Pollution as Poetic Practice: Glimpses of Modernism in Wilhelm Raabe’s *Pfisters Mühle*

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Wilhelm Raabe’s 1884 novel *Pfisters Mühle* tells the story of how a small family business, a mill and adjacent beer garden, is being destroyed by polluted wastewater run-off from a nearby sugar factory that dumps industrial chemicals into the stream. The pollution causes the growth of filamentous proteobacteria which, in turn, gives rise to a terrible stench. In the frame of the novel, the high school Latin and Greek teacher, Dr. Eberhard (Ebert) Pfister, returns to his ancestral home with his newly married wife, the nineteen year-old Emmy, to spend a summer month reminiscing about the past. The mill is about to be sold and subsequently demolished to make room for a new industrial dry cleaning plant. Triggered by the return to his ancestral home Ebert fills a series of altogether twenty-three loose sheets («Blätter») on which he reconstructs the story of Pfister’s mill over the course of that summer month. Many of the episodes that he recollects derive from daydreams during which his mind drifts off into the past and envisions people and reconstructs conversations. At the end of each day, Ebert reads what he noted on these sheets to his wife who shows moderate interest, at times even falling asleep while listening to his prose. In reading these sheets we learn about Ebert’s childhood growing up in Pfister’s mill: we meet his father, the miller and owner of the country tavern, the caretaker, Christine, his Latin tutor, Adam Asche, the poet Felix Lippoldes and his daughter, Albertine. We also learn the story of the slow but doomed downturn of the father’s business due to the incredible stench from the foul creek that keeps his customers away and ruins the mill. Ebert’s father had the creek water analyzed scientifically, then traced the problems to their source, the sugar factory, and enlisted the services of a lawyer who successfully won the case against the polluters who were ordered by the courts to stop polluting the nearby waters or pay a daily penalty of 100 Marks. Despite this win, the miller’s soul and lifestyle are permanently damaged. He dies not long after the verdict is pronounced and passes the inheritance with all its obligations down to his son, who is not trained to take over the business and hence unable to maintain it. Ebert Pfister ends up selling the property to his friend and former tutor, Adam Asche, a chemist and successful businessman who is erecting a large-scale dry cleaning factory on the property where the mill once stood.
From Ebert’s sheets documenting the story, the main elements of the modern discourse on environmental destruction emerge. This essay reconstructs the literary dimension of a type of discourse that Lawrence Buell has described as «toxic» and links it to nineteenth-century realist fiction. Buell defines toxic rhetoric as «an interlocked set of topoi whose force derives partly from the exigencies of an anxiously industrializing culture, partly from deeper-rooted Western attitudes» (639). He locates the beginning of contemporary toxic discourse in Rachel Carson’s *Silent Spring* (1962), the book that introduced the key discursive motifs of «retelling narratives of rude awakening from simple pastoral to complex» (Buell 647) and «the moral passion of a battle between David and Goliath» (Buell 651) among others. I show how late-nineteenth-century realist fiction struggles with finding an adequate literary configuration for narrating pollution by experimenting with different genres, discourses, and rhetorical figures to describe the changes in modern technological practices that result in pollution. Raabe populates his novel with a variety of literary figures who evoke different registers – realist, mytho-poetic speech, scientific and technocratic rhetoric, and toxic discourse – when faced with the problem of narrating pollution. Each of these figures seeks his/her own strategies of coming to terms with their modified environment and navigating the scene of pollution. Toxic discourse emerges from this discursive competition as the precursor of modernism. Toxic discourse strings the chemical phenomena that make up pollution into a metonymic chain forming rich webs of interconnected figurations poetically performing the tropical principles of pollution. Pollution as poetic practice shapes the modern discourse of environmental degradation derived from this constructive difference between the genre conventions of realist fiction and modernist poetics.

*Pfisters Mühle* was composed between April 1883 and May 1884 while Raabe was attentively following the trial of a sugar refinery in Rautheim near Braunschweig. In fact, he carefully studied the trial documents to which he had access, thanks to his friend Heinrich Beckurts, a professor of pharmaceutics and applied chemistry at the Technische Hochschule Braunschweig and who served as expert witness in the case («Heinrich Beckurts»). However, Raabe made only very selective use of this material as Jeffrey Sammons has shown convincingly: «Raabe had begun to compose the novel while the lawsuit was still unfolding, and he was still receiving documentation from Beckurts in the course of his writing,» yet, «despite the materials he lifted directly out of the documents, such as the biological jargon, he is no more immediately mimetic here than he was accustomed to be otherwise» (*Raabe* 50–51). As evidence, Sammons discusses three major deviations from the official records: Pfister’s mill doubles as a country tavern, the actual indemnity awarded is sig-
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nificantly reduced (from 1000 Marks a day in the historical case to 100 Marks a day in the novel), and the erasure of the figure of Raabe’s informant, Heinrich Beckurts, the emerging scholar in pharmaceutics and applied chemistry and Raabe’s co-fellow in one of Braunschweig’s social clubs (Sammons, Raabe 35–36). Since the novel focuses on contemporaneous events having to do with a case of actual environmental degradation, it has received attention in Raabe scholarship as a literary discussion of the process of wastewater treatment (Thienemann), the fictionalization of the trial (Popp), and as a characterization of the mythological ties to Western civilization (Kaiser). Pfisters Mühle has been called the first ecological novel of German literature (Detering 10) and its author a leader in sustainability (Kodjio). Sammons, in contrast, argues against this body of scholarship that situates the novel in the context of environmental questions by pointing to the fact that the emerging capitalist figure – Asche – is not painted as a distinctly negative figure; that father Pfister does not have an ecological outlook; and that pollution is portrayed not as «an isolated evil but part of a dilemma of competing values» (Raabe 62). Sammons states that «the environmental problems have their origin not in capitalism but in modernization and industrialization,» noting that Raabe «was not about to set his face against modernization and industrialization» and that «in Pfisters Mühle he was attempting to grapple with experiences that could no longer be contained with the conventions of the realism that had become traditional in German letters» (Raabe 69). These arguments set up the final section of Sammon’s book which deals with Raabe’s path to naturalism.1

