e-ISSN 2785-2709

Lagoonscapes
Vol. 5 – Num. 1 – June 2025

Translucence
Some Notations on Sediments, Amber, Toxic Chemicals, and the Possibility of Returns

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Abstract The ongoing repercussions of a permanently and persistently polluted planet present a critical juncture that requires new analytical engagements. This article uses translucence as a conceptual vehicle to explore chemical pollution by comparing amber with a buried chemical waste depot. These two modes of submergence animate discussions about time, existence, desirable and undesirable futures, and pasts. Translucence – light passing through a semi-transparent object and thus becoming transformed – helps conceptualize epistemes that diffusively alter perspectives rather than being clear or opaque. The article combines text and sound (https://doi.org/10.30687/LGSP/2785-2709/2025/01/006/mmedia/001) to explore experiences of pollution and landscape across dual media interfaces.

Keywords Amber. Surfaces. Toxic chemicals. Translucence. Verticality.

Summary 1 Overture. – 2 Surfaces. – 3 Amber. – 4 Depot. – 5 Return. – 6 Depths.

Edizioni Ca'Foscari

Peer review

Submitted 2025-03-21
Accepted 2025-05-22
Published 2025-07-21

Open access

Citation Lundsteen, S.; Jelača, K. (2025). "Translucence. Some Notations on Sediments, Amber, Toxic Chemicals, and the Possibility of Returns". *Lagoonscapes*, 5(1), 139-158.

DOI 10.30687/LGSP/2785-2709/2025/01/006

1 Overture

Dear listener-reader/reader-listener,

this sound/text is conceived as a multisensory experience. You are invited to explore the sonic landscape by pressing play either before, during, or after immersing yourself in the textual universe.

The sonic piece entitled "Notations on Sediments", by sound artist Korana Jelača, is intended to be in direct conversation with the essay without being in competition with the words but rather adding to them while introducing subtleties to encourage the reader to further think of and question the larger context of ontology, altered landscapes, history, toxicity, and translucency. Hopefully, this allows your experience to weave in and out of the text. The sound is intended to convey a sense of isolation and distance which is present in towns and communities like Thyborøn. Landscapes that have been drastically transformed both by the elements, but even more so by industrialization, thus becoming discarded and undesirable non-places.[1]

Scholarship on chemical pollution has challenged conventional thinking; dissolving boundaries between subject and object, body and landscape, disrupting linear orthodox temporality, and questioning domains of perceptibility (Alaimo 2010; Müller, Nielsen 2022; Murphy 2006). This sound/article engages with these arguments 'performatively', by dissolving the barriers between listening and reading in a way that, like pollution, contaminates, transmits, and transforms the experience. Contamination and pollution are, however, not innocent encounters (Bond 2021; Reith-Hauberg 2024). The long-standing tendency to decontextualize and isolate chemical contaminants must be critically re-examined. And so, the intention behind the sound/text is to move towards a deeper form of relational thinking.[2]

The authors would like to extend a sincere thank you to the special issue editors, peer reviewers, Katy Overstreet, Jacob Mohr, and Jagtvej 69 for inspiration and guidance.

1 The artist works with field recordings, everyday objects, and materials to expose a certain lacking in our comprehension of our surroundings. The piece is composed using only concrete sounds, creating an opportunity to alter perceptions of the familiar.

2 As Deleuze and Guattari (2011) suggested, a text is a non-linear, non-hierarchical entity – it is a rhizome existing in relation to the "outside" of the text, as a plateau to use their (geological) term, that encompasses connections, flows, and interactions. In a similar, but less ambitious way, we wish to connect the text to surfaces, depths, fossils, chemical waste, sounds, and experiences. See also Lesley Green's (2020) *Rock, Water, Life*.

e-ISSN 2785-2709

While sound introduces a performative dimension, amber and a submerged toxic waste depot are brought into analytical focus to ask what kinds of histories, practices, reasonings, and habits have produced and shaped an industrially contaminated landscape. And, relatedly, what kinds of knowledge, practices, and relations either resist, counter, or offer alternatives to this dominant mode of reasoning? Following Charlotte Wrigley (2023, 5), who challenges the techno-scientific monopolization of underground knowledge by calling for the inclusion of more embodied epistemes, those that do not appear on maps or in models, this article introduces the concept of 'translucence' to critically reflect on knowledge/power, visual representation, verticality, and submerged chemical waste.

