

## Speculative Writing and Environmental Politics: Ecocritical Readings of *Oryx and Crake* and *Der Schwarm*

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### Abstract:

This paper provides a comparative ecocritical study of two contemporary novels, *Oryx and Crake* (2003) by Canadian Margaret Atwood and *Der Schwarm* (The Swarm; 2004) by German Frank Schätzing, in order to emphasize the global dimension of environmental concerns expressed by these authors on one hand, and the need for what Ursula K. Heise has termed a 'sense of planet' in the required scholarship on the other. While the two texts differ in style and format, they both represent natural disasters that are results of misguided scientific developments and political decisions. Both, *Oryx and Crake* and *Der Schwarm*, focus on the involvement of the so-called 'natural' or 'hard sciences', mostly genetic engineering in Atwood's story and oceanography, as well as marine biology along with petro-chemistry in Schätzing's. They likewise provide sources of suggested comfort, and through the diversity of settings underline a global urgency as it relates to concepts such as 'globalization', 'sustainability', and 'risk society'.

*Keywords:* Atwood, Ecocriticism, *Oryx and Crake*, Schätzing, Speculative Fiction

## Introduction

When Cheryll Glotfelty and Harold Fromm edited their seminal *Ecocriticism Reader* about two decades ago, this area of literary studies was only about to be introduced. For the obvious reason that concerns about the planet's natural environments have unfortunately had no reason to decrease since then, the literary representation of these concerns has grown along with analyses in the field. Associations and journals have been established, and individual studies, such as Axel Goodbody's *Technology and Cultural Change in Twentieth-Century German Literature: The Challenge of Ecocriticism*, apply the critical approach to texts in a specific language or also by individual authors. The importance given to ecocritical studies, in particular in North America, may be measured by the fact that one of its main proponents, Ursula K. Heise, has been appointed Head of the editorial team by the American Comparative Literature Association to generate the next decennial report on the state of the discipline. My essay intends to add a comparative analysis of two contemporary novels, Margaret Atwood's *Oryx and Crake* (2003) and Frank Schätzing's *Der Schwarm* (The Swarm; 2004), to the existing body of ecocritical literary scholarship. I will demonstrate how to read the Canadian alongside the German author means to emphasize the global dimension of their environmental concerns. In my comparative analysis of the two texts, which the authors themselves situate between speculative and science fiction, I scrutinize three particular aspects of the imagined eco-disasters: the involvement of the so-called 'hard sciences', the sources of suggested comfort or hope, and the presence of what Heise describes as a 'sense of planet'. It is the last concept which firmly situates the two texts in question on the kind of early twenty-first-century globe that is grappling with phenomena such as 'globalization', 'global warming', variations of 'cosmopolitanism', and what Ulrich Beck has termed 'risk society'. It is therefore also the idea of a 'sense of planet' which most tangibly links my analysis to the kind of politics, at least in their literary representations, that are currently challenged to come to terms with problems pertaining to sustainability.

## Comparative Analysis of *Oryx and Crake* and *Der Schwarm*

"In reality," Fromm writes in his review of Glen A. Love's *Practical Ecocriticism: Literature, Biology, and the Environment*, "there is not and never has been such a thing as 'the environment.' Nothing 'surrounds' a human being who is made of some special substance that can be distinguished from the 'surroundings.' There is only one congeries of earthly substance and it comprises everything from eukaryotes to Albert Einstein" (Fromm, 2004). Such modification of the concept of 'reality' may lead the reader to assume that no actions of the likes of Einstein could possibly have a destructive effect on what is commonly referred to as 'the environment,' since the idea of aggregation, one should hope, implies constructive cooperation. On the other hand the statement emphasizes that environmental damage, developed to a considerable extent by Einstein's colleagues in the sciences, affects not exclusively 'the environment' but its inhabitants as a part of it. For the purpose of my ecocritical argument, to highlight some of the threats today's natural landscapes are exposed to through an analysis of ways in which these threats are represented in creative expression, I propose to hold on to the concept of 'environment' as the setting populated with characters who are either not at all or extremely worried about their setting's future.

