telephone-gram to his superiors in Kiev, P. I. Chekrenev related that in June a delegation from the Ministry of Light Industry arrived at the Berdichev leather factory. (These are the villains, or maybe not villains, but merely optimists). The businessmen said they wanted to carry out an experimental processing of contaminated hides to see if they could dis-activate them for use on the consumer market as shoe bottoms. The process called for extra hours of rinsing and boiling the hides, as well as for treatment in vats of chromium. They signed an agreement and shipped in the hides, each one measuring from .3 to 1 millirad/hr. That measurement meant that individually each hide was safe, but the numbers multiplied several hundred times were a cause for concern. And that concern stimulated Chekrenev into action.

He and a doctor on staff at the sanitation bureau dug up some dosimetry equipment and went to the leather factory and took their own measurements. They evidently returned repeatedly, assessing anxiously and vigilantly, because on July 25th they

recorded that the radiation level of the factory's wastewater registered from 1.3 to 6.5 times higher than permissible levels. Worse, the factory's waste flowed untreated directly into a local river. Seventeen-thousand cubic meters of chromium-laced and radioactive water waste quickly overflowed the small Gnidopiat' River and poured into a reservoir that served as the main water source for the city of Zhitomir. "There is no way," Chekrenev wrote in exasperation, "that long-lasting radioactive isotopes can be drained into a drinking water reservoir." Without waiting for approval from his superiors at the Ministry of Health in Kiev, Chekrenev signed an order, citing a Soviet pollution law from 1980, and he shut down the processing and shipping of contaminated hides to the Berdichev leather factory.

The officials from the Ministry of Light Industry were fit to be tied. They had found their leather-processing experiment a success. The leather produced was clean enough for shoe bottoms, and they had counted up the shoe bottoms they expected to produce from the unexpected boon of 17,000 extra animal carcasses brought to them free of charge by the Chernobyl disaster. Chekrenev, however, disturbed their calculations by pointing to the fact that radioactive isotopes cannot be "dis-activated." That is one of those optimistic terms to be placed in the same aspirational vocabulary with "liquidation" and "permissible dose." Radioactive isotopes can only be moved from one place to another, while they decay on their own schedule. The cleaner the leather emerged from the factory, the dirtier the wastewater that flowed from its drainage pipes along the riverbank. Or, to put it another way, exposures saved at the bottom of citizens' feet flowed instead into city pipes to be dropped directly onto citizens' skins and into their mouths.

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Under pressure brought on by a landslide of classified correspondence from the Ministries of Light Industry, Leather Products and Industrial Agriculture, Chekrenev did not yield. His bosses at the Ministry of Health in Kiev backed him up, and the dispute went all the way to the Council of Ministers of the Ukrainian Republic. That body supported Chekrenev's principled and lone-wolf decision to terminate the processing of contaminated hides at the Berdichev leather factory and so save the people of Zhitomir from additional exposures, of which, by September 1986, they already had plenty.

The infamous monolithic Soviet state is nowhere to be found in this story. Chekrenev acted on his own, taking a risk in this year before the liberalizations of the glasnost

era. Yet it wasn't a risk. In the correspondence, Chekrenev was not threatened or cursed. No one called for his arrest or resignation. Instead, this small chapter of Chernobyl history includes easily recognizable players in societal dramas. There were the people looking to make their quotas and turn a profit, and the people looking to protect public welfare. As the 30th anniversary of the Chernobyl accident approaches, it is important to normalize late Soviet history so as to place the disaster inside the boundaries of normally functioning states.

This is not the story of a special, spectacularly incompetent and unsympathetic state, but one that functioned much like capitalist states elsewhere did at the time. As I work my way through archives in Kiev, I am learning that Chernobyl was, in far too many ways, sadly typical.

(Featured image: credit Kate Brown)

Footnotes

(1) The files for this case are in the archives of the Ministry of Health of the Ukrainian Republic at the Central State Archives of the Higher Organs (TsDAVO), Kiev, Ukraine, 342/17/4348.

(2) "VCh-gramma no 129 ot 23.06.86 g. iz Minsdrava SSSR," June 23, 1986, TsDAVO 342/17/4340, 162.r too many ways, sadly typical.

Professor Kate Brown has written a number of publications relating to Toxicity, including the multi award-winning book [*Plutopia: Nuclear Families in Atomic Cities and the Great Soviet and American Plutonium*](#) (Oxford University Press) and her latest book [*Dispatches from Dystopia: Histories of Places Not Yet Forgotten*](#) (University of Chicago Press). For more information about the historian and author Professor Kate Brown, please click [here](#).

U.S. Oil Refineries Required to Monitor Ambient Air Toxics: A victory, with limits, for neighbouring communities

Dr Gwen Ottinger, Assistant Professor, Department of Politics, Drexel University, USA

The EPA refinery rule thus marks a major victory in community groups' decades-long struggle for ambient air monitoring at refinery fence lines... but without a way to translate new air quality information into action, communities risk being overwhelmed by data.