In optics, translucence denotes the state between transparency and opacity: as light passes through a substance, it is preserved but altered in the process (Gigilashvili et al. 2020). This quality is not only characteristic of amber but also invites reflection on the improbability of unmediated reality, and how epistemic regimes are shaped by ideals of clarity and purity (Shotwell 2016). Translucence, as a concept, critiques techno-scientific routines in which knowledge about chemicals is tied to visibility, objectivity, manageability, and certainty where outliers and distortion are often erased or ignored. Yet, the buried toxic waste has not complied with these epistemic frameworks. Instead, translucence introduces alternative ways of knowing a landscape that is shaped by flooding and storms but also hosts amber and a submerged depot. The article argues that dominant practices of boundary-making and reductive representations of the underground carry serious consequences. Still, figures like amber and translucency offer analytical potential emerging from thinking about, with, and through verticality.

Inspired by Overstreet and Sørensen's (2024, 3) methodology and epistemology – which assemble seemingly disparate stories to make sense of politically charged places, this article brings the landscape, its history, amber, and a subsurface depot into an analytical constellation. These serve as empirical touchstones that integrate ethnographic fieldwork, archival research, and artistic practice.

The original idea was to include sounds of amber and the transformations of it in the piece, but the focus eventually shifted to amber as an artifact, a symbol of human modification of our surroundings. Therefore, the artist chose to manipulate and record different objects made of wood, metal, plastic and glass, allowing them to intertwine with, pollute and alter the sounds of the wind

and the sea. In a sense, to acknowledge and replicate how human presence alters and manipulates the landscapes which it inhabits.[3]

The article unfolds through five curated encounters. It begins by situating the reader in the landscape offering a sense of place, milieu, and its inhabitants. A brief local and natural history of amber follows. From there, attention turns to the emergence and conditions surrounding the depot, before lingering on the probability of returns. The final section proposes a quiet closing, revisiting the concepts and their potential to prompt further reflection.

Now we welcome you to press play and begin exploring.

2 Surfaces

The horizon is filled with clouds of various sizes drifting with the wind. Swallowed up by a scenery so characteristic of this place and time of year, I find myself on the Danish West Coast in late October. I am walking along the beach near the small town of Thyborøn, placed at the very end of Harboøre Tange – a narrow sandy strip that separates the enclosed, brackish water of Limfjorden from Vesterhavet, the Danish name for the North Sea.

Here, the shoreline does not simply lie adjacent to Thyborøn; it forms a meeting point of two worlds – one urban, one marine – that gradually dissolve into each other, making it hard to distinguish where one ends and the other begins. The landscape is profoundly shaped by currents and tides, where the disruptive forces of storms and floods radically alter the boundaries above and below water. As Wilko Graf von Hardenberg and Martin Mahony (2020) argue, the perception of the sea's surface – its heights and depths as objects of knowledge – are fluid, relative, and historically contingent, shaped by evolving scientific interests and practices. In this sense, distinctions between beginnings and ends, surface and depth, and the shifting borders of land and water resist clear definition, fluctuating with perspective, which are especially prevalent in a moving landscape.

3 Among the sounds heard are bubble wrap, different metal and plastic parts used in building construction, carbonated water in a very thin glass and discarded plywood. Furthermore, the artist chose to use bird sounds recorded in urban parks which always have a backdrop of traffic or some other machinery, which can be heard if you listen carefully. In many years of using field recording the artist noticed that sounds like traffic, construction are almost always to be found in the distance of Danish beaches and forests and are often only drowned out by the sound of strong winds. Considering the topics at hand it seemed more relevant and appropriate to add urban nature to the mix. Panning and layering choices, in both recording and post-production are meant to aid in shifting and altering the readers/listeners perspectives and recognition, thus exploring the ideas of the organic vs. synthetic among other topics.

These processes of layering, upheaval, and settling are integrated into the very fabric and structure of Thyborøn, sedimented in its culture and history. The people living here, known for their toughness and tenacity, have similarly been shaped by the cyclical forces of nature which sustains life, yet in moments of volatile intensity, turns into life-taking violence (Rasmussen, Rasmussen 1972, 17-20).

In 1825 a relentless storm breached the sandy strip of Harboøre Tange which, until that defining moment, had connected the mainland with Northern Jutland and served as a terrestrial barrier between the fjord and the North Sea. The catastrophe, as one newspaper described it, became the most violent storm in over a century, claimed more than 800 lives and had long-lasting and long-lasting social, environmental, and economic repercussions (Poulsen 2019, 2-6).

Yet the storm in 1825 was not an isolated event. Repeated storms throughout the century widened the breach, deepening the water channels and carving out what is now known as the Thyborøn Canal. In 1868, a storm-induced flood was documented by an unnamed traveler who recounted the dramatic transformation of the landscape, from "once fertile meadows and dune-protected villages to a barren, gravel-filled plain" (Vestergaard Jensen 1973, 4). The wayfarer was fascinated by the local's determination to survive in a place where storms and floodings had taken everything from an area that had little. Despite enduring intense circumstances, the prospect of a deteriorating future caused by living in a hostile environment led several residents to move. By 1896, 20 houses, two cows, some sheep, and a few geese remained in the area around Thyborøn (Rasmussen, Rasmussen 1972, 87).

