

**LITERARY STRATEGIES OF REPRESENTATIONS OF CLIMATE CHANGE INTO FICTION**

*Jumanazar Niyozov*

*Independent researcher at UzSWLU*

**Annotation.** It's not an easy effort to include climate change into literature. To explore how global warming impacts human character, the future, imagined landscapes, the political realm, or culture, the novel must bring fact into dialogue with fiction. The way that science is incorporated into fiction is a deeper issue that lies beneath all of these decisions. Writers exploit different strategies to reach this goal.

**Key words:** climate change, environmentalism, fiction, plotline, scientific predictions.

The body of climate change fiction is a vast and expanding. Climate fiction can convey cultural narratives, create detailed speculation, incorporate diverse points of view, and hold a multitude of