

Article

The Past Erased, the Future Stolen: Lignite Extractivism as Germany's Trope for the Anthropocene

Helga G. Braunbeck

Department of Foreign Languages and Literatures, Campus Box 8106, North Carolina State University, Raleigh, NC 27695-8106, USA; helga_braunbeck@ncsu.edu

Abstract: Coal, and even more so, brown coal or lignite, is currently under-researched in the energy humanities. Lignite still provides approximately 25% of “green” Germany’s energy; its extraction obliterates human settlements and vibrant ecosystems, and its incineration produces more CO₂ than any other fossil fuel, contributing massively to climate change. After discussing German mining history, the genres of the energy narrative, the bioregional novel, and ecopoetry, and earlier literary treatments of lignite mining, I analyze recent lignite novels by Anja Wedershoven, Andreas Apelt, Bernhard Sinkel, and Ingrid Bachér, and ecopoems by Max Czollek and Marion Poschmann. I discuss socioenvironmental issues such as “slow violence” and “environmental injustice” enacted upon rural communities that are being resettled in “sacrifice zones” for national energy needs; political-economic entanglements, and activism against this complete devastation of the naturalcultural landscape; differences in representation in narrative and lyrical texts; and how the authors frame local perceptions of the mining operations and the resulting “moonscape” within the larger temporal and spatial scales of the Anthropocene. I argue that these literary texts prefigure where the Earth may be headed in the Anthropocene, and that Germany’s lignite extractivism can be considered a trope for the Anthropocene.

Keywords: lignite mining; extractivism; energy narrative; bioregional novel; ecopoetry; Anthropocene; temporality; sacrifice zone; environmental justice; slow violence



Citation: Braunbeck, Helga G. 2021. The Past Erased, the Future Stolen: Lignite Extractivism as Germany’s Trope for the Anthropocene. *Humanities* 10: 10. <https://doi.org/10.3390/h10010010>

Received: 15 November 2020
Accepted: 18 December 2020
Published: 30 December 2020

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1. Introduction

Activism to protest the devastation of the ancient Hambach Forest blocking an expansion of the opencast lignite mining operation in Germany’s Rhineland in Fall 2018 provided enough spectacle for broad, even international, media coverage. While visual media can present shocking images and detailed data on Germany’s industrial lignite extraction and its disastrous impacts on local ecosystems and the humans whose hometowns, fields, and farms are obliterated, the narrative medium of literature can more fully represent the dire consequences of this violent practice, which devours not just subterranean and surface space but historically grown “places” and their temporalities—past, present, and future. Open-pit lignite excavation destroys it all: the sediment layers bearing testimony to the development of Earth history and of the human history preserved in archeological artifacts underground; the naturalcultural landscape that has emerged from human settlements and agricultural practices that is typical for most of Central Europe (Lekan and Zeller 2005, p. 3); and the living environment and future of ecosystems, or what earth scientists call “the Critical Zone.” As a potentially new geological epoch following the Holocene, the Anthropocene was conceived by climate and earth scientists in the year 2000 (Crutzen and Stoermer 2000) as an epoch in which the impact of human activities has reached a scale that makes it a force affecting all of the Earth’s systems. While its exact starting date remains to be scientifically determined by the International Commission on Stratigraphy (ICS), based on recommendations of its Anthropocene Working Group (AWG) (Horn and Bergthaller 2020, p. 23), the concept of the Anthropocene, with its planetary spatial scale

and attention to the “deep time” of Earth history, has also gained currency in the humanities and social sciences (Horn and Berghaller 2020, p. 4; Münster 2020, pp. 1, 4), which increasingly investigate the cultural, socioenvironmental, and political tensions between smaller-scale local or regional and large-scale global transformations caused by humans. Within the environmental humanities, literature in particular has the capacity to convey the complexities of issues, such as environmental injustice in order to create empathy for the living beings affected by these drastic changes, and to consider questions of agency and responsibility.

Lignite mining has an impact locally and regionally that is comparable to the effects that the Anthropocene has or will have in future on a planetary scale: its extraction and incineration devastates the biosphere with all its plants, killing or displacing all the animals and humans living there, and leaving behind a biologically dead “moonscape” that may take centuries or millennia to recover. While the large scales of the Anthropocene and its sometimes abstract theories (cf. Münster 2020, p. 7) may present challenges for humans attempting to understand and fully imagine its effects, the more human-scale local, material, and visible devastation of industrial lignite extraction can be seen, heard, felt, and experienced bodily as well as emotionally. Sensuous literary narratives about people, plants, and animals sacrificed in this anthropogenic obliteration of their habitats are perhaps better able to convey the socioenvironmental impacts in terms of time spans that are comprehensible to humans. From a global perspective, Germany’s worst contribution to the impacts of the Anthropocene is the continuing practice of lignite mining, which it has been reluctant to give up. It is perceived as a “cheap” form of energy that also grants the nation a measure of energy security—although at the price of undermining the country’s ambitious goals for mitigating climate change, i.e., reducing fossil fuel consumption by 80% by 2050 (Renn and Marshall 2016, p. 225), since lignite incineration for energy production is ineffective because of its low energy content. Moreover, its combustion emits enormous amounts of the greenhouse gas CO₂, making it one of the most damaging fuels (Uekötter 2015, p. 181)—it “currently accounts for forty-five per cent of global CO₂ emissions” (Müller and Morton 2018, p. 134). Germany’s lignite extractivism also contradicts the green image this nation has acquired over recent decades; in fact, “Germany has gone from being a pioneer to a laggard when it comes to climate protection” (Kemfert 2018, p. 1) and, as “the largest European economy, is the main polluter within Europe” (Kittel et al. 2020, p. 13); Weber and Cabras agree with E. Lander that Germany’s Green Economy is a “Wolf in Sheep’s Clothing” (Weber and Cabras 2017, p. 1227). After mining, the left-behind wounded land, with its gaping holes so big that they can be seen from space, prefigures the future of much of the Earth’s surface as it is being rendered uninhabitable and devoid of life by destructive human activity. The ongoing expansion of lignite extractive practices threatening to swallow up ever more ancient forests, fertile agricultural land, and village communities with their centuries-old heritage, is experienced in the time frames of human lives and at the individual’s micro-scale. Narrating these lived experiences of identifiable, affected humans with all the details of their daily living can convey the material, bodily, and emotional impacts of the many losses caused by this form of fuel extraction in ways that may be more easily comprehensible than the abstract scientific charts and graphs measuring the physical impacts of climate change or “the Anthropocene.” The longer narratives of novels can successfully capture issues of temporality that may be insufficiently conveyed by short-lived and visually focused media reports. And the figurative language of ecopoetry can spur the imagination into connecting local devastation with past or future transformations of the only planet humans likely will ever call home. While ecopoetry in general, and specifically poetry of the Anthropocene, has received scholarly attention, sometimes as a recent subgenre of nature poetry (see Kopisch 2012; Goodbody 2016), Germany’s recent lignite narratives have not yet been investigated in the contexts of the larger genre of the “energy narrative” within the Anthropocene, or as bioregional novels.

It is the goal of this article to explore how four contemporary “lignite novels” and two “lignite poems” represent central aspects and impacts of this practice, such as issues of environmental injustice; the entanglements of environmental, labor, and energy policies—especially in the context of the planetary climate crisis; the concept of national “sacrifice zones” (Lerner and Brown 2012); the use of what literary scholar Rob Nixon (2011) has deemed to be “slow violence”; and forms of activism against fuel excavation, or what Anna Willow (2016) specifically calls “ExtrACTIVISM.” All these issues surrounding this European nation’s destructive interactions with the Earth on small and large temporal and spatial scales might make the case for regarding Germany’s continued lignite extractivism as this country’s trope for the Anthropocene.

This article addresses the “urgent need for further critical work in the environmental humanities” that has been expressed by Sabine Wilke (2015, p. 209). And as a contribution to the “energy humanities,” it responds to Christopher F. Jones’s critical statement about this field, which, in his opinion, “currently pays too much attention to oil and too little attention to other energy topics,” a phenomenon he calls “petromyopia”; he especially criticizes the inattention to coal, which “facilitated the creation of a profoundly unequal world order [and] produces more carbon dioxide per unit of energy released than oil or natural gas, so burning coal has an outsized influence on global warming”—and he is not even talking about its dirtiest form, lignite (Jones 2016, pp. 1, 5).

2. Germany’s Mining History, Lignite Mining, Energy Policy, Environmental Movements, and the Planetary Climate Crisis

Mining in Germany started with the excavation of metals in the 15th century, which already at that time and scale caused environmental issues (Uekötter 2013, p. 543); it continued with the mining of “precious stones, metals, and ores” in the 18th and early 19th centuries (Groves 2020, p. 18), but much more severe impacts were caused by large-scale industrial excavation of hard (black, or mineral) coal and brown coal to be used as fuel, starting in the 19th century. While mining for metals and for hard coal was done as deep-shaft mining and left landscapes on the surface mostly intact—though still polluted and sometimes subsided—lignite mining is done as opencast mining, which, in addition to producing large amounts of toxic dust, fly ash, and slag, results in an urge for expansion and displays an enormous hunger for surfaces (Uekötter 2013, pp. 540, 550–52). Already in 1926, eleven years before changes in German law established the priority of mining rights over the rights of land owners, the first village in the Rhenish lignite area was relocated, with resettlements in the eastern lignite areas to follow. Mining’s privileged status in the German regulatory and judicial systems made it difficult for those affected by it—home owners, farmers, forest administrators, and other residents (Uekötter 2013, pp. 551, 562)—to be successful with their protests and activism.