On September 29, 2015, the [United States Environmental Protection Agency](#) (EPA) issued a [new rule](#) aimed at controlling air pollution from oil refineries. Grassroots groups representing communities adjacent to refineries in Louisiana, Texas, and California had pushed for the rule, [suing the agency](#) to update its refinery regulations. When the rule was released, they [heralded it as a victory](#) for community health, highlighting one provision in particular: the new [requirement that refineries monitor for benzene concentrations at their fencelines](#).

It's hard to appreciate the significance of this provision—widely hailed as the “first-ever” fenceline monitoring requirement—without understanding just how little air monitoring is conducted in fenceline communities, and how active residents have been in advocating for more.

When [I first began studying community activism around oil refineries](#), I was shocked to learn that there was virtually no systematic monitoring of ambient air quality at refinery fencelines or in neighboring residential areas. Refineries monitor their emissions, and they use computer models to calculate their effects on the ambient air. But air dispersion models, as they're called, have their limitations: they don't include

ground-level “fugitive emissions” from leaky seals and valves, and they don’t model the effects of emissions from accidental releases.

Community advocacy for fenceline monitoring was catalyzed by a [1994 accident](#) at the Unocal Refinery in Rodeo, California. A release went unreported and unchecked for 16 days, sickening hundreds of residents. In the aftermath, community members fought for—and won—a [continuous, real-time, fenceline monitoring system](#). Their lawyer also commissioned an engineering firm to design an inexpensive, easy-to-use air sampler that would allow residents to generate their own air quality data when they detected a problem. The community-friendly [“bucket” air sampler](#) quickly spread to refinery communities around the world, and users presented their data alongside calls for more extensive, real-time monitoring, holding up the fenceline system as a gold standard.

The EPA refinery rule thus marks a major victory in community groups’ decades-long struggle for ambient air monitoring at refinery fencelines. It guarantees that every community will have access to at least some information about actual, local concentrations of a known carcinogen.

At the same time, however, activists decry the limited scope of the monitoring required: it includes only one chemical, and it doesn’t offer real-time readings that could give residents insight into what they are breathing during an obvious accident or release. Instead, samples will be collected over two-week periods—meaning that an intensely high concentration that lasts for an afternoon would show up as only a slight elevation in the two-week average—and refineries judged on 6-month average concentrations.

U.S. refinery rules thus underscore an important, unfolding dynamic in our efforts to understand the “slow violence” of toxic exposures.

Community groups and their allies would have preferred to see the EPA adopt fenceline monitoring rules more like [those currently proposed](#) by the [Bay Area Air Quality Management District](#) in Northern California, where [regulators are calling for refineries to install real-time monitoring](#) for an array of chemicals, with data to be made available immediately on a public website.

But even real-time monitoring cannot, in and of itself, protect community health or improve air quality. Without a way to translate new air quality information into action, communities risk being [overwhelmed by data](#). Though limited in other ways, the EPA’s rule recognizes this: it sets an action level for benzene. If measured

concentrations exceed the action level at a refinery's fenceline, the company is required to take additional measures to identify and fix the source(s) of the emissions. In contrast, the Bay area rule requires only that data be collected and made accessible to residents. The work of sifting through the data, identifying potentially unhealthy exposures, and fighting for enforcement and remediation, falls on community groups, who may not have the capacity to handle such large volumes of data.

U.S. refinery rules thus underscore an important, unfolding dynamic in our efforts to understand the "slow violence" of toxic exposures. Many of the most important victories in the fight against toxins have revolved around securing the "right to know" and winning access to information. But with data becoming easier and easier to generate, store, and make available, there's a real risk that right-to-know provisions will lead to information overload rather than new knowledge or meaningful environmental improvements. Although struggles for access to data are far from over, the next wave of advocacy needs to incorporate a concern for how to leverage data to drive change; the next wave of innovation should focus on "gold standard" and community friendly information systems that enable residents and regulators to put toxic data to work in the protection of fenceline communities.

(Featured image: credit Gwen Ottinger)

Toxic Life? The Slow Violence of refugee abandonment

Dr Thom Davies, Research Fellow, Department of Sociology, University of Warwick, UK [@ThomDavies](#)

“The single most important challenge to the safety and protection of refugees arises from populist politics and toxic public debates”

– Volker Türk, UNHCR’s Assistant High Commissioner for Protection ([UN 2015](#))

While conducting research this summer in the so-called ‘new Jungle’ in Calais – the largest informal migrant camp in mainland Europe – many refugees who had fled distant conflicts, shared their stories of physical violence; narratives of



kidnap, extortion and murder. ‘*They threatened to kill me*’ explained one Eritrean refugee, recalling how he had been held ransom by ‘*fascists*’ in northern Libya, before he made the perilous journey to Italy, packed cheek-by-jowl into an inflatable boat with eighty other terrified souls. (Image: ‘The Camp’, credit Thom Davies)

Sudanese residents cook pork on an open fire. Photograph by Thom Davies



Invited into makeshift shelters in the overcrowded refugee camp, and over long conversations with cups of sweet tea, some residents showed me shaky video footage of these dangerous maritime voyages, while others occasionally discussed their physical scars. ‘*The Taliban did it*’ explained one refugee from Afghanistan while I bagged

and labelled a food sample for laboratory analysis in the UK. He was referring to his index finger which had been severed at the second knuckle; ‘*Daesh*’ [Islamic State] another refugee simply remarked, as he lifted up his trouser leg to reveal two bullet wounds, and the reason that he had to flee Kurdistan.