While poverty, absent infrastructure, a desolate topography, and treacherous surroundings did not make an attractive combination, Thyborøn did, in fact, see an increase in population and wealth from the turn of the century until the 1950s. The development was rooted in the seemingly catastrophic storm of 1825, which had created a canal, also brought attention to coastal protection facilities and construction of built infrastructure. Industrious and opportunistic individuals began building several breakwaters, a harbor, and a railroad which eventually led to an emerging industrialized fishing industry (88-9). The path of decline that seemed unavoidable became a favorable event of circumstances as the canal led to the construction of early logistical industrial infrastructure. The port of Thyborøn became one of the most important access points for commerce, placed at the intersection between Limfjorden to the North Sea. The storm of 1825 altered the area's reputation from the "coast of death" to "land of opportunities" indicating how disasters had devastating consequences for some, leading to a gradual abandonment, while the very same catastrophe became a profitable opportunity for others (Poulsen 2019, 29-30).

The coastal processes of tides and currents, storm and floodings, shaping the landscape for centuries, are still vital to understanding the

rhythms of life on Harboøre Tange. After a recent storm left the streets deserted, I was drawn the beach in its wake. I took the storm as a serendipitous event to become familiar with the local tradition of looking for amber, guided by a local woman.[4] Prior to my coastal undertaking, I had learned the tacit knowledge required for collecting amber from Bjarne, a 70-something-old, retired fisher who had dedicated much of his spare time to collecting and polishing amber. His knowledge comes from his father, affectionately known as Rav-Aage – 'Amber-Aage' in Danish –, a well-known figure in the community.

The same natural forces that devastate the coastline also bring amber ashore. But they also bring something more insidious.

Rav-Aage, also remembered as Denmark's first environmentalist, mobilized a large group of fishers against the pesticide producer, Cheminova, which had long been dumping vast quantities of toxic chemicals in the area. The contamination unfolded as a form of slow violence, its effects delayed, invisible, and ongoing (Nixon 2011; Lynge et al. 2021). Although Rav-Aage's activism was hailed as a success, Harboøre Tange remains the most contaminated area in Denmark, with three major sites of buried hazardous waste; one of them a chemical depot buried on the shoreline just a little south of Thyborøn (Andersen 2024). Bjarne has continued his father's struggle against living in a toxic environment, committing himself to a complete remediation of Harboøre Tange.

And just as the tides once brought opportunity through amber, storms and currents now return the buried toxic waste – once thought gone – reminding us that nothing in this landscape ever truly disappears. The coastal processes of tides and currents, storms and floodings, are also the same phenomena that returned the toxic waste which was thought as gone.

3 Amber

While spending time at Bjarne's house seeking to learn about the environmental injustices of long-term exposure to chemical pollution, amber sank into a stronger focus. The previous days of storms, which eventually led me to the beach, pushed our conversation to other places, like how and where to find amber. Amber is known as 'Northern Gold' because it is commonly found in Northern Europe. Their materiality as resin secreted by pine trees during the tertiary age, reveals a golden glow shining beneath an otherwise ordinary surface and distinguishes it from other types of fossils (Nationalmuseet). The currents and waves surface geological time, as the amber lies dormant for eons on the seabed until storms carry

4 The authors have chosen not to disclose her name.

the deep-time artifacts into the present. Storms unravel deep time providing the perfect occasion to look for the fossilized tree sap.

There are different ways of collecting amber; some people stand in the waves during a storm with handheld nets, while amber is also a common bycatch lifted from its dwelling as commercial fishing boats plow through the seabed. A third, and more common, less intensive, and low-key method, was the one Bjarne taught me: he instructed me to rummage through kelp, shells, and small pieces of wood across the coast, and not, as normally believed, among the stones and pebbles. Because of amber's density, it is found among lighter objects on the coast.

Gaining knowledge of amber through environmental storytelling, the urge to look for the golden pebbles collided with the serendipity of storms, which ultimately led me to inquire about an amber-finding excursion. Unfortunately, Bjarne was unable to join me as he suffers from a severe back injury because of an accident during his time as a commercial fisher in the North Sea. A tragic event that still renders him unable to walk for longer distances. And so, because of Bjarne's immobility a local woman who also had cultivated a remarkable knack for finding amber agreed to companion me. We fetched two sticks, useful tools for sticking and poking through the wet, sandy seaweed and pieces of driftwood lying scattered across the beach.