The brown coal of Germany’s lignite areas was formed primarily 25 to 5 million years ago in the Miocene epoch of the Tertiary and consists of decayed plant material from the carbon period that was compressed under high temperatures, resulting first in peat, then brown coal—in short, through the geochemical process of coalification (Inkohlung). In essence, coal is millions of years of solar energy preserved in plant material (Kohleatlas 2015, p. 10), or, as German writer Marion Poschmann calls it, “black sun” and “forest concentrate” (Bayer and Seel 2016, p. 234). Environmental historian Rolf Peter Sieferle describes the “earth’s biosphere” as “a powerful solar energy system,” with coal as its “subterranean forest,” a source of stored energy that is, however, finite (Sieferle 2001, pp. 1, 184; for more on the vegetal origin of fossil fuels see (Sullivan 2019)). Compared with other fuels such as hard coal or natural gas, the energy content of lignite is low, averaging only around 35%, and its inefficient combustion makes it the most polluting fossil fuel “with the highest CO₂ emissions” (Reitzenstein et al. 2020, p. 151) and the most deleterious ecological consequences and effects on the climate. It still supplies approximately 25% of Germany’s energy (Müller and Morton 2018, p. 137).

Germany has three regions in which lignite has been mined for centuries for local fuel, already starting in the Roman Empire, and on an industrial scale in the 19th and 20th

centuries: the Rhineland is the biggest region; a small one, almost depleted, is in Central Germany around Leipzig; and a third one, developed mostly by the German Democratic Republic, is in Lusatia (Lausitz) near the Polish border. The process of opencast mining requires removal of large amounts of overburden above the coal deposits: all soil, plants, and buildings need to be removed, and in order to prevent flooding during the excavation process, the level of ground water in the surrounding area needs to be lowered, leading to impacts on hydrogeological systems and the dying-off of vegetation, especially trees. It pollutes the air with fine particulate matter, and water with sulphate and chloride, while mining wastewater contains iron, which affects aquatic life (Oei et al. 2020, p. 2). And “the relocation of villages destroys valuable ecosystems and cultural assets and changes rural environments permanently” (Oei et al. 2020, p. 2). All this converts the landscape into a sterile and monstrous moonscape that presents “a tremendous challenge for recultivation (reclamation)” or that is “not possible to rebuild” (Krümmelbein et al. 2012, pp. 53, 63; see also Sienkiewicz and Gasiorowski 2016). Along with all its other devastating environmental impacts, this makes lignite excavation the most destructive form of fuel extraction, perhaps along with the US-American practice of mountain top removal mining (see Scott 2018, pp. 170–75). Since the start of the 19th century, 370 villages have been wiped from the face of the earth, and about 120,000 people were resettled (*Zukunft statt Braunkohle* 2016).

As cultural geographers Susanne Kost and Martin Döring in their investigation of the social-spatial dimensions of the loss of “Heimat” (one’s native town and region) through lignite mining have observed, the most difficult aspect for those facing eviction is the time *before* resettlement, a publicly overlooked and politically trivialized time period in which the loss of the family home and ancestral lands, noise, the stress of the upcoming move and resulting family discord can lead to poor sleep, panic attacks, depression, or even suicide (Kost and Döring 2017, pp. 185, 201). While the eviction from their home and land will be economically compensated for (though often in controversial terms with regard to its value and the “replacement” offered in exchange), there is zero compensation for and not even any recognition of the loss of lived time connected with both the resettlement process and the temporal aspects of the places destined for devastation. “Orte sind nicht bloß Orte”—places/villages are not just places, as Kost and Döring (2017, p. 186) state, alluding to the double meaning of “Ort” as both a place or location and a common abbreviation for “Ortschaft” (village, town); in their natural and built design they are intensely social structures co-created through natural and cultural values, histories, and memories (Kost and Döring 2017, p. 186; also see Müller and Morton 2018, p. 139), and not just neutral “space.” In his discussion of “place” versus “space,” Timothy Morton comes to the conclusion that in our global, cosmopolitan society it is not “localized, particular ‘place’” which should be (and has been) pronounced dead (Morton 2016, p. 9), but it is “space,” which “has collapsed” and “turned out to be the “anthropocentric concept.” Meanwhile, “place” continues to exist “at all kinds of scale,” from “dinner table” to “bioregion” to “tectonic plate,” and it also “deeply involves time” (Morton 2016, pp. 10–11). The sense of place and place attachment that the German language captures with the difficult-to-translate term “Heimat” is a bond formed only over time—a long time, between humans and their ancestral lands (Kost and Döring 2017, p. 187). It is based on relationships with both human neighbors, and other-than-human beings, such as trees—often ancient trees planted by ancestors; metaphors of roots and growth and uprooting often come into play as people describe the expulsion from their land (Kost and Döring 2017, p. 191). Daily and seasonal rituals and village festivals, clubs and associations, and also the genealogy of families that have lived in a place for centuries (i.e., the indigenous or native population), their heritage—all are dismantled, cut off, and erased. The whole process of planning, clearing of settlements and forests, preparation of the land (“Vorfeldberäumung”), lignite extraction, and eventual “recultivation” or “reclamation”—a “socially and psychologically challenging [. . .] confrontation with coal mining” (Müller and Morton 2018, p. 139)—takes eighty to ninety years: more than a lifetime for most. Many of these years are stolen when people are unable to make plans for the future (Müller and Morton, p. 142) and have to

deal with this lengthy process, while the gigantic excavators (the biggest machines on the planet, *Kohleatlas* 2015, p. 14) slowly advance towards their land and villages in order to devour them and annihilate their future.

In addition to this local and regional annihilation reaching far into the future, climate science has by now firmly established the large contribution of greenhouse gases from fossil fuel incineration, especially CO₂, to a warming atmosphere and climate change. Since in terms of emissions, lignite is one of the dirtiest forms of energy, massively contributing to Germany's "Waldsterben" (dying of the forest) from acid rain in the 1970s and 1980s and to Germany's CO₂ emissions today, it seems counterproductive to mine this fuel at a time when Germany has set itself ambitious goals for mitigating climate change by joining the Paris Climate Agreement in 2016. However, a look at the country's comprehensive energy policy provides the answer: the environmental movement, which started in the 1970s, chose as its main target not the coal industry, with its deep roots in German history and labor history that had formed "local cultures and identities" of miners and residents of lignite areas (Reitzenstein et al. 2020, p. 151), but nuclear power, the new source of energy being promoted by the government and perceived as a much bigger threat because of the danger of accidents that could contaminate large areas with (invisible) radiation and also with its unsolved problem of safe storage for spent fuel rods. This seemed to outweigh the fact that "clean" nuclear energy does not emit greenhouse gases. The nuclear accident in Chernobyl in 1986, whose "radioactive cloud" affected much of Germany, and finally the disaster in Fukushima, Japan in 2011, led to the government's commitment to an exit from nuclear power by 2022. Meanwhile, a growing awareness of the dangers of the greenhouse effect and the rise of the global climate change movement called attention to the devastating impact of fossil fuel consumption—which for this nation is primarily coal—on the planet's climate. As a result of Germany's environmental grassroots movements and the rise of the Green Party, as well as eventually its climate change mitigation goals, Germany had already for decades invested heavily in renewable energies such as wind and solar. But in order to compensate for lost energy due to the exit from nuclear power, coal was still an energy form on which Germany would rely heavily in the near future (Klein 2014, pp. 136–39). Therefore, even though many environmentally aware and activist citizens were demanding a speedy phase-out of coal by 2025 (Rinscheid and Wüstenhagen 2019, p. 859), as another part of the country's energy transition to a low-carbon energy system (Energiewende), and in 2018 the government established the so-called "Coal Commission" (Reitzenstein et al. 2020, p. 152), the exit from coal is planned only for 2035–2038 (Kittel et al. 2020, p. 2; Reitzenstein et al. 2020, p. 165). Meanwhile, even though federal authorities agreed not to develop the Hambach forest and the energy conglomerate RWE will stop logging, the protesters have not left their tree houses (Douglas 2020). With the rise of the climate change movement and environmental justice movements, resistance against lignite mining by "farmers and local populations struggling to maintain their livelihoods" (Weber and Cabras 2017, p. 1226) has now merged with global climate change and environmental justice activism for events such as "the human chain against coal" in 2014 (Müller and Morton 2018, p. 138), and received support from groups such as *Greenpeace*, *Friends of the Earth*, *Ende Gelände*, and *Fridays for Future* (climate activist Greta Thunberg visited in 2019), leading to international attention, as could already be seen in the successful protest against the annihilation of the ancient Hambach forest in 2018.