My reading of Raabe’s text shows that it treats the thematic of environmental degradation in an entirely new fashion as a configuration of scenes from memory while grappling with the boundaries of fiction and the recognition of the all-pervasive nature of the phenomenon it is describing, i.e., pollution. Pollution knows no borders. It spreads opportunistically wherever the right conditions prevail; it spreads fast and indiscriminately in all directions. It conforms to a principle of interpenetration that affects all environments. I agree with Sammons that the novel, on a meta-poetic level, is seeking formal solutions to problems that could no longer be addressed within the framework of realist fiction.2 What emerges from the scenes of memory, however, are not the outlines of naturalism but glimpses of modernism and the outlines of a toxic discourse capable of turning the principles of pollution into rhetorical figures and an interrelated set of topoi.

In his 1998 essay on toxic discourse, Lawrence Buell defines toxic rhetoric as «an interlocked set of topoi whose force derives partly from the exigencies of an anxiously industrializing culture, partly from deeper-rooted Western attitudes» (639). In a departure from earlier models of ecocriticism that em-
phasize the imbrications of physical environments and de-emphasize aspects of social, cultural, and discursive construction when it comes to analyzing humans and their relationship to the non-human world, the concept of toxic discourse emphatically «insists on the interdependence of ecocentric and anthropocentric values» (639). While Buell points to the 1962 publication of Rachel Carson’s *Silent Spring* as the effective start of contemporary toxic discourse, he makes occasional reference to examples from older American literature such as Nathaniel Hawthorne’s tale «Rappacini’s Daughter» or Henry Thoreau’s *Walden*, effectively creating an archive of certain attitudes toward narrating nature that anticipate contemporary rhetoric. Buell argues that «it comes as no surprise, therefore, to find contemporary toxic discourse retelling narratives of rude awakening from simple pastoral to complex» (647). German novels such as *Pfisters Mühle* belong to this archive; Raabe’s novel prominently features the literary and formal negotiations that accompany the emergence of a modern form of toxic discourse.

Contemporary toxic discourse is shaped by a number of key discursive motifs beginning with its innate literariness – after all the title for Rachel Carson’s book *Silent Spring* was inspired by a poem by John Keats, «La Belle Dame sans Merci,» which contains the lines «The sedge is wither’d from the lake/And no birds sing.» In her opening chapter, «A Fable for Tomorrow,» Carson asks her readers to imagine a «town in the heart of America» that awakens to a birdless, budless spring, thus giving her essayistic prose a decidedly literary dimension:

> There was once a town in the heart of American where all life seemed to live in harmony with its surroundings. The town lay in the midst of a checkerboard of prosperous farms, with fields of grain and hillsides of orchards where, in spring, white clouds of bloom drifted about the green fields. In autumn, oak and marble and birch set up a blaze of color that flamed and flickered across a backdrop of pines. Then foxes barked in the hills and deer silently crossed the fields, half hidden in the mists of the fall mornings. (1)

Literature is the place where imagined realms are formed and, as literature, toxic discourse engages the conventions of genre and literary traditions. One such tradition is what Buell characterizes as the mythography of a betrayed Eden, a framework through which narratives of rude awakening from the simple pastoral are told and retold (647). Speakers of toxic discourse voice their shock about polluted surroundings and they refuse to accept the all-pervasiveness of conditions of toxicity in modern life. Buell here evokes Carson again who starts out her chapter on «The Elixirs of Death» by claiming that «for the first time in the history of the world, every human being is now subjected to contact with dangerous chemicals, from the moment of conception.
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In contemporary conditions, there is no space outside of toxicity, no refuge that one could flee to and get away from this condition: «In the less than two decades of their use, the synthetic pesticides have been so thoroughly distributed throughout the animate and inanimate world that they occur virtually everywhere» (16). Just like the conditions of modernity that penetrate every fiber of today’s world, toxicity is a property that pervades the historical logic of modern civilization. All spaces of nature and culture are defined by the condition of toxic interpenetration. The speakers of toxic discourse convey their outrage over this condition by resorting to the moral passion of the battle between David and Goliath, with the courts as one of the preferred locations for this battle, more often than not enlisting the language of Gothic literature paired with the assistance of scientific authorities (Buell 651–55). Addressing this legacy of toxic discourse head on brings us to the core issue that Ebert Pfister faces when writing down these scenes from memory, i.e. the realization that

the modern nature that toxic discourse recognizes as the physical environment humans actually inhabit is not a holistic spiritual or biotic economy but a network or networks within which, on the one hand, humans are biotically imbricated (like it or not) and, on the other hand, nature figures as modified (like it or not) by techne (Buell 657).

