Recent German Ecocriticism in Interdisciplinary Context

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Literatur und Ökologie. Neue literatur-und kulturwissenschaftliche Perspektiven.

Herausgegeben von Claudia Schmitt und Christiane Solte-Gresser. Bielefeld: Aisthesis, 2017. 602 Seiten + 44 *s/w und farbige Abbildungen.* €98,00.

Kulturökologie und Literaturdidaktik. Beiträge zur ökologischen Herausforderung in Literatur und Unterricht.

Herausgegeben von Sieglinde Grimm und Berbeli Wanning. Göttingen: Vandenhoeck & Ruprecht, 2016. 426 Seiten + 4 Abbildungen. €65,00 gebunden, €54,99 eBook.

Ökologische Genres. Naturästhetik—Umweltethik—Wissenspoetik.

Herausgegeben von Evi Zemanek. Göttingen: Vandenhoeck & Ruprecht, 2018. 407 Seiten + 2 Abbildungen. €50,00 gebunden, €39,99 eBook.

Ecological Thought in German Literature and Culture.

Edited by Gabriele Dürbeck, Urte Stobbe, Hubert Zapf, and Evi Zemanek. London: Lexington Books, 2017. xxxiii + 449 pages + 28 b/w illustrations. \$130.00 hardcover, \$123.50 e-book.

German Ecocriticism in the Anthropocene.

Edited by Caroline Schaumann and Heather I. Sullivan. New York: Palgrave Macmillan, 2017. xi + 348 pages + 3 b/w illustrations. \$139.99 hardcover, \$109.00 e-book.

Readings in the Anthropocene: The Environmental Humanities, German Studies, and Beyond.

Edited by Sabine Wilke and Japhet Johnstone. New York: Bloomsbury, 2017. ix + 326 pages + 12 b/w illustrations. \$108.00 hardcover, \$86.40 e-book.

Das ökologische Auge. Landschaftsmalerei im Spiegel nachhaltiger Entwicklung.

Von Sybille Heidenreich. Köln: Böhlau, 2018. 314 Seiten + 40 farbige Abbildungen. €35.00.

In the decades before and after the millennium, the image and notion of an ecologically advanced "Green Germany" stood in stark contrast to the relative dearth of literary texts as well as scholarly publications on literature and the environment. Even in the middle of the second decade of the 21st century, Ursula Heise could still claim:

In Germany, environmental philosophy and environmental history have built up distinguished archives of research, whereas *umweltorientierte Literaturkritik* (ecocriticism), initially practiced by Germanists in England and the United States and by Americanists at German universities, is only beginning to gain a foothold in *Germanistik* departments in Germany itself. (Heise, "Environmental Humanities" 22)

This has now changed dramatically, not least due to the establishment of the *Rachel Carson Center for Environment and Society* in Munich in 2009 with its fellowships, symposia, and exhibitions; the founding of the *Transatlantic Research Network of Scholars in the Environmental Humanities* (organized by Sabine Wilke) in 2011, as well as support from the *Deutsche Forschungs-gemeinschaft (DFG)* and the *Deutscher Akademischer Austauschdienst (DAAD)* for ecocritical projects such as DFG research networks on "Ethik and Ästhetik in literarischen Repräsentationen ökologischer Transformationen," 2013–2016 (organized by Evi Zemanek), "Zeit des Klimas. Zur Verzeitlichung von Natur in der literarischen Moderne," 2014–2017 (organized by Eva Horn), and "Environmental Crisis and the Transnational Imagination," 2015–2017 (organized by Timo Müller); and in 2004, the founding of the *European Association for the Study of Literature, Culture and the Environment (EASLCE)* with the launching of its online journal *Ecocon*@ in 2010.

A first wave of German-focused ecocritical research had originated in German-Studies departments internationally, with publications by Jost Hermand (USA), Axel Goodbody (Great Britain), and Kate Rigby (Australia) in the 1980s and 1990s was complemented by the work of German Americanists who developed overarching theories and concepts for ecocriticism (and sometimes included German examples). The most influential theory—applied by many contributors of the volumes under review—seems to be Hubert Zapf's "triadic functional model of literature as cultural ecology," in which he identifies three discursive modes employed by ecological narratives: a "cultural-critical metadiscourse," an "imaginative counter-discourse," and a "reintegrative interdiscourse" (Dürbeck/Stobbe/Zapf/Zemanek 153). Americanist Ursula Heise's work with a global focus, such as *Sense of Place and Sense of Planet* (2008), is also frequently referred to. In addition, German scholars Hartmut and Gernot Böhme's concept of "Naturästhetik" is influential. The growing number of articles, special issues, anthologies, and a few mono-

graphs about German-language environmental literature that appeared in the first fifteen years of the 21st century¹ were eventually followed by two introductions to the field of German ecocriticism by Dürbeck/Stobbe (2015) [ed. note: see review in *Monatshefte* 110.1, Spring 2018, 115–117] and Bühler (2016) [ed. note: see review in Monatshefte 109.2, Summer 2017, 292–294].