Finding amber is both a pastime and a traditional supplementary income for people living in Harboøre Tange. In the Northern parts of Europe, amber is a type of fossil whose cultural significance can hardly be understated; in Denmark, they were an important source of income and vital for trade in ancient times (Schnorr 2012; Brinch 2012). Amber is also believed to have healing capacities and has been used as valuable currency for trade, which is partly the reason why archeologists find them in far-flung corners of the world. They come in various colors; orange, red, brown, green, and black, each holding a captivating and shimmering presence, which has placed it among some of the most precious materials. The multiple and variegated nomenclatures used to describe amber; fossils, resins, succinite, and resinite, have given rise to much speculation as well as confusion. Originating from extinct forests causes a severance between source and redeposition adds additional layers to their perplexing presence. And ultimately, the fossilization processes where physical circumstances are as important as temporal spans, have given much cause to speculation in terms of how, when, and why amber is formed (Causey 2012). The enigma of amber prevails as being much studied but still not fully understood, even in areas of scientific inquiry.

Despite amber's persistence, as materializations of processes that have traveled through geological time, entered social and cultural time, becoming objects of scientific inquiry, they remain elusive objects. They illustrate how things, phenomena, and entities that might

appear well-known and even normal, have generated an abundance of knowledge, but are still shrouded in partial mysteries. As such, amber becomes objects that contain an aspect of not-knowing emerging as windows into unexplored aspects of the past and the present.

Today, amber still holds significance in the Northern Region as a desired status symbol with a mythological dimension, but also an attraction for tourists that flock to the Danish West Coast looking for fossilized resins. While some tourists are inclined to look for amber as an activity that resembles a lottery, some reports of finding massive chunks of amber sold for a good deal of money, most take finding amber as a sign of good luck and a small-scale surprise. My own motivation was to mimic Bjarne and Rav-Aage, getting a better understanding of the area in an embodied way while small-talking with my companion about the place and its history.

The coastline where I poked around looking for amber is directly linked to the subsumed chemical depot. The chemical depot, the landscape, amber and the shore connects to Cheminova and Thyborøn, but not in a straightforwardly and linearly way. Instead, it is best illustrated by lines drawn between material, synthetic, organic, temporal, spatial, social, political, scientific, social, economic, and more-than-human elements. While strains of new materialism claims that amber might hold a certain "thing-power", there is a very different other type of agency to the chemical depot which entails slow violence and the ongoing aftermath of toxic exposure (Bennett 2010; Murphy 2017; Frantzen, Bjerre 2020). However, amber and the chemical depot are subjected to, and a part of, the same rhythms and movements of the landscape, but belong to two very different epistemic regimes. The first belongs to a type of local knowledge where the sea returns what has been given, the other insists on containment through technological control and epistemological certainty. As we shall see, both are characterized by translucency as a type of epistemic murk (Taussig 1986, 121). As an analytic interface, translucency provides a critique of certain epistemic regimes whose claims of unmediated and unbiased objectivity have life-altering consequences, while also offers an opportunity to think otherwise.

During our shoreline scramble in pursuit of amber, I was reminded how Bjarne's relation to amber illustrates such an otherwise. In many ways, Bjarne and Rav-Aage symbolize an intergenerational history, by having traveled on similar paths but in different decades; they both spent a large part of their lives at sea, have a strong sense of justice, nurture a close relationship to, and knowledge about, their surroundings which is, among other things, shown through their appreciation of amber. When Rav-Aage passed away, Bjarne moved into his childhood home and took up his father's interest in collecting, polishing, and selling amber, as well as running a small amber museum inside his house.

When Bjarne was raised, knowledge and skills were passed on from generation to generation, as a type of practiced and learned heritage that differed from that in schools. The craft of finding and polishing amber into golden glowing aesthetic objects – is a skill that requires patience, as a practice involving a constant process of careful removal of the surface. Amber-polishing brings surfaces and depths into conversation, like residing beneath the earth's crust or placed on a seabed surface, hidden and forgotten until a storm brings it ashore where Bjarne would pick it up and carry it back home.

The subsequent scenes involve Bjarne slowly and steadily polish the surface, while gradually dissolving and revealing a radiant and glowing inner world, bringing another perspective, a translucent perspective, into existence as the light is altered when it passes through. The translucency of amber reveals the relationship between interiority and exteriority as processual and gradual, and about what might exist under a surface that has been deemed as impenetrable.

4 Depot

Amber and translucency tell a story not unlike that of chemicals and their toxic properties. They are unruly entities, continually attempting to be tamed, but nevertheless evades settled distinctions and fixed categories. They multiply, proliferate, and surface in unexpected places. They are, however, very different in their political, environmental, and social realities. Still, translucency and amber speak to the conditions and logic that shape these realities.