The main speakers in Pfisters Mühle (as re-envisioned in Ebert’s scenic prose) embody aspects of toxic discourse as they try to come to terms with the inextricable imbrication of the simple pastoral with the metropolis, each in their own way and with their own imaginings (or lack thereof) of the meaning of their lives in the context of an environment that is modified. I analyze how each character negotiates the confines of this all-pervasive condition of toxicity and which discursive strategies they employ in this negotiation. Mapping these strategies over the course of the novel highlights the range of interrelations between humans and nature and is a first step in understanding toxic discourse «as a possible prototype of environmental imagining» (Buell 657), as a hybrid genre that performs the inextricable imbrication of outback with metropolis that it reflects on thematically as poetic practice.

The open-ended and unstructured nature of the text is alluded to in the novel’s subtitle: «Ein Sommerferienheft,» referring to a collection of loose sheets that the author, Ebert Pfister, fills with writing during the summer month that he and his wife spend at Pfister’s mill, sheets that the wind blows away and rearranges, leaving some of them grimy with dirt – ironically the only lasting material remnant from Ebert’s ancestral home. Ebert refuses to rework his collection of loose sheets into a polished narrative that is organized according to the realist genre conventions operative at the time. What we get instead are
glimpses into a future mode of configuration. Back in Berlin after his visit to Pfister’s mill and sitting in his home office grading student papers he insists: «Ich werde auch jetzt nur Bilder, die einst Leben, Licht, Form und Farbe hatten, mir im Nachträumen solange als möglich festhalten!» (164). These sheets contain fleeting after-images, «Nachbilder,» that are formed in Ebert’s visions according to the logic of memory. No coherent narrative form emerges from these vignettes even though Ebert starts out with an ambitious goal in setting up his project, i.e., his goal is to reconstruct a world that no longer exists, a «Vorwelt» full of miracles, a «Wundergeschichte» but not one that plays in the Orient: «Wir verlegen keine Wundergeschichte mehr in den Orient» (7). Toxic discourse is a decidedly contemporary and local discourse with global implications that disrupt the conventional genres based on the idea of closure such as the fairy tale, the pastoral, or the idyll. Toxic discourse insists on the interdependencies of the rural and the metropolis. Even Ebert’s early memories of Pfister’s mill include «qualmende Fabrikschornsteine,» «Dunstwolken,» and «Türme der Stadt» (11), indeed the road to the nearby town as well as the tavern itself function as locations where the pastoral and modern urbanity interconnect, making the spatial configurations of this text an ideal example for the imbrications of pastoral settings Buell addresses in his essay on toxic rhetoric (647–49). Barbara Thums has shown how Ebert’s construct of the idyll is tied to his nostalgic longing for original unity and purity as a response to – and a reflection of – modern experiences of alienation and how the novel connects these longings to nineteenth-century knowledge preoccupied with economy, hygiene, Darwinism, and genealogy: «Dieses Wissen von Ökonomie, Darwinismus, Genealogie und Hygiene ist grundlegend für die ökopoetische Diagnose vom Sündenfall der Moderne» (15). Thums reminds us that the poetics of purity («Reinheit») tied to the poet’s recitations make way for a project of purification («Reinigung») in which everyone who is left at the end of the story is invested. The language of the novel highlights these connections between «Reinheit» and «Reinigung» that the scientific perspective obscures because it is so heavily invested in progress and economic success and fails to see irony in the name for the chemical process of dry cleaning («Reinigung») and its reliance on toxins. Thums argues that in its refusal to integrate the ugly face of modernity aesthetically, realist fiction makes an important poetic intervention in the project of modernization on an ethical level by pointing to that which gets lost and abandoned on the path to progress:

So gehört fortan zum kulturellen Abfall erstens die Vorstellung einer paradiesisch-reinen Natur im Zeichen der Idylle, zweitens die Ästhetik des schönen Reinen aus dem 18. Jahrhundert und drittens ein poetischer Realismus, der nicht bereit ist, die Hässlichkeiten der Moderne ästhetisch zu integrieren. Im Erzählen von Reini-
gungsprozessen und somit vom Sündenfall der Moderne generiert der Roman also ein in ethischer Hinsicht relevantes Wissen um die Modernisierungsverluste sowie um die Ausschließungspraktiken einer darwinistischen Ökonomisierung der Ästhetik. (18)

Toxic discourse emerges from what is discarded in the modernization process, like the notion of pure nature or idyllic spaces, and shoved to the side by Darwinian economics as the ultimate configuration of modernity.