A tremendous second wave of publications has arrived in the most recent three years, with a focus on German-language literature and culture but also beyond, including global environmental issues and comparatist approaches. With the exception of the Wilke/Johnstone volume, which considers its "Readings in the Anthropocene" as part of the broader field of the "Environmental Humanities," all the other collections include "öko-" or "eco" in their titles-a shift from earlier publications that had, in addition, frequently used the concepts of "nature," "green," "environment," or their German equivalents. While Schmitt/Solte-Gresser briefly reflect on the concept "Ökologie," which they will use "im Wortsinn von oikos = Hausgemeinschaft" (16) and thus, focus on the interactions between humans and the biotic and abiotic organisms with which they share an environment, it is Evi Zemanek who discusses the term in most detail in the introduction to her volume. Starting with Ernst Haeckel's concept (also based on *oikos*), she follows the development of the term "[v]on der biologischen Teildisziplin zur integrativen Leitwissenschaft" (10) and eventually on to the concept of a cultural ecology with literature as its medium (Zapf) and the emergence of "ecocriticism"—an approach to analyzing literary texts based on interdisciplinarity and a plurality of methods. Quite a few contributions across these volumes are still operating largely within the realm of a "Naturästhetik" or simply focus on the nature/culture dichotomy represented in the literary texts, which points to the fact that the term "ecology" may be used with the "semantische Unschärfe und Mehrdeutigkeit alles 'Ökologischen' in öffentlichen massenmedialen Diskursen und im Alltagsgebrauch" of which Zemanek warns (9). Other essays consider to a much greater extent ecological systems-the sum of which is the Earth's biosphere-and how they interact with the systems created by humans: with political, economic, ethical, aesthetic and-broadly speaking, cultural systems as reflected, e.g., in genre traditions and modes of writing. The shift from research about "nature" and "environmental" literature, which is primarily determined by content, towards ecocriticism also brings with it more attention to the specific literary forms and modes of writing, including new genres and intermedial forms.

As climate change, the loss of biodiversity, and environmental injustice (along with many other measures) are accelerating along the familiar hockeystick curves presented by scientific models, it is certainly not the sciences alone that produce the narrative for the future of our planet but increasingly the arts, the social sciences, and the collective field of the "environmental humanities." The Anthropocene—the new name for an epoch shaped by the massive impact of the human species on the Earth's atmosphere, biosphere, and geological strata—is fast becoming a concept with which to frame analyses of the political, economic, social and cultural systems that are now altering the Earth's biological, chemical, and atmospheric processes. In an interview, Timothy Clark—author of *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept* (2015)—correctly states that much ecocriticism takes the form of individual articles and that the critical anthology has become the dominant mode of publication in this field. He wonders if the genre of the anthology may actually be a "refusal of overview," might "feel intellectually evasive" or even "newly inadequate," and may—despite the individual value of the anthologized articles—leave the reader "with a sense that it is less than the sum of its parts" (Clark/Aquilina 2015, 283).

While the tremendous work that goes into assembling these anthologies deserves recognition. I will also consider whether the anthologies under review work as a whole and provide the added value one would expect from the genre. Since it will not be possible to do justice to the 132 individual articles assembled in the six anthologies, I will highlight the ones that I found to be most useful for the targeted audiences of literary and humanities scholars, the most intriguing and convincing, and the ones demonstrating new ways of thinking about and teaching environmental literature and the humanities. Any selection is also at least in part subjective, and the articles that are not mentioned may still be of excellent quality and significant scholarly impact. All publishers of these volumes make the table of contents available online. The full development of in-depth comprehensive studies that Timothy Clark is calling for may not have happened yet in German Studies, although some have arrived, such as the books by Ursula Heise (considering her German examples), Sabine Wilke, Andrew Liston, Sabine Frost, and the interdisciplinary investigation by Sybille Heidenreich included here.

II.

With 40 contributions, Claudia Schmitt and Christiane Solte-Gresser's anthology is the largest collection, as befits its broad topic of "Literatur und Ökologie" and its comparatist approach, with essays in three languages (three in English, four in French, the majority in German) by contributors from eight European countries and the US, working in German Studies (often combined with other fields), comparative literature, cultural studies, Anglophone literature, Romance Studies, and Slavic Studies. Confronting the fact that ecocriticism has so far blossomed primarily in the Anglophone realm, the editors pursue the goal of presenting a specifically European perspective. In their introduction, they explain underlying concepts of nature, environment, ecology, literature, and ecocriticism; unfold a short history of developments in international ecocriticism; and point out the potential of a comparatist ecocriticism "im Sinne eines komparatistischen Weltliteraturkonzepts" (22). They have grouped the essays under ten headings: (new) ecocritical approaches; transitional spaces between nature and culture; ecology between constructions of memory and future; ecology in lyrical texts; ecology and (post-)apocalyptic narrative; ecology in capitalist, and in socialist systems; intercultural and postcolonial dimensions of ecology; ecology in intermedial and multimedial productions; and problems of mediation for ecocritical messages.

In the first part, Hannes Bergthaller sees "ecocriticism's center of gravity" still in the US (55), and most of the essays frame their arguments with Anglophone ecocritical theories. But they appear alongside European theories and critical approaches such as Ulrich Beck's theory of risk, Serenella Iovino and Serpil Opperman's approach of Material Ecocriticism, Bruno Latour's "Pluriversum" and refusal to separate materialist reality from cultural values, Hubert Zapf's "cultural ecology," and Gernot Böhme's "Naturästhetik." Among the most successful essays are, in my opinion, Hannah Steurer's investigation of city discourse as nature discourse in German and French literature about the metaphorical "desert island" of Berlin; Susanne Scharnowski's contrastive analysis of the English countryside versus the German concept of "Heimat"; Linda Simonis's investigation of how the lyrical form of the Japanese haiku and its nature motifs and cosmic perspective were continued and transformed in the poetry of Philippe Jaccottet and Durs Grünbein; Ruth Neubauer-Petzoldt's broad overview and establishment of criteria for eco crime fiction as a genre between idyll and apocalypse; Eva Wiegmann's comparison of responses to a planned complete destruction of a community for the sake of a large-scale energy project as they unfold in the capitalist system of Switzerland versus the socialist system in Siberia, also teasing out the structural analogies between ecosystem and political system; Jana Schuster's analysis of Heiner Goebbels's creative installation performance Stifters Dinge and how Stifter's own aesthetic, based only on the written text, was successful in its own ways; Evi Zemanek's comparison of three scientific climate-change comics from Germany, France, and Great Britain (with illustrations); and finally Hans-Joachim Backe's broad overview of "green gaming" and establishment of a heuristic for assessing the ecocritical dimensions of computer games. Overall, this voluminous and diverse collection, with essays that are only 10–15 pages long and including untranslated quotes, is clearly targeted at multilingual scholars looking for a broad range of European-focused ecocritical essays; the lack of an index (all other volumes have one) makes cross-referencing more difficult. But its comparatist approach is convincing and illuminates new interconnections both at the level of ecocritical content and its formal artistic expressions.

