## Reinhard Hennig (Oslo)

## Climate Change Denial in Literary Fiction: Gert Nygårdshaug's 'eco-thriller' Chimera

#### Introduction

According to Paul J. Crutzen and Eugene F. Stoermer, the massive anthropogenic increase of greenhouse gases in the atmosphere causing climate change is one of the main factors that led to the transition from the Holocene to a new geological era which they propose to name Anthropocene (17-18). While there is a certain disagreement about when exactly the Anthropocene began, most consider its starting point to be the large-scale burning of fossil fuels that began with the Industrial Revolution (Steffen et al. 848). Accepting the premises of the Anthropocene concept therefore includes acknowledging the scientific consensus that humans are altering the global climate through the emission of greenhouse gases from fossil fuels. The Anthropocene concept could therefore be assumed to counteract any form of climate change denial.

Yet denial – "a refusal to believe something no matter what the evidence" (Washington and Cook 1) – is still widespread with regard to the topic of anthropogenic global warming. The reasons are manifold. While religious beliefs may play a role in some cases, one of the most frequent causes of denial is the fear that adequate measures for mitigating climate change would endanger one's own economic interests, especially when the latter are tied to the fossil fuel industry (Diethelm and McKee 3). Many may even consider the acknowledgement of anthropogenic global warming as a threat to their personal identities and to lifestyles connected to high greenhouse gas emissions (Washington and Cook 101). Climate change denial therefore usually aims at preventing and – if this is not possible – delaying the implementation of measures to mitigate global warming.

While there are a great variety of reasons why people deny the scientific consensus on anthropogenic climate change, the strategies applied in the process of such denial are even more diverse. Haydn Washington and John Cook list three main categories of climate change denial. Literal denial, as "the assertion that something did not happen or is not true" (98), means rejecting or doubting the truth of anthropogenic global warming altogether. Interpretive denial, on the other hand, does not deny that climate change is happening, but interprets it in such a way that no action is needed, for example through claiming that a warming planet might be something good. James Hoggan coined the term "nondenier deniers" (118) for those practicing this sort of denial. A third and related category is implicatory denial, which means knowing about and accepting anthropogenic climate change and its highly problematic character, yet failing "to incorporate this knowledge into everyday life or transform it into social action" (Washington and Cook 98).

In recent years, climate change has become a topic that is frequently taken up even in literary fiction, and scholars in the field of ecocriticism often emphasize literary texts' educational potential in this context (see Johns-Putra 274). It is thus assumed that climate change fiction can contribute to raising awareness about global warming and motivate readers to commit to mitigation. The circumstance that fictional texts just as well can function as a medium of climate change denial has

<sup>&</sup>lt;sup>1</sup> In the most comprehensive study on this issue so far, John Cook et al. assessed 11,944 articles published by 29,083 authors in 1,980 scientific journals between 1991 and 2001. Their results showed that 97.1% of those articles that commented on the causes of climate change confirmed that it is mainly caused by human activities. The Intergovernmental Panel on Climate Change (IPCC) also confirms the scientific consensus on anthropogenic climate change in its Fifth Assessment Report: "It is *extremely likely* that human influence has been the dominant cause of the observed warming since the mid-20th century" (IPCC 15; emphasis in the original).

received considerably less scholarly attention, despite the prominent example of Michael Crichton's *State of Fear* (2004), which has been deemed "the most popular climate change novel to date" (Trexler 35). In this thriller, anthropogenic global warming is revealed as a threat that has been invented by scientists in order to receive more funding for their research and that is used by unscrupulous environmentalists to generate more donations for their organizations. What is more, in the novel a retired sociologist claims that politicians, the military and the media are using climate change as a means of keeping the population in a state of permanent fear that would make it easier for them to exert control and to pursue their own interests (Crichton 540-542). Yet, it is repeatedly stated by the 'good guys' among the novel's characters that even "if global warming really does occur, it will probably benefit most nations of the world" (506).

State of Fear thus combines strategies of both literal and interpretive denial. An indication of the novel's considerable impact at least in the U.S. is that Crichton was asked by James M. Inhofe (a Republican who openly denies anthropogenic global warming) to testify before the U.S. Senate Committee on Environment and Public Works in 2005 and that in the same year a meeting between Crichton and then U.S. president George W. Bush was arranged after the latter had read State of Fear (Hoggan 54).

A more recent example of climate change denial in literary fiction from the U.S. is Chris Skates' novel *Going Green* (2011), in which an employee of a coal-fired power plant discovers that global warming is not only non-existent, but moreover is used by 'communist' states as a means of ruining the U.S. economy through establishing unnecessary mitigating measures, with industry-hating U.S. politicians, environmental activists, and the media unknowingly contributing to the success of this conspiracy. Meanwhile, Muslim terrorists connected to al-Qaeda and pretending to be lobbyists for climate protection use Democratic politicians' and environmentalists' irrational concern about CO<sub>2</sub> emissions as part of their own plan to destroy the entire power grid in the U.S. in order to create social chaos in the entire country.

State of Fear and Going Green are literary texts that provide rather obvious examples of literal climate change denial. Although some of the novels' characters believe in the reality of climate change, the novels' plots leave no doubt at all that global warming is indeed not happening. Yet, there are even literary texts containing more subtle strategies of denial, which are harder to recognize as such. An informed close reading can demonstrate how even such novels function as a medium of climate change denial. In the following such a reading will be conducted with regard to strategies of denial in the novel *Chimera* (2011) by Norwegian writer Gert Nygårdshaug.

#### Gert Nygårdshaug: Chimera

Nygårdshaug (born 1946) is the author of a huge number of crime thrillers. While his novels are relatively popular and sell well in Norway itself, only few of them have been translated into other languages, and it can be presumed that Nygårdshaug is targeting a primarily Norwegian readership with his texts. His most successful novel so far and his first one taking up environmental questions is the thriller *Mengele Zoo* (1989). It primarily addresses rainforest destruction and mentions climate change only once as a remote possible consequence of deforestation (368). This is different in *Chimera*, Nygårdshaug's most recent novel addressing environmental issues, which, for the first time in his oeuvre, depicts possible consequences of global warming as part of a fictional future scenario. Like many other of Nygårdshaug's novels, *Chimera* is a highly political text. In an interview about the

novel, Nygårdshaug called himself "more a political than a literary writer" (Korsvold 4) and stated that he shares the views uttered by the narrator and the central characters of *Chimera*.