There is an important environmental angle to the quintessential scene of modernism as Walter Benjamin envisioned it with his figure of the angel of history at the center, the Angelus Novus, who sees piles of garbage where we see history. Where we perceive a chain of events, the angel of history sees a single catastrophe that keeps piling wreckage upon wreckage and hurls it in front of his feet. The angel would like to make whole what has been smashed, but a storm is blowing from Paradise and blows against his wings with such force that the angel can no longer close them. This storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward:

As Catriona Sandilands notes: «In capitalism, then, history is garbage. And nature is garbage. But garbage is also garbage, and, for Benjamin, it is in the careful examination of the detritus of «progress» that the historical materialist might find the past beyond its apparent assumption of the present» (31). The angel of history performs some of the elements of toxic discourse: «By violently wrenching salvaged objects out of their comfortable places in the mythic history of commodity, by gleaning them from their place in the trash can of bourgeois utility,» the angel seeks to juxtapose these pieces of garbage, destroy their assumed habitual place, and arrest the object beyond the historical logic of commodity fetishism (Sandilands 31). An environmental reading of this key scene of modernism ties the poetic configuration of the image to the phenomena it theorizes. That is what the concept of toxic discourse does as well. Toxic discourse is organized in such a way that it represents its content and finds a poetic configuration for it that reflects the principles that
make up this content. Toxic discourse insists on the fact that in modernity the natural world has become part of the phantasmagoria of bourgeois commodity fetishism. In her reading of Benjamin, Sandilands reminds us that «this incorporation of the natural world into the bourgeois narrative of progress via green technologies and nature documentaries serves only to continue the barbarism of the present» (37). Toxic discourse pursues an environmental agenda in its insistence on the all-pervasiveness of toxicity in modern civilization. Proclaiming the continued possibility of a nature outside commodity relations would be tantamount to continuing to hide this condition.

Raabe’s characters struggle with the all-pervasiveness of toxicity, each in their unique ways. Ebert does so by daring to evoke a remembered idyllic «Vorwelt» that turns out to be contaminated even in his earliest memories. Even if we grant the fact that there may have been a different, more benign attribution of cultural values to smoke in the nineteenth century as the historical research on the public perception of smoke in Victorian Manchester seems to suggest – factory chimneys and, for that matter, even domestic chimneys belching out black smoke symbolized wealth and well-being rather than pollution and ill health, at least for the working class (Mosley 163) – Raabe still includes smokestacks in Ebert’s early childhood memories and later reintroduces them in the narrative of the sugar faculty. With these mimetic references to scenes of environmental pollution, he lays the ground for toxic discourse to emerge. Toxic discourse enters the novel through olfactory perception, through the nose, so to speak, that father Pfister orders his son to stick into the books. He legitimizes his decision not to train his son as a miller and instead prepares him for a career in teaching by claiming: «Ist’s nicht, als ob ich’s vorausgerochen hätte, lieber Junge, als ich dich von der Gänseweide holte und mit der Nase ins Buch steckte?» (20). On sheet number four entitled «Wie es anfing übel zu riechen,» father Pfister comes storming into Ebert’s room who has just put his nose into the classics to study for his high school finals, cursing the bad air inside the house in which Ebert lives, and at the same time urging Ebert to keep the windows shut since nothing better could possibly come in than would leave the room: «das Fenster laß nur zu; es kommt nichts Besseres herein, als hinausgeht» (47). Father Pfister finally bursts into allegations and accusations about his situation at home: «Ich halte es nicht länger aus, mich, ohne mich dagegen zu rühren, zu Tode stänkern und stinken zu lassen [...] und wenn es eine Wissenschaft und Gerechtigkeit gibt, so soll sie jetzt für uns zwei – Pfisters Mühle und mich – eintreten, oder wir schließen beide das Geschäft» (47). Smell is the only sense that cannot be avoided at will because of our need to breathe. It took the assault of his and his customer’s noses and the very real consequence of economic decline for a classic rendition of toxic
discourse to emerge in realist fiction. In this instance, the foul stench is no longer symbolically tied to economic prosperity as in the public perception of the working smokestacks in Victorian Manchester, neither is it tied to waste and inefficiency in a frugal middle-class mindset; it rather becomes a deadly assault on the father’s body and his business. Toxic discourse aligns itself with science. It defers to the culture of expertise («Wissenschaft») and speaks the language of ethics («Gerechtigkeit»): «wenn der Mensch sich gar nicht mehr zu helfen weiß, dann geht er zum Doktor» (50) – a point also made by Stacy Alaimo in her chapter on «Deviant Agents.» Dr. Asche, Ebert’s first Latin tutor and now freshly minted Ph. D. in chemistry, is asked to analyze the water and find out, «was das Wasser verschimpft und schändiert» (50). Equipped with this knowledge father Pfister plans to enlist the services of a lawyer in order to take whomever and whatever causes this stench to court. In an unusually violent tone, father Pfister envisions: «den infamen Halunken, der uns dieses antut und mir mein Väter Erbe und ewig Anwesen und Leben so verleidet, den bringe ich mit Freuden an den Galgen» (50). It is the threat to a way of life that provides the context for toxic discourse to emerge.