Sieglinde Grimm and Berbeli Wanning's volume has a different agenda. They address the challenge of how to integrate cultural ecology with teaching literature, applying the principle of a "Themenorientierte Literaturdidaktik (TOLD)" as a way of reintroducing content after decades of focusing on literary history and formal aspects. This is done with the goal of motivating students to discover literature and encourage active learning. The collection does not provide detailed lesson plans but instead presents an array of suggestions for making productive changes to one's pedagogy, e.g. by connecting "standard" topics and texts with current developments or media adaptations, or including materials from other disciplines, such as the sciences. Target audiences for this pedagogy range from children browsing picture books and teenagers reading youth literature to college students studying Germanistik. The attention being paid to actual didactics varies a great deal; contributors with expertise in pedagogy typically present more carefully elaborated didactic ideas. The range of literary and non-fiction forms discussed is broad: picture books, movies, novels, science fiction, journalistic discourses, canonical texts, photographs, poetry, drama, popular fiction and film, travel reports, and essays.

The 21 contributions are losely grouped under four headings: "Die Zukunft meistern-an der Zukunft scheitern," "Männer und Frauen-Künstliche Körper," "Räume-Landschaften-Reisen," and "Von der Natur lernen-Den Menschen verstehen," with color images included in some of the essays. This is the case in the first essay by Elisabeth Hollerweger, who investigates a "classic" environmental text, Dr. Seuss's picture-book story The Lorax (1971), and its much more recent film adaptation from 2012 (Universal Pictures, USA), which brought renewed attention to this figure and the principles of sustainability already included in the early text. The author shows how text and film use different narrative and visual strategies in order to teach about sustainability and generational justice and provide models for identification and empathy. Jana Mikota gives an overview of dystopian youth literature, which comes with the particular challenges of negativity, catastrophic scenarios, and the danger of a fatalistic outlook and therefore requires a delicate pedagogy. Gabriele Dürbeck offers an excellent interpretation of Dirk C. Fleck's ecothriller Das Tahiti-Projekt (2007), within the context of genre and the discourse of the exotic, but primarily investigating how the Anthropocene is reflected in this narrative. How can we teach our students to deal with catastrophes? Looking at a great number of narratives from literary, filmic and journalistic discourses, Torsten Pflugmacher develops a didactic for teaching catastrophes and their narratives by creating cognitively rational scenarios that will enable students to develop their competencies for assessing and meeting the challenges of catastrophes.

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Opening the second part of the collection, on artificial bodies, Sieglinde Grimm reads texts by E.T.A. Hoffmann and Gottfried Keller within the context of Human-Animal Studies and provides suggestions for teaching about perceptions of the boundary between human and artificial life, including current discussions about genetic engineering. As an alternative to traditional practices of teaching literature, Ulrich Kinzel presents creative ideas for teaching youth about developing a positive self-image by considering (pop) idols (Marilyn Monroe), body image (anorexia), Brecht's poem "Gegen Verführung," and Rilke's poem "Archaischer Torso Apollos." In the third part, Anica Betz reports how she takes students out of the classroom to facilitate experiential learning about the constructedness of both literature and, through perception, real spaces. Part Four contains an excellent, more conceptually oriented essay by Susanne Scharnowski in which she calls for renewed attention to emotional-aesthetic positions vis-à-vis the dominant techno-scientific and political discourses on ecology. Overall, Grimm and Wanning's volume is an inspiring collection made cohesive through the focus on pedagogy, with a wealth of ideas from which any instructor at any level could benefit and develop their own didactic of environmental literature and ecocriticism.

IV.

A discussion of "ecological genres" is truly welcome given the frequently offered observation that environmental literature has spawned its own new genres, is favoring certain genres that have so far occupied a more marginal position in academic discussions, and has transformed some of the traditional genres. Evi Zemanek's introduction is the longest and most thorough one among all the introductions. Starting with a reference to Ernst Haeckel, who first defined the term "ecology" over a hundred years ago, and whose Kunstformen der Natur (1904) grace the attractive book cover, Zemanek leads her reader through an overview of the history of the term and its developments, "[v]on der biologischen Teildisziplin zur integrativen Leitwissenschaft." She presents the broad spectrum of ecological genres and explains the terms Gattung, genre, mode of writing, and discourse, pointing out that the contributors' selection of examples includes not only representative works but also those triggering genre transformations and a change of paradigms. Many essays cover long periods of time and consider transnational iterations of a genre. Zemanek's summary of the contributions includes a section on utopia and dystopia, which she considers to be not genres but modes of writing which permeate many of the genres discussed across multiple essays, and which are therefore not represented in separate essays. All but one of the contributors teach or study at German-speaking universities, their specialties including German literature, Anglophone literatures, pedagogy, Hispanic literatures, comparative literature, history, political science and cultural studies.