The environmental health situation in the Calais camp in northern France reveals another, slower, less visible, but perhaps just as long-lasting form of violence – that of abandonment.

As global refugee numbers reach levels not witnessed since the end of WW2 ([UNHCR 2015](#)), and with arrivals into Europe surpassing half a million this year alone, bodily trauma enacted upon countless refugees is both shocking and ‘necropolitical’ ([Mbembe 2003](#)). But the violence that these displaced people face does not stop when they reach European shores ([Davies & Isakjee 2015](#)). The research I have been conducting with my colleagues Surindar Dhesi and Arshad Isakjee into the environmental health situation in the Calais camp in northern France reveals another, slower, less visible, but perhaps just as long-lasting form of violence – that of abandonment.

Refugees are suffering from an invisible brutality that is reminiscent of Nixon’s environmental concept of ‘slow violence’:

‘a 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 2011](#), 2)



A refugee fills his water bottle at one of the five water points. This research found evidence of faecal contamination located on one of the taps. Photograph by Thom Davies.

For scholars and activists of environmental (in)justice, it will come

as no surprise that the only location that French authorities have permitted Calais’

destitute to set up camp, is the site of an old quarry and informal dumping ground. No surprise either, that a large chemical and metallurgy factory looms over this wasteland, on the other side of a busy motorway. When the sea breeze is in the wrong direction, the unsettling scent of chemical pollution from the adjacent '*Zone Industrielle des Dunes*' wafts over the camp, which is now [home to around 6000 refugees](#) and migrants. Below them, in the sandy soil of the camp, the rubble remnants from years of illegal fly-tipping can be seen jutting out of the ground. Environmental justice research, into the placement of petrochemical industries for example ([Allen 2003](#); [Ottinger 2013](#)) or the ability of communities to cope with disaster ([Bullard & Wright 2009](#)), shows time and again, that it is the most vulnerable, impoverished and discriminated groups who face the worst consequences of environmental pollution and degradation ([Harvey 2006](#)).

In line with Allen's call that '*science must start from the lives, questions, and experiences of the marginalised*' ([Allen 2003](#), 6), my colleagues and I were in the camp this summer to conduct the first public health investigation of the 'new Jungle' ([Dhesi et al 2015](#)). We aimed to add scientific weight to the growing calls to treat the situation around Calais as a humanitarian crisis. With funding from the [ESRC](#), we interviewed residents of the camp, but also took bacteria swabs, food samples, dust samples and measured particulates in the air, in an attempt 'to produce science that can directly support environmental regulation, law and health care' ([Fortun & Fortun 2005](#), 46). What we found was shocking (see [Guardian 2015](#)).

Some of the scientific equipment that the research team used to measure the particulates in the air. Photograph by Thom Davies.

Monitoring the air quality in the camp revealed particulate matter at significantly high concentrations. The WHO recommend that PM_{2.5} not to exceed 15 µg /m³ as an average over a 24 hour period ([WHO 2014](#)).



We aimed to add scientific weight to the growing calls to treat the situation around Calais as a humanitarian crisis.

In the camp, next to the industrial zone, a motorway and the numerous open fires used for cooking and keeping warm, average concentrations were over 2000 µg /m³, peaking occasionally at 12,000 µg /m³ – far above safe levels. We found other invisible dangers too, including the use of chemical containers that once held toxic liquids being repurposed to transport drinking water from the taps in the camp. Alarmingly, swabs taken from one of these taps held concentrations of bacteria that suggested the presence of faecal matter, and significant levels of pathogens from several other swabs were found, doubtless contributing to the widespread cases of vomiting and diarrhoea that were reported.



Many containers that were designed to carry hazardous chemicals are now used to store water. Photograph by Thom Davies.

Along with the scabies and lice that blight many residents of the camp, all of these invisible dangers are *completely* preventable, if not for the political abandonment that the refugees suffer; a ‘violent abandonment’ ([Davies & Isakjee 2015](#)) transcending scales from the microbiological to the biopolitical.

The environmental campaigner Jim Puckett argues that ‘toxic waste will always run downhill on an economic path of least resistance’ (cited in [Bauman 2004](#)). At the bottom of the heap in Calais are its growing number of refugees. In a *de facto* sense,

refugees in Europe have been 'designated expendable' ([Nixon 2011](#), 151) and politically 'superfluous' ([Arendt 1953](#), 323); in Calais they have been forced to live in circumstances that do not meet internationally recognised standards for refugee camps ([WHO 2000](#), [UNHCR 2007](#), [Sphere project 2015](#)), let alone the environmental protection that European citizens would expect.