Fromm's statement resonates in the Inuit "hishuk ish ts'awalk," which Schätzing chose as a motto for *Der Schwarm*. Indigenous collective memory plays a crucial role in Schätzing's novel since one of the main characters is born, though not raised, in a Native American community in Nunavut. This character is the one to eventually receive a translation, "all is one," for the "hishuk ish ts'awalk" the reader encounters before the beginning of the story. Leslie Marmon Silko has expressed the same idea of connectedness between all organisms and their locations in the sentence that "viewers are as much a part of the landscape as the boulders they stand on" (Glotfelty & Fromm, 1996: 266). This sentence is taken from an essay included in the *Ecocriticism Reader* referred to above. Analyses in this collection focus on texts either praising the earth's natural wealth and/or signaling due alarm about the increasing dangers of its destruction. It is the latter kind which usually looks to politics among the culprits responsible for environmental calamities. Atwood's *Oryx and Crake* as well as Schätzing's *Schwarm* are two recent novels belonging to this accusing kind of text and by implication challenge specific politics of their global settings. Playing with different notions of 'reality' and their involvement with environmental politics both authors are concerned with the ways in which Einstein's colleagues in the so-called 'natural' sciences have been treating their metaphorical outlook boulders. The importance of the unity of setting and characters as one "congeries of earthly substance" is more pronounced in Schätzing's text, but also implied in Atwood's. It is increasingly emphasized in the recently published closing part of the trilogy beginning with *Oryx and Crake*, the part entitled *MaddAddam* (2013). The connection between Atwood's three novels now referred to as the Maddaddam Trilogy and ecocriticism will become clear in the process of the present analysis.

Both *Oryx and Crake* and *Der Schwarm* present their readers with scenarios of environmental disasters. While the catastrophe in Schätzing's one-thousand-page piece could begin to unfold tomorrow, Atwood's novel is projecting a slightly more distant future. While the main focus in *Der Schwarm* is the ocean, Atwood's settings are exclusively located on land, albeit frequently on a coastline. Both authors depart from a common concern, which is the "sorry ecological state of the planet" (Fromm, 2004), to quote Fromm once more, and human involvement in it. Both, Schätzing and Atwood, represent an obvious reality concerned with contemporary threats for sustainability, and they weave this reality into imaginary but at the same time easily imaginable scenarios. Both texts in question can be categorized science fiction, though Atwood herself is reluctant to attribute her writing to this category.

Atwood has repeatedly stated her preference of the term "speculative" instead of "science" fiction for her writing that is set in the future. In a keynote address later published in *PMLA* she carefully explains not only her understanding of various prosaic genres but also the array of texts which inspired her to write futuristic stories (Atwood, 2004a: 513). The preference of the term 'speculative' signals the absence of, for example, aliens and spaceships. "I did not wish to promise –for instance- the talking squid of Saturn if I couldn't deliver them," Atwood writes in "*The Handmaid's Tale* and *Oryx and Crake* in Context" (Atwood, 2004a: 513). Atwood's genre discussion thus implies a warning for potential audiences as it anticipates misguided receptions of her speculative texts. The concern revolving around definitions of related classifications, however, ultimately refers to questions of proximity: How soon could the imagined scenario become reality? How far-fetched do fictional elements seem compared to the reader's tangible reality? Atwood assures that *Oryx and Crake* "invents nothing we haven't

already invented or started to invent” (Atwood, 2004b: 330). Anything beyond present-day existence is presented as logical consequence of attempted developments. The same can be said for at least the first half of *Der Schwarm*. After detailed depictions of comparatively harmless and seemingly unrelated natural disasters in different parts of the globe, however, ‘the environment’ in Schätzing’s novel is given a new agency in the shape of another intelligent species. In her comparative analysis of *The Handmaid’s Tale* and *Oryx and Crake* Carol Ann Howells uses the term “near-future novels” (Howells, 2006: 161) to emphasize that the reader’s reality might not be far indeed from Atwood’s speculations. *Der Schwarm* reads like a realist novel set in the current decade until the identification of the ‘Yrr’ as another intelligent species turns it into science fiction. Maybe to emphasize the proximity between fact and fiction, both Atwood and Schätzing use names of actual people in their fictional texts. Atwood invents a character for Amanda Payne who won this privilege in an auction to raise funds for a medical foundation (Atwood, 2003: 434). Schätzing includes Gerhard Bohrmann, Erwin Suess, and Heiko Sahling, scientists who assisted him with research and who are given credit in the extensive acknowledgements (Schätzing, 2004: 988). Like Atwood, Schätzing does not present spaceships or beings from a different planet. Some of the fictional scientist even hesitate to call the Yrr ‘aliens’ because of their origin in the Earth’s oceans.