Evi Zemanek and Anna Rauscher's article on the "ecological potential" of the subgenre of nature poetry (including ecopoetry) provides excellent definitions, an overview of ecological discourses in poetry with topics such as sustainability and the human-caused destruction of nature, and then explains how poetry (in German and Anglophone examples) moved from an anthropocentric to a bio/ecocentric perspective represented in changing hierarchies, anthropomorphization, phantasies of merging, and the imitation of nature in role poems. The essay concludes with a discussion of how traditional lyrical forms such as the ode, the *terza rima*, the sonnet, and free verse adapted and evolved as they were shaped by their ecological content. It is enlightening to follow the "Bildungsroman" as it evolves through the centuries into a much more open and hybrid genre that includes ecological knowledge and education toward the goal of sustainability; Berbeli Wanning discusses it at the intersection of environmental theories, genre, and well-chosen examples from its German tradition. The eco-thriller is, of course, a new but increasingly popular genre at the nexus of thriller, utopian text, investigative journalism, scientific narrative, and docufiction, geared towards educating and activating the reader; in her feminist reading, Katrin Schneider, however, detects the essentialist and chauvinist gender roles aligning the feminine with nature, and with weakness, while the masculine is associated with technology, and with strength and dominance. Anna Stemman investigates "Genretransgressionen und hybride Erzählstrategien in ökologischen Krisenszenarien der Kinder-und Jugendliteratur," where she finds that a plethora of hybrid forms-such as comics, films, series, computer games, and interactive apps-have been added to the traditional medium of the book. The intermedial text-and-image combinations are further diversified by the use of multiple perspectives and a switching back and forth between factual and fictional narrative modes. Finally, Simone Schröder takes a look at the nature essay in German literature since 1800, discussing examples by Alexander von Humboldt, Ernst Jünger, and Andreas Maier/Christine Büchner. While Germany lacks the recognized tradition of "nature writing" that had developed in the U.S., it does have a tradition of the nature essay, which addresses ecological issues in a combination of description, introspection, and reflection that is characterized by an aesthetics of rapid alternation among these modes of writing.

Other genres and topics discussed that cannot be covered in detail here are the *Lehrgedicht*, *Idylle* (pastoral), the (Kunst-)Märchen, the *Robinsonade*, the meta-genre drama, the *Schauerroman*, the *Risikonarrativ*, science fiction, the parallels between the slave narrative and the liberation of the cyborg in science fiction, the diary, travel literature, the *Chronik/Testimonialliteratur*, and also the non-fiction genre of *Ratgeber-Literatur*.

No collection is ever complete, and here, too, there is room for future additions: the genres of the ecological story or short story, the novella, and the comic are three examples that still call for an investigation, although the comic is included in several of the chapters and Zemanek has published on it elsewhere (e.g. in Schmitt/Solte-Gresser). What is presented, however, helps clarify the genre transformations that were effected in part by the texts' ecological content. Discussing a much more inclusive range of genres than customary establishes the volume's pioneering role and demonstrates the value of this collection, which is a treasure trove for anybody looking to expand their research focus or the materials they might select for teaching literary ecology.

V.

The volume Ecological Thought in German Literature and Culture, edited by four well-known scholars in the field of ecocriticism, is the most wideranging and multidisciplinary collection. Its international cast of contributors brings disciplines and specializations to the table that go beyond German Studies, including environmental and sustainability studies, history, art history, film studies, landscape management, cultural ecology, philosophy, American studies, environmental humanities, chemistry, linguistics, comparative literature, teaching methodologies, landscape architecture, and interart studies. It was particularly refreshing to read essays written from a scientific or applied-science perspective, and one can only hope that future anthologies will follow this example and also include disciplinary perspectives from beyond the humanities and the arts, even though true integration can be difficult to achieve. The decision to include both the original German and an English translation of all quotes is certainly welcome and serves multiple audiences. The collection's underlying concept of "ecological thought" is very inclusive, or, as the editors state, "consists of a plurality of different developments, ideas, directions, and approaches" (xiv), but the essays are convincingly grouped into five parts under the headings "Proto-Ecological Thought," "Theoretical Approaches," "Environmental History in Germany," "Ecocritical Case Studies of German Literature," and "Ecological Visions in Painting, Music, Film, and Land Art."

Heather I. Sullivan has established herself as the expert on Goethe's concept of nature and re-reading his work from an ecocritical perspective, in particular from what is considered "to be a 'proto-ecological' perspective, in other words, a mapping out of material interactions of all living and nonliving things, including the human, with much similarity to the complex web or in Timothy Morton's term—"mesh" of agential processes often termed 'na-tureculture' in material ecocriticism" (18). Caroline Schaumann investigates Alexander von Humboldt, a writer and researcher who has recently garnered tremendous attention. She investigates how he already "noticed degrading conditions of both humans and the environment, and pointed ahead to some key environmental challenges of the Anthropocene" (65)—all in all a "sweeping yet detailed critique of the modern practices of exploitation" (71). Among the theoretical approaches of the second part, Timo Müller presents an excellent exploration of fundamental concerns shared by the Frankfurt School of critical theory and ecocriticism, e.g., its continuation in Timothy Morton's constructivist ecocriticism. Hannes Bergthaller considers "Niklas Luhmann's Theory of Social Systems" as an antidote to the ecological crisis; and Benjamin Bühler elaborates on three models of risk theory. Exceedingly useful is the concise version of his triadic functional model of "Cultural Ecology as a Transdisciplinary Paradigm of Literary Studies" which Hubert Zapf presents—a model that has become a widely used tool for assessing the ecocritical potential and strategies of literary texts. The Americanist here demonstrates its three dimensions of "culture-critical metadiscourse," "imaginative counter-discourse," and "reintegrative interdiscourse" in texts by Rilke, Kafka, Goethe, and Thomas Mann.