Chimera's text is preceded by a prologue in which Nygårdshaug recounts how he met a virologist who had inspired him to write this novel and whom he represents under the pseudonym Istvan Carval Xtolec. The novel itself is divided into ten chapters of which the first one is titled "The Water Warden" (Vannvokteren). This chapter is written from a second-person perspective. It tells the story of a writer, identified rather explicitly as Nygårdshaug himself ("you could be a writer, maybe be called Gert Nygårdshaug", 22), who is dwelling in a town in the Niger Delta and planning to write a novel about how toxic waste from the industrial nations pollutes the environment in African countries. Yet when a diver working for a marine research institute tells him about the pollution and acidification of the oceans, the writer – overwhelmed by pessimism – throws away all the material that he had already collected for his novel.

After this, the novel's main story, which is narrated in the third person, begins. It is interspersed with short pieces of text that are said to constitute quotes from publications and oral or written statements by the virologist Xtolec. The story is set some fifteen to twenty years in the future, and its main setting is the (fictitious) Congo Rainforest Center (CORAC), an international research center located in the Virunga National Park in the Democratic Republic of the Congo, where sixteen scientists, among them botanists, zoologists, entomologists, ornithologists and biochemists, led by the ecologist Gauthier de Payens research the effects of global warming on biodiversity. The station is subordinate to a (likewise fictitious) subsidiary organization of the United Nations' Intergovernmental Panel on Climate Change (IPCC) called International Global Overwatch and referred to as IGLOO. Climatic changes are at this time already considerably affecting ecosystems on a global scale. The researchers at CORAC happen to discover a new, highly lethal virus that has killed the population of a small indigenous village close by. This virus, which they name 'Chimera,' has the potential to spread globally unnoticed and to kill the majority of humans on earth. Since there is a consensus among the scientists that a total collapse of ecological and social systems is to be expected soon unless something is done to limit human population growth, de Payens decides that four of the scientists should release the virus at various international airports and thus enforce a reduction of the world's population. When one of these four, the Norwegian zoologist Karl Iver Lyngvin, is about to implement this plan, he learns that the virus is only contained in the capsule that he himself had received, and that thus the decision about its release is up to him alone. The end of the novel leaves his choice open.

# Strategy 1: Portraying Norwegians as innocent victims of climate change

While many arguments against the existence of anthropogenic global warming or against mitigating action are used in similar ways by climate change deniers in different countries, national contexts often play a very important role with regard to which strategies of denial are pursued. As the above description of *State of Fear* and *Going Green* may already have indicated, these are novels embedded in and referring to a specifically U.S.-American social, economic and cultural framing of climate change. In both of them the 'American way of life' and with it U.S.-American culture and national identity appear as threatened by any acknowledgement of anthropogenic global warming. *Chimera*, on the other hand, contains many references to Norwegian culture and national identity in connection to strategies of climate change denial. For an analysis of these strategies it is therefore necessary to

<sup>&</sup>lt;sup>2</sup> "[M]er en politisk enn litterær forfatter". All translations from the Norwegian in this article are my own.

<sup>&</sup>lt;sup>3</sup> "Du kann være forfatter, kanskje hete Gert Nygårdshaug."

consider the novel's specifically Norwegian background. Norway is an especially interesting example with regard to the topic of climate change denial, since it currently can be regarded as the world's wealthiest country – ranking first in the United Nations Development Program's Human Development Report (UNDP) – while much of its wealth is based on the export of fossil fuels and thus on precisely the energy source whose use is the main cause of anthropogenic climate change.

As Kari Marie Norgaard argues in her study *Living in Denial*, literal climate change denial is not nearly as widespread in Norwegian society as in the U.S. Yet in interviews with the inhabitants of a Norwegian rural community Norgaard found that her interviewees had developed a variety of strategies of what she calls "socially organized denial" (9) which effectively prevented them from acting on climate change despite acknowledging its existence and its problematic consequences. Most of her interviewees tried "to construct their own innocence from the resources of their culture's particular tool kit" (222), among others through references to a specifically Norwegian national identity.

One prominent element in how this identity was constructed from the 19<sup>th</sup> century on is an idealization of Norwegian society as a farming society. Traditional rural life is looked upon as embodying authenticity, simplicity and closeness to nature, while modern urbanity often is rejected, even though a majority of Norwegians are living in urban environments today (Eriksen 18-19). Closely linked to this idealization of the rural is the idea that Norwegians are (or should be) closer to nature than the inhabitants of other countries. This closeness is to be maintained through activities that require being outdoors such as hunting, fishing, picking berries and mushrooms, hiking and skiing. All of these activities are usually subsumed in Norwegian under the term *friluftsliv*, which roughly translates as 'outdoor life.'

Many Norwegians, however, consider themselves to be not only closer to 'nature,' but also more rational, egalitarian and democratically oriented than the citizens of other states. In addition, there is a widespread perception that, as a small country without a colonial past, Norway can in a unique way accept global responsibility through internationally promoting peace, democracy and human rights (Norges offentlige utredninger 51-52). The Norwegian historian Terje Tvedt has coined the (critically intended) term "national regime of goodness" (*nasjonal godhetsregime*) for this element of the Norwegian national self-image. This 'regime of goodness' is not limited to the humanitarian realm, but includes global ecological commitment as well. For example in the Norwegian government's so-called "Climate and Forest Initiative," climate protection and the conservation of rainforests are linked together, as countries such as Brazil and Indonesia receive financial compensation if they in return protect rainforests on their state territories (see Klima- og miljødepartementet). Through such global commitment, Norway has even "[i]n the eyes of the outside world [...] become the epitome of good governance, environmental concern, and enlightened altruism" (Witoszek 7).

Norway's national (self-)image is, however, challenged by the country's large-scale offshore extraction of oil and natural gas. Started in 1971, this has been Norway's most important economic sector for several decades now. In 2009, 50% of Norwegian export earnings came from fossil fuels and roughly 15% of all jobs were directly or indirectly dependent upon this sector (Schiefloe 34-35). The material wealth created through the petroleum industry has led to a low unemployment rate, to fast increasing wages and consumption, and has made it possible to significantly expand the public sector and the welfare state (37). That Norway is ranking highest in the United Nations Human Development Report is thus not only, but to a large extent, attributable to an economy based on the extraction and export of fossil fuels.

Yet, Norway, both through its main export and through the consumerism that the oil wealth has generated in the country, is contributing extraordinarily to global greenhouse gas emissions and thus to anthropogenic climate change (Curtis 12). With global warming constituting a threat especially to poor countries, which – other than the rich ones – are unable to adapt, Norway's economical model runs contrary to the country's humanitarian and ecological commitment.