A collective intelligence, the Yrr are defending their habitat against human pollution, deforestation, overfishing, and exploitation of other natural resources. As a result disaster strikes throughout the novel in various places. Examples of occurring calamities are whale attacks off the Canadian West coast, poisonous jellyfish in Australia, and a major tsunami in Northern Europe. In contrast, the catastrophe in *Oryx and Crake*, presented in retrospect, resembles an apocalypse as it nearly wipes out all humans, leaving a wasteland as habitat for the Crakers. The Crakers are genetically engineered human-like creatures designed by the ingenious scientist Crake. The wasteland in question is later described from the Crakers’ perspective, a point of view that is given more and more importance especially in last part of the trilogy. When referring to their creation story, they describe the post-apocalyptic Earth as the place from which their inventor eliminated “the chaos.” The Crakers are certainly no aliens; they are made by the same mastermind that also causes the apocalypse. His intention was to eliminate human traits he deemed responsible for all evil in the world. In “Liminal Ecologies in Margaret Atwood’s *Oryx and Crake*” Lee Rozelle defines the Crakers as “metonymic ‘floor models’ to exhibit alternative versions of humanity within millennial contexts” (Rozelle, 2010: 66). Rozelle’s focus in this essay is the fact that in light of ecocriticism Atwood’s novel projects survival options for life on earth, however gloomy its outlook might generally be. Schätzing’s outlook is more optimistic, as will be seen below. Both authors, however, go through great lengths to lay bare certain political responsibilities on their fictional way to avoid complete extinction. While Schätzing targets mainly oil and marine industries with regard to political participation detrimental to sustainability, Atwood’s focus is primarily on genetic engineering. Where Schätzing provides extensive details of the various ways in which (non-human) nature could possibly exercise its power, Atwood devotes comparatively little narrative time to the process, the actual catastrophe that leaves Jimmy, alias Snowman, not only to tell his ‘last-man’ tale but also in charge of his friend Crake’s creatures. More emphasis on the process during which Crake removes the world’s “chaos,” a process referred to as a “waterless flood,” is placed in Atwood’s succeeding novel *The Year of the Flood*.

Both *Oryx and Crake* and *Der Schwarm* can then be considered ‘dystopian’ in that they project major disasters, although not without leaving a however small possibility for human survival in the future. Howells writes about Atwood’s “near-future novels” that they are “an imaginative writer’s response to contemporary situations of cultural crisis...” (Howells, 2006: 161). The same can be said about *Der Schwarm*. A look at respective intertexts explains the different ways in which the two authors arrive at their individual responses. While there are references to James Cameron’s *The Abyss* and to *Star Trek* in *Der Schwarm*, *Oryx and Crake* begins with an epigraph from Swift’s *Gulliver’s Travels*: “I could perhaps like others have astonished you with strange improbable tales; but I rather chose to relate plain matter of fact in the simplest manner and style; because my principal design was to inform you, and not to amuse you.” The Swift quotation is followed by three questions from Virginia Woolf’s *To the Lighthouse*, in which “the ways of the world” are shown in danger. These intertexts further illustrate generic classifications. To give Swift’s idea of “plain matter of fact” the prominent place of an epigraph emphasizes how Atwood’s speculative plot draws attention to existing, ‘real-life’ environmental damage and the threats thereof with the help of satire. Where Atwood relies on literary classics, Schätzing’s intertexts favor popular culture.

Besides references to indigenous collective memory, as in his motto quoting the Inuit “hishuk ish ts’awalk,” there are the evocations of films, and Schätzing has repeatedly stated that his novels are usually written with a screenplay in the back of his mind. Various online sources have linked first Uma Thurman with Ica and Michael Souvignier, then Dino and Martha De Laurentiis, and finally Till Grönemeyer to the attempted cinematic adaptation of *Der Schwarm*. The fact that almost a decade has passed since the novel was published and rights for a cinematic adaptation were sold, is probably due to matters of funding, as any production detail from the cast size to the special effects of such a projected thriller requires a rather large budget. There are critics who may be particularly frustrated by this delay because they hope that the extensive scientific research presented in the novel will no longer disturb the plot development on screen. Examples of such critics are Georges T. Dodds and Tony Chester whose reviews appear on ‘sci-fi’ web pages. While the review of the former provides some useful observations, the latter undermines its credibility early on: “Can there be a common cause behind all these phenomena? Well, duh! Seems like there’s this big super-intelligent hive-mind thingy, ...” (Chester, 2006). If a review thus crafted ends with the statement that the novel is “too poorly written” (Chester, 2006), then the problem certainly lies beyond the challenge of translation. Where *Der Schwarm*, then, owes more to the thriller, *Oryx and Crake* is twisting and speculating with reality in a more satirical way. In their accusations of political systems, however, the texts share a certain ‘Anti-(US-) Americanism’. This common plot element might be criticized as detrimental to readings in light of Heiseian ‘eco-cosmopolitanism’, a concept which rests on the premise that since environmental damage takes place everywhere in the world it has to be addressed in a cooperative manner involving representatives from across the globe. The Anti-(US-) Americanism portrayed in both novels in question may further be criticized as the respective authors’ blaming the ‘Other’ (environment/nation). The alternative, however, would have only been a completely unidentified setting which would have worked against the proximity to realism.