Among the informative essays of Part III on environmental history in Germany, I would like to highlight the two written by non-historians since they contribute intriguing new perspectives. Werner Konold looks at the continuities, ruptures, and stewardship in a large variety of cultural landscapes in Germany as he traces their "growth" and change, such as terraced vineyards; land consolidations; melioration landscapes for bogs, reedy marshes, sandy areas; regulation of water courses; and the creation of large-scale agricultural landscapes in Eastern Germany. Konold then points out ideas for how to exercise better "cultural landscape stewardship" (207). In his essay on "Substance Stories," chemist/philosopher Jens Soentgen writes about the "histories of things" (231) within the field of "material cultural studies" (235), critically engaging with Arjun Appadurai's "seminal volume 'The Social Life of Things'" (235). He investigates "[e]cological side effects" (238)—such as the (unintended, uncontrolled/uncontrollable) dissipation of substances like asbestos, nitrogen fertilizer, DDT, arsenic, or Agent Orange, and the resulting pollution-that bring to light the self-mobile agency of substances.

Part IV presents case studies and includes an excellent overview by Axel Goodbody on the development of "German Ecopoetry: From 'Naturlyrik' (Nature Poetry) and 'Ökolyrik' (Environmental Poetry) to Poetry in the Anthropocene"; an investigation of "Elemental Poetics" by Evi Zemanek, in which she traces material agency; and Gabriele Dürbeck's investigation of climate-change fiction and ecothrillers (Frisch, Trojanow, Schätzing, Fleck). Among the essays of Part V, Matthias Hurst's broad overview of German environmental films and ecocinema, from "Heimatfilm" and "Bergfilm" to German Westerns, "Green Films since the 1970s," and TV productions provides a good sense of the development of this subgenre of the feature film within the German tradition. The volume closes with an article by Udo Weilacher at the intersection of art and landscape, with black-and-white photographs, discussing issues such as transience. All in all, *Ecological Thought* is a well-conceived and inspiring volume with mostly excellent essays on an especially broad variety of ecological topics, approached with diverse disciplinary and interdisciplinary analytical tools, and attractive to humanities scholars interested in German contributions to cultural ecology.

VI.

The impact of human activities such as industrial agriculture, construction of megacities, increased mobility of people and goods, and technology on altering the surface of the Earth and the composition of geological strata has led atmospheric chemist Paul Crutzen and biologist Eugene Stoermer to propose in the year 2000 that we have entered into a new planetary epoch following the Holocene: the age of the human, the Anthropocene. They date its beginning to the invention of the steam engine driven by fossil fuels in the late 18th century—the era of industrialization, during which global CO₂ levels and other greenhouse gases have risen sharply.² While scientists will continue to collect data to support any decision on whether we have truly entered into a new geological epoch and what its starting date might be, the Anthropocene is no longer merely a geological term based on stratigraphic traces found in the planet's biosphere but has evolved into a cultural concept and a force arising from political, economic, technological, and social systems that shape the earth as much as (or perhaps more than) biological, chemical and atmospheric processes. Human history and natural history can no longer be separated and are being rewritten based on the recognized agency of the nonhuman world of animals, plants, organic and inorganic matter, and (hyper)objects that have co-created our world on this planet.

While much of the attention for the Anthropocene has originated in Anglophone scholarship, Schaumann/Sullivan as well as Wilke/Johnstone present collections of ecocritical essays specifically about German literature and other media such as film, TV, or caricatures (as well as German philosophy in the Wilke/Johnstone volume); they have made them accessible to the global academic community since both volumes are in English, with translated quotes. For both collections, about two thirds of the contributors are widely published scholars in ecocriticism, of whom seven are represented in both volumes, with different essays. The editors for both volumes briefly explain the concept of the Anthropocene, following Crutzen/Stoermer (2000) in dating its beginning to around 1770 with the start of the Industrial Revolution and thus including research about texts from roughly the last 250 years. Most essays in the collections are case studies or combine short comparative case studies with coverage of broader topics such as a common trope for the Anthropocene (Sullivan), Romanticism (Rigby), genres such as climate fiction (Goodbody) or the ecothriller (Dürbeck) in the Schaumann/Sullivan volume; hybrid environments (Schaumann/Sullivan), the idea of sustainability

(Wilczek), science and technology (Struck, Wilczek, Ritson) in the Wilke/ Johnstone volume; as well as ethics, aesthetics, and poetics for a new geological age in many of the essays.