3. Literary Genres: Energy Narratives, Bioregional Novels, Hybrid Genres, and Eco-poetry

The impact of media images and narratives cannot be underestimated and is often the explicit goal of spectacular protest actions in order to gain public support and political leverage, as in the case of the Hambach forest protests in Germany's Rhineland area. But literary narratives are constructed and function in other ways. In his investigation of "literary energy narratives," Axel Goodbody explains how media discourses, which "dominate contemporary cultures" but also reconfigure them, usually frame and construct their narratives somewhat differently from literary texts, making "extensive use of condensing

symbols," "metaphors, [. . .] historical examples, [. . .], catchphrases, descriptions, and visual images," as well as "reasoning devices," such as analysing causes and consequences, and appealing to moral principles (Goodbody 2018, pp. 18–19). Literary texts, on the other hand, and "novels in particular explore the complex consequences of energy system change, and issues of agency and responsibility [. . .] embedding [energy choices] in moral and religious frameworks and aligning them with traditional patterns of thought and cultural narratives" (Goodbody 2018, pp. 16–17). In addition, as Goodbody observes, literary texts convey alterity, as they "expose the public to experiences of others, and distribute readers' empathy in ways leading them to identify with new perspectives on energy dilemmas and choices" (Goodbody 2018, p. 17). In the more specific case of opencast lignite mining, I would add yet another difference between media discourse strategies and the capabilities of literature: textual as well as visual media focus primarily on the devastation of natural and cultural spaces and the threat of their total annihilation by the energy conglomerates and the political structures enabling them; in contrast, longer literary texts, such as novels, are better able to trace the psychosocial impacts of impending and actual forced resettlement; the long-term uncertainties as a result of political and legal processes and delays; and the slow decline, degradation and decay of a region's *natureculture*—in other words, the *temporal* aspects of these massive spatial changes and their effects on human and nonhuman communities. Examples are descriptions of the progressive desertion of villages and increasingly bold looting and dismantling of the empty houses and farms by tourists and booty hunters; the relocation of grave sites that were supposed to be a "letzte Ruhestätte" (last place of rest); the slowness of lives that have been robbed of their normal rhythms, events and cultural traditions for those still hanging on until the demolition date is upon them; the slow dying of trees as a result of the lowering of the water table to prevent flooding of the pits; and reflections about time—human time, historical time, rhythms and cycles of nature, the deep time of Earth history, and how they all intersect in the here and now, but not in the future that will be cut short. Time can also be visible in the age of trees, as well as in stone monuments and sculptures from different historical periods (Bachér 2011, p. 124). The awareness that old trees or ancient stone monuments and grave markers will be razed likely leads to a heightened perception of their presence and persistence over long periods of time, and their function as spatial as well as temporal anchors for both human and more-than-human communities.

Investigating the nexus between social and environmental crises caused primarily by colonialism and capitalism in the global South, literary scholar Rob Nixon has developed the concept of "slow violence," which he defines as "a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all" (Nixon 2011, p. 2). While the ravaged landscapes of German lignite mining are highly visible, locally and from outer space, and resource excavation does not take place in a Third-World country with lax environmental regulations, few civil rights, an autocratic regime and powerful transnational corporations, the issues are surprisingly similar. So I will argue that Nixon's concept of "slow violence" also applies to what is happening in Germany's lignite mining operations with its consequences of social disintegration through the displacement of communities, its negative effects on health and well-being, and the disastrous long-term environmental effects—not just on the land swallowed by the pits, but on a large surrounding area that had its groundwater drained, surface water and air polluted, and biodiversity destroyed. In so-called "green" Germany, too, environmental laws at the federal or European Union level are ignored or subverted, and citizens are not involved in processes of decision making in a political and legal system that privileges subsurface rights and energy conglomerates. And just as Nixon describes it, the media favors the visibility of the spectacle of the day and has a "representational bias against slow violence" (Nixon 2011, pp. 13, 15). The affected rural population also tends to be poorer than executives of large corporations and politicians from urban centers and is certainly a minority when it comes to the legal valuation of national energy needs versus the local right to possession

of land and a home, and this raises the issue of environmental injustice. According to Amanda Kennedy, land use conflict over extractive development disproportionately affects rural communities, even in developed countries (Kennedy 2017, pp. 2, 6), and creates “injustices where people would not ordinarily expect to be disadvantaged” (Kennedy 2017, p. 185). In addition to expropriation, Weber and Cabras mention the environmental injustice of having to live in the contaminated areas around East German extraction sites, with “a much lower life expectancy and manifold higher risk of cancer and other serious diseases” (Weber and Cabras 2017, p. 1225). Environmental injustice is an issue that is central to many energy narratives.

In addition to belonging to the genre of energy narratives, the four lignite novels I have chosen for my investigation all belong also to what has been described as “bioregional literature”—a literature focused on a unique region with a defined natural character and unique human cultures resulting from it (Lynch et al. 2012, p. 3). Contrasting traditional regional writing, which “relies on generalities and stereotypes” and is more of a “literature of tourism,” with “bioregional literature,” Tom Lynch, Cheryll Glotfelty, and Karla Armbruster specify that “bioregional literature is more likely to be oriented towards those who live in that bioregion” (Lynch et al. 2012, pp. 14, 15), and Lawrence Buell argues that it displays a “sense of vulnerability and flux” (Lawrence Buell 2005, p. 88). In the face of worldwide forces of change, it extends its horizon beyond the “merely local” (Lynch et al. 2012, p. 15) and includes temporality. Investigating literature about the devastation of the Italian Po valley, Serenella Iovino modifies the term “bioregion” into the more accurate one of the “necroregion”—a region where all sense of place has been lost, where utilitarian “space has become more valuable than place” (Iovino 2012, p. 102), ignoring its natural and social history, ecology, and people’s place attachment. Lignite excavation sites, which completely kill off any and all life, certainly qualify as “necroregions,” and the translocal forces of change in the form of capitalist and political greed for ever larger quantities of “cheap” energy also make them “National Sacrifice Zones,” to use an “Orwellian term coined by [US] government officials to designate areas dangerously contaminated as a result of the mining and processing of uranium into nuclear weapons” (Lerner and Brown 2012, p. 2.)

While it could be expected that contemporary German bioregional novels might continue the 19th-century tradition of the “Heimatroman” (novel of one’s home region; “Heimat” being a term that contains one’s attachment to the home region), this is not the case. The trivial genre of the “Heimatroman” typically idealizes rural life in the village, presenting it as harmonious and perfect, and in contrast to morally questionable and technology-driven urban modernity. Even though the four lignite novels also thematize the rural/urban divide and criticize the greed for the fossil fuels that drive modernity, they neither romanticize rural life nor do they mount a fundamental and general critique of industrialization and modern life.

The issue of Germany’s national energy needs versus the devastation of their lives and homes to be suffered by the regional population is a central one in lignite novels: how should these be balanced or prioritized? In her *PMLA* editor’s column from 2011, Patricia Yaeger points out the importance of the “relation between energy resources and literature,” which is neglected in favor of the “history of ideas” that shapes how we sort texts into periods such as Romanticism or Enlightenment (Yaeger 2011, p. 305). Energy’s “invisibility” and the resulting “energy unconscious” (Yaeger 2011, p. 309), even though, “cheap ‘surplus energy’ [. . .] has enabled classical industrial, urban and economic development” (as she quotes physicist Jacob Lund Fisker, and as is certainly true for Germany’s rise to economic powerhouse), has led to a “dearth of oil in contemporary fiction” (Yaeger 2011, p. 324). Meanwhile “Petroculture Studies” and the genre of petrofiction, introduced by Amitav Ghosh in 1992 (Yaeger 2011, p. 325; Ghosh 2014) have become more established (Ghosh 2014; Sullivan 2019). In his “Short History of Oil Cultures,” Frederick Buell explores the many entanglements of energy history, in particular how “oil-electric capitalism” has developed and defined “itself culturally against the previous era of coal capitalism” and

“is significantly related to the emergence of modernist culture”; he identifies “two recurring motifs, exuberance and catastrophe, as they play out in a wide range of literary texts and popular enthusiasms” (Buell 2012, p. 273) and explores how the availability of fossil fuel energy literally energizes and “electrifies” people (all classes), and injects their lives with speed and dynamism that translates into narrative strategies and is paralleled in the emergence of new media such as film, while coal extraction has always stood for the “exploitation and environmental immiseration of the coal-capitalist working class” (Buell 2012, p. 289). Oil exuberance is followed with catastrophe in the form of pollution, and eventually “global apocalypse” and the loss of stability (Buell 2012, p. 291).

Unlike petrofiction, literature about coal mining does not yet have its own genre categorization, even though black coal, like oil, is shipped internationally, i.e., has a geopolitical dimension. In contrast, brown coal is excavated *and* burnt regionally; this may explain the fact that lignite novels have received less attention than petrofiction and even fiction thematizing black coal. Lignite mining may have had its time of exuberance in the days of the Democratic Republic, when brown coal supplied practically all the electric energy that was needed to drive the country’s industry and provide for its citizens. This is still noticeable today in the fact that both former East German lignite mine workers as well as inhabitants of the region seem to suffer much more from the loss of this industry, with whose success and national significance they had so strongly identified. Opposition to closing the lignite mines is much stronger in these areas, while environmental concerns and activism are stronger in the western part of Germany with its deep history of environmentalism. Coal exuberance may have existed in the west around the mining of black coal in the Rhenish area.