A well-known story about toxic chemicals is framed as industrial development. Traditional ways of living were subsumed by new businesses and factories, replacing former subsistence economies. These emerging industries signaled a new era defined by an accelerated scale and intensity – and one that forged radically different relationships with its surroundings.

In 1952 Cheminova established a factory just south of Thyborøn, producing organophosphate-based chemicals and mercury-based coating for the agricultural industry. Targeting the emerging global agrochemical market, the company quickly rose to become a prominent pesticide exporter. But their fast-growing business did not happen without consequences (Jørgensen et al. 1984, 13-14).[5]

Despite warnings from experts, willing local politicians granted Cheminova permits to dispose of wastewater (Miljøministeriet

5 Danske Ukrudtsmidler sendes til flere end 30 Lande 1956.

1981b, 1-10).[6] In the 1950s, the local political and juridical bodies consisted of businessmen, interested in bringing prosperity to a place that was perceived as underdeveloped (Den Store Danske).[7] Not unlike the cultural significance of amber, Cheminova represented wealth and status. As a result, Cheminova was allowed to dispose sewage on the coast between two dunes. A pipeline reaching across the sandy strip – from the east to the west – was not financially viable, making a sewage-filled truck the best cheap alternative.

However, yellow water flowed from the factory grounds, a synthetic smell inundated the area, and reports of spills from an overfilled truck driving haphazardly non-stop in all weather, were followed by reports of chemical exposure (Miljøministeriet 1981b, 79).[8]

These forms of pollution were often rationalized. They were framed as isolated incidents, incidental accidents, or the exaggerated complaints of a local population resisting the benefits of a benevolent company. But behind this rationalization lay a deeper tension: the dreamscape of synthetic modernity, enabled and sustained by exclusion, contamination, and selective visibility.

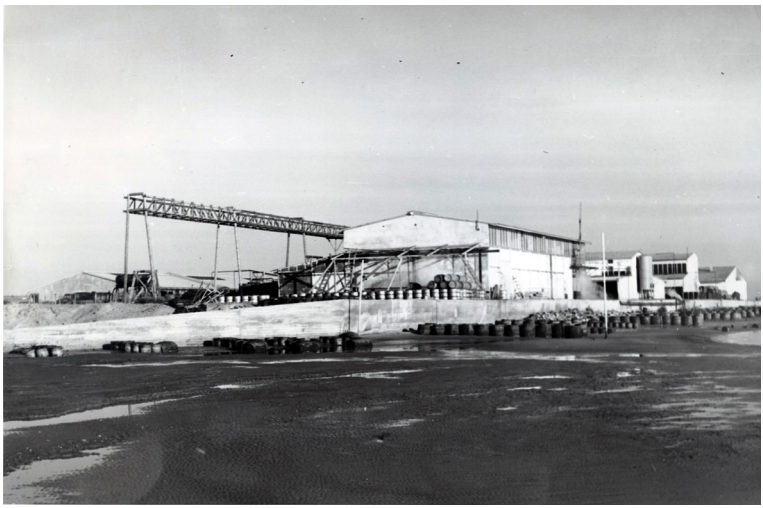

Figure 1 Cheminova's factory. Unknown photographer, ca. 1956. Harboøre, Lokalarkivet for Thyborøn-Harboøre-Engbjerg, B12999, www.arkiv.dk

6 Cheminova skal bygge Rensningsanlæg inden Nytaar – Landvæsenskommissionens Kendelse faldt efter bevæget Møde i Gaar 1952; Court Transcript of Negotiation Protocol 1952.

7 Cheminova Flytter Fra Maalev Til Landets Mest Øde Omraade 1952.

8 Rønland-Beboere Klager Til Politiet over Cheminova 1956.

e-ISSN 2785-2709

A few years later, the waste site became the optimal solution for dumping other types of externalities. In 1956 Cheminova filed for permission to extend their disposal agreements to include solid waste. A local representative from the coastal authorities reported how Cheminova's property had expanded because of buried solid chemical waste, including half-empty barrels and contaminated debris from the production.[9] Shocked by the scale and intensity of waste accumulation, the local authorities led by the Danish Coastal Protection Management, agreed to expand the permission as it posed the "least risk", especially considering the contamination of water consumed by the nearby residents and their livestock.[10] A tentative agreement for three years was turned the area into a dump site for chemical waste (Miljøministeriet 1981a, 77).