This discrepancy questions the reality behind the Norwegian national self-image. Trond Berg Eriksen, Andreas Hompland and Eivind Tjønneland, for example, judge that the oil wealth constitutes "an embarrassing defeat for the Norwegian self-image of cautious modesty, for the belief that we are more reasonable than others" (476).<sup>4</sup> Yet, as Norgaard's study shows, the contradictory nature of national ideals and economic reality may even have a self-reinforcing effect on the Norwegian national self-image:

By portraying Norwegians as close to nature, egalitarian, simple, and humble, these narratives of national identity counter the criticism that Norwegians face with regard to climate change and petroleum policies. [...] [T]hese discourses, which may seem trivial or unconnected to climate change, are in fact central to the process of socially organized denial. (140)

Emphasizing Norwegian national identity is thus one strategy of denying a specifically Norwegian responsibility for global warming and its problematic consequences.

Norwegian environmental activists and many NGOs have criticized the contradiction between appearance and reality of Norwegian humanitarian and environmental politics. The threats to both the climate and to Norwegian national identity originating from an economy mainly based on the extraction of fossil fuels have in recent years even been addressed in several works of literary fiction. Jostein Gaarder's young-adult novel *Anna* – *A Fable about the Planet's Climate and Environment* (*Anna. En fabel om klodens klima og miljø, 2013*), for example, contains clear criticism of the Norwegian oil industry and of overconsumption. It can be read as a call for global and intergenerational justice in light of the threats emanating from climate change. Bård Isdahl's novel *Accident (Havari, 2013)*, set a few decades in the future, likewise addresses disaster and migration from poor countries forced by climate change and focuses in particular on the Norwegian fossil fuel industry's responsibility.

Climate change also forms a very discernable element in *Chimera*'s setting. The scientists at CORAC are worried about a drastic decrease in biodiversity due to global warming (107) and they consider the future of all life to be "highly insecure" (96). Flora and fauna in the forest in Virunga National Park are described as being visibly affected by changes in weather patterns. Since there is too little rain, most of the environment in which the research station is located consists of "decayed, withered and withering forest" (55). The few larger land mammals that can still be found there are emaciated and weakened because of a lack of prey (93).

Despite the main setting being the Congolese rainforest, most representations of environmental degradation in the novel refer to the planet's northern regions. The Finnish woods and waters are in

<sup>&</sup>lt;sup>4</sup> "[E]t pinlig nederlag for det norske selvbildet av forsiktig nøysomhet, for troen på at vi er fornuftigere enn andre."

<sup>&</sup>lt;sup>5</sup> "[H]øyst usikker."

<sup>6 &</sup>quot;[R]åtten, inntørket og visnende skog."

bad condition because of pollution and climate change (385-386). Many important fish species in the North Sea have almost vanished, and this has, in turn, led to the extinction of several once large bird populations (168). The vegetation in Alaska is described as "crippled, brown and miserable" (389). According to the narrator, the climatic changes are nowhere as visible as in the Arctic regions (389). "One of the world's most species-rich Arctic ecosystems" (168), the sea off the coast of British Columbia, has already collapsed. In the Arctic Ocean and around Svalbard – an Arctic archipelago that belongs to Norway – the cod stocks are declining dramatically (168).

The third-person narrator's focus switches between several of the employees at the research station. However, the perspective of Karl Iver Lyngvin, who is the only Norwegian among the novel's characters, dominates clearly. Lyngvin is a stereotypical Norwegian in so far as he despises urban life and is devoted to *friluftsliv*. His greatest wish is "to be allowed to spend his entire life out in nature" (95). Already in his youth he enjoyed "the solitude during the long tours around in the Norwegian alpine world, both in summer and in winter" (186) and even during his student days he avoided the city and took his books with him into the woods (186). Later, Lyngvin worked a long time as a ranger in the Norwegian Femundsmarka national park. For him, Femundsmarka is "a landscape that he loved and that he never grew tired of" (74), and he "wished that the calm and happiness that he felt in this landscape would never end" (94). When he later on visits Femundsmarka once again, he enjoys "the fresh mountain air" (383) and remembers all the activities he formerly used to pursue there.

This specifically Nordic landscape with "the stones, the birch slopes, the reindeer herds, the mountain trout and the blueberry scrub" (94) and the *friluftsliv* possible in it refer plainly to nature as a central element of Norwegian national identity. Femundsmarka functions in the novel as a sort of 'Holy Land' that *pars pro toto* represents Norway's nature in its entirety. Yet even this place is clearly endangered through climate change: The crowberries there are no longer pollinated, since bees and bumblebees have vanished (94-95). Brooks and rivers have run dry and the fish stocks have vanished. Occasionally, extreme rainfalls cause flooding and soil erosion, making the national park less appealing to tourists who want to practice *friluftsliv* in it: "The hiking trails in Femundsmarka were used less and less" <sup>15</sup> (74). This implies, then, that climate change not only threatens nature, but even Norwegian national culture through making one of the latter's core elements all but impossible.

Given the central role of *friluftsliv* in the construction of Norwegian national identity, it may not be surprising that the effects of climate change are viewed upon by many Norwegians as problematic. As Norgaard remarks: "Especially attuned to their natural environment, Norwegians are in a special position to notice climate change and to have their national identity affected by it. [...] What happens to a ski culture when there isn't snow?" (20). Jørgen Randers, a Norwegian professor of climate strategy and one of the co-authors of the first *The Limits to Growth* study in 1972, utters precisely such concern in his recent book 2052. A Global Forecast for the Next Forty Years (2012). In a paragraph titled "Will the Climate Problem Hurt Us?," he mourns that winter temperatures in the Oslo region (where he is living) already have gone up considerably and that thus the opportunities for cross-

<sup>&</sup>lt;sup>7</sup> "[F]orkrøplet, brun og ynkelig."

<sup>8 &</sup>quot;[E]t av verdens mest artsrike arktiske økosystemer."

<sup>9 &</sup>quot;[Å] få tilbringe hele sitt liv ute i naturen."

<sup>10 &</sup>quot;[E]nsomheten i de lange turene rundt omkring i den norske fjellheimen, sommer som vinter".

<sup>11 &</sup>quot;[E]t landskap han elsket og aldri gikk lei av."

<sup>12 &</sup>quot;[Ø]nsket at roen og den lykken han følte i dette landskapet aldri skulle ta slutt."

<sup>13 &</sup>quot;[D]en friske fjellluften."

<sup>14 &</sup>quot;[S]teinene, bjørkeliene, reinsdyrflokkene, fjellørreten og blåbærlyngen."

<sup>&</sup>lt;sup>15</sup> "Turstiene i Femundsmarka ble mindre og mindre brukt."

country skiing in the forests surrounding the city have been greatly reduced since 1986: "One-half of the Oslo winter is gone, sacrificed on the altar of climate change" and this generates "a longing, among the grown-ups, for the good old days" (242). Randers even expresses concern that due to climate change, ecosystem degradation and population growth, virtual reality will increasingly supersede 'real' experience of nature (176-177).