The Canadian author Atwood’s main setting is, although not extremely explicit but nevertheless unmistakably, in the United States where Crake finds the circumstances and

encouragement to develop his intellect to the extreme that ends with the successful plan to terminate the existing human world. It is in this setting, where “time was of the essence” (Atwood, 2003: 404), that the technological comfort of the information and gadget age, from “ChickieNobs” (Atwood, 2003: 400) fast food to the diverse media achievements, along with an institution like “Watson-Crick,” a palace compared to Jimmy’s liberal arts “Martha Graham” (Atwood, 2003: 234), provides sufficient stimulation and facilities for Crake’s master plot to be realized. The German author Schätzing, whose settings are more diverse, unites the mainly North-American and European scientists in a task force initiated as well as supervised by the US government. Not only is the work of the scientists controlled by CIA representatives, the former also remain uninformed of the conspiracy with which the US forces pursue the goal to terminate whoever or whatever will be identified as responsible for the crisis.

### Scientific Progress

Both Atwood and Schätzing relate the present situations of cultural and socio-political crisis to the abuse of scientific knowledge, and ultimately to the kind of politics which render this abuse not only possible but to a certain degree even support or encourage it. As mentioned above the science focus in *Oryx and Crake* rests on genetic engineering. In *Der Schwarm* it revolves around marine biology, geology, and generally all scientific expertise invested in the oil industry. Earl Ingersoll reminds in his analysis of Atwood’s novel that *Frankenstein* was inspired by Percy Bysshe Shelley and Lord Byron’s “excitement with the potential of science to improve the condition of humanity” (Ingersoll, 2004: 170). In “Writing *Oryx and Crake*” Atwood explains how growing up in a family of scientists has influenced her continuous interest in the so-called ‘natural’ or ‘hard’ sciences (Atwood, 2004b: 329). Social scientist Ulrich Beck shows how the juxtaposition of ‘nature’ and ‘society’ is a 19<sup>th</sup>-century construct with the aim to submit as well as ignore nature (Beck, 1986: 9). A parallel may be drawn, at this point, to Fromm’s anti-anthropocentric statement quoted at the beginning of this essay in order to challenge the connections between his ecocentric concept of “earthly substance” and academic methodologies to research this very matter. Following his explanations about the origin of the respective juxtaposition, Beck goes on to criticize that discussions revolving around sustainability are largely restricted to categories and equations pertaining to the natural sciences. “It remains unrecognized that a social, cultural, and political meaning is inherent in such scientific ‘immiseration formulas’,” Beck writes in *Risk Society: Towards a New Modernity* (Beck, 1992: 31-2). Beck’s premise in this study is that one of the most burning questions at the turn of the millennium is how to limit the risks produced systematically through modernization to render them bearable (Beck, 1986: 26). It is puzzling that the significant sentence “‘Post’ ist das Codewort für Ratlosigkeit, die sich im Modischen verfängt” (12; “‘post’ is the code word for a cluelessness which gets tangled in the fashionable”) from the first paragraph of the preface is left out of the otherwise accomplished 1992 English translation by Mark Ritter. The cluelessness referred to in the sentence omitted by the study’s translation stands symbolic for the fact that solutions to the challenge of risk reduction are indeed hard to identify and even more so to realize. Reminiscent of Heise’s call for a sense of planet in ecocritical scholarship, Beck supports interdisciplinary and international cooperation which also departs from an ecocentric premise.

To look at contemporary crises more in light of Fromm’s concept of a unity of “earthly substance,” which is as collective responsible for as well as affected by their consequences,

might not merely be the best but only way to strive for risk limitations. A more ecocentric approach necessarily transgresses borders, and requires interdisciplinary scrutiny. With regard to creative expression, speculative fiction seems an appropriate possibility to bridge the gap between natural sciences and humanities. Both Atwood and Schätzing provide extensive lists of supportive scientists in their acknowledgments. Atwood's list continues on her web page [oryxandcrake.com](http://oryxandcrake.com). At the same time, some of the harshest criticism hails from natural scientists who often sound suspiciously defensive. One example of such an attack is Anthony Griffiths' "Genetics according to *Oryx and Crake*." Griffiths could not have read the novel very carefully in order to call the narrator Jimmy (alias Snowman) a "shallow sidekick" (Griffiths, 2004: 192).