In 1958, when the agreement expired, Cheminova continued dumping waste between the dunes. By 1962, a storm had eroded one of the dunes facing the Sea and large parts of the liquid waste flowed into the sea, while the solid waste remained. Despite consistent reports from local fishers warning that Cheminova's waste management had deteriorated, the authorities nevertheless expressed surprise at the continual and illegal dumping. The storm led the local authorities to establish preventive measures, such as a fence around the dump site, a cautionary sign, and insisting on building a pipeline for sewage from the factory to the shoreline (Miljøministeriet 1981a, 52-3).

The dunes were rendered as blank spaces existing outside of Harboøre Tange. They were chosen as dumping sites based on a particular understanding of coastal dynamics, rendered as a "system", in which the sea's movement would naturally erase the waste (Andreasen 1983). This system imagined the coast as unidirectional; flowing away, absorbed, forgotten. It did not account for the return. The design excluded the possibility of reversal. Falling out of bureaucratic and technoscientific existence, the waste was assumed gone. Like amber, the toxic remnants of Cheminova became agents of environmental memory. They surfaced in response to weather and time, revealing the landscape's unwillingness to forget. Though subject to scientific categorization and bureaucratic oversight, the waste depot remained semi-visible – translucent, but not absent. It defied regulatory expectations, undermining narratives of disappearance, and became a haunting reminder of the region's entanglement with both industrial ambition and ecological vulnerability.

The storm of 1962 demonstrated the dangers of having an open pit for chemical waste, requiring the Coastal Authorities to cover

9 Report on inspection of Cheminova 1956.

10 Svendsen *Institutional Correspondance about the Prospect of a Landfill* 1956.

e-ISSN 2785-2709

the landfill with sand. Covering up the waste pit removed it from out of sight, and through the visual disappearance, it superficially and effectively removed the waste problem. This reasoning is closely associated with the ways in which specific properties are ascribed to the underground. The underground, Rosalind Williams notes, is intertwined with cultural imaginaries of industrialism and technology-induced desires for a complete mastery of nature (Williams 2008). Williams shows how the space beneath the surface was depicted as absent from time and life and consequently rendered it conquerable through technology.

Yet, like amber, the buried waste persists in silence, only to reappear through the very processes of storms, tides, shifting sands, that once helped conceal it. Both amber and toxic waste blur the lines between what is natural and what is industrial, what is past and what is present. They re-emerge as reminders that disappearance is rarely permanent and that the landscape itself stores memory – not only of life, but of violence.

The buried waste, much like amber, defied the desire for clean boundaries. It undermined the notion that harm can simply be hidden or managed through technological intervention. As translucent entities – both materially and metaphorically – they expose the porousness of containment, and the instability of the systems designed to suppress them. In this way, the underground does not erase.

Bureaucratically supported scientific investigations insisted on keeping the hazardous substance in its place. However, the chemical waste in its translucent state meant that it distorted otherwise transparent models of containment. The waste sedimented in some places but seeped and leaked into other places. It dripped and dissolved, percolated and erode, slouched and slided, and altogether escaped its confinement. And so, the submerged depot released its toxic contents out of the presumable confinement leading to the contamination that transgressed stratigraphies, revealing the circular motions of eco-systems. A leakage from the depot, contaminated a multitude of small sand eels, who were subsequently devoured by hungry terns, leading their polluted bodies to be scattered all over the area.[11]

Appalled by the radical environmental degradations and bureaucratic inertia, a group of local fishers, most prominently Rav-Aage decided to speak out against the factory's pollution, with Rav-Aage becoming one of the first publicly recognized environmentalists in Danish history.[12] Using his vernacular knowledge,

11 *Nye Problemer for Thyborøn-Fiskeriet* 1964

12 *Nye Problemer for Thyborøn-Fiskeriet* 1964; Lex Aage Hansen – ravsliber og miljøaktivist.

the same type of intimate relationship with the environment that earned him his amber-epithet, Rav-Aage identified and criticized those who claimed that the waste remained buried and isolated. It was the stench that first alarmed him and then the fish he caught that had blisters and white stains. They tasted like the rancid stench coming from the factory (Gade 1987). Drawing from his embodied history, he knew that toxic waste, like amber, surfaces after being tossed and turned by the sea. Its presence persisted beneath the surface, a slow and spectral force whose return was not just possible, but inevitable.

Successive storms accelerated the already vulnerable position of a buried depot subjected to coastal erosion, but it was institutional amnesia that unintentionally unearthed the chemical waste. The depot had been bureaucratically forgotten in 1971 when Coastal Authorities accidentally excavated the depot during shoreline maintenance. The reawakening of a forgotten chemical waste problem, catalyzed successive debates about the existence of the depot (Miljøministeriet 1981a, 125). Upon opening the depot, the waste did not appear as projected, the waste had mutated into a toxic substance described as "sticky and oily" (126). Cheminova either could not or did not want to provide information about what had been disposed, of and was ordered to exhume 1,260 tons of waste and re-deposit it on its new industrial complex adjacent to their former property. After the depot had been partially removed, a concrete lid was placed on top to solidify the boundaries between the surface and the depth in an effort to better contain the chemical waste.