Norgaard calls the emphasis on a special connection of Norwegians to nature "a tool of innocence" (149). Practicing *friluftsliv* functioned for her interviewees as a way of blocking out their own responsibility for global warming and demonstrating "that despite their rising materialism, petroleum development, and wealth, they too are pure, naturally good, even 'natural' environmentalists" (149). In *Chimera*, references to *friluftsliv* similarly serve to imply Norwegian innocence. Norwegian nature and *friluftsliv* are described in the novel as threatened by climate change in order to portray Norwegians and their national identity as victims of climate change. While it certainly is legitimate to point out that global warming affects even Norway, in *Chimera* its causes – such as the burning of fossil fuels – are never mentioned, and the victimization of Norwegians in the novel therefore functions as a strategy of implicatory denial. The reality of climate change is thus not denied in *Chimera*. On the contrary, it is emphasized strongly, yet the main purpose of this emphasis is – somewhat paradoxically – to detract attention from Norwegians' own responsibility for global warming and from any obligation following from it to commit to mitigation.

## Strategy 2: Hoping for technological quick-fixes

Despite the novel's emphasis on its detrimental effects, climate change appears in *Chimera* as a problem that can be solved with relative ease by technological means. Both the narrator and the central characters emphasize again and again that large-scale technological means exist to fight global warming: Humankind, "with its constantly more advanced technology". (169), can counteract any kind of climatic change, even the emergence of a new ice age. As an example already practiced successfully at the story's future level, the covering of Sahara and of Arctic and Antarctic regions with a metal foil reflecting sunlight is mentioned (69-70). This refers to 'solar radiation management,' one of several ideas for so-called geo-engineering presently discussed as possible technological measures for deliberately altering earth's climate (see Anshelm and Hansson).

One of the critiques that hitherto have been brought forward against the Anthropocene concept is that it may encourage inappropriate technological optimism, including the belief "that humans will be able to create painless technological fixes through massive geo-engineering projects" (LeCain 4). Ideas of geo-engineering have indeed received increasing prominence in recent years (Steffen et al. 858). Yet most environmentalists reject such methods, pointing at the immense risks involved and considering them as yet another way of legitimizing business-as-usual with regard to the burning of fossil fuels. Proposing ideas for geo-engineering can be regarded as a strategy of implicatory climate change denial, since it suggests that mitigating measures (such as a reduction of greenhouse gas emissions) are either unrealistic and not to be expected in time, or generally unnecessary since large-scale technological solutions will take care of the problem anyway.

In Norway, not geo-engineering as such, but another supposed technological 'wonder-weapon' has functioned in a very similar way in public debate in recent years: the so called carbon capture and storage technology (CCS). This technique is supposed to capture CO<sub>2</sub> emissions at for example power plants and refineries and to store them underground instead of releasing them into the atmosphere. If

<sup>16 &</sup>quot;[M]ed sin stadig mer avanserte teknologi."

the technology would work and be available at a reasonable price, therefore, continued use of fossil fuels would be unproblematic with regard to the climate. Randers deems CCS to be a good solution not only for the reduction of CO<sub>2</sub> emissions from conventional plants but also one that could be used in wood-fired power plants, making it possible to actually remove CO<sub>2</sub> from the atmosphere. Yet even he admits that it is unlikely that this technology will be applied on a broad scale in the near future (117). Indeed the Norwegian government announced in 2014 that the attempt to implement CCS in a gas power plant at Mongstad in southern Norway would be cancelled because it had proven to be too expensive (Kongsnes 27). The Mongstad project had previously been referred to by the then Norwegian prime minister Jens Stoltenberg as a legitimization for the further extraction of fossil fuels. Stoltenberg even called it Norway's "moon landing" in his New Year's speech in 2007 (quoted in Swensen 334). He and other supporters of the project claimed that Norway, through developing and providing the technology for CCS, would soon be contributing to the reduction of CO<sub>2</sub> emissions worldwide. Representatives of environmental organizations such as Greenpeace Norway argued, however, that relying on CCS was a way of prolonging the extraction and use of fossil fuels instead of investing in energy efficiency and renewable energies (Swensen 343-345). Washington and Cook regard CCS as a means to make it possible for governments to continue business-as-usual instead of committing to mitigation, and thus as a form of implicatory climate change denial (146-8).

Interpreted against this background, the repeated emphasis in *Chimera* that the climate problem can easily be solved through geo-engineering or other technological means that yet need to be developed is also a strategy of implicatory denial: No changes in current economic structures and resource use are necessary, since the resulting emissions can be dealt with later. In the novel's Norwegian context, this implies that the country's economy can continue to be based on fossil fuels.

## Strategy 3: Denying the scientific consensus on anthropogenic climate change

In *Chimera*, implicatory denial is augmented by a strategy of literal denial. The scientists at CORAC are not convinced that global warming indeed is anthropogenic. The station's leader, de Payens, states, for example, that "whether the temperature rise we've had during the last years is man-made or not is an irrelevant question. The main point is that it is a *fact*. Our planet has at all times had dramatic temperature fluctuations" (70; emphasis in the original). Lyngvin likewise refuses to make up his mind concerning the question whether or not global warming is anthropogenic "or caused by other things" (95), and the narrator repeats and expands de Payen's statement, emphasizing that the causes of global warming are irrelevant and that there has always been a variety of 'natural' reasons for changes in global temperature (169).

This may not seem to be climate change denial at first sight, since the reality of global warming and even the necessity of counteracting it (at least by technological means) are acknowledged. The implications of an indetermination concerning the causes of global warming are, however, considerable: If it is not clear whether human activities are altering the climate are not, then anthropogenic greenhouse gas emissions (and thus those who produce them) are possibly not even responsible for global warming. <sup>19</sup> Referring to climatic changes and fluctuations in the past and

<sup>&</sup>lt;sup>17</sup> "Om den temperaturøkningen vi har hatt de siste årene er menneskeskapt eller ikke, er et uvesentlig spørsmål. Hovedsaken er at det er et *faktum*. Kloden vår har til alle tider hatt dramatiske temperatursvingninger."

<sup>18</sup> "[E]ller skyldtes andre ting."

<sup>&</sup>lt;sup>19</sup> That Lyngvin at one point in the story complains that "we've not heard of *one single* really effective and environmentally friendly alternative to oil and coal for stopping the warming of the planet" ("vi har ikke hørt om *et eneste* virkelig, effektivt og miljøvennlig alternativ til olje eller kull for å stanse opphetningen av kloden,"

deducing from them that even the current changes must be natural is a very popular (although logically flawed) argument among climate change deniers (Washington and Cook 50-51). Pointing out possible natural origins is thus supposed to cast doubt on whether or not any changes to business-as-usual are necessary.