Patricia Yaeger also addresses the “dirty” nature of energy extraction (Yaeger 2011, p. 305), and Heather Sullivan, exploring its materialist aspects, finds that “[e]xtraction narratives exemplify the translation of direct engagements and exchanges with dirty nature into individual stories about personal power, freedom and transformation” (Sullivan 2011, p. 127), as she contrasts illusions and sublime fantasies with the realistic imagery of “a hellish landscape” after large-scale mining; it is a devastated landscape that has already been described in texts from the Romantic era (Sullivan 2011, p. 119).

As Evi Zemanek and several contributors to her volume on ecological genres have observed, classic genre boundaries are increasingly being dissolved and authors writing about ecological crises combine genres (Zemanek 2018, p. 25). The four lignite novels under investigation display this hybridization, containing elements of the literary energy narrative, testimonial literature, the realistic bioregional novel, and various other genres, or modes of writing. All four employ narrators that bear witness to the slow-moving catastrophe for their bioregion and its people. Sinkel and Bachér use first person narrators who explicitly state or describe their roles as chroniclers or reporters of events, in which they also participate. Wedershoven tells her story with an omniscient third person narrator, who follows the protagonist in her unsuccessful fight against dispossession; but the author intersperses this narrative with passages in the first person by the protagonist’s granddaughter, who witnesses how the threat of losing her home affects her grandmother; this adds a second, related, witness position. Apelt, while using third person narration, clearly places the perspective with his protagonist Elli Noack, whose interior monologue is interwoven with the villagers’ conversations—thus also including the oral discourse often underlying testimonial literature. The novels display many strategies originally developed by the postcolonial Latin American genre of testimonial literature. While focusing on a single narrative voice and a single social problem or conflict, this literature pursues its main goal of uncovering, making visible, and representing the experiences of subalterns (Schmidt 2018, pp. 367–68), and that is the case in all four lignite novels as they focus on the lives of ordinary but marginalized people under immense pressure as they stand to lose their homes, their livelihoods, and their communities. As the deadline for relocation and destruction nears, the aspect of the “emergency narrative” comes to the fore, which is also one of the forms of testimonial literature (Schmidt 2018, p. 368). And that introduces

elements of the narrative of catastrophe or apocalypse, albeit a slow moving one that “only” affects the region; anxious anticipation of future losses introduces an elegiac tone, most prominently on display in Bachér’s novel, where it seems to create an emotional vortex that pulls the reader into the oppressive feelings of inescapability and pain from the slow and systemic violence perpetrated on the land and its people. The elegiac tone asks for empathy and creates a moral accusation, combined with anger and disbelief that a modern democratic state such as Germany does not better protect the rights of its citizens. In addition, Bachér’s story contains elements of tragedy around the death of the narrator’s brother, also present to some degree in Apelt’s novel and its many tragic deaths occurring over longer historical time spans in the community, although there are also subtle comical elements in the way the protagonist mounts her resistance. Sinkel is the only author who has chosen to make comedy his major mode of representation, mixing it with realistic passages, tragedy, political satire, social critique, irony, and fairy-tale fantasy, which results in a multifaceted hybridization of genres and modes of writing that is successful at uncovering and attacking the many contradictions that exist in German society and politics, such as strong laws protecting endangered species while at the same time wiping out whole ecosystems. His text contains a few funny drawings of little birds and also some graphically offset notes in the margins that inform and educate his readers about specifics surrounding lignite mining, historical events and persons, or allusions he makes to works of film and literature. It would be desirable to study whether these lignite testimonials that present marginalized voices and lives had, or still have, any real impact at the regional or national scale in a time that is so heavily dominated by visual journalistic media. However, such research into the sociology, the communicative effectiveness, and cultural significance, of this semifictional narrative literature lies outside the scope of this investigation.

Ecopoetry pays less attention to the personal, social and political struggles that require narrative development, but instead often pays closer attention to materialist aspects or, as Axel Goodbody states, “shows human life as co-constituted by material conditions, and gives voice to the more-than-human” (Goodbody 2017, p. 265). A strong tradition of nature poetry, established during Romanticism, developed into the critical and political environmental poetry of the second half of the 20th century, also spurred by Germany’s environmentalist movements. More recently, poetry began to engage with the concept of the Anthropocene (e.g., Goodbody 2016, 2017; Melin 2018), and the question arises, “What forms are appropriate for fostering an eco-cosmopolitan consciousness, recognizing the agency of nature, and relating the deep time and global reach of the Anthropocene to human scales of time and place” (Goodbody 2017, p. 272; see also Goodbody 2016). For poetry about Germany’s lignite mining, it is the dramatic shift in scale towards Earth systems and Earth history that sets it apart from environmental poetry of the late 20th-century with its usually more local focus and appeal to humans to “protect” their immediate environment.

4. Mining in German Literature, and Recent German Lignite Novels and Poetry

It was during Romanticism when mining became a popular literary theme or motif, because of several factors: the rise of the science of geology, or what Jason Groves calls “the Golden Age of Geology (ca. 1790–1820)” (Groves 2016, p. 2; see also Groves 2020, p. 19); the fact that many Romantic writers and thinkers themselves, most notably Novalis, Theodor Körner, and Alexander von Humboldt, had studied mining at the “first modern mining academy [. . .] in Freiberg,” which had opened in 1756 (Groves 2020, p. 2; see also Böhme 1988, p. 97); and an allegorization of the “descent into the mine” as “a descent into human history, literary tradition, and sexuality” (Groves 2020, p. 20; see also Böhme 1988, p. 114). Its association with the psychology of the unconscious, i.e., a perception of the mine as an “image of the soul,” has been comprehensively investigated by Theodore Ziolkowski, who analysed texts by Novalis, Tieck, Eichendorff, Körner, Brentano, Kleist, Heine, E.T.A. Hoffmann, and Hebel. But there is a major difference between mining that supplies fuel and materials for the industrial revolution, and pre-industrial mining for the Earth’s beautiful treasures: “Instead of coal mining, iron production, and industrialization,

with all the attendant social problems [. . .], mining aroused in the German Romantic mind the archetypal image of the descent into mysterious subterranean caverns under the guidance of wise old men in search of hidden lore symbolized by glittering stones and precious metals" (Ziolkowski 1990, p. 27). This romanticized idea of mining did not last, and "soon the nature of mining in Germany and even Freiberg itself changed so radically that the old reality was reduced to a literary image. [. . .] Mining became noisy, and it became dirty. Beginning in the second quarter of the [19th] century, coal mining grew at an unprecedented pace" (Ziolkowski 1990, p. 57). Researchers recently reexamining Romantic mining narratives, however, found this "dirty nature" of mining already present in the era's extraction narratives (Sullivan 2011), or exhumed its "ecological ethos that might provide a locus of resistance to today's political economy of extraction" (Rigby 2017, p. 116).

As for "Modern Recurrences of the Romantic Image" in German cultural and literary texts, Ziolkowski mentions Freud, poetry by Rilke, narratives or passages by Kafka, Hofmannsthal, Hesse, Thomas Mann, Musil, Broch, and Günter Grass. According to Ziolkowski, Grass, who had "worked in a potassium mine," displays in scenes of his novel *Hundejahre* (Dog Years) a "mastery of the technical details and vocabulary of modern mining" (Ziolkowski 1990, p. 62). However, in his description of the brown coal mining site of the Rhenish Erftland region in the novel *Die Blechtrommel* (The Tin Drum), he focuses on the grotesque aspects of the exhumation of a body for reburial, as witnessed by the protagonist (? , 1961, 1963/980, pp. 401–3) [B20-humanities-1020192]. Reburials are a central issue also in the lignite novels under investigation, although attitude and perspective are completely different. But Grass's engagement with Germany's lignite mining areas is more extensive than just the scenes in his novels. Richard E. Schade has analyzed Grass' various texts and 51 drawings and reaches three conclusions: Grass was fixated "on the literary and artistic aesthetics of devastation" (Schade 2013, p. 620); his personal war experience in Lusatia combined with historical events focused on the region drew him to the sites; and Grass's "profound reservations about German unification in 1990" (Schade 2013, p. 622) played a role: in one of the texts, he "equated the ravaged landscape with the condition of Germany" (Schade 2013, p. 619). So Grass's depiction of Germany's lignite mining areas is personal, political, and aesthetic, while the lignite novels and poetry from the 21st-century focus on testimonials by impacted individuals, on environmental injustice, on "slow violence," on activism against the devastation, and on the harmful consequences for the planet. As a setting or background story, the circumstances surrounding lignite mining operations, such as the pit, the topic of time running out for residents, and the theme of loss, play a role in Joachim Nowotny's novella *Letzter Auftritt der Komparsen* (1981, Last Appearance of the Extras), Wolfgang Hilbig's novella *Die Kunde von den Bäumen* (Hilbig [1994] 1996, Tidings of the Trees), Kurt Lehmkuhl's mystery *Begraben in Garzweiler II* (Lehmkuhl [1999] 2019, Buried in Garzweiler II), and Patrick Hofmann's novel *Die letzte Sau* (Hofmann 2009, The Last Pig). The collection *Mit Baumhäusern gegen Bagger: Geschichten vom Widerstand im rheinischen Braunkohlerevier* (Wlazik and Fekete 2015, Tree Houses against Excavators: Stories of Resistance in the Rhenish Lignite Territory) contains texts by activists protesting the felling of Hambach forest for an expansion of lignite mining.