Adriana [Petryna \(2002\)](#), in her work on post-Chernobyl Liquidators, posits the idea of 'biological citizenship' as a means by which Ukrainians who have been exposed to toxic pollution can lay claim to compensation and political status by using their toxic exposure as political leverage. Though this concept was useful to my own ethnographic research in Chernobyl ([Davies 2015](#); [Davies & Polese 2015](#)), for refugees in Calais, this situation could never arise. After all, to claim biological citizenship you must first become a citizen.



Many of the informal structures that refugees sleep in are very cold at night and overcrowded. Photograph by Thom Davies.

How then, are we to understand the social and political circumstances that allow refugees and migrants to suffer such brutal abandonment? Academics often turn to Giorgio Agamben for explanation, leaning on his concept of '[bare life](#)' (1998), where sovereign power, according to Agamben, reduces certain groups to mere biology, and denies them political worth. Increasingly however this has been critiqued by scholars who highlight the agency and acts of (political) resistance utilised by such

disempowered groups (Sigona 2015). Perhaps Bauman's idea of 'wasted lives' (Bauman 2004) comes closer, where he invokes the idea that certain individuals have been 'dumped into the refuse heaps of asylum systems' (Wylie 2013, 57) – quite literally, in the case of Calais.

The quick brutality of physical violence that refugees suffer has mutated into a slow, stealthy and hidden violence of abandonment

In light of accidents such as Bhopal, Chernobyl and Fukushima, and the 'slow violence' (Nixon 2011) of climate change, the image of 'environmental refugees' (Gill 2010) fleeing from landscapes decimated by toxic pollution is not a new one. But I would suggest also that refugees in Europe fleeing geopolitical conflicts today are being treated in an increasingly 'toxic' manner. Framed as existential threats to the status-quo of the European political order – refugees and irregular migrants become hazardous life; removed, encamped, numbered and regulated, set outside non-polluted spaces. They are framed as carcinogenic threats against European borders and biopolitics. Transmutating from *Humanitarian* issue to *Hazardous* threat, refugees in (and beyond) the informal and formal camps of Europe have become 'surplus people' (Nixon 2011), made politically toxic.

The quick brutality of physical violence that refugees suffer has mutated into a 'slow' (Nixon 2011), 'stealthy' (Li 2010) and 'hidden violence of abandonment' within Europe (Davies & Polese 2015, 38), and one that exposes expendable life to environmental harm; a toxic mutation that designates refugees as superfluous and subject to a slow brutality that transcends spatial scales, yet often remains unseen. Exploring the abandonment of vulnerable groups through the motif of toxicity may provide new inroads into this ongoing crisis.

(Featured images: credit Thom Davies)

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A Reflection on the Tianjin Explosions

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The issue of realizing the right to information is far greater than one hazardous substance.

Baskut Tuncak, UN Special Rapporteur (2015)

The shocking series of explosions at a hazardous goods warehouse occurred at the night of 12 August 2015, but since then Tianjin have been gradually disappearing from our sights. Today, in the destroyed area, new lawns have been laid and the deadly scene of the catastrophic explosions is less visible. While environmental disasters tend to capture our attention in their immediate aftermath, reflective thinking is nonetheless important in order to prevent such disasters from happening again in the future. Looking retrospectively, it is argued here that the lack of transparency and strict monitoring of dangerous substances are the key factors behind the Tianjin tragedy that resulted in hundreds of casualties, immeasurable economic loss, and — though difficult to assess at the moment — environmental impact as well.

The exploded Ruihai Warehouse, storing thousands tons of hazardous goods, including 700 tons sodium cyanide, a highly toxic chemical substance, is only 600 metres away from its nearest residential area.

In China, management of dangerous cargo includes two major phases: pre-operation approval and operation monitoring. The approval process includes both safety assessment and environmental impact assessment. According to the *Operation Conditions and Technical Requirements of Dangerous Chemical Business* issued by the State Administration of Work Safety, large and middle size dangerous chemical warehouse shall be built at least 1000 metres away from public buildings, main traffic, and other enterprises.

The exploded Ruihai Warehouse, storing thousands tons of hazardous goods, including 700 tons sodium cyanide, a highly toxic chemical substance, is only 600 metres away from its nearest residential area. While one company refused to make safety assessment reports for it, worrying about the short distance might make the project unable to get approved, Zhongbin Haisheng Company took the job and made the safety assessment reports which were successfully approved by several levels of government agencies. There could only be two reasons for this, as Professor Luo Yun at the China University of Geosciences explains – “Ruihai Warehouse provided inaccurate information of distance and the amount of dangerous goods, however all assessment companies need to make onsite investigations, so it is impossible that they could not know this; or the assessment company wrote a false assessment report.” The Professor of Safe Engineering, also told the *Beijing Youth Daily*, “Except assessment entities, it is rare that anyone will really check if the safety assessment report is false, therefore false report will not be easily known to the public at all.”