Ebert assists his father’s plans by locating Dr. Asche and later finding the right lawyer to represent him in court. When he and Asche return to Pfister’s mill for the holidays to check out the source of the stench, he struggles to convert the violent allegations of his father’s openly accusing toxic discourse into a more contained language that can abide by the conventions of realist fiction. Faced with writing down his memories of his first encounter with the polluted stream, Ebert resorts to descriptive adjectives, synesthesia, metaphors, aesthetic judgments, and anthropomorphism. This is what toxic discourse sounds like when reconfigured in terms of realist fiction:


Something («Etwas») broke into the tradition of describing nature scenes, but the narrator is still trying to contain this something with the genre conventions operating at the time. The fibers are qualified as slimy but, like the ripe fruit in nature poetry, they are hanging from bushes. Slime is covering up a pastoral that never was a pure idyll in the first place. Ebert resorts to mytho-
poetic speech that upholds the phantasmagoria of pure idyllic spaces and covers up the signs of all-pervasive toxicity. Father Pfister’s overtly accusatory toxic discourse meets Ebert Pfister’s realistic configuration of the scene of pollution into a poetic nature scene covering up the very principles that explode this scene in the end.

Rather than enlisting ethics (as father Pfister does) or poetics (as Ebert does) to describe the polluted scene, Asche resorts to the tools of contemporary scientific jargon in his diagnosis of what is happening with the water supply of Pfister’s mill. A simple visual inspection produces a seemingly neutral statement of facts: «Augenblicklich erkenne ich in der Tat eine beträchtliche Ablagerung niederer, pflanzlicher Gebilde, worüber das Weitere im Verlaufe der Festtage das Vergrößerungsglas ergeben wird» (89). Scientific discourse poses as allegedly neutral description of «facts,» covering up the conditions of its production and failing to reflect on its limitations. Asche’s diagnosis of what is going on with the polluted stream identifies the biological agents that cause this condition, evokes their Latin classifications, and then translates the chemical processes into the language of local family relations:

Wie ich es mir gedacht habe, was das interessante Geschlecht der Algen anbetrifft, meistens kieselschalige Diatomeen. Gattungen Melosira, Encyonema, Ravicula und Plaurosigma. Hier auch eine Zygemuacee. Nicht wahr, Meister, die Namen allein genügen schon, um ein Mühlrad anzuhalten! [...] Haben die Familien Schulze, Meier und so weiter den Verkehr in Pfisters Mühle eingestellt, so haben sie dafür die Familien der Schizomyceten und Saprolignaceen in fröhlicher Menge, sämtlich mit der löblichen Fähigkeit, statt Kaffee in Pfisters Mühle zu kochen, aus den in Pfisters Mühlwasser vorkommenden schwefelsauren Salzen in kürzester Zeit den angenehmsten Schwefelwasserstoff zu brauen. (90)

The foul stench that penetrates the area around Pfister’s mill is diagnosed as the product of an interaction (brewing) of bacterial agents with the alkaline condition of the water resulting in sulfurous fumes. The scientific discourse is searching (unsuccessfully) for an adequate tropical configuration for the processes it is describing. It resorts to metaphoric speech with rich associations to the conventions of realist fiction, thus representing a meta-poetic moment where the text reflects on the poetic practice it performs.

From the polluted scene we move to the scene of the crime, the sugar factory Krikerode, where Ebert Pfister, the poet Lippoldes, and Adam Asche go in order to investigate the source of the problem. Ebert, in his realist poetic speech, enlists descriptive attributes, anthropomorphic similes, even language that recalls scenes of sublime nature, yet in the end is only able to resort to the language of purity:
Raabe is reintroducing the working smokestacks from Ebert’s earliest memories, now symbolically linking them to modernization with irony and disapproval. The fact that the smokestacks are running even on the day after Christmas disrupts Ebert’s idyllic memories almost as much as the sight of the steaming creek itself or the polluted meadow. Ebert enlists ethics, a move which leads Asche to counter with a scientific description that avoids all literary and cultural allusions:

Das, was ihr in Pfisters Mühle dann, laienhaft erbost, eine Sünde und Schande, eine Satansbrühe, eine ganz infame Suppe aus des Teufels oder seiner Großmutter Küche bezeichnet, nenne ich ruhig und wissenschaftlich das Produkt der reproduzierenden Wirkung der organischen Stoffe auf das gegebene Quantum schwefelsauren Salzes. (100)

The polluted scene is the product of a chemical reaction that needs to be understood properly in terms of its working principles in order to be managed properly, a process that requires a different form of language and poetics.

It might be productive to look at the chemical principles defining the scene of pollution in terms of poetic practice. When chemicals are introduced into the environment, unexpected reactions occur, which is what happened in the case of the biological agents that were dumped into the creek feeding Pfister’s mill. The history of specific chemicals has had a profound impact on the way in which ecological and health effects are perceived. A recent conference on «Hazardous Agents: Agents of Risk and Change (1800–2000)» at the Deutsches Museum in Munich was a first attempt at uncovering the history of chemical agents through biographical approaches tracing the entire life history of certain hazardous substances from production to use, problems, risk assessment, management strategies, and disposal (Erker/Vaupel). While this initiative was a first attempt at a systematic historical approach to understanding hazardous chemicals, the question of how literary and cultural documents relate to these principles has yet to be asked. In Pfister’s Mill we encounter different attempts at narrating a scene of chemical pollution: the poetic realist approach (Ebert), the scientific approach (Asche), and toxic discourse (father Pfister).5 Raabe links these different approaches through metonymic devices such as the smokestacks into a chain of objects and events that prefigure modernist techniques. If we look at which objects and events the text brings up
but then excludes from the master plot, we see the garbage that is piling up before the angel of history. Toxic discourse yanks these elements from their assumed habitat and reconfigures them into scenes of modernism.