The politics of containment also hinges on the stability of other natural elements. However, Vestkysten is notorious for its extreme weather – the very same conditions that return amber to land, unravelling time and toxic waste. Rav-Aage and the group of fishers turned environmentalists, nevertheless insisted that something was seeping from the depot. And that something was destroying the surrounding environment. It was, however, not only the seeping of toxic waste to all sides that concerned Rav-Aage, but the increasingly exposed position at urgent proximity to the seashore that became a primary apprehension (Gade 1987). The altered situation made the depot crawl into a different stratosphere, where the stakes had become higher. Coastal erosion had taken small pieces of land, while storms intensified the process, making the depot move increasingly closer to the shoreline. Time became an important factor, adding urgency to an already critical state. By the late 1970s, successive storms contrasted previous arguments concerning the depot's status as safe and secure. Through the course of five years, from 1978 to 1981, toxic waste leakage, storms, and the coast approximating the depot caused the media and politicians to question whether it was safely contained (Pedersen 1978; Kyrø 1981; Andreasen 1981).

Rav-Aage became an important figure in the demand for remediation of the submerged depot. He joined a group of young biologists and formed "Cheminova-Gruppen" a trans-regional, interdisciplinary, and intergenerational constellation committed to documenting the pollution coming from the depot (Østergaard, Madsen 2017). The group studied the swirl of epistemic murk flowing from the heart of Cheminova, as the management continually, and strategically, claimed none-awareness or provided imprecise and occasionally false information, upon inquiries into the status of the pollution. Ultimately, they demonstrated that the solid boundaries of the surface were, in fact, very porous. Their activism played a vital role in bringing the depot's dangers into public discourse and ultimately spurred political momentum for remediation. However, discrepancies between the materiality of the waste and its bureaucratic second life became a specter haunting the area and its inhabitants. The depot, not assumed to pose any danger, was challenged by the many cases of immediate and gradual exposure as well as immediate and long-term consequences (Kamstrup 1988).

Figure 2 Rav-Aage's vej, 2021. Thyborøn. Photograph by the Author

The story of Cheminova spirals downwards descending upon Bjarne as a legacy difficult to escape. The pollution persists, not as history, but as a toxic heritage; a haunting continuity that refuses resolution (Kryder-Reid, May 2023). Today, the three largest sites of pollution in Denmark remains. As a strange recurrence of past events, Bjarne, a bearer of intergenerational environmental injustice, is battling the same institutional and bureaucratic inertia. What remains is not only the memory of injustice but the material inheritance of over 120,000 tons of buried waste – an invisible network threading beneath the surface, always threatening to return (Andersen 2024).

Much like amber itself, dislodged by storms and returned to shore, the depot's waste re-emerged through a convergence of natural forces and vernacular vigilance. It refused to stay buried. The chemical inheritance of Cheminova, once deemed contained, became visible through signs that blurred the line between surface and depth – blisters on fish, an oily substance reappearing, and the acrid stench carried by the wind. These were translucent signals: partially legible, partially denied. The depot's material and bureaucratic translucency mirrored one another. As such, amber and toxicity operate as twin figures of return – natural and industrial archives that do not forget, even when institutions do.

5 Return

Standing on the coast, one is able to stand directly on top of the depot. It would be invisible, if not for the small signs that indicate the continuous exchange between above and below. In a small shed-like construction next to the dunes is a pump that filters water that passes through the depot. It is a material manifestation of the continuous flow between surface and depth, but also a visual reminder of the depot's existence. However, due to its camouflaged appearance, looking quite innocent, it only reveals its inner purpose to those who already know. The pump is a precautious measure intended to permanently ward off the buried chemical waste. However, every storm forewarns a return, either of amber or another environmental catastrophe.

Like amber, the depot is much studied but not fully understood. The types of knowledge produced about the depot were predominantly in the hands of assertive engineers who based their claims on monitoring and remote sensing that led to estimations, projections, and models (Lundsteen 2024a, 200-36). The epistemic virtues, based on rationality and objectivity, were not always incorrect, but they did monopolize discourses and create space for decisions about the depot's existence entirely indebted to cost-benefit analysis (Plumwood 2007; Daston, Galison 2007; Lundsteen 2024b). The techno-scientific reasonings established a truth regime that excluded other types of knowing, other archives, or environmental justice claims that insists about the link between socio-economic aspects and pollution (Rønn 2025). The other ways of knowing remain submerged hauntological figures shadowing the technical reports.