Besides safety assessment, environmental impact assessment (EIA) is also carried out for Ruihai Warehouse. During the two rounds EIA public consultations, respectively 130 and 100 questionnaires were handed out for public participation, and the EIA brief report was also presented in a local newspaper, on the Internet, and onsite. No comment was received during the public presentations of the project and the questionnaire consultation has shown that 100% of the public considered that the project location appropriate. It is difficult to know besides these 230 people, whether the public, especially people living nearby, were provided sufficient information of the potential risks that the warehouse poses. Or were the risks explained clearly enough for the public to understand?

The zero public feedback except the questionnaires suggests that the public concern about the hazardous goods warehouse, compared to [anti-PX protests](#) in the form of

“*sanbu*” (to take a patrol) due to demonstrations not permitted in China in cities such as Xiamen and Dalian where tens of thousands of people took part in, was surprisingly very low. It is doubtful that people think a hazardous cargo warehouse, storing highly toxic chemicals, less dangerous than the PX chemical plant. Presumably, if without the explosions, most residents would have never been aware of their dangerous neighbour. [“No one told us there were chemicals here”, residents near the blast site told reporters.](#) The shocking truth is, most residents living nearby only started to know of their dangerous neighbouring warehouse after being injured by shattered windows caused by the blasts.

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Undoubtedly, workers of the warehouse are the most vulnerable given their high-levels of exposure to the dangerous goods. In the situation of Ruihai Warehouse, even people who dealt with the chemicals everyday were kept in the darkness. “I don’t know what chemicals I am transporting, neither do I know if they are combustible”, a driver of the transport team in charge of loading chemicals for the warehouse told [Beijing News](#) reporter, “There is no formal safety training; occasionally the team lead gives us a few talks.”

There is also inadequate regulation of the warehouse during its operation. It was estimated that the amount of sodium cyanide stored onsite was 70 times more than its permitted limit. How could the safety monitoring authority allow this if there had been strict regulations of all the goods in transition via the warehouse? Was there information disclosed about these over-limit chemicals? Moreover, with regard to Ruihai Warehouse, as a dangerous cargo warehouse, it is *de facto* regulated by quite a few government authorities at different levels and ranging from Communications, Safety Monitoring, to Maritime departments; nevertheless until one week later after the explosions, government officials have not clearly answered which authority was responsible for regulating the Ruihai dangerous cargo warehouse. The various vertical, territorial and lateral regulation system has *de facto* resulted in the scenario of “*sanbuguan*” that no one really regulates.

The lack of information disclosure also happened after the explosions. While availability and accessibility of information on toxic substances are essential to prevent and mitigate disasters, for instance, the amount, categories and character of chemicals stored on the explosion site are crucial for firefighters to understand what

measures to take to extinguish the fire. Unfortunately, among the casualties of the explosions, most are fire fighters. While we mourn for the passing young lives, it is rather doubtful whether they were provided sufficient information of the chemicals stored at the explosion site, both before and immediately after the first blast, and whether they were given adequate and complete trainings to fight fires caused by highly toxic chemicals.

Government information disclosure after the tragedy was also inadequate, unclear and inefficient. On the one hand, the authorities issued guidance that the Tianjin Explosions reports must follow the official *Xinhua News*, and news and images about the explosions be removed from headlines and recommendations; on the other hand, information disclosure of the explosions from the authorities and official news channel is neither timely nor sufficient. A large part of crucial information was only acknowledged and publicly disclosed by the government when journalists started to expose such information and impose pressure upon government officials through questioning in press conferences, including the information of the highly toxic sodium cyanide, the death toll of firefighters who were not formal staff but contract workers of the fire brigade, and the political connections behind the Ruihai Warehouse. Moreover, some of the disclosed information contradicts each other. While it was said by an official that poisonous gas that affects people's neural system was detected on the blast site in an investigative program broadcasted by Chinese Central Television, it was soon denied by *Xinhua News*, claiming that other experts said that the saying about poisonous gas was a "big misjudgement".

On Tianjin explosions, the UN Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, [Baskut Tuncak](#) expressed that "The lack of information when needed—information that could have mitigated or perhaps even prevented this disaster—is truly tragic," and "Moreover, the reported restrictions on public access to health and safety information and freedom of the press in the aftermath are deeply disturbing, particularly to the extent it risks increasing the number of victims of this disaster."

Dangerous chemicals are toxic; however, it is the lack of transparency and ineffective monitoring from the warehouse's approval stage to its operation laid the breeding ground for the toxic risks to happen, and it is the lack of information disclosure after the explosions that made the disasters to magnify but not mitigate. From this perspective, the non-transparent and black box operation is as toxic as, or even more dangerous, than the hazardous substances themselves.

Like other large scale industrial disasters in history, the Tianjin explosions have rung loud alarm bells for us again. Looking beyond, how many more such dangerous goods plants and warehouses are there in China? How many of them were approved without effective public participation, and insufficient information disclosure? How many ticking time bombs must be defused before disasters like the Tianjin blasts happen again?