Female speech constitutes one such example of discarded wreckage that is piling up before the angel of history. There are numerous female figures in the novel: Emmy, the young wife of the narrator, Albertine, the wife of Dr. Asche, and Christine who moves in with Dr. Pfister and Emmy to take care of their Berlin household. But Ebert's memory scenes hardly include them. Ebert's mother passed away when he was very young. We never learn about Asche's mother, the poet's wife and Albertine's mother, or Emmy's mother for that matter. Ebert's daydreaming does not generate recollections of females and contains practically no female speech. Toxic discourse seems to be spoken by men and among men. Christine certainly whines about having to leave the place where she spent her entire life. But Emmy is quite content to have seen it and, at the end of summer, is ready to move on.

Another motif that is dropped in the novel is the practice of dyeing. Dr. Asche's father—a figure who passed away before the action of the novel begins, about whom we hear good things from father Pfister and not so good things from his son—was a «Schönfärberei,» a practitioner of an age-old craft that was changing rapidly as new synthetic dyes were introduced in the nineteenth century. All the novel does with this figure is focus on the metaphorical aspect of the name of the profession, i.e., his ability to paint things in a positive light, a quality that everyone ascribes to Asche and his son. That is only half the story. In the history of dyeing fabric, there are a number of distinctly different traditions, including the «Schwarzfäßer,» the «Tuchfäßer,» the «Seidenfäßer,» and the «Rauchfäßer.» These variations depend on which dyes were used, which fabrics were treated, and how the dye was applied. «Schönfäßer» refers to a later version of dyeing that includes imported dyes that were applied to exquisite fabrics («Färben»; Andersen 185–86). If we follow the metonymic chain of associations from «Schönfäßer» to its history we get to a string of meanings that gesture to faraway places such as Bagdad or Babylon in the mythical Orient where Ebert did not want to locate his «Wundergeschichte.» On the plot level, the novel bans any reference to a place outside of its triangulated geography consisting of Pfister's mill, the nearby small town, and Berlin. We never learn where Adam Asche goes on his long absences from Berlin. But if we string Ebert's mythical Orient as the location for stories about miracles, father Asche's foreign dyes and fabrics, and Adam Asche's travels to faraway places into one metonymic row, we uncover a very different level of the text in which the entanglement of modern European life and its dependency on trade and commerce based on the exploitation of re-
sources extracted from the non-European world is highlighted. Ebert paints an idyllic picture of a «Vorwelt» which systematically bans all references to that economic and political interdependence, an idyllic space cleansed of all references to global imbrications, a poetic location in a world of phantasmagoria where all knowledge of its production is suppressed. With his secrecy about his travels into foreign territory and his return to Pfister’s mill as the ideal location for his new factory, Asche plays into this fantasy even though he is keenly aware of the global nature of his project that stands in contrast to the image of the idyllic green German Empire as he calls Ebert’s phantasmagoria in the passage quoted below. When he tells Ebert that he suspects the sugar factory to be the source of the problem he is quite open about his collusion with that other world in which science and industry cooperate in knowledge transfer and in seeking out profitable applications for scientific research. Mimicking Ebert’s poetic language, Asche affirms:

Ein Mensch wie ich, der die beste Absicht hat, selber einen sprudelnden Quell, einen Kristallbach, einen majestätischen Fluß, kurz, irgendeinen Wasserlauf im idyllischen grünen deutschen Reich sobald als möglich und so infam als möglich zu verunreinigen, kann nicht mehr sagen, als dass er sein Herzblut hingeben würde, um dem guten alten Manne dort seinen Mühlbach rein zu halten. (67)

In the end, Pfister’s mill is worth a certain price and Ebert invests his new capital in Asche’s dry cleaning business, an important detail that is mentioned only once in conversation with the architect who is building the new factory (125).

Rather than reading the novel for mimetic references, metaphorical content, and symbolic meaning, I highlight the principles of proliferation that bacteria promote and discuss them in terms of poetic practice. Asche’s diagnosis of what is causing the foul stench focuses on identifying Beggiatoa alba as the main culprit. Beggiatoa alba is a bacterium that belongs to the order Thiotrichales and is named after an Italian botanist (Ljungdahl et al. 128–38). Its main property is the capacity to utilize inorganic compounds as a source of energy for its own metabolism. The organism lives in sulfur-rich environments where it oxidizes hydrogen sulfide as an energy source forming intracellular sulfur droplets. The bacteria in this group are usually found in marine or freshwater environments such as sulfur springs, sewage-contaminated water, and the mud layers of lakes or swamps. They grow by oxidizing organic compounds to carbon dioxide where oxygen is present and chaining together cells with thread-like structures with filaments. These filaments can hook onto each other and form entire carpets, white carpets, for example, that cover the ocean floors. Other filaments can form dense mats on sediments, like a
whitish layer in environments that have been subject to pollution («Beggia-toa»). The cells are disk-shaped and can move in a gliding action. Some bacteria in this group can form rosettas, others move thanks to feet-like filaments, some can even slide back and forth without any of these features.