What I set out to explore as I was reading imaginative literature about lignite mining, was the following: How does literature—essentially a temporal mode of representation—depict the temporality of place and its socioenvironmental devastation, i.e., the process of the "long dying" (Nixon 2011, p. 2) of a bioregion on the way to becoming a "necroregion"? Is there a sense of other time scales, e.g., do the lignite narratives refer to "deep time" or "geologic time" in addition to human/historic time; and do the narratives connect with the current debate on climate change, which is, after all, caused by excessive fossil fuel extraction, especially carbon? And what about other modes of temporality, such as the cyclical time of nature, or the sense of a "shadow time"—of living in two or more temporal scales simultaneously (as described by Clark 2019, p. 12)? In terms of time and the temporality of place, three of the narratives under investigation cover the period

leading up to the dispossession and demolition date for people's property, while one depicts the years immediately following the devastation of a small village and the lives of its inhabitants now alongside the edge of the pit. So this article is not only about a real or imagined post-mining landscape of ruination (that might be shown quite effectively using visual media), but about narratives that tell of the slow process of displacement, dereliction, and decay preceding and accompanying extraction, and the emotional and sometimes psychosomatic pain of having to witness it. Poetry, too, though it does not narrate the lives of victims, portrays the spatial devastation within temporal frames—in this case focusing on the large time frames of Earth history.

4.1. Anja Wedershoven: *Schürfwunden—ein Tagebau-Roman* (Abrasions—An Opencast-Novel)

Anja Wedershoven, born in 1968, is a journalist and writer living in the lower Rhine region, where she would regularly drive by the lignite pit and explore the deserted villages before the start of demolition and excavation. Published in 2013, *Schürfwunden* is her first novel and is based on her excursions as well as on her interviews with locals. It takes place in the fictive "ghost village" of Lossweiler, most of whose residents have already been resettled or are refusing to leave—such as the elderly Charlotte. The protagonist is actually Katja, Charlotte's granddaughter, and the third person narrative is interwoven with passages written in the first person and present tense, reflecting Katja's intimate thoughts and feelings in the present time (e.g., Wedershoven p. 206)—a commentary on her grandmother's memories of the past in the main narrative. By writing a memoir, "Geschichte meines Hauses und meines Lebens" (Wedershoven 2013, pp. 43, 130; history of my house and my life), which she saves on a USB stick to be handed over to Katja, Charlotte is trying to rescue and capture what will soon be lost. The main narrative of the novel is primarily focused on various characters' familial and love relationships, but the strong narrative presence of Charlotte is a constant until her ultimate act of resistance after she receives her final eviction notice: her assisted suicide and the incineration of her house, which she has asked her friend and neighbor Josef to carry out. Charlotte's health had long been severely compromised by the coal dust covering everything, settling in her lungs and causing coughing attacks (Wedershoven 2013, pp. 7, 96); even the constant noise of the monstrous excavator seems to have entered her body and is now pounding her head. The "trans-corporeal effects" (Alaimo 2010, p. 2) of the destructive process of opencast lignite mining are in evidence just as much as the long-term psychological violence caused by the decades-long struggle against the loss of home, social community, and "Heimat"—the place attachment to one's home region. For both Charlotte and her neighbor, one of the most difficult things is the thought of the many trees, planted, cared for, and loved by generations over time, that will also perish (Wedershoven 2013, pp. 138, 172, 248–49). As living beings whose lifespan far exceeds that of humans, the loss of trees underscores and synecdochally symbolizes the long-term nature of the environmental damage and history of the relationships between humans and plants. The strongly felt sense of loss and experience of looming death even extends to material objects such as the house, which Katja, in order to prevent its complete disappearance, captures in her drawings—ironically, done with charcoal. As she is portraying its "bodyparts," she perceives the house as having a skin and eyes (Wedershoven 2013, p. 215), anthropomorphizing it—again by employing synecdoche. The novel's title already invokes the physical abrasions inflicted on the skin and body of a living being, while the verb "schürfen" also refers to its secondary meaning in the terminology of mining: the process of resource extraction that causes "wounds" to the "skin" of the Earth (on "wounds" and "scars" from industrial devastation, see Storm 2014). Wedershoven's novel focuses on the particularly severe effects of eviction practices on the elderly, with their deeper roots, and on the trans-corporeal impacts of pollution from mining, but also on a form of "passive" resistance that lets Charlotte regain a sense of control and agency as she chooses the time of her death and makes it impossible for the mining company to take possession of her house.

4.2. Andreas Apelt: *Schwarzer Herbst* (Black Autumn)

Andreas Apelt, born in 1958 and having grown up in a small village in Lusatia, the lignite mining region developed primarily by the GDR, could, like Anja Wedershoven and Ingrid Bachér for the Rhenish lignite excavation area, be considered a witness to the destructive practices of this industry. His second novel *Schwarzer Herbst* (2010), is the only one taking place in Germany's second largest lignite mining area in the former GDR, which is also home to the officially recognized Sorbian minority, a West Slavic ethnic group with their own language and culture; it is an area typically neglected by researchers of "lignite-induced resettlements" (Ess 2019, p. 2). The narrative takes place in the fall of 1989, leading up to the Fall of the Wall and the first years of reunification. Through the biographies of its characters and their families, the novel unfolds how 20th-century history, with its wars and changing political systems, has shaped their lives, focusing on the many losses they have suffered, making the loss of their "Heimat" through lignite mining only the most recent one in the series. Apelt sets his novel in Presenchen, an authentic historical village that was devastated in 1987/88. Fifty-one people had lived there, in twenty-two houses; it had a kindergarten and a pub, no church, except in the novel. *Schwarzer Herbst* differs from the other three novels in that it takes place *after* the resettlement of the villagers to a nearby bigger village or, as in the case of Klara Beckmann (a close friend of the protagonist), to a nursing home. The novel opens with a topic central to all lignite texts: the issue of the deceased resting in their native soil. This issue of being buried in their "native soil" is not connected to the national socialist "Blut und Boden" (blood and soil) ideology, but reflects the strong sense of belonging and attachment to their "Heimat"; the main issue here is the sacrilege of disturbing the dead and robbing them of their "eternal" resting place, which the living villagers experience as an extremely serious infraction against social and religious customs. The gravediggers who are tasked with reburial in another cemetery have been bribed by the novel's protagonist, Elli Noack, to deliver their gravestones to the garden of her new home, where she lines them up along the fence, with a "view" towards the void that used to be their village, thus preserving at least these symbolic markers of the human lives that had been the village community. The novel closes with the theft of Klara Beckmann's urn (Klara passes away within the timeframe of the novel) from the funeral home and its secret and illegal interment in Elli's makeshift cemetery that has become essential not just to her but to the identity of the otherwise displaced community. Elli Noack's illegal actions in order to preserve the coherence of the old village community are a small-scale form of activism; it is not political or environmental, but a way to adapt to the new situation, trying to at least preserve the symbols or remains of lives lost and keep them in the community. As the mourners look across the fence into the distance, they "see," like a *mirage*, the roofs, gardens, fruit trees, and steeple of their old village. The effort to preserve the community of the old village even after resettlement is Apelt's focus in this novel; he has developed many characters from the Presenchen village, creating conversations in their local dialect that demonstrate their regional origin and sense of belonging. One of the villagers is also collecting material reminders such as street signs and other place markers, maps, photos, and left-behind objects from the village in order to preserve its cultural memory (Apelt 2010, p. 34). While the memory of their lost home is often tinged with nostalgia, it is also the memory of the cruel linearity of time that, unstoppable, has marched them from one disastrous loss to another through wars, displacements, euthanasia, alcohol addiction, suicide, and now the loss of their community, devoured by the iron dragon excavator. Perhaps as a counter measure, they also pay attention to another type of time: the cyclical time of nature, expressed in the regular return of the seasons and the flight of migratory birds (Apelt 2010, pp. 153, 218), as well as in the replanting of thousands of trees in an effort to replace the forest that was lost (Apelt 2010, p. 241). Elli Noack waters one of them every day, since the loss of groundwater has made this tree dependent on artificial irrigation delivered by humans; nevertheless, the young trees are a sign of growth and vitality, and a symbol of a future that may take root even in this "necroregion." And Elli Noack, who believes that "Das Leben ist doch wie ein Kreis" (Apelt 2010, pp. 19, 287; life

is just a circle), does everything to support this idea: on her visits to Klara, who is totally depressed in her nursing home, she invents fantastic stories—really a fairy tale—about a completely recreated new village of Presenchen and about reviving their community and its spirit; she presents them to her friend as real (Apelt 2010, pp. 114–15, 155–57, 225–27). While both Wedersheim and Apelt focus on the experiences of the elderly, for whom the resettlement and the loss of “Heimat” is particularly cruel, Apelt’s main focus is the loss of community, a community that had grown and formed over hundreds of years and through many catastrophes, a community that could not be preserved or recreated in the sterile new housing projects provided by the government in exchange for the vitality of their native village. But the novel shows how small-scale, individual activism—preserving memory by providing a place for the communal cemetery and its material, symbolic markers, then burying the recently deceased in it, i.e., reclaiming the past and providing a future for the community—can return agency to those affected by the environmental injustice in Germany’s sacrifice zones.