Sadly, two months after the first blast of the Ruihai Warehouse in Tianjin, a warehouse storing alcohol exploded, also, in Tianjin. Similar to the late eighteenth and early nineteenth centuries in the Western world, ever-increasing industrialization, including toxic chemical plants and their related chain industries, at the expense of the environment and human health has been happening unprecedentedly in today's China. Facing this situation, access to information is crucial for us to understand, prevent and mitigate the risks of toxic chemicals; and strict regulation is imperative in making industries operate within their safety ranges. It must be emphasized that information about the toxic risks of chemical plants and its related chain business must be made clearly accessible to the public, not only after demonstrable crisis emerge, but during its planning approval, daily operation, and during global transportation as well.

(Featured Image: credit to European Press Association)

Toxic Struggle and Corporate Paradox in a High-Tech Industrial Birthplace

Dr Peter C. Little, Assistant Professor, Anthropology Department, Rhode Island College, USA

A three hour drive northwest of New York City, in the Empire State's Southern Tier region, is the small community of Endicott. Nestled along the Susquehanna River, it is known as the "Birthplace of IBM." International Business Machines Corporation (IBM)—born of a marriage between the Computing, Tabulating, and Recording Company and the International Time Recording Company—opened its first plant in Endicott in 1924. From the 1920s to the 1970s, the IBM-Endicott facility figured centrally in electronic innovations, and the surrounding community enjoyed relative prosperity. Since the 1980s, however, the area has experienced steady decline due to IBM's disinvestment in the Endicott facility and the outsourcing of manufacturing jobs.

It was then that I first learned about how, despite the plant's closure, the specters of its business and technological innovations continued to haunt Endicott in the form of social, environmental, and health consequences.

When IBM sold its Endicott facility in 2002, the town was left with a collapsed tax base and a distressed workforce. My ethnographic research there began in 2002 as the sale of the IBM-Endicott plant was underway. It was then that I first learned about how, despite the plant's closure, the specters of its business and technological innovations continued to haunt Endicott in the form of social, environmental, and health consequences.

For example, with the IBM exodus, residents saw a crippling decline in local property values, the loss of jobs, and enduring environmental contamination problems that continue to be the target of many local public health concerns. This whirlpool of issues and tangled struggles sparked my genuine interest in the lives of ordinary people navigating a tainted, post-IBM economy and toxic ecology, and is the primary focus of my book [*Toxic Town: IBM, Pollution, and Industrial Risks*](#) (2014, New York University Press).



Sign for a local meeting
Photograph by Peter C.
Little

Today, Endicott is the site of a contentious U.S. EPA Superfund site—a high-priority hazardous waste site—consisting of a 300-acre toxic plume of trichloroethylene (or

TCE). This cancer-causing chlorine-based cleaning solvent was heavily used by IBM to manufacture chip boards and other microelectronics at the former Endicott plant.

Many feel that restoring life in Endicott to what it was before the IBM spills is a questionable long-shot goal. At Superfund sites with a clearly defined “responsible party,” capital-rich companies like IBM can use their abundant legal and monetary resources to indefinitely prolong a lawsuit, leaving the community of plaintiffs exhausted and worn down in their struggle for justice.

TCE, a groundwater contaminant found at over 70 percent of Superfund sites nationwide, raises numerous environmental health concerns. A recent epidemiological study in Endicott strongly suggests that TCE exposures are associated with cardiac effects, low birth weight, and fetal growth restriction. A large-scale remediation and mitigation effort started in the late 1970s when chemical spills from the then-active IBM plant began.

Nevertheless, many residents continue to doubt the efficacy of risk-management decisions taken by public-health authorities, contending that, as one resident put it, “no matter what IBM or the state agencies do, we have to live with it, and that is the problem they can’t fix.” Adding to this toxic struggle is a prolonged class-action lawsuit, made up of over 1,000 plaintiffs. Most plaintiffs I have spoken to add this lawsuit to their list of headaches, and nobody I have interviewed over the years feels the lawsuit will ever result in any meaningful compensation. Many feel that restoring life in Endicott to what it was before the IBM spills is a questionable long-shot goal. At Superfund sites with a clearly defined “responsible party,” capital-rich companies like IBM can use their abundant legal and monetary resources to indefinitely prolong a lawsuit, leaving the community of plaintiffs exhausted and worn down in their struggle for justice.

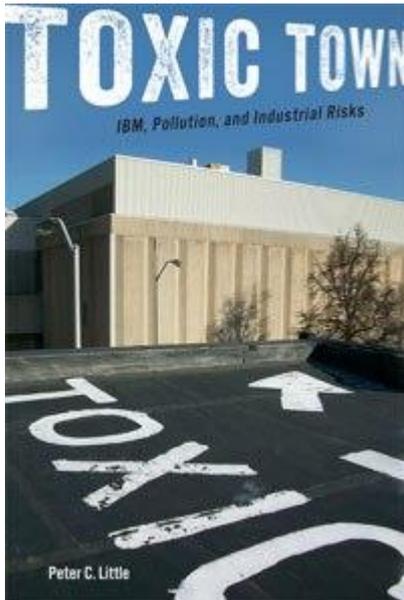
My ethnographic fieldwork drew me to the paradoxical role of emerging corporate responsibility schemes, especially IBM's steadfast campaign to "Build a Smarter Planet." On January 12, 2010, Samuel J. Palmisano, IBM's former chairman and president, laid out the company's Smarter Planet mantra during a speech to business and civic leaders in London. Palmisano heralded a world in which "[e]normous computational power can now be delivered in forms so small, abundant and inexpensive that it is being put into things no one would recognize as computers: cars, appliances, roadways and rail lines, power grids, clothes; across processes and global supply chains; and even in natural systems, such as agriculture and waterways."