That future scientists researching the effects of climate change are portrayed in *Chimera* as being not sure about its causes literally denies today's *de facto* scientific consensus about the mainly anthropogenic origins of global warming. Therefore, through referring to large-scale future technological solutions on the one hand, and creating doubt concerning the causes of climate change on the other hand, any particular responsibility of countries with relatively high greenhouse gas emissions – such as Norway – is denied in the novel.

### **Strategy 4: Blaming others**

Norgaard found in her interviews with Norwegians that a common strategy to minimize their individual responsibility for global warming was to blame others – mainly through pointing out that other countries – especially the U.S. – had much higher emissions than Norway with its relatively small population of about five million (142 and 163-167). Such "perspectival selectivity" (163) combined with distraction is the main strategy of climate change denial pursued in *Chimera*. The worth of technological solutions to climate change is thus relativized through the view held by the scientists of CORAC that the crucial question concerning the planet's future is not climate change, but rather human population growth (346). According to de Payens, since climate change is not "the real problem" (71), it would not be of any use to stabilize the CO<sub>2</sub> content of the atmosphere. An ornithologist states in a similar way that a world in which the climate problem was solved but in which ten to twelve billion humans lived would nevertheless unavoidably be heading for disaster (179). "Waste separation" (180; emphasis in the original) would not help anything against this.

This ironic depreciation of conventional approaches to environmental protection implies that the removal of symptoms of the ecological crisis will not be of any use, and that only tackling its roots can lead to a real solution. It is made explicitly clear by the narrator that human population growth constitutes this actual cause of all environmental problems: "the climate crisis they were having now, the destruction of rainforests, that the Earth's biological diversity was seriously threatened" (398). Therefore the solution inevitably aims at a drastic reduction of human beings on earth.

The theory "that the power of population is indefinitely greater than the power in the earth to produce subsistence for man" and that therefore the number of humans necessarily is limited through famines, epidemics and wars, goes back to Thomas Malthus' *An Essay on the Principle of Population*, published in 1798 (Malthus 5). Malthus considers this 'principle' to be a natural law and draws the conclusion that it would be wrong to attempt diminishing the hardships of the poor, since this only would lead to an even higher fertility rate and as a consequence would produce even worse suffering (31-32). He regards the persistence of social inequality and thus of the established ownership structures in society even as mandatory for the protection of civilization (111-112).

<sup>316;</sup> emphasis in the original) is in contradiction to his previously stated indetermination concerning the causes of global warming (and a rather strange claim considering that technologies for utilizing wind power, solar energy, etc. already exist today).

<sup>&</sup>lt;sup>20</sup> "[D]et virkelige problemet."

<sup>&</sup>lt;sup>21</sup> "[K]ildesortering."

<sup>&</sup>lt;sup>22</sup> "Klimakrisen de hadde nå, ødeleggelsene av regnskogene, at Jordens artsmangfold var alvorlig truet."

Positions inspired by Malthus that emphasize – much more than Malthus did himself – the harm that population growth does to the environment spread widely in the 1960s. The most prominent advocate of this neo-Malthusianism was the biologist Paul Ehrlich, who in 1968 published the bestseller The Population Bomb. Ehrlich claims that it will by no means be possible to feed the fastgrowing populations of the developing countries and that therefore the starvation of hundreds of millions of humans in the near future will be unavoidable (xi). He considers every form of environmental damage to be a consequence of population growth: "Too many cars, too many factories, too much detergent, too much pesticide, multiplying contrails, inadequate sewage treatment plants, too little water, too much carbon dioxide – all can be traced easily to too many people" (66-67; emphasis in the original). A substantial enlargement of areas under cultivation and thus of food production – so that the latter would conform to the growth of world population – is impossible according to Ehrlich (96 and 108). He therefore suggests to strictly regulate population growth in the U.S. through incentives, penalties, education and possibly mass sterilization, and to terminate all food deliveries to developing countries with already too large populations, even though hunger catastrophes would then have to be expected there (135-139 and 160). After the death of those who cannot be fed, demographers should determine the proper population size of each and every country in relation to its natural resources (164).

In Chimera, reflections concerning the predicted further strong growth of human populations in many African countries can be found already in the very first chapter. The writer – who is rather explicitly identified as Nygårdshaug himself and who is the central character in this chapter – tries to envision the future of the people there, but then states: "You see nothing, absolutely nothing" (27). When spotting some farm hands, he calls them "zombies" (29) and, thus, implies the unavoidable death of these people that is already looming ahead in the present. On the story's future level, the report of an unnamed 'expert' is quoted extensively, who refers explicitly to Malthus and Ehrlich and deduces his analysis of the world's ecological situation from their views. According to him, the production of ever more food for humans and the cultivation of plants for the production of biofuel cause mass species extinction (126), which he calls a "biological holocaust" (125). Like Malthus and Ehrlich, he does not see an unequal distribution of resources and consumption levels as the basic problem, but holds instead that the size of human populations must be consistent with "the ecology, the biodiversity and carrying capacity of every single country"<sup>26</sup> (124). Every increase in food production for humans would – irrespectively of any technological innovations – inevitably lead to further species extinction. Therefore there is "a deep and serious contradiction between fulfilling every individual human's minimum demand for food and quality of living and the protection of the planet's diversity of those species that precisely form the precondition for all life here on this planet<sup>27</sup> (127). "Irrefutable expertise"<sup>28</sup> (127) would moreover show that "the entire system, large parts of the world's food production, are facing a complete collapse"<sup>29</sup> (127), since the nonrenewable resource phosphor – necessary for the production of artificial fertilizer – would soon be depleted.

23

<sup>&</sup>lt;sup>23</sup> "Du ser ingenting, absolutt ingenting."

<sup>&</sup>lt;sup>24</sup> "[Z]ombier."

<sup>&</sup>lt;sup>25</sup> "[B]iologiske holocaust."

<sup>&</sup>lt;sup>26</sup> "[H]vert enkelt lands økologi, bio-mangfold og bærekraft."

<sup>&</sup>lt;sup>27</sup> "[E]n dyp og alvorlig motsetning mellom det å ivareta ethvert menneskes krav på et minimum av mat og livskvalitet og det å bevare klodens mangfold av de arter som nettopp er forutsetningen for alt liv her på kloden." <sup>28</sup> "[D]en ugjendrivelige ekspertisen."

<sup>&</sup>lt;sup>29</sup> "[H]ele systemet, store deler av verdens matvareproduksjon står overfor en fullstendig kollaps."

The premises of this 'expertise' are shared by both the research station's head, de Payens, and by the majority of the scientists working there. De Payens states that consumption, waste and pollution would further increase through a continuously growing world population (71). Lyngvin's own nightmare scenario are "cities that grew and swelled up in tremendous speed" (74) and "humans who tore to pieces and destroyed ever more of our pristine, beautiful nature" (74). In his view, the inevitable consequence of population growth will be future resource scarcity: "When the oil ran out, the production of artificial fertilizer ended because of a lack of phosphor, and the number of the planet's inhabitants came close to ten billion, a catastrophe of scary dimensions would be unavoidable",32 (398).