4.3. Bernhard Sinkel: *Der Wachtelkönig* (*The Corncrake*)

Bernhard Sinkel, born in 1940 and well known for his illustrious career as a film director, has written a completely different kind of book about the fight against lignite mining. While his 2017 novel *Der Wachtelkönig* uses real place names in the Rhineland and references actual events and organizations, such as “EndeGelände” (Sinkel 2017, p. 130), the book’s dustjacket calls it “das Märchen von der List und der Liebe, die den Zauberbann der Ohnmacht brechen kann” (the fairytale about cunning and love, which can break the spell of powerlessness) and cites well-known literary critic Michael Krüger, who considers it “[e]ine herrliche Satire über den unauflöselichen Widerspruch von Umweltschutz und Fortschritt” (a delightful satire about the irresolvable contradiction between environmental protection and progress). On his website, Sinkel mentions a recent event in Hamburg, where the protection of the rare bird featuring in his title, the “Wachtelkönig” (corncrake, although the literal translation is king of the quails; its species name is “*crex crex*”—an onomatopoeic name), again prevented the building of a highway (Sinkel n.d.; see also Muench 1996). While his satirical fairytale with elements of a picaresque novel plays off Europe’s environmental laws against Germany’s greed for lignite, represented by the fictitious “BraunAG,” in a complicated plot with realistic as well as satirically distorted characters and hilarious slapstick scenes, Sinkel states his view of the serious political situation underlying his comedy in the book’s subtitle: “Gewinne werden eingesackt, Verluste trägt die Allgemeinheit” (Profits are Bagged, Losses are Carried by the Public). He introduces each of the three chapters and also closes the book with his own funny drawing of the “Wachtelkönig” and one of the small-bird poems from Lewis Carroll’s novel *Sylvie and Bruno* (? , 1893991]B10-humanities-1020192). Switching back and forth between being a social novel of the Victorian era and a fairy-tale, Lewis Carroll’s novel combines the two worlds that are then also woven together in Sinkel’s narrative. Sinkel’s novel has some of the most plausible and concrete descriptions of the landscape devastation caused by the “terraforming” (Sinkel 2017, p. 108) of lignite mining operations and of the brutal harassment that people resisting resettlement are subjected to, such as when a nursery’s one hundred blooming apple trees—precious heirloom varieties, no less—are hacked to pieces overnight (Sinkel 2017, p. 69) and the owner is threatened by hunting dogs set on him while their masters vandalize his nursery by trampling the vegetable beds (Sinkel 2017, p. 93)—all in order to force him to give up his resistance. After the discovery of a medieval fresco in the village church as it is being torn down, time is being gained and the protesters of the demolition, in cahoots with a film team that has come to take advantage of the planned blasting of the village church as a backdrop for their war film, figure out that Germany’s strong new environmental laws, specifically the extremely strict law to protect threatened species on the “Rote Liste” (p. 72, “red list” of threatened species), could be used to stop the excavators. They carry out an elaborate deceptive scheme involving a 3-D printed bird and mini loudspeakers hidden in a meadow in order to pretend that the

“Wachtelkönig”—an extremely shy bird that is rarely seen, only heard—has recolonized the wasteland created by the company in preparation for mining. They are caught, of course, but the court decision is mild and, in a fairy tale ending, the devastation of their village is called off, the mining pit becomes a swimming lake, and the former CEO of BraunAG has converted to being a naturalist and has moved to a bird sanctuary island, where he is joined by the story’s first person narrator and whistleblower Penelope. Sinkel’s narrative uses a complex plot and interweaves modes of realism, irony, satire, and fantasy with countless references to the world of media, especially film, and portrays many aspects of the battle between David and Goliath—between the victimized and often powerless locals who love their land and the giant machinery of energy conglomerates in cahoots with politicians who have created an energy policy that sacrifices large swaths of land with its history and vibrant ecologies.

In her investigation of red lists, cultures of extinction, and “ghost species,” Ursula Heise discusses the problematics of focusing environmental conservation efforts on single species, the concept of “species,” and how to represent biodiversity loss, the current 6th mass extinction, and conservation efforts in various textual genres from popular science to literature and different visual media (Heise 2010). By choosing as a title character a severely endangered bird that has been named the “king” of the quail genera, and which represents synecdochally the current biodiversity crisis and loss of species as a result of habitat destruction, Sinkel exposes the inherent contradiction and absurdity of environmental laws that protect a single, select species while allowing the devastation of complete ecological systems. The charade of staging the bird’s return to the region, with the help of audio technology, may even poke fun at the phenomenon of the “ghost” species—people’s eagerness to give in to the illusion of seeing (in this case hearing) a species previously extinct in an area.

As is the case in the three other narratives, Sinkel focuses on the time leading up to eviction before the excavators show up, and on the loss of “Heimat,” the loss of a one-thousand-year-old church, the loss of ancient oak trees, and the loss of heirloom fruit trees, along with their fertile soil that has been cultivated for centuries to reach this fertility. But in his narrative, the nostalgia and grief is countered by the comedic, ironic, satirical, and fantastic elements that eventually project a happy ending into the future—as unrealistic as that may be (similar to Elli Noack’s fantastic tales in Apelt’s novel, although fantasy and reality are kept separate there). Sinkel’s filmic (scenic) narrative remains within the time frame of human history; it picks up current environmental discourses, such as discussions around environmental laws to preserve biodiversity, but it is less concerned with larger-scale issues such as geologic time frames, long-term effects of environmental devastation in addition to the loss of species, or the climate change driven by extractive industries.

4.4. Ingrid Bachér: *Die Grube* (The Pit)

Ingrid Bachér, born in 1930 and granddaughter of famous 19th-century German writer Theodor Storm, is a journalist, writer, and past president of the PEN Centre Germany. She starts her 2011 novel *Die Grube* with a preliminary note stating that all characters and also the farm owned by the family whose story she tells are fictitious. However, as she continues to explain, the names of the villages and their devastation, the pit and its unstoppable expansion, would be portrayed as she saw and experienced them. After thanking those who provided her with information over the span of two decades, she ends by wondering in disbelief, how one village after another could simply disappear never to be seen again, right here in the middle of this peaceful nation. Her accusation against the “war” around lignite mining, the “rape” of the land (Bachér 2011, p. 43), and her deep grief about its complete loss, also sets the elegiac tone of a short text from 1996, titled simply “Garzweiler”—the name of the village that has become a national symbol for the fight against this devastation. In this text she describes the village as “aus der Zeit gefallen” (Bachér 1996, p. 403, being temporally displaced), and existing in a state of persistent past ever since it was announced that the village would have no future—and that was in the