The potential threat of genetic engineering becomes very obvious in *Oryx and Crake* when Snowman remembers the work done in his father's company: "There'd been a lot of fooling around in those days: create-an-animal was so much fun, said the guys doing it; it made you feel like God" (Atwood, 2003: 57). The same power of creation linked with elimination accounts for the appeal of Crake's computer game 'Extinctathon':

Extinctathon, an interactive biofreak masterlore game he'd found on the Web. EXTINCTATHON, *Monitored by MaddAddam*. Adam named the living animals, MaddAddam names the dead ones. Do you want to play? That was what came up when you logged on. You then had to click Yes, enter your codename, and pick one of the two chat rooms – Kingdom Animal, Kingdom Vegetable. [...] It helped to have the MaddAddam printout of every extinct species, but that gave you only the Latin names, and anyway it was a couple of hundred pages of fine print and filled with obscure bugs, weeds, and frogs nobody had ever heard of. Nobody except, it seemed, the Extinctathon Grandmasters, who had brains like search engines. (Atwood, 2003: 92)

It is a large-scale version of 'Extinctathon' which Crake plays later in life when he invents a way to spread a deadly pandemic fast enough to discard the use of vaccines or cures. In Schätzing's scenario the apocalypse is only anticipated. The destruction is stopped much before the loss of even half the lives that Snowman recalls lost in Atwood's novel. Although the Yrr are held responsible for the destruction that does occur, they are, of course, reacting to human-made threats to sustainability. Much more grounded in today's reality, Schätzing's story is told through the eyes of various scientists, while Atwood's narrative perspective rests on Snowman, formerly Jimmy, the survivor of the epidemic who is then left in charge of the Crakers. In the recently published third part of the trilogy started with *Oryx and Crake*, and immediately preceded by *The Year of the Flood*, Jimmy is referred to as "Snowman-the-Jimmy," in conversations with the Crakers. Inspired by the computer game mentioned above, the last of what Atwood calls 'simultaneals' because the narrative time overlaps in the three novels, is titled *MaddAddam*. The point-of-view in *Der Schwarm* foregrounds scientists such as the Canadian oceanographer and whale expert Leon Anawak along with the Norwegian biologist Sigur Johanson. Furthermore, there is Samantha Crowe from the SETI center, an expert in the search for extra-terrestrial intelligence, and Karen Weaver, a journalist writing for popular science magazines. Anawak is the crucial link to Native American culture which I scrutinize in the following segment of this paper. Johanson stands out as the first to suggest the existence of a force that coordinates the various disasters, and Crowe provides the journal from which the

epilogue is taken. It is Weaver, the fictional link between science and society, who in the end achieves a symbolic peace with the Yrr and thus saves the world for the time being. It is revealing and rather ridiculous that Crowe and Weaver are not at all discussed in Rolf Löchel's attempt to accuse the novel of chauvinism and misogyny (Löchel, 2004).

### **Ecocentric Focus and Indigenous Collective Memory**

While an apocalypse is thus prevented in *Der Schwarm* it has already taken place before narration in *Oryx and Crake* even begins. Atwood's novel opens with a description of what seems the only survivor of the pandemic, not counting the Crakers. Schätzing's text, on the other hand, first presents a prologue, set on the Peruvian coast, in which contemporary environmental threats, such as the rapidly spreading tourist industry and overfishing, are merely hinted at. Population explosion is implied in Atwood's image of the 'pleeblands' from which the 'compound people' need to be protected. Global warming is addressed briefly when Snowman remembers older people talk about the disappearance of the Eastern coastal cities and about the tsunami that followed a volcano eruption in the Canary Islands (Atwood, 2003: 71). It is, however, in *Der Schwarm* that the implications of human interaction with and abuse of the natural landscape is described in great detail and with scientific depth. Crowe's journal in the epilogue states clearly that humankind continues to damage the Earth, despite the efforts that are made to remedy damage done as well as to prevent an aggravation of the dilemma:

Many are trying, these days, to analyze the biological diversity in order to comprehend the true harmonizing principles and to understand what ultimately unites us beyond any hierarchy. [...] With the destruction of diverse life forms we ruin a complexity which we neither understand, nor can we recreate it. What we rip apart, remains ripped. Who wants to decide which part of nature we can dispose of in the great network? The secret of the matrix reveals itself only in its entirety. Once we have gone too far, and the web decided to expel us. There is truce for the time being. (Schätzing, 2004: 987; translation mine)