The submerged depot, probably the most famous in Danish history, is a well-known but nevertheless secret history – a translucent truth that is hard to fully comprehend even if the circumstances are well known. It is a public secret as a type of knowledge akin to a public secret, as generally known but unable to be articulated; as knowing

what not to know (Taussig 1999, 5). If not for the signs, that differ in style and content from those next to Cheminova, the 120 tons of highly toxic chemical waste buried underground, would elude attention.

And here the ontological status of the buried depot is underlined, as its history and detrimental consequences are well known, the leaking and seeping and its increasingly exposed position are also understood, but in some way, escapes awareness. The depot remains and thrives in open secrecy beneath the surface. During the sunken repository's entire existence silence has engulfed it, only broken by environmentalists who desecrated the secret and, in return, became discredited. Only the innocent looking pumping station or a sign on a little path at the very end of Thyborøn that carries the name "Rav-Aage's Vej" unearths the troubled history of the chemical depot. It is a modest monument to a person who dedicated his life to an environmental struggle and the right to live without excessive chemical pollution.

The wind does not stay silent either. The disruptive element both brings back and foregrounds the exposed state of the depot and the following claims that repeatedly emphasize that the waste is managed, monitored, and controlled. It seizes the future by re-awakening past experiences of institutional neglect or a detailed agnotology, when the relationship between chemical pollution and the high incidence of diseases in the community linked to chemical exposure, is severed. As such, the soundscapes become a provocation for thinking about toxicity and the environment, that disrupts arguments of purity, clean slates, chemicals as isolated entities floating in white space – all of which leads to notions of the existence or possibility of an "away" that does exist (Shotwell 2016; Liboiron 2021; Murphy 2022).

6 Depths

The depot has belonged to the subsurface since 1964. As a proposed solution to an increased waste problem, its existence on the surface was estimated to be too dangerous. Ideally, the toxic chemical waste was supposed to dissolve infinitely through the vast North Sea. However, the waste remained in a perilous and uncertain state, by being exposed to the water and the storms, while coastal erosion intensified an already precarious situation.

As we have seen, verticality, the relationship between surface and depth, is not an entirely innocent concept, but can become imbued with political and environmental implications when entering different constellations. For example, in Harboøre Tange, the depot contains a history where pollution is governed by a specific type of expertise that insists on the toxic chemical waste as safely stored underground. Despite numerous examples that have shown that safe, stored, and underground were not as static and stable as argued.

The storms, however, do not solely bring a once-buried chemical horror back into existence, they also mediate chance encounters by lifting and bringing fossilized resins to the coastline. The serendipitous contingency of finding amber emerges as a material reminder of the inevitable returns of natural processes. It is not the storms themselves that hold an inherent cruel agency, but rather the initial catastrophe of burying an enormous amount of chemical waste on the coastline that is replaced by the tragedy of ignoring its existence and the consequences that entails. And as an ironic twist, driven by the thirst for growth causing climate emergency are also the very same processes that cause the storms to increase and intensify.

We have deliberately introduced a distorted element to your reading experience in the form of a sound piece. It is centered around field recordings taken from walks on Danish beaches, on windy as well as serene days. This juxtaposition between the storm and the calm is especially important to convey, because it touches on the idea of an idealized, good and noble nature. Characteristics which help shape the notion that nature's sole value is instrumental – existing either for pleasure or profit, and otherwise to be abandoned and/or destroyed.

The sound piece accompanies translucence as ways to think about how our perception of environmental issues is mediated through sonic, cultural, political, and economic filters that distort or reframe ecological realities. Moreover, translucency frames environmental knowledge as existing on similar gradients between opacity and transparency, acknowledging the limitations of complete environmental understanding while rejecting total relativism.

Light diffusing through amber is a way of thinking about permeability, boundaries, and partiality. The passage of light, as with the containment of chemical waste, is neither separation nor total submergence but is always in connection with others as the pollutants continually cross these conceived and constructed thresholds. The physical properties of translucent materials: diffraction, refraction, scattering, is an apt prism that reveals how pollution disperses, accumulates, and transforms across different contexts and timeframes. Locating and polishing amber by eradicating the surface and revealing a translucent light provides us with a better understanding of vernacular knowledge of the surrounding environment, and that returns are always possible. Even if it has been gone for timescales beyond our comprehension. Furthermore, the partial visibility resonates with the responses to the incidences of pollution, where the effects of the buried depot are not always visible or immediately detectable, implying the perceptions and responses to ecological threats.

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