nineteen fifties. Yet this “timeless” village continues to exist, for decades, next to “die Leere des Loches” (Bachér 1996, p. 403, the void of the hole), the mercilessly approaching pit that would be in operation until 2045, then be filled with water from the Rhine for the next 35 years, until 2080 (Bachér 2011, p. 44). This most difficult time period for the residents before the actual start of the mining operation is the frame for Bachér’s story of Lale and her family, most of all her brother Simon, who has been missing since the devastation of his farm (Bachér 2011, p. 10), an apparent mystery that provides suspense throughout the first person narrative and adds the crime novel to the mix of genres that constitute this text. Deeply connected to the land by working his centuries-old family farm, Simon becomes an activist in the fight to keep his ancestors’ heritage. He also befriends the archeologist Marmelstein, who is supposed to document archeological finds before their destruction; however, 90–95 percent of all possible finds will be sacrificed to feed the excavator before the archeologist can rescue them. The biggest insult is that extremely valuable finds in this rural region, such as the world’s oldest wooden well—7300 years old, consisting of 200 oak planks (Bachér 2011, p. 67)—seem to mean nothing compared to even the tiniest historic wall that is discovered in the city. The laws of historic preservation, incontrovertible in the city, the values of the past and the future, can simply be disregarded in a rural area where profits from energy extraction rule the day. This inequity, along with the collusion, corruption, and deception of politicians and mining companies, even the courts (e.g., Bachér 2011, pp. 142, 145, 153), makes any resistance futile and clearly demonstrates the environmental injustice committed by this politically sanctioned devastation of past and future. A central scene depicts a 1989 public meeting between the company, politicians, proponents of mining—mostly company employees, and protesters (Bachér 2011, pp. 85–104); in that scene the ecological effects are disclosed as well: loss of clean drinking water for generations, plus dried up rivers, wells, and natural areas. Representatives of the mining company portray energy from coal as preferable to a possible nuclear accident such as in Chernobyl (Bachér 2011, p. 93), and the company’s glossy brochures of orderly recultivated landscapes stand against the data about climate-damaging CO₂ emissions, arguments about the potential of alternative renewable forms of energy, and about the environmentally devastating loss of ground water for the whole region—as presented in the booths of the protesters’ grass roots organizations (Bachér 2011, p. 99). But the real value of people’s loss of “Heimat” can neither be monetized nor can it be made visible (Bachér 2011, pp. 101, 102). A letter from Lale and Simon’s brother Hinner, who has fled to South America, points out how the colonial exploitation of other countries in the past has now been shifted to their own country in the present (Bachér 2011, pp. 104–5). The Fall of the Wall in 1989 brings hope and a vision for a new beginning and perhaps the end of this destructive practice (Bachér 2011, p. 109). Asylum seekers are being settled in the abandoned villages (Bachér 2011, p. 112); time is still visible in the age of the remaining trees and in the historicity of various stone monuments (Bachér 2011, p. 124). But this local community of human, vegetal and mineral inhabitants of the land is defenseless against the “Größenwahn” (Bachér 2011, p. 131, hubris) of the biggest machine of all times, the largest man-made lake, the most egregious crime: the natural-cultural scale of place will lose out against the national and global scales of energy greed, even at the cost of the life of future generations locally *and* globally. This greed also wipes out the material objects of natural and cultural history, of “deep time,” preserved in the soil and the peat: the mummies of ancient humans, their tools and jewelry, and the mummies of animals such as mollusks and ocean creatures (Bachér 2011, p. 138). Simon’s body, secretly and illegally entombed by family and friends in 1992 in his native soil while as far away from the pit as possible (Bachér 2011, pp. 161–62, 172), is in the end also swallowed up eleven years later, and Borschemich, the village where many people had been resettled, is now also slated for future devastation (Bachér 2011, pp. 118, 173). In this narrative, cyclical time is not the comforting return of the seasons but the never-ending cycle of devastation and expulsion. Spring with its fresh green, blooming linden trees and honey-perfumed air (Bachér 2011, pp. 139, 158) is nothing but a “shadow time” temporarily masking the cruel reality of a

natural catastrophe worse than any other, including all wars (Bachér 2011, p. 150), in the thousand year history of this country. In contrast to the other authors, Bachér frames her deeply moving testimonial narrative of loss and activism in the geological time frame of Earth history, represented in the figure of the archeologist, the discussion of found and lost material objects in the lignite layers, and the narrator's reflections about anthropogenic destruction of both human and Earth history.

4.5. Lignite Poetry

It is not surprising that, in comparison to the novels, the two poems by Poschmann and Czollek about Germany's lignite excavation sites that I will discuss (both published in the anthology of Anthropocene poetry by Bayer and Seel 2016, pp. 209, 234), neither focus on the passage of time that precedes the resettlement of village communities nor thematize the "slow violence" experienced by the victims of this practice—these are simply more suitable for a longer prose narrative that can develop fictional characters. Instead, they express observations and reflections of the lyrical "I" or "We" that are triggered by the sight of the power stations and the post-excavation pit, "the hole" (Poschmann), and focus more on Earth history and issues of the Anthropocene, while at the same time explicitly situating their poems in Germany's geography (on the ability of poetry to successfully convey "a sense of place" see Dürbeck 2018, p. 15).

Max Czollek, born in 1987, a German poet, writer and performer, did not give his poem a title but seems to invite his reader to simply jump aboard and join him on his journey "zwischen berlin und münchen" (between Berlin and Munich), which would lead him either through the central German lignite area around Leipzig, or through the western part of the Lusatian area. Both were heavily mined in GDR times, leaving behind flooded pits, but still actively extracting lignite to be burned in the power stations which the speaker of the poem sees "blinzeln," i.e., blink like living creatures. Right away, though, the poem moves into imaginary realms as the speaker opens up the horizon of time, pondering what the consequences of past and present anthropogenic activities will look like in the future. As he imagines the Earth being covered by a sediment layer of burnt objects and humans, the result of "ridiculous" millennia (of civilization); the massive loss of species (of which humans are just one of the 58.000 that are lost annually); the melting of Alpine glaciers; and the impermanence of flowing rivers which carry away the "faces" of passers-by (i.e., obliterating their identities, an allusion to the Greek mythological river of the underworld and spirit of oblivion, Lethe), he comes to the conclusion that the Earth is indifferent to the demise of human civilization and that humanity's talk of the Anthropocene is simply an attempt to secure its heritage, since the flooded lignite excavation pits will never divulge how much "content" was burnt. Czollek's repeated mentioning of "burning" alludes to both the Holocaust and humanity's incineration of fossil fuels, which drives climate change. His pointing out that the melting of Alpine glaciers is not only an ecological disaster but also uncovers the bodies of dead soldiers bearing witness to humanity's bellicose past in a "cold century" sets up the implied contrast with the hot century on its way. He weaves together Earth history, human history, and environmental history, ending his poem with a variation on Bert Brecht's famous dictum in his poem "Vom armen B.B.": "Und nach uns wird kommen: nichts Nennenswertes" (Brode 1990, p. 319, About the poor B.B.: After us *nothing noteworthy* will come along), changed into a statement that refers to a posthuman world or age where everything is so devastated it cannot be differentiated and named, also including the fact that nobody may be left to do the naming, that language and civilization will no longer exist: "nach uns wird kommen nichts benennbares" (after us *nothing nameable* will come along). In Czollek's poem, the east German post-industrial landscape, characterized by layers of toxic slag from lignite mining and flooded acidic pits, becomes the central trope for a future devoid of the human and also more-than-human life that used to exist and that humans knowingly and sadly sacrificed in their misguided greed for ever more energy to fuel their capitalist systems—their idea of growth without limits in what Jason Moore has developed as the "Capitalocene" (Moore 2016; Horn and Bergthaller

2020, p. 31). As poets know well, this landscape with its anthropogenically obliterated past and, in terms of its biocultural life, whose future has been stolen, has become Germany's trope for the Anthropocene.

Marion Poschmann, born in 1969, is a well-known German writer, who has made a name for herself with novels, poetry, and essays on poetics that are a part of the "new German nature writing"; she received the first German Prize for Nature Writing in 2017. While Czollek set the geographical perimeters of his poem in the first line, Poschmann does so in the poem's title: "Jülich—Grevenbroich—Erkelenz," the names of three towns that form "[e]in energisches Dreieck" (an energetic triangle), but which, from this bird's eye view, or glance at a map, is lacking the materiality of an actual landscape, and is "farblos und flach aus der Luft gegriffen" (colorless and flat, grasped out of the air). In contrast, the color she mentions in the next sentence, blue, and which is a part of the real naturalcultural landscape, is "beängstigend blau" (*frighteningly* blue), as it combines the color of the open sky, of the "Attribute der Arbeit" (attributes of work, likely referring to the workers' blue overalls called "Blaumänner" in German), and of the lakes into which the abandoned pits will be turned in the future—"die größten Europas" (the biggest ones of Europe). The emotionally charged, repeated, references to scale allude to the hubris underlying this landscape, which has been anthropogenically created by the excavators and conveyor belts, "die größten der Welt" (the biggest ones in the world). Moving on to a scenic depiction of a lyrical "we" standing at the edge of a pit and watching the machines move earth and destroy the surface, Poschmann anthropomorphizes the result of this activity: "Die Unveräußerliche, die Leere, gähnte gelangweilt" (the inalienable, the void, yawned in boredom). She continues in this vein when she attributes a "Hoheitspose" (pose of sovereignty) to the exposed coal seams, which are "machtvoll" (full of power), but she is also alluding to mining terminology that describes the thickness of geological layers with the word "mächtig" (powerful, strong). The poet then goes deeper into Earth history while at the same time evoking Germany's most well-known poem, "Abendlied," by Matthias Claudius, which contains the phrase "Der Wald steht schwarz und schweiget" (Grimm 1995, p. 127; The forest stands black and is silent), which she transposes into the past tense, alluding to the material origin of lignite in prehistorical forests but also to the silence of this fossilized forest facing destruction: "Was Wald war im Tertiär, stand schwarz und schwieg" (What used to be forest in the tertiary, stood black and was silent). Within Earth history, humans are nothing more than "kurz eingeglimmte Sedimente" (briefly sparkling sediments), while the present time is dominated by the coal dust that people breathe in. The trans-corporeal effects of lignite mining are real, as are the ghost villages during the preparation phase and the cemeteries that are relocated often multiple times and, instead of being permanent resting places, seem to be wandering along the edge of the pit, like the lyrical "we" of the poem. The German term for something that left you speechless or took your breath away would be "es verschlug uns die Sprache"; Poschmann adds one letter to the verb's infinitive form, transforming "verschlagen" into the past tense of "verschlingen" ("to take away" into "to devour"), so she arrives at a much more powerful image: the moonscape devouring the observers' language: "Mondlandschaft verschlang uns die Sprache." This echoes the frequent description of the excavators as beasts devouring the land. The poem ends with a view far into the future: humans themselves, as they are put under pressure every day, going through the process of coalification and becoming "forest concentrate," which is easy to burn. Just like Czollek, Poschmann ends with the vision of a posthuman future, reaffirming the power ("Macht") of the Earth in contrast with the insignificant human glitter in its sediment layers. By anchoring their poems geographically, by referring to human history and the present consequences of anthropogenic extractivism, and by extending their temporal horizon deep into Earth history, both poets display a multiscalar poetics that lyrically represents the horrific anthropogenic devastation caused by lignite mining as Germany's trope for the Anthropocene.