In her preface to Schaumann/Sullivan's German Ecocriticism in the Anthropocene, German Americanist Ursula Heise fittingly presents the "basic differences [...] between American and German environmental literature and politics" (2), such as the North American "rhetoric of a 'sense of place'" and the key concept of wilderness in contrast to German notions of Heimat and Landschaft, which "in this context usually means humanly transformed landscapes that combine culture and nature" (3). Heather I. Sullivan's essay on "The Dark Pastoral: A Trope for the Anthropocene" serves as an excellent introduction to the ways in which "stories and narrative forms" provide a "specifically *literary* frame for environmental studies and the environmental humanities" (25). While the traditional pastoral presents "nostalgia for idealized rural landscapes" Sullivan sees the "dark pastoral" (a term alluding to Timothy Morton's "dark ecology") as "not a designated literary genre" but as a trope, as the pastoral's "second side," which exposes the "seemingly hidden and ignored costs of global industrial capitalism" (26) and the "anthropogenic re-shaping" (28) of our planet. She discusses the presence of this trope in Goethe's Werther, Kleist's Erdbeben, Storm's Schimmelreiter, Pausewang's Die Wolke, and Trojanow's EisTau. The first section of the book under the heading "Ecological Systems and Place in the Anthropocene" is completed by essays on Goethe, Stifter, and Handke.

Invoking Jane Bennett's seminal text, Part II, "Vibrant Matter: Rocks, Mines, Air, and Food," assembles essays that look at literary texts through the lens of Material Ecocriticism, an approach which regards "the world's material phenomena [as] knots in a vast network of agencies, that can be 'read' and interpreted as forming narratives, stories" (Iovino/Oppermann 1). "Dig[ging] down into Novalis's poetics of mining" (116), Kate Rigby excavates not only the author's (and Romanticism's) well-known enthusiasm for the extraction of subterranean resources but also his advocacy for a less materialistic relationship with the non-human world, "restoring voice, agency and ethical significance to 'beasts, and trees, and rocks'" (120). In an intriguing analysis by Evi Zemanek, Fontane's persistent comments, throughout his novels, diaries and letters, on (bad) air, together with discussion of discoveries in contemporary medicine and bacteriology, exemplify how Stacy Alaimo's concept of "trans-corporeality" captures environmental impacts such as that of increasing industrial air pollution on human health and even, also detrimentally, on poetic inspiration. Wilke and Wilke-Gray re-read Kafka's "Hunger Artist" as a performance of capitalism's ultimately self-destructive logic of consumption. And Caroline Schaumann traces the fluidity of boundaries between human and nonhuman beings in Enzensberger's Geschichte der Natur.

The heading for Part III, "Catastrophe, Crisis, and Cultural Exploitation," again addresses topics current in scholarship on the Anthropocene. Christoph Weber reads Franz Hohler's apocalyptic novel Der neue Berg with Rob Nixon's concept of "slow violence." A second case study of environmental exploitation in Alpine topography, through technology and large dams, is presented in Sean Ireton's discussion of Thomas Bernhard's novel *Frost* in the context of Austrian national history and literature, especially Stifter and Jelinek. Brad Prager's investigation of Werner Herzog's and Polish director Michał Marczak's filmic excursions into the Amazonian rainforest finds similarities in the ways in which both filmmakers with their egocentric perspective, European gaze, and Romantic and colonial fantasies completely fail to understand another culture and its environment. Finally, Katharina Gerstenberger investigates Kathrin Röggla's attempt to determine "how we assess environmental risk" in her made-for-TV documentary The Mobile Future. She successfully maps Ulrich Beck's risk theory onto Röggla's documentary and filmic strategies.

The last section, on "Genres in the Anthropocene," contains three outstanding contributions: Jason Groves reads Sebald's long prose poem *Nach der Natur* and his novels as an "Anthropocene imaginary." Axel Goodbody provides an overview of climate fiction, then compares Trojanow's *EisTau*, "a flawed work" (306) "of death and despair" (308), with Cornelia Franz's novel *Ins Nordlicht blicken*, which is able to fuse climate change with human drama and hope. And Gabriele Dürbeck explores once more the "genre-mix" of the ecothriller with examples by Schätzing and Fleck.

The overall strength of this volume, whose readers would be mostly Germanists, lies in the way its authors build bridges between ecocritical concepts, theories of the Anthropocene, and the stories of humans and the nonhuman world narrated in canonical texts of German literature plus some wellknown films and genres favored by recent environmental literature.

VII.

Similar to the Schaumann/Sullivan volume in that it takes its overarching themes from central issues and new approaches in Anthropocene Studies, the Wilke/Johnstone collection groups them around "nodes where literary-critical readings and philosophical investigations meet nature and the environment in the Anthropocene" (7), but is casting a wider net beyond German Studies into the environmental humanities and "prob[ing] the need for collaborations across disciplinary boundaries" (13). In Part I, "Entanglements," Wolfgang Struck discusses the idea of "Nature Beyond Humankind," as represented by science, literature (Melville, Schalansky), and art (Caspar David Friedrich, Sugimoto). Schaumann/Sullivan track down the "mini-ecosystems" of "hybrid environments" in recent German texts by Meyer, Dückers, and Eschbach,

looking at "the products and animals for sale in the supermarket" (43), a trashfilled desert environment (46), and energy landscapes in sci-fi and ecothrillers (50)—finding that rather "than emphasizing the death and the destruction of existing ecologies, they instead depict resilience and creative adaptations" (60) and "new, hybrid places with their own vibrant energies and dangers" (60). Sabine Frost's comparison of Marlen Haushofer's novel *Die Wand* (1963) and its much more recent filmic adaptation by Austrian director Julian Roman Pölsler (2012) is an excellent investigation of how the different media of text and image as well as different authorial choices create vastly different imaginations of nature and humanity. In contrast to Haushofer, Pölsler romanticizes nature and prevents the reflection about anthropocenic issues that Haushofer had included, even though she did not yet know the concept.