This passage demonstrates the importance of equilibrium between all existing elements on the planet, an importance emphasized in my introduction and throughout the preceding paragraphs. As Gabriele Dürbeck and Peter H. Feindt point out in "*Der Schwarm* und das Netzwerk im multiskalaren Raum," (*The Swarm* and the Network in Multidimensional Space) Schätzing's novel clearly favors Fromm's anti-anthropocentric perspective because the surviving scientists are those who also follow it (Dürbeck & Feindt, 2010: 223). The sense of and continued demand for equilibrium is traced back to Native American belief. Unable to explain the unfamiliar behavior of the whales he has studied for decades Anawak seeks the advice of the local indigenous population. One of the tribes whose descendants continue to live on Vancouver Island is known as 'Nootka'. A Nootka representative explains to Anawak the meaning of *hishuk ish ts'awalk*, which the reader already encounters in the place of an epigraph before the prologue: 'All is one'. What happens to someone or something, happens to everyone and everything (Schätzing, 2004: 309). The importance of interconnectedness is not limited to human vs. non-human nature, but also emphasized with regard to locations across the globe. Dürbeck and Feindt argue convincingly that it is worth considering the much challenged center/periphery distinction in order to highlight the ways in which increasing urgency of a threat



is still very much linked to how close it appears to potential victims. A Eurocentric center-periphery logic in the sense of Wallerstein's socio-economic world system represents, according to Dürbeck and Feindt, the main perspective of Schätzing's target audience. The logic in question builds up to the moment a task force of North-American and European scientists and government representatives is formed to prevent further escalation of the global crisis. Under the supervision of US General Judith Li, the scientists are called together once the disasters have reached their own immediate environments. Anawak's understanding of his ancestors' sense of 'all is one' becomes a crucial factor in the progress of this task force.

Although indigenous collective memory is absent from *Oryx and Crake* it seems to have played a role in Atwood's writing process. In the essay which describes this process, Atwood locates the impulse for this particular novel during her visit to Australia, during bird watching on the one hand, and during the encounter with Aboriginals on the other. She mentions visits to "several open-sided cave complexes where Aboriginal people have lived continuously, in harmony with their environment, for tens of thousands of years" (Atwood, 2004b: 328). As I have mentioned, Schätzing's character Anawak is himself Native American. He did not grow up in his parents' community in Nunavut, but visits it on the occasion of his father's death. This visit allows for extensive descriptions, including references to the population's harmony with their environment also sensed by Atwood during her visit to Australia. Although Anawak has grown up in an industrialized North American city, he is more capable of understanding and applying his ancestors' respect for nature than any of the other scientists. It is this respect for particularly non-human nature which guides those scientists who opt for communication with the Yrr and who therefore oppose the US general's choice for termination. Not only do the good scientists win, in Schätzing's scenario, they are also the only ones to survive and provide for a more or less happy ending. Crowe records in her epilogue journal how knowing about the existence of a second intelligence enforces not only the rethinking of human spirituality but along with it the necessary respect for 'un-researchable' parts of nature. By implication, it necessarily enforces a much more ecocentric worldview.

Since in *Oryx and Crake* the apocalypse can no longer be stopped the ending is accordingly less happy. In the closing chapter Snowman has discovered three other human survivors and contemplates different reactions to this changed situation. "Zero hour," so the last line in reference to Snowman's broken watch, "Time to go" (Atwood, 2003: 433). These are Snowman's thoughts as he is spying on the two men and one woman roasting a 'rakunk'. They have, in Snowman's absence, already seen the Crakers and run away from them. They are armed, and so is Snowman. If Snowman tried to kill them, he might get killed in the process. If he succeeded in communicating he would have to function as mediator between the humans and the Crakers. In the subsequent novels it becomes clear that the two men are evil "Painballers" with whom communication is futile. They are finally executed at the end of *MaddAddam*, the end of the trilogy, by survivors of a group called the God's Gardeners. *The Year of the Flood*, the second of the simultaneals, is devoted to Crake's removal of "the chaos," as the pandemic becomes known by the Crakers. The point-of-view switches between the first and second novel from two male (Jimmy and Crake) to two female voices, and the reader learns that there are other survivors than those identified at the end of *Oryx and Crake*. In the third text all of these individuals manage to gather in a community, which includes the Crakers and eventually even the 'Pigeons', to protect themselves and ultimately destroy the common enemy, the Painballers.