5. Conclusions

All four novels narrating the time overshadowed by the looming lignite excavator—Big Wheel, monstrous insect, dragon, or kraken—debate issues of life and death, the struggle of locals against powerful energy conglomerates, the capitalist system, colluding politicians, and the resulting environmental injustice. All four narratives depict the cruelty of the “slow violence” caused by the long process of lignite mining and the slow dying of the villages and the land. All authors allegorically align their time lines of life and death of the land with the life and death of one of their characters or representatives of the more-than-human world: In *Schürfwunden*, Charlotte is refusing to be a hapless victim and is regaining agency by taking control of the time of her death and that of her house; in *Schwarzer Herbst*, the decline of the village community is mirrored in the slow dying of Klara in the nursing home; in *Die Grube*, Simon is killed by heart problems as a result of his unsuccessful fight to keep his farm—a psychosomatic effect of the constant stress from the threat of losing his farm; and in Sinkel’s novel it is the death of the blooming apple trees that fulfils this function. Cyclicity is invoked positively in connection with nature in Apelt’s novel, while in Bachér’s novel it signifies only yet another resettlement. The problem of a future erased is addressed by Apelt through Elli’s “imaginative counter discourse” (Zapf 2016, p. 148) as she tells her fantastic story of their village being rebuilt, attempting to re-integrate its lost future into their lives. Sinkel creates his version of an “imaginative counter discourse” by transitioning into complete fairy tale mode at the end. None of these authors focuses primarily on the planetary threat of global climate change—perhaps because protests against lignite mining and against climate change have merged only more recently, after publication of their novels. The widest scope in terms of space awareness and also in terms of a sense of various time scales is presented by Ingrid Bachér. She narrates not only the archeology of human history but also the deep time of the history of the Earth, the geologic palimpsest of the lithosphere with its layers of biomass still recognizable as plants and creatures. Cyclical time is present in the fight against diminishing linear time, but mostly as the dubious experience of “shadow time,” when yet another gorgeous spring day with its fresh green, blooming linden trees and honey-perfumed air (pp. 139, 158) creates an uncanny contrast with the impending doom of time cut short for human as well as more-than-human life. However, despite their empathy for trees, and in Bachér’s case also for fossilized flora and fauna, these four novels are primarily anthropocentric and do not present the perspective of plants and animals losing their habitats and their lives.

A more-than-human perspective as well as consideration of the destruction or long-lasting damage to ecological systems in and around the open pits after excavation has ended is also rarely present in journalistic narratives about Germany’s “Neuseenland” (new lakes country; see Wiesner 2018; *Land Reclamation in Neuseenland* 2020). In the post-industrial Lusatian landscape, Germany’s largest man-made lakes are being created: “Coal Mine to Swimming Pool,” “Germany’s Hawaii,” a paradise for water sports, and a chance for locals to become entrepreneurs in a future tourism industry (also for touring the pits and the industrial monuments of decommissioned excavators and processing facilities) and to create a new (economic) identity for themselves and their region—this is usually the focus. And whether it can be a model for a metamorphosis of the Rhenish necroregions, which depend on water from the Rhine for flooding their gigantic pits (water that may not be there, given Germany’s frequent severe droughts in recent years)—that remains to be seen.

All the novels thematize “the tension between resource-hungry capitalistic and urban populations and the disempowered rural hinterlands” (Vaccaro et al. 2016, p. 6). Gender also plays a role. As Uekötter has argued, the privileged legal status of mining that gave the industrialists so much power, also had its roots “in einem spezifischen Habitus, der erwähnten Dickfelligkeit, in der sich industrialistische Sympathien mit männlicher Robustheit trafen” (Uekötter 2013, p. 562, a specific habitus, the aforementioned callousness, in which industrialist sympathies met masculine ruggedness). Bachér probably represents this best in her descriptions of colluding industrialists and policy-makers; and the fact that

the protagonists of all four novels, who belong to the group of affected persons, are female, also points out how the conflict between powerful industrialists and politicians on one side versus local, rural residents on the other, includes the issue of gender, in addition to the dichotomy of urban versus rural populations and the resulting environmental injustice. In her detailed analysis of lignite-induced resettlements in Lusatia, Julia Ess observed that “older people (especially widows)” were moved to apartments different from those of young adults (Ess 2019, p. 7)—likely because of a combination of ageism and gender bias.

In addition to the hybridization of genres such as the energy narrative, the Latin American “testimonio,” the bioregional novel, the detective story, the picaresque novel, the satire, the comedy, and the fairy tale—each introducing its particular narrative strategies—there are a number of tropes that can be found across all or most of these lignite novels. Unsurprisingly, images of death are used in various forms, such as the slowly dying, sacrificed villages being compared to animals in their death throes, with vultures watching over them (Bachér 2011, p. 79); dying trees and dying humans, who have been “uprooted”; and the particularly troubling treatment of the dead and their graves in the cemeteries to be razed. The demolition of village churches is another central trope; they are not just religious houses of worship but often the heart of the village community—hundreds, perhaps a thousand years old, and thus also representing a village’s historical core; their violent destruction, usually by blasting, is a painful experience for the villagers. Body metaphors are common as well, often connected with illness and the process of dying. With regard to the land, the metaphor of its “rape” is employed. And the giant excavators that, for the locals, are the most constantly visible representation of this violence against the land, are typically described with metaphors of threatening beasts, such as monstrous insects, dragons, or kraken (octopus), which devour their prey—the land and its people.

Endowing destructive lignite technology with creaturely life and referring to the act of being devoured is also a strategy employed by the poets, in Poschmann’s case with concurrent reference to the effect on her ability to write: the moonscape devours her language. In contrast to the novels, however, the two lignite poems do not focus on slow violence or environmental injustice; instead, they frame the poetic representation of lignite mining and incineration in the deep time frames of Earth history, considering natural processes such as the forming of sediment layers; coalification; anthropogenic impacts causing toxicity, mass extinctions, and climate change; and a planetary future devoid of the agents that caused these changes and their own demise. While explicitly anchoring their poems in currently familiar, inhabited, and visible places of human civilization and, through intertextual references, placing them in cultural historical contexts (which also points out the dramatic changes in the human/nature relationship), their poems represent much more directly the planetary and long-term consequences of fossil fuel extractivism, which has generated the age of the Anthropocene.

By narrating the incremental psychological and physical effects of the slow violence of lignite mining and the growing pit devoid of all life and place identity, literary testimonial, bioregional fiction can downscale and translate the latency of the “transformative processes of the Anthropocene” (Horn and Bergthaller 2020, pp. 105–6), of which fossil fuel extraction and consumption is the main cause, into temporal and spatial scales that the reader can intellectually comprehend and affectively and empathically experience. Lignite poetry, on the other hand, upscales the poetic tradition that had started out as primarily locally focused ecopoetry in the 1970s and 1980s, by framing locally observed anthropogenic impacts on human and more-than-human worlds within the extensive timescales and spatial scales of the Anthropocene, and even imagining the possibility of the end of those who have caused this planetary devastation—a posthuman age. Horn and Bergthaller state that “it is important to recognize that scale transitions are indeed a central epistemological challenge of the Anthropocene and must be understood and analyzed as such (Horn and Bergthaller 2020, p. 144) and that “[m]ediating between geological and human timescales is one of the fundamental challenges of the Anthropocene” (Horn and Bergthaller 2020, p. 165). They also affirm the significance of the local and how it “always needs to be viewed

in conjunction with the planetary, in light of the interdependencies between localities, actors, technologies, and ecological processes" (Horn and Bergthaller 2020, p. 154). Novels and poetry about the most destructive way of sourcing energy, both locally and in terms of planetary climate change impacts, can accomplish this mediation. The frightful pit of lignite mining opened up by the excavator produces the image of a deep wound on the surface of the Earth that might heal over only in a posthuman age; it can be read as Germany's trope for the Anthropocene. Physically and with regard to its long-term effects on life, it even resembles a similar, though cosmic (natural) and more sudden catastrophe, which paleobiologist Jan Zalasiewicz has used as a comparison: the crater at the center of an earlier planetary extinction event. Except that now the agentive force has changed: "We are the meteor" (Zalasiewicz et al. 2017, and discussed by Horn and Bergthaller 2020, p. 167; emphasis added by HGB).

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Acknowledgments: I wish to thank my home institution for its travel support and the commentator and participants in the session on *Future Past*, organized by the Interdisciplinary Environmental Studies Network at the 2019 conference of the German Studies Association in Portland, OR, for their insightful questions and comments.

Conflicts of Interest: The author declares no conflict of interest.

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