The important point, from an ecological perspective, is that these bacteria produce energy through oxidation with inorganic compounds and that they settle in aquatic habitats rich in sulfur or thiosulfate such as ponds, wastewater, sulfur springs, or even at the bottom of the ocean. Since these filaments flourish in marine environments that have been subject to pollution and they prefer areas rich in water that has been contaminated with sewage, they are considered an indicator species: «Die schwefeloxidierenden Thiotrichales besiedeln aquatische Habitate die reich an Schwefelwasserstoff oder Thiosulfat sind, wie Schlammschichten in Seen und Teichen, Abwasser, Schwefelquellen oder auch Meeresböden» («Thiotrichales»). In other words, the pollution that Ebert and Asche observe on their reconnaissance mission upstream is caused by a reaction of these bacteria with the sulfurous wastewater run-off from the sugar factory.

From a literary perspective, these chemical processes have an agentic nature and they represent a mode of proliferation that performs according to the core economic principles of capitalism, the principle of accumulation and the principle of exchange. These bacteria grow using local hosts, they displace other organic substances, they generate energy, invade and take over entire habitats; in other words, they effectively colonize other environments given the right environmental conditions. They feed off other organisms like parasites, they connect to each other with hooks, they form mats, and they move from site to site just like the proliferation principles that inform the flow of money in capitalist economies. The Orient that Ebert wants to displace at the beginning of the novel by locating his «Wundergeschichte» in a local pastoral realm comes back to haunt that very space via bacterial colonization, reminding him that there is no outside to modernization, industrialization, and toxicity. Pollution as poetic practice invades and colonizes the language of realist fiction that, in the end, implodes in the encounter with environmental degradation. The literary representation of pollution in realist fiction shares with the narration of other modern scenes of environmental degradation such as scenes of waste, mess, and clutter, but also dirt (Sullivan «Dirt Theory» and «Dirty Nature») the association with and acknowledgement of contingency, a core principle of capitalism. However, as opposed to waste, which David Trotter defines as «the measure of an organism’s ability to renew itself by excluding whatever it does not require for its own immediate purposes» (20), mess and clutter are events that highlight formlessness and the contingent self
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at the center of modernity (31). Dirt, on the other hand, is a bodily engagement with the sheer physicality of our environmental engagement as process, rather than fixed location, which remaps (aesthetic or polluted) places into a more fluid, post-human sensibility of dirty integration (Sullivan, «Dirty Nature»). The bacteria that grow at the scene of chemical pollution in Raabe perform the principle of all-pervasive toxic proliferation as a modernist project.

The lawyer asks Ebert why he didn’t become one of the co-founders of Krikerode (117). The question is left unanswered in the novel. At this point, Ebert still thinks in terms of assisting his father through the trial phase, but shortly thereafter one of the main turning points in the novel occurs: Ebert visits Asche’s newly founded company in Berlin, Schmurky & Co., that promises «Fleckenreinigung,» a purification project par excellence and a project that embodies the ambiguities of the new era in terms of promising absolute cleanliness – with the help of toxins – and by doing so produces chemical waste polluting the nearby water. Thums situates the purification theme in Raabe’s novel in the context of nineteenth-century discourses of hygiene and characterizes Asche as the new Adam, «der das Unheil einer darwinistischen Reinigungspraktik der Selektion verkörpert» (15). At the moment when Ebert encounters this new Adam at work in the new dry-cleaning company, his poetic language falls apart at the seams and transforms itself into the language of modernism, replacing the poetic practice of mimesis, metaphor, and symbolic meanings with abstraction, metonymy, and parataxis in a Kafkaesque scene in which Ebert is passed from one gatekeeper to the next through the factory, passing all the machinery with its horrendous noise and unbearable stench until he finally gets to the core of the plant where he finds Asche working on refining his project in the middle of all this noise and foul odor:


Ebert still relies on descriptive adjectives and irony to narrate this scene. But when he eventually finds his friend, the language of realist fiction breaks
down in face of this overwhelmingly disorienting encounter at the «Urszene» of toxicity. Ebert’s old-world defense mechanisms are simply inadequate to deal with this new reality just like his father’s way of life has to make room for the forces of modernization. While the victims of modernization perish, something new is born in the encounter with toxicity: toxic discourse emerges as a core feature of modernist poetics.