In Part II, "Excess/Sustainability," Evi Zemanek's essay on "Caricatures of Man-Made Landscapes in German Satirical Magazines from the Fin de Siècle" (with six captivating images) tracks down a less canonical but culturally influential genre and selects examples that demonstrate an early critical consciousness of the negative human impact on the environment through modernization. In her critical reading of Hilbig's *Alte Abdeckerei*, a text featuring a post-industrial landscape with "degenerated vegetal life" (154) and toxic substances, Sabine Nöllgen illuminates the nexus between this landscape and the Holocaust as well as the Gaia hypothesis, showing a "paralle-lization of genocide and ecocide," and a poetic negotiation of "the Anthropocene as an age of darkness" (151).

In Part III, on "Periodization and Scale," Sean Ireton traces Stifter's *sanftes Gesetz*, from his preface to *Bunte Steine* (1853) through that collection of narratives as well as through *Die Mappe meines Urgroßvaters* (1848) and, briefly, his novel *Der Nachsommer* (1857). He finds that Stifter's "*gentle* biocentric ethic" (219) aligns him with Thoreau but also "with modern environmental-ethical movements like 'deep ecology'" (203). In her reading of Storm's novella *Der Schimmelreiter* (1888), Katie Ritson investigates how modern technology in the form of landscape engineering and the belief that nature can be controlled by humans collide with "pre-modern superstition" (227) that may in fact be "folk (and feminine) knowledge" (228). She also detects a correspondence between the breached dikes and the incomplete frames of the narrative.

In the first essay of Part IV, "Diffusion, the Lithic, and a Planetary Praxis," Jason Groves suggests the term "petrifiction" for "fictional encounters with virtually any stratum in the lithosphere" (245), looks at texts by Romantic writers that depict the era's fascination with mining, such as Tieck's narrative "Der Runenberg" (1802), and exposes parallels between its material/imaginary objects and today's corresponding objects, such as a touchscreen tablet. Another excellent contribution is Bernhard Malkmus's essay on "The Anthroposcene" (sic) and "Diffuse Dwelling," which, arguing with Timothy

Clark's concept of the Anthropocene scale, analyzes Graham Swift's *Waterland* (1983) and W.G. Sebald's *The Rings of Saturn* (1995) as texts that are "anthropo-scenic" in that "they trace human history in a particular landscape and through the historical sediments of that scenery" (292).

In the last essay of the collection, "Planetary Praxis in the Anthropocene: An Ethics and Poetics for a New Geological Age," Sabine Wilke opens up the view to a broad assessment of connections among scientific Antropocenic research, the critical theory of the Frankfurt school, Germany's protest movements of the 60s and 70s, and (among others) the work of Kant, Hans Jonas, and Timothy Morton. She states that a "planetary praxis also needs aesthetics" (306) and sees hybrid genres replacing the grand narratives of modernity since they "might be more effective in shaping a poetics of coexistence, cohabitation and interconnectivity in the Anthropocene" (310). While this essay would have made an effective conclusion to the collection. Axel Goodbody's "Epilogue" about "The Anthropocene in German Perspective" pulls together some of the main strands of the fabric of this volume: in particular, the fact that it addresses two questions, the "environmental imagination" (Lawrence Buell), and how literature can help meet the challenges of the Anthropocene. He also finds that the collected essays "engage with three distinct dimensions of the Anthropocene discourse, [...] its genealogy, [...] literary and visual representations," and "the implications of the Anthropocene for aesthetics and poetology" (317). He ends by alerting his readers to "the ultimate conundrum for the novelist in the Anthropocene," pointed out by Timothy Clark, namely, that the privileging of the human cannot altogether cease; the same is true for research into the Anthropocene, which must, despite all attempts at "decentering the human" (319), be carried out by humans.

VIII.

The unusual title of Sybille Heidenreich's book *Das ökologische Auge: Land-schaftsmalerei im Spiegel nachhaltiger Entwicklung* seems to announce an art-historical analysis framed by its ecohistorical context. However, it is so much more than that. For each chapter, the author presents a landscape painting that serves to introduce the topic, but then she unfolds, in breadth and in depth, the political, social, cultural, and environmental history of the issue under scrutiny, accompanied by additional color images. More than most articles in the anthologies discussed above, this is a truly interdisciplinary investigation that integrates knowledge from virtually all academic fields: data from the sciences; the results of historical, political, economic, psychological, and anthropological research; ideas, ethics, and aesthetics of philosophers and other thinkers; and a focus on the interconnections between environmental history and its reflections in literature, music, and the arts.

Geographically, the focus is Europe but examples from other countries and topographies are included where pertinent. The organization is thematic, not chronological, and each chapter covers developments spanning centuries; one gets a real sense of the historical depth of environmental changes and how today's landscape, as a co-creation by both nature and human activities, came into being. The chapters are grouped in two parts and written from those perspectives: Part I: "Das gab es schon" and Part II: "Das gab es noch"—this one, fittingly, also in the past tense, since it looks at historical developments, not just the present.

The list of topics that Heidenreich investigates is comprehensive: Part I: weather, climate change, and the Little Ice Age; the economics, overuse, and love of the forest, as well as "Waldsterben"; the use of rivers as highways for trade, and river course regulation; the development from early agriculture to industrialized agriculture with its monocultures, chemicals, and loss of biodiversity; the drainage of swamps and moors as a colonization of wilderness; coal mining and industrialization; the arrival of trains, speed and global mobility (of people and plants). Part II: wilderness, its relegation to borderlands, and attempts at rewilding; dragons, wild animals, the noble (and the bad) savage—all as "the other" of civilization—and the return of wild animals such as the wolf and the buffalo in the US; grass, meadows, the industrial production of sod, and urban nature; commons for grazing animals, and factory farming; plant diversity in fields and its loss through chemical agriculture; river flood plains and their restoration; ocean exploitation and pollution.