IBM's ambitious Smarter Planet initiative promises digital technology solutions that modernize the infrastructure of nation-states and build "Smarter Cities" by installing energy-efficient (or "smart grid") infrastructure and reducing traffic congestion via sensor technology. It's no secret that IBM is becoming more entangled in city- and nation-building efforts. Its commitment to expanding techno-modernization—and its deep ties to government and industry here and abroad—date back to the company's founding in the early 1910s. Today IBM is going beyond city and nation-building projects with its Smarter Planet initiative, offering to perform the audacious, but not impossible, act of corralling investors to embark on rebuilding Planet Earth itself.

These observations bring to light the marked contrast between the world where IBM manufactures its products, and the world IBM says it is creating through them. One might consider IBM's Smarter Planet mission just another marketing strategy on the high-tech corporate playing field.

Yet here lies IBM's greatest contradiction: while IBM purports to be building a smarter, more modern, more urban and more sustainable world, it is actually leaving behind a trail of exploitation, economic marginalization and environmental degradation in out-of-the-way places like Endicott.

But for me, a former resident of Endicott and an ethnographer who has spent time listening to the struggles of people living in IBM's tainted birthplace, this corporate planetary responsibility campaign reflects a paradoxical ethos of caring and exploitation. It aspires to what philosopher Peter Sloterdijk, in his multi-volume *Spheres*, terms "thoroughgoing market enlightenment that promises a better life." But the campaign's logic, as always, is one of profit maximization, not global advancements in social and environmental justice.



[Toxic Town](#) by Peter. C Little

Each time I come across another ad showcasing IBM's mammoth technological effort to "Build a Smarter Planet," I am reminded that our neoliberal techno-capitalist world is also a world of microelectronic disaster that leaves me wondering: What Smarter Planet? Whose Smarter Planet? What is "smart" about what is unfolding in IBM's birthplace? Perhaps focusing on the entire "planet" allows IBM to sidestep the vibrant particulars of deindustrialization and corporate environmental plunder, a way to shift the focus to an ever greater, but ultimately opaque, sphere of innovation, transformation, and profit. Instead of being hypnotized by this planetary vision, we might

look to Endicott for lessons about the toxic legacies and costs of "smarter," high-tech neoliberalization and the supposed intelligence underlying contemporary corporate responsibility practices. Such a move, I argue in [Toxic Town](#), calls for an ever "smarter" and critical approach to industrial pollution and toxics risk.

(Featured Images: credit to Peter C. Little)

My journey in environmental justice: How – or rather why – I came to work on the Toxic Expertise project...

India Foster, Project Administrator, Department of Sociology, University of Warwick, UK

“It is universally considered just that each person should obtain that (whether good or evil) which he deserves; and unjust that he should obtain a good, or be made to undergo an evil, which he does not deserve. This is, perhaps, the clearest and most emphatic form in which the idea of justice is conceived by the general mind.” (John Stuart Mill, [Utilitarianism, 1861, Ch. 5, paragraph 7](#)).

When I saw the job advert for the position for Project Administrator on the ERC project ‘[Toxic Expertise: Environmental Justice and the Global Petrochemical Industry](#)’ at the University of Warwick, I was excited. I was happy with my current job as a Projects Coordinator in the Physics Department. I got on well with my colleagues and had a nice, permanent contract. However, I wanted to work on a project that I could engage with, one that I could understand. And not just with the subject area but with the point of the project, its overall goal. I am no expert on toxic pollution or environmental justice, in fact I am a complete novice, but I do understand the language. In fact, the very notion of ‘expertise’ – including the importance of recognizing ordinary people’s knowledge– is something that this project would tackle directly.

So, upon reading the job advert, I quickly started doing some reading. When I learned about [environmental disasters at Love Canal and Cancer Alley](#), I was stunned. For me the statistics of a place like ‘Cancer Alley’ manage to speak for themselves in many ways. 85 miles and 136 petrochemical factories and 7 oil refineries. At this point, I didn’t know very much, and I wasn’t particularly sure about what petrochemicals even are. But I knew those stats could not be good and that I would not want to move to such a place. Images of smog filled skies, metal structures, chimneys and just sheer, thick, suffocating pollution came to mind.