Where do all the paintings remain, Ebert asks his wife on the occasion of a visit to a Berlin art gallery? This question becomes one of the leitmotifs in this text. The German term «Bilder» also refers to the more general sense of the word for «images.» Where do all the images remain after we have moved on with our lives and stored them somewhere inside ourselves? This is Ebert’s summer project: recreating the scenes from his childhood and youth at his father’s mill, writing them down on individual sheets, scene by scene, reading them to his wife, reenacting them in the form of lively dialogues, and, upon return to Berlin, shoving them into the drawer without ordering them neatly in a binder, refusing to provide a coherent narrative. These scenes draft different responses to environmental degradation, different in terms of attitude, but also in terms of narrative figuration. The language of poetic realism operates within a pastoral mindset, the language of science exhibits its elective affinity with technology transfer, and glimpses of modernist discourse emerge in the face of the most unsettling experiences with scenes of environmental degradation. Is this an early articulation of Ulrich Beck’s thesis about the function of risk and risk assessment in a modernization process that has become self-reflexive (85ff.)? This is hardly the case since modernization and industrialization are still in the growing phase at the end of the nineteenth century and we have not even seen the destructive powers of full-swing environmental degradation that we are accustomed to seeing today. Narrating and depicting pollution in late nineteenth-century fiction is still a matter of a negotiation between these different scripts and styles. We have the proponents of the way of the past, those who articulate their outrage about environmental degradation on moral grounds, those who use the system to fight it, and those who willfully participate in and benefit from new production processes, even if they prove environmentally hazardous. In some cases these are the same people. The novel performs what Karen Thornber has identified as fundamental ecoambiguity that characterizes our modern attitude toward environmental degradation, an attitude she defines as «the complex, contradictory interaction between people and environments with a significantly nonhuman presence» (1). All characters are accomplices in the destructive patterns of modernization: Ebert Pfister invests in the new dry cleaning business, father Pfister hangs a sugar ornament on his Christmas tree, Adam Asche conducts
the chemical analysis of the polluting substance for the courts while at the same time his expert opinion strengthens his credentials as innovative chemical engineer, the lawyer takes on the case in order to promote himself and appear in the news, father Pfister depends on pharmaceuticals at the end of his life, and so on and so forth. Everyone is imbricated and involved in promoting the forces of (global) modernization within a context of all-pervasive toxicity. It is to Raabe’s credit that he shows us a world where there is no inside and outside of society, where humans and nature are shown as interdependent. Only a reading strategy that addresses this interdependence does justice to the aesthetic and formal problems presented in this novel. Raabe grapples with, and shapes, a literary response to the scene of environmental degradation that is thematized in this story. The elements of toxic discourse emerge as centerpiece of a new language that speaks to a modernist poetics.

To conclude, it is interesting to compare this novel to Raabe’s 1885 novel Unruhige Gäste in which Raabe dealt with a different, but related phenomenon of modern society, i.e., strategies of «othering» in medical discourses. Natalie Binczek provides a fascinating account of Raabe’s intervention in the formation of a discursive constellation around strategies of creating a bacteriological typology for infectious diseases. She shows how Raabe shifts the focus of the discussion by locating the infected individual inside a close-knit remote rural village in order to counter traditional strategies of exclusion that identify the source of the problem as coming from the outside, thus effectively exploding the linear chain of cause and effect and introducing an inherently modern principle (61). The bacteria that cause infections are infinitely reproducible provided they find a host, which makes their principle of proliferation even more aggressive than chemical reactions that still depend on the quantum and the mixture of elements. In Unruhige Gäste, Anna Fuchs, the wife of the village’s outcast, falls ill and dies of typhus. Phöbe Hahnemeyer, the pastor’s sister, who attends to her without fear, does not get infected, but Baron Veit von Bielow, the person who accompanies Phöbe Hahnemeyer to the scene in order to persuade Volkmar Fuchs to give his wife’s body a proper burial in the town’s cemetery, falls ill. The village doctor warns the pastor: «Das Ding hat seine Haken, Sporen, wie man das jetzt so nennt, und einer davon genügt hier und da, solchen Liebhaber tragischer Touristenerlebnisse scharf bergab zu ziehen, auch aus der besten, liebenswürdigsten und respektabelsten Gesellschaft heraus!» (Unruhige Gäste 531). There is no connection between infection and social class, although access to better care can make a difference in the rate of recovery. Veit survives in the nearby town’s make-shift hospital thanks to the committed care of Phöbe and an older nurse. In narrating the moral and the medical aspects of this story, the text questions
the perceived connection between lifestyle and the likelihood of infection (Binczek 65). This important point helps us rethink the connection between discursive figuration, narrative strategy, and chemical pollution in Pfister Mühle. By textually performing a radical disconnect between the content of the story – an incident of chemical pollution – and the realist conventions of narrating and depicting nature scenes in the face of environmental degradation, Raabe highlights the problems of a modernization that has not yet arrived at a point of reflexivity where the world as we know it has come to an end and new solutions to environmental problems need to be envisioned. The solutions to Raabe’s «Wundergeschichte» may still be found in Bagdad or Babylon. We, however, have to seek the solutions to our problems at home, in the midst of the rubble of progress.

Notes

1 Sammons is responding to generations of critics who have interpreted Raabe’s work within the framework of capitalist critique. See, for example, Helmers 51.
2 For an analysis of Raabe’s narrative technique see Oppermann 15ff.; Pascal 340ff.; Bul-livant 265ff.; for the relationship between environmental theme and narrative technique see Denkler 293ff. and Sammons, «The Mill on the Sewer» 18ff.
3 See Jameson 352: «Pollution, although it’s horrifying and dangerous, is maybe simply a spin-off of this new relationship to nature, the industrialization of agriculture and the transformation of peasants or farmers into agricultural workers.» Buell explains that «for Jameson the reductive «simply» reflects the belief that ecological politics are nevertheless still bourgeois politics» (641, FN 3).
4 See also Wanning 200.
5 For more background on the role individual stories play in understanding our lives as part of community, see Allen 187 and Alaimo 128f.

Works Cited

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