The closure of the trilogy provides many reasons for the kind of optimism Ingersoll correctly also sees at the end of the first novel (Ingersoll, 2004: 173). Four new babies combine traits of the remaining humans and the Crakers and, as mentioned above, cooperation is reached and maintained between these two groups and the ‘Pigoons’. While the two central characters in *Oryx and Crake* are male, Jimmy and Crake, they are female, Ren and Toby, in *The Year of the Flood*. The focus in *MaddAddam* rests on Toby and her romance with Zeb, but the Craker point-of-view is increasingly represented as well. Blackbeard, a young Craker who selects Toby as his human mentor, becomes literate and functions as mediator. The closing passage of the final chapter, titled ‘The Story of Toby’, is written by Blackbeard the way Toby has taught him. The last event “Blackb(e)ard” – as Atwood wittily has him once misspell his name – reports is the fact that he is one of the “fourfathers” of yet another expected baby: “And that is a thing of hope” (Atwood, 2013: 390). Rozelle, who agrees with Ingersoll that much ignored grounds for optimism are to be detected even at the end of *Oryx and Crake*, incidentally predicts a development which thus accelerates towards the end of the trilogy: “... life survives in increasingly diverse forms” (Rozelle, 2010: 68).

The emphasis on the unity of ‘earthly substance’, of the fact that ‘all is one’, as *Der Schwarm* paraphrases it, is less explicit in Atwood’s first novel of the trilogy, but one would have to agree with Ronald B. Hatch’s observation, even before the publication of *Oryx and Crake*, that there are parallels between Atwood and those “ecocentrist writers” whose goal it is “to re-position humanity as one species among many in a web of natural connections” (Rozelle, 2010: 63). Rozelle refers to Hatch’s study in support of his own argument that many literary analyses which “do not grant the ecological world any claims to ‘reality’” fail to recognize the environmental implications in Atwood’s texts (Rozelle, 2010: 62). With regard to the trilogy started with *Oryx and Crake* this failure may be related to the strong Christian context some may consider incompatible with an anti-anthropocentric world view. This context is obvious in references such as the above quoted to Adam’s task of naming. It is inherent in the Noah intertext with regard to the ‘waterless flood’. It is much more pronounced throughout *The Year of the Flood* in which the action revolves around the group called ‘God’s Gardeners’, and every chapter is preceded by one of their hymns explaining their theology. Through the use of biblical intertext on the one hand, and the suggested consequences of knowing about another intelligent species on the other, the novels by Atwood and Schätzing both seem to caution that religion should not be considered in conflict with ecocentrism.

In an interview on the occasion of her being awarded Dortmund’s Nelly Sachs Prize, Atwood explains the fairly long gap between *Oryx and Crake* (2003) and *The Year of the Flood* (2009). It is in this interview that she labels these two very distinct parts of the extensive project ‘simultaneals’ (Bölling, 2010: 149 & 151), and explains how *MaddAddam* (2013) also falls into this category. An excellent comparative study of the first two parts of the trilogy is provided in William Deresiewicz’s “Honey and Salt.” Emphasizing Atwood’s stylistic achievements Deresiewicz is right in remarking that she “snaps her puzzle pieces together with admirable cunning” (Deresiewicz, 2009: 27). This skill continues throughout the final part which conveniently begins with short summaries of the two preceding novels/simultaneals and evolves into a compelling synthesis of the threads spun in *Oryx and Crake* and *The Year of the Flood*. It is in *MaddAddam* that the ecological world’s claim to reality is most pronounced, as indicated above, and communication with the “Pigoons” is established via the Crakers. One may want to

go as far as to compare such “inter-species co-operation” (Atwood, 2013: 373) with the acknowledgement of and search for contact with the Yrr in Schätzing’s novel.