The virus appears in this context as "the remedy that can save this tormented planet" (218). That its application in order to kill billions of people is the only possible conclusion is repeatedly made clear in the novel, for "the alternative was far worse" (398), that is, "a world in pain, a dark future in a slowly burning and suffering century, with riots, wars, hardship, hunger and slow death" (414). The virus is "the only possible escape" (396) from this catastrophic scenario.

Although Nygårdshaug claimed that Dan Brown in his novel *Inferno* had 'stolen' from *Chimera* the idea of deliberately using a virus to reduce overpopulation (quoted in Bjørnskau), this idea is not in the least new. It was already envisioned in quite some detail as a possible future scenario in Ehrlich's *The* Population Bomb (70-71), and has been frequently adopted in literature and TV, for example in the Star Trek episode The Mark of Gideon (1969) and in the German writer Carl Amery's novel The Fall of the City of Passau (Der Untergang der Stadt Passau, 1975). A more recent example (which, however, also predates Chimera) is Margaret Atwood's novel Oryx and Crake (2003). Randers likewise mentions in 2052 that a pandemic disease killing at least two billion people may be unlikely, but would at the same time constitute "a solution to the climate problem" (252).

What *Chimera* also has in common with many other neo-Malthusian scenarios is that through addressing world population, a seemingly global approach to environmental questions is taken. The necessity of such an approach has been repeatedly emphasized with regard to the Anthropocene concept, which is supposed to require humans to adopt a truly global perspective not only on environmental change but also on humans as a species and the ways in which this species is changing the earth (e.g. Chakrabarty 213). According to Timothy Clark, the Anthropocene "represents, for the first time, the demand made upon a species consciously to consider its impact, as a whole and as a natural/physical force, upon the whole planet – the advent of a kind of new, totalizing reflexivity as a species" (86).

Yet such calls for a 'species perspective' have also been criticized for blurring uneven social and national responsibilities for the problematic developments that led to the Anthropocene, and also for neglecting the fact that the negative effects of climate change do not equally affect the entire human species, but rather hit those who are the least responsible for them the hardest. Andreas Malm and Alf Hornborg, for example, point out that it was only a very small part of the human species – those

<sup>&</sup>lt;sup>30</sup> "Byer som vokste og este ut i voldsomt tempo."

<sup>&</sup>lt;sup>31</sup> "[M]ennesker som tråkket i stykker og ødela stadig mer av vår opprinnelige, vakre natur."

<sup>&</sup>lt;sup>32</sup> "Når oljen tok slutt, kunstgjødselproduksjonen opphørte på grunn av mangel på fosfor og klodens innbygertall nærmet seg ti milliarder, ville en katastrofe med uhyggelige dimensjoner være uunngåelig."

<sup>33 &</sup>quot;[M]iddelet som kan redde denne forpinte kloden."

<sup>34 &</sup>quot;[A]lternativet var langt verre."

<sup>35 &</sup>quot;[E]n verden i smerte, en mørk fremtid i et langsomt brennende og lidende århundre, med oppstand, kriger, nød, sult og langsom død."

<sup>&</sup>lt;sup>36</sup> "[D]en eneste mulige utveien."

capitalists who had the necessary financial means – who, in the 18<sup>th</sup> and 19<sup>th</sup> century, started and carried out the transition to fossil fuel based economies. They emphasize also that enormous differences concerning the amounts of greenhouse gas emissions exist both historically and contemporarily between nations and within individual societies (64). David Satterthwaite argues that the global increase in greenhouse gas emissions has been and continues to be driven much more by increases in consumption of the privileged than by population growth, and that if emissions were calculated based on *per capita* consumption, the wealthiest fifth of world population would be responsible for more than 80% of all greenhouse gas emissions, while the poorest fifth would only account for around 1% of global emissions (563). Against this background, Malm and Hornborg state that "species-thinking on climate change is conducive to mystification and political paralysis. It cannot serve as a basis for challenging the vested interests of business-as-usual" (67).

In *Chimera*, however, responsibility for all kinds of environmental problems is frequently traced to the species level. The above mentioned 'expert' states for example that environmentally harmful soy monocultures in Brazil are "supplying the world's rising population with food" (126) and that giant sugar cane plantations (also in Brazil) for which rainforests are destroyed serve to produce biodiesel for "keeping the world's – again growing – fleet of cars in motion" (126). In this way, "the world" and thus all human beings are made equally responsible for the consumption of soy and biodiesel, without mentioning, for example, that around three quarters of the world's soy production is used as animal feed in meat production and only about 6% directly as food for humans (WWF 14-15) – even though vegetarian diets could feed many more people while having a considerably lower environmental impact (Reijnders and Soret 665S). Meat is, moreover, only consumed by those parts of humanity that can afford it – such as Norwegians. Imports of soy for use in meat production and fish farming in Norway have doubled between 2004 and 2013 (with more than 80% of that soy coming from Brazil; Lindahl 3), while Norwegian meat consumption in the same period went up from the already very high level of 70 kg per person per year in 2004 to 77 kg in 2013 (Helsedirektoratet 6).

The 'expert' in *Chimera*, however, seems to be unaware of such figures. Through blaming the entire human species equally for environmental problems, any differences in financial means and consumption patterns between the privileged and the poor parts of humanity are obliterated. The lifestyle of the rich is never put into the context of environmental degradation. A change of lifestyles and reduction in consumption are not mentioned as options in the novel. Quite the contrary happens: The scientists at CORAC are themselves living in considerable luxury, with "all the conveniences that the researchers could wish for" (57), including an obviously anything but vegetarian diet of the highest culinary standards, as is repeatedly emphasized (228 and 282).

Rich societies with high levels of consumption, such as the Norwegian, are, thus, not particularly held accountable for environmental degradation in *Chimera*, while countries such as Nigeria and the Democratic Republic of the Congo are explicitly exposed as places of excessive population growth (27 and 310) and are thus (following the 'scientific' argumentation of the above mentioned 'expert') made responsible for global environmental degradation and species extinction. That these are countries ranking at the opposite end of the United Nations Human Development Index than Norway and having much lower *per capita* consumption and emission rates than the Global North is not mentioned once in

<sup>&</sup>lt;sup>37</sup> "[F]orsyner verdens stigende befolkning med mat."

<sup>&</sup>lt;sup>38</sup> "[H]olde verdens – igjen stigende – bilpark i bevegelse."

<sup>&</sup>lt;sup>39</sup> "[A]lle de bekvemmeligheter forskerne kunne ønske seg."