What is really unique, however, is Heidenreich's method of integrating many fields of knowledge in her eminently readable narrative. As an example, I will describe two chapters which both focus on rivers: "Flusslandschaft mit schöner Aussicht. Die Entstehung der Wasserautobahn. Das Bild: Lasinsky, Der Rhein bei Koblenz-Ehrenbreitstein" and its stated ecological topic of "Flussregulierungen"; and a corresponding chapter in Part II, which turns the attention to restoration projects: "Mäandernde Flüsse. Das Bild: Birmann, Blick vom Isteiner Klotz," focusing on "Auenlandschaften." Heidenreich starts by describing the details in Lasinsky's painting, which shows an expanse of the river Rhine with a fortress in the background, a long raft in the river, and in the foreground a number of workers pulling tree trunks from a second raft at the river bank. After providing a short cultural history of the Rhine (in other chapters she is apt to describe the art-historical context and biography of the painter as well), Heidenreich moves on to the second part of the chapter: "Das ökologische Auge: Flussregulierungen". In her introduction to the volume, she had defined "ökologisches Auge" as a perspective to be applied to art, looking at its various aesthetic and historical layers, parallel to how ecocriticism deals with literature. This section in every chapter explores how our current environmental problems have developed over time; here, it investigates what caused humans to drastically change the course of rivers and convert them to completely straight, fast-flowing water highways that now cause major flooding and other environmental damage. Heidenreich shows how this started with the Dutch need for large tree trunks for ship building and loggers from the Black Forest supplying them, wanting uninhibited transport on a fast-flowing, wide river. Quotes from Wilhelm Hauff's famous story "Das kalte Herz" with its protagonist of the "Holländer Michel" illustrate her argument, which then turns to industrialization requiring straight, deep waterways for steam boats, and a discussion of the consequences of ecological damage. Another problem is pollution by industry, as thematized in Germany's first environmental novel, Wilhelm Raabe's Pfisters Mühle (1884), and subsequent damages up to the present, such as the loss of most fish species and riparian biotopes. Almost 70% of German river courses have been changed, so a federal program started in 2017 with the aim of renaturalizing rivers and connecting biotopes, the so-called "Blaues Band Deutschland," will be a huge environmental project going forward. It is presented in the corresponding short chapter in Part II, which describes restoration projects supported by the government, environmental organizations, and the EU, for the rivers Rhine and Danube. Success is measured in returning fish but much work remains to be done.

As may be obvious from this example, Heidenreich spends most of her energy discussing all facets of environmental issues, often including fictional representations, which is of interest to literary scholars. Overall, her book is so well written and attractively presented that it will appeal to anybody who is interested in environmental history and questions of sustainability seen through the lens of cultural ecology.

IX.

Considering this large crop of German/German-Studies ecocriticism, it appears that the field is now well established and should have more of an impact on *Germanistik* in general as well as on international ecocriticism. This may not quite be the case as yet—but the momentum is certainly there, and more ecocritical work about German literature (that could not be included in this review) is on the horizon, such as another collection, edited by Dürbeck, Kanz, and Zschachlitz, on ecological change in German-language literature of the 20th and 21st century, and a new biannual interdisciplinary journal, edited by Richter and Rötzer, which has started publication in August 2018: *Dritte Natur. Technik—Kapital—Umwelt*.

Scholars from the science-and-technology fields often favor perspectives that are less pessimistic about environmental change and privilege a problem-solving attitude; it could be productive to establish more interdisciplinary dialogue with this other "culture" of the two that C.P. Snow identified a long time ago—this is definitely a research desideratum for the future. Another one would be more attention to the emerging field of (critical, or human)-plant studies, similar to the already well-established human-animal studies; as of now, only very few authors have overcome the common problem of "plant blindness"—not noticing plants at all and not perceiving them as living (even sentient) beings.³ Considering that human existence is completely dependent on what the vegetal world provides, it would certainly behoove us to re-examine our relationship with plants, acknowledge their cultural contributions, and respect their significance for a life-supporting biosphere.⁴

¹Two excellent overviews of German ecocriticism from its beginning to about 2015 are presented by Axel Goodbody (2014, 2015). Publications from 2010 to 2014 have been reviewed by Sabine Wilke (2015). Examples of special journal issues are: "Themenheft: Dirty Nature," *Colloquia Germanica* 44.2 (2011); a Sonderheft on "Müll," *Zeitschrift für deutsche Philologie* 133 (2014); "Helden, ambivalente Protagonisten, nicht-menschliche Agenzien. Zur Figuren-darstellung in umweltbezogener Literatur," *Komparatistik Online* 2 (2015); "Mensch-Maschine-Materie-Tier: Entwürfe posthumaner Interaktionen," *Philologie im Netz*, Beiheft 10 (2016); and "The Challenge of Ecology to the Humanities: Posthumanism or Humanism?" *New German Critique* 128, 43.2 (2016).

²Succinct introductions in German to the concept of the Anthropocene can be found in Dürbeck/Stobbe (2015) and Trischler (2016). Trischler aptly contrasts the geological and the cultural concepts.

³The volume by Gagliano, Ryan, and Vieira (2017) provides an excellent introduction.

⁴The recently established "Literary and Cultural Plant Studies Network" (https://plants. sites.arizona.edu/) and a forthcoming special issue of *Literatur für Leser* address this.

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