Louisiana oil refinery, credit Pixabay

As it turns out, many photographs of Cancer Alley do portray these images. All the images my mind conjured up weren’t a million miles away from the reality. But thrown into this toxic landscape was the addition of residential housing. Miles and miles of it;

playgrounds, schools, shops and parks, just a short walk away from a sprawling mass of toxic industry. Not surprisingly, I discovered, these houses are not occupied by society's elites, but by poor, predominantly African-American residents, and this echoes patterns of environmental injustice around the world.

For me the statistics of a place like 'Cancer Alley' manage to speak for themselves in many ways. 85 miles and 136 petrochemical factories and 7 oil refineries.

But despite the injustice of petrochemical landscapes, it isn't simple. This isn't an industry we can easily downsize. We can't stop its growth, and at the moment I'm not even sure that we would want to. Petrochemicals, as it turns out, form the basis of so many everyday, arguably essential and important products. Whilst I doubt I will ever understand the processes involved (much like when I was in the Physics Department, science just isn't my forte, and trust me I tried!) I do understand the products. They are tangible, they are familiar, and in fact they are all around me.



Petrol pumps, credit Pixabay

Plastics, fabrics, car parts, cosmetics, rocket fuel, pharmaceuticals, clothing, computer parts, detergents, paint. The list goes on and on and we can't forget that petrochemicals are derived from petrol, which I can thank for getting me to work on time today.

Despite my initial shock at the scale of pollution of petrochemical complexes, I ended up concluding that we do need petrochemicals, and that the industry provides millions of jobs. In fact, I think it would be difficult to calculate how many jobs. From the people that extract the oil to those that work in the refineries, the managers, the sales teams...all the staff within any company that produces or sells any of the products (and the many more) in the list above.

Going back to how I joined the project then, I think it's more of a 'why?' than a 'how?', as I joined the project because something about being involved with it makes me feel like a better person. Ultimately, that's it. The subject matter is interesting and I want to

know more. The reasons for the project are compelling and convincing. What the project is aiming to achieve is in my opinion both vital and beneficial.

Having studied Politics and Philosophy and then an MA in Global Law at university, the language isn't alien to me (unlike degree level Physics, oh who am I kidding, GCSE level Physics!) and I understand concepts like Environmental Justice. Having studied modules such as Ethics and Justice, Morality, Globalisation and Cosmopolitanism I find the arguments surrounding areas such as Cancer Alley fascinating.

I started to contemplate social justice. Is it socially just that these areas are in existence? These areas with higher rates of cancer and many serious and minor illnesses in general, poverty stricken areas that are home to the petrochemical industry. Well, I knew somewhere in the depths of my brain there must be some actual theory that I remember from university.



Plastic keys, Pixabay

Upon reading some articles online (thank you Google, and those nice plastic keys I am tapping on, probably made up with some petrochemicals) the memories started getting excited.

Is it socially just that these areas are in existence? These areas with higher rates of cancer and many serious and minor illnesses in general, poverty stricken areas that are home to the petrochemical industry.

John Stuart Mill argued that most of us have an intrinsic desert based understanding of justice. We believe it's 'just' to get what we 'deserve' – (i.e. our 'just deserts'). We believe this applies to all people. If you work hard, it's 'just' to be rewarded. If you steal someone's car, it's 'just' to be punished. Basically we mostly believe things to be 'just' if they are deserved. The '*deserts*' can be good or bad and they can be of our own doing or a random occurrence. If a convicted killer was to win the lottery, then most of us would find this unjust. The killer won the lottery by chance, so they didn't even work hard for it and that makes this situation even more unjust. If a student works all hours and pours their soul into an assignment, they may believe it's unjust that they

received a C and not an A. But it may be that their assignment really was of a C standard. The C was fair and once the student understands that their C grade was fair they probably won't feel anymore injustice, disappointment maybe, but not injustice. So it could be argued that most of us (or Mill's 'general mind') believe that justice is desert based and that it needs to be fair.

Is it fair that the people of Niagara Falls unknowingly sent their children to a school [built on toxic waste](#)? Is it fair that people live in places dubbed as Cancer Villages and known as Cancer Alley? That their neighbourhoods have and continue to be transformed into toxic hot spots? Well, according to the way most of us understand 'justice' it's only fair if the residents 'deserve' it. Unlike the many complicated arguments surrounding this project, for me the answer to this question is simple. No, they don't. I could go on and attempt to bring in many more philosophical arguments or I could delve further into concepts such as *desert* based justice. However, within this short article and having only just become reacquainted with philosophical theories (after shamefully not giving 'theory' much thought the past ten years) I can only touch upon such concepts. But for me just this brief dalliance with some social justice theory has helped to further illuminate the injustice.

Is it fair that people live in places dubbed as Cancer Villages and known as Cancer Alley? That their neighbourhoods have and continue to be transformed into toxic hot spots? Well, according to the way most of us understand 'justice' it is clearly not.

Finally, this 'injustice' is why I am thrilled to be working on Toxic Expertise. I get to learn loads, I get to help create new knowledge to share, and new solutions to problems. This project will hopefully benefit many people and will help to ensure there is a little bit more justice in the world and that people are treated more fairly.