### ‘Sense of Planet’

Howells points out how Atwood moved from the focus on a national disaster in *The Handmaid’s Tale* to the representation of a global catastrophe in *Oryx and Crake* (Howells, 2006: 161). Readers are first made aware of the global dimension when Jimmy is asking Oryx, who later becomes Crake’s companion and the first to educate the Crakers, about her youth in the “distant, foreign place” (Atwood, 2003: 133). Oryx’s country of origin is never specified: “Vietnam? Jimmy guessed. Cambodia? (134).” It is, however, clearly situated in East Asia. The alternation between settings in *Oryx and Crake* never reaches the extent it has in *Der Schwarm*, but when Jimmy becomes the surviving witness of the pandemic, a screen shows him how this “waterless flood,” as it is termed in *The Year of the Flood*, spreads across the planet: “Taiwan, Bangkok, Saudi Arabia, Bombay, Paris, Berlin. The pleeblands west of Chicago [...] more than a few isolated plague spots” (Atwood, 2003: 379). I find it useful especially with regard to this inclusion of a global setting to read *Oryx and Crake* and *Der Schwarm* alongside each other. To study both texts from a comparative point of view shows how it is precisely the strong emphasis of a Heiseian ‘sense of planet’ which distinguishes the two novels by Atwood and Schätzing from predecessors in the genre. “Rather than focusing on the recuperation of a sense of place,” writes Heise, “environmentalism needs to foster an understanding of how a wide variety of both natural and cultural places and processes are connected and shape each other around the world, and how human impact affects and changes this connectedness” (Heise, 2008: 21). Ecocriticism should prove to be an appropriate approach for transnational/-cultural studies with its focus on those elements of the ecosystem whose damage occurs regardless of boundaries. Comparative studies such as the present one can be taken to underline the significance of the global dimension with regard to this damage, its origins and effects. Emphasizing the need for “eco-cosmopolitanism” (Heise, 2008: 12), Heise proposes a re-evaluation of the concept of ‘deterritorialization’ and suggests that “ecologically based advocacy” may be shifted from a primary focus on the local to a type of inquiry which accounts for “territories and systems that are understood to encompass the planet as a whole.” Such a suggestion relates to Fromm’s ecocentric concept of the “congeries of earthly substance” as well as to Beck’s encouragement for interdisciplinary methodologies. It also implies added challenges in terms of knowledge generation for the writer, researcher and/or politician. As Dürbeck and Feindt emphasize, Schätzing’s fictional scientists need to articulate the relevance of their local perspectives as they engage in debates which require a capability of global interpretations (Dürbeck & Feindt, 2010: 220). In addition to the expertise regarding the familiar environments these kinds of debates, then, demand informed inquiry into the much less familiar ones. Ultimately, they might include inquiries into the environments of the Yrr in Schätzing’s scenario, and inquiries into the realms of Crakers and Pigeons in Atwood’s. They undoubtedly have to rely on the kind of cooperative intention as well as reliability exhibited by these and required from similarly diverse groups.

### Conclusion

As much as both novels analyzed share an ecocentric ‘sense of planet’ in expressing their concern with current threats to sustainability, as much do they differ in style and format. While Atwood’s text is the first in a series of three ‘simultaneals’ written in a satirical tone, Schätzing’s is a single massive volume whose less sophisticated language matches its design as thriller. Although *Oryx and Crake* may well be studied independently, its plot is complemented by the action changing from a focus on two male to two female main characters in *The Year of the Flood*. Published exactly a decade later, *MaddAddam* finally provides the synthesis along with an explicitly hopeful, to avoid the somewhat exhausted and maybe in a dystopian context inappropriate term ‘happy’, end. As some critics have correctly stated, however, even the end of *Oryx and Crake* already provides grounds for optimism, and so does the conclusion of *Der Schwarm*. While both texts testify to their authors’ extensive research involved with the so-called ‘natural’ or ‘hard’ sciences, Atwood’s focus rests on genetic engineering and Schätzing’s on geology, marine biology, and petro-chemistry. Both authors represent links between the respective sciences, certain industries, and government politics. By embedding this kind of scientific research in fictional plots, by selecting the genre of speculative or science fiction, the authors also challenge the rigid division between academic disciplines.

Both Atwood and Schätzing point towards sources of comfort and hope, rather than solutions, mainly through their characters’ evaluations of spirituality along with the encounter of unknown life-forms. Although it is more pronounced in Schätzing’s references to indigenous collective memory, both texts make a clear statement against prevailing anthropocentrism in favor of more ecocentric approaches. They both suggest the necessity to consider all “earthly substance” beyond hierarchies as well as beyond localities. In so doing they support the kind of ‘eco-cosmopolitanism’ defined by Heise in *Sense of Place and Sense of Planet: The Environmental Imagination of the Global*. The two novels lend themselves, I argue, to the comparative kind of analysis provided here which favors such considerations beyond geographical borders. Both *Oryx and Crake* and *Der Schwarm* were published before the current economic crisis began to unfold, as well as before the rather rapid succession of events such as the earthquakes in Haiti and Chile, the volcano eruption in Iceland, and the tsunami with subsequent nuclear accident in Japan intensified environmental considerations. Assuming that these developments will increase not only the demand for but also the supply of texts with ecocritical focus one should be able to hope for their heightened impact on public politics not exclusively on a local but even more so on an international or global level. One of the final questions in the above mentioned interview refers to the “troubled relationship between writers and politicians,” and I would argue, without wanting to stretch the idea of amalgamation too far, that Atwood’s answer, “the relation is always uneasy” (Bölling 155), fails to acknowledge the overlap between the two categories.

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