*Chimera*. An implied message is then, in turn, that Norway with its small population has – if any – only a vanishingly small co-responsibility for environmental problems.

Blaming population growth in poor countries for environmental degradation as it is done in *Chimera* can thus be interpreted as a strategy of denying an extraordinary high responsibility of the privileged for climate change. Presenting the deliberate extinguishing of a large part of humanity through a virus as the only solution to environmental problems distracts attention from any approaches that involve questions of social and global justice and that argue for changes in lifestyles and consumption behavior. Moreover, since a virus epidemic on such a scale seems to be at least highly unlikely and since there is no ethically acceptable *ad-hoc* way of reducing human population sizes, the conclusions drawn in *Chimera* with regard to the solution of environmental problems are ultimately pointless.

Washington and Cook consider distraction and blameshifting as forms of implicatory denial serving to divert attention from one's own responsibility with regard to climate change (99). In *Chimera*, however, all the main characters agree that climate change is not the 'real' problem and that it should be neglected in order to focus instead on human population growth. This is rather a strategy belonging to the category of interpretative denial, since it acknowledges climate change *per se*, but argues that there actually is no need or no possibility to deal with it at present, since other issues need to be prioritized.<sup>40</sup>

Interestingly, in *Chimera*, environmental degradation caused by population growth is discursively linked to a hostility against certain religions, whose members are accused of opposing "birth control" (128). De Payens blames in particular Catholic and Muslim countries for preventing the adopting of effective environmental protection measures on a global scale, and calls Catholicism and Islam in this context a "medieval superstition" (72). According to one zoologist, Muslims have "never understood how the real cosmos functioned" (408) and are mentally unable to leave their 'superstition' behind.

In this way, again there is a scapegoat. It is not the ethnic Norwegians – a huge majority of whom still are members of the Lutheran state church while an increasing number are not part of any religious community at all – but rather the 'unenlightened' populations of other countries and minority groups such as Muslims living in Norway who cause environmental problems. It is them and their unimpeded proliferation that need to be dealt with – preferably through some kind of "Endlösung" (398), as the application of the virus is explicitly called by one of the scientists in *Chimera*. This scapegoating directed against foreigners and national minorities, again, serves as a strategy of denying responsibility of ethnic Norwegians for climate change.

## Strategy 5: Hoping for authoritarian and totalitarian rule

*Chimera* also contains criticism against an alleged inability of international organizations, such as the United Nations, to initialize effective measures for solving environmental problems. The fictitious UN organization IGLOO, which in the novel theoretically would have the power and the means to decide

<sup>&</sup>lt;sup>40</sup> Even Washington and Cook, in their study of climate change denial, call overpopulation "the only problem more 'wicked' than climate change" (115), without, however, providing any substantial evidence for this claim. Other than in the case of anthropogenic global warming, there is no scientific consensus that human population growth necessarily "exacerbates all the other environmental problems, including climate change" (116), as they suggest. It could thus be said that Washington and Cook themselves through such statements come close to a form of interpretative climate change denial.

<sup>&</sup>lt;sup>41</sup> "[F]ødselsbegrensende tiltak."

<sup>42 &</sup>quot;[M]iddelaldersk overtro."

<sup>&</sup>lt;sup>43</sup> "[A]ldri skjønt hvordan det virkelige kosmos fungerte."

about solutions, frequently acts too late, if at all, because of time-consuming inner disputes (59). In de Payen's eyes, a main impediment within IGLOO is that decisions are made by the principle of majority rule: "There were unfortunately no actions that could be taken without a majority vote, and a majority for something that craved considerable efforts both with regard to capital and unselfish willingness to sacrifice occurred rarely, all too rarely, '44 (128). According to the narrator, the few measures already taken are completely insufficient, yet improvements are not to be expected:

Disputes, useless discussions, sly reasoning, demand for special treatment, exceptions and dispensations used up almost all time in those institutions that were supposed to administrate the planet's future. Yet the worst thing was that a holistic analysis was absent, one which included all those factors upon which a planet with life was dependent to remain viable in the unforeseeable future. 45 (170)

The novel thus ties in discursively with an ecologically motivated criticism of democracy and an endorsement of authoritarian rule that is also advocated by Randers. The latter argues in a very similar way that solving the climate problem could be done relatively easily, yet "only if the voters and rulers actually want to do it, which is rarely the case" (326). In Randers' view, democratic decision-making processes that involve weighing of interests and dissent take too much time, given the urgency of ecological problems. Therefore, "a stronger state" (30) that can act before it is too late would be necessary – "a government that would act in the long-term interest of the people, even if they do not agree in the short-term" (249). It is thus only "forward-looking authoritarian regimes that have the liberty to consult more rarely with their populations" (166) who can deal properly with global ecological problems. Randers' conclusion is that it would be the best for the future well-being of humanity "if a benevolent dictator took control" (239) and enforced the necessary measures without needing to take into consideration the short-term interests that, according to Randers, always dominate democracies.

In Chimera, de Payens is precisely such a benevolent dictator, who, moreover, possesses the "holistic view" that the narrator claims is absent in international organizations. He is portrayed as an older, high-ranking ecologist and biologist (68), whose outward appearance "could be reminiscent of a medieval Knight Templar, 46 (69). That de Payens, moreover, has the same last name as the founder of the Knight Templars, Hugues de Payens, characterizes him as a secular pendant of this historical person: Just like the medieval de Payens who founded the Knights Templars for the protection of Christian pilgrims, the novel's de Payens leads the scientists in protecting the environment. He is regarded by the others as an excellent leader with enormous knowledge and farsightedness (338). Even in difficult situations he remains calm and self-controlled (327), and his authority seems to be undisputed at the research station (106). Since he, as the only one among the scientists, is in frequent contact with the outside world, it is him who receives information first and who chooses what he conveys to the others (103). He makes even decisions with enormous consequences entirely alone and

<sup>&</sup>lt;sup>44</sup> "Dessverre var det ingen tiltak som kunne iverksettes uten en flertallsbeslutning, og flertall for noe som krevde betydelige anstrengelser både hva kapital og uselvisk offervilje angikk, forekom sjelden, altfor sjelden." <sup>45</sup> "Krangel, ørkesløse diskusjoner, finurlig argumentasjon, krav om særbehandling, unntak og dispensasjoner

tok nesten all tid i de organene som skulle forvalte klodens fremtid. Men verst var det at en helhetlig analyse som inkluderte alle de faktorene en klode med liv var avhengig av for å kunne fortsette å være levedyktig i uoverskuelig fremtid, manglet."

<sup>46 &</sup>quot;[K]unne minne om en middelaldersk tempelridder."

is in charge of their implementation, including the targeted distribution of the virus. He informs the leaders of other research stations about his plan, yet not as an idea to be discussed, but as a "fait accompli" (378). Through the motif of a headband on which jaguars are depicted, de Payens is linked to the virologist Xtolec, from whom he states to have received the headband (378). Xtolec is introduced in Nygårdshaug's preface and is frequently cited as a scientific authority throughout the novel. De Payens thus combines the roles of a rational scientist and of a strong, authoritarian leader. Therefore, he is not only able to analyze the situation correctly and to draw the right conclusions, but he can also enforce the actions he has recognized as necessary without involving democratic considerations and finding of compromise. Through his identification with the supposedly 'real life' scientific authority Xtolec, any doubt concerning his qualification to judge correctly on facts and circumstances is erased.

Surprisingly, the anti-Islamic and authoritarian rhetoric in *Chimera* that through the character of de Payens is combined with a Knights Templar and crusader imagery was not commented upon by literary critics in Norway, although the novel was published in 2011, only a short time after the terrorist attacks by Norwegian right-wing extremist Anders Behring Breivik killing 77 people. Breivik (under the name Andrew Berwick) claimed in an anti-Islamic manifesto released on the day of the attacks to be a member of a renewed Order of the Temple that aimed at protecting Europe from a "Muslim invasion/colonisation" (Berwick 827). According to Breivik, Muslims are conducting "demographic warfare" (825) against Western countries through mass-immigration combined with high birthrates. The idealization of authoritarian rule by 'experts' who do not shy away from violence against human beings, combined with neo-Malthusian views and an anti-Islamic rhetoric throughout the novel, thus shows very clear parallels to the mindset of Norwegian right-wing extremists such as Breivik.

In the novel, however, this combination functions primarily as a strategy of implicatory climate change denial: While global warming is acknowledged as being problematic, it seems as though nothing could be done to mitigate it within the current political system. Only if what Randers calls a "benevolent dictator" takes control, the necessary measures will be enforced. Following this logic, individuals can do nothing to mitigate global environmental problems, apart from transferring their political agency to 'experts' and to authoritarian or totalitarian rulers. With unrestricted rule by one ecologically minded dictator or authoritarian regime over the entire planet being more than unlikely to appear in time to prevent catastrophic climate change, however, this way of thinking – besides being highly problematic from a democratic and human rights perspective – is pointless and ultimately results in a denial of any individual responsibility for mitigating climate change. It rejects any attempts of mitigation because of their inherent complexity, and indefinitely defers any measures through suggesting that only a totalitarian all-in-one solution forced upon the world's population from above could successfully deal with global environmental problems.

### Conclusion

*Chimera* is a novel in which global warming plays a central role and that addresses it as a serious problem. Yet despite this, the text contains at least five different strategies of climate change denial. All of these serve to detract attention from any particular Norwegian responsibility with regard to greenhouse gas emissions, and to portray immediate mitigating measures as unnecessary or even impossible. These strategies range from literal denial (denying the scientific consensus that anthropogenic greenhouse gas emissions cause global warming) via interpretative denial (stating that

climate change is not the 'real problem' and instead blaming the poor and certain religions for all sorts of environmental degradation) to implicatory denial (portraying Norwegians and their national identity as innocent victims of climate change, suggesting that technological quick-fixes will be developed, and hoping for authoritarian or totalitarian rule in the future instead of committing to mitigating action in the present).

Against my contention that *Chimera* propagates climate change denial could be objected that a novel is not a scientific text and that it, therefore, does not need to be scientifically accurate. Yet it is, on the other hand, very clear that *Chimera* contains political messages that are highlighted frequently both explicitly and implicitly throughout the entire text. As mentioned earlier, Nygårdshaug himself has described his authorship as politically motivated, and he has made clear that he shares the views uttered by the narrator and the central characters of *Chimera*. There can thus be little doubt that the novel indeed represents a political agenda.

Nygårdshaug has, moreover, claimed that "everything in the book is based on facts" (Sætren 30), thus trying to add credibility to the fictional future scenario presented in *Chimera*. The frequent quotes from allegedly 'scientific' texts interspersed throughout the novel serve the same purpose. Yet, as I hopefully have been able to show, what in *Chimera* is presented as scientifically proven 'truth' is, in reality, not at all in accordance with the current scientific state of knowledge. With regard to the causes of climate change and other environmental issues, the novel's scenario is instead based on ignorance and a distortion of actual science.

It seems nevertheless that Nygårdshaug has been rather successful in convincing his primarily Norwegian audience of the credibility of the ecological 'facts' in *Chimera* and the conclusions drawn from them. Cathrine Krøger criticized the novel's style in the newspaper *Dagbladet*, yet called Nygårdshaug an "environmental spearhead" and praised the commitment she saw expressed in *Chimera* (Krøger 8). Other reviewers likewise highlighted that the novel was based on thorough research and represented an environmentally committed attitude (e.g. Lillehaug 16 and Oppedal 44). Tellingly, it was not a professional literary critic, but an employee of the environmental organization *Naturvernforbundet*, who, as the only reviewer of *Chimera*, at least raised some doubt concerning the claim that human population growth is the main cause of environmental degradation (Opdal 31). Yet, no reviewer commented upon the literal denial of the scientific consensus on anthropogenic global warming in *Chimera*, or on the strategies of both interpretative and implicatory climate change denial in it. The book's relative popularity in Norway can be deduced from the circumstance that it was nominated for the Norwegian Booksellers' Prize in 2011.

It is unlikely that the climate change denial contained in *Chimera* would not have met substantial critique had it instead been put forward in a political debate or in a work of non-fiction. That, as part of a novel, readers let it pass without comment may indicate that strategies of climate change denial woven into works of fiction are less easily identifiable as what they are than when the same strategies are pursued in other genres or media. It is, thus, all the more important to bring to light such strategies in literary works and to make clear that they are part of an overall attempt of denying climate change that indeed constitutes the precise opposite of altruistic environmental and social commitment. Novels such as *Chimera*, *State of Fear* or *Going Green* do not constitute examples of a *littérature engagée* that enlightens its readership concerning important environmental issues. On the contrary: They are

<sup>&</sup>lt;sup>47</sup> "Alt i boka er basert på fakta."

<sup>48 &</sup>quot;[M]iljøforkemperen."

texts that contribute to the spreading of ignorance and that provide excuses for not acting on the actual causes of global environmental change.

The impact of works of fiction on public opinion may be difficult to assess, yet it would be wrong to assume that they have none. At a time when distortion of facts and targeted misinformation are used as strategic tools for bringing climate change deniers into the highest political offices (see Lemos), literary critics cannot limit themselves to judging the aesthetic quality of literary works and to celebrating fiction's potential to stir the imagination. They also need to be able to conduct critical assessments of the often highly problematic relation between fiction and fact, and be aware of the manifold ways in which literary fiction can function as a medium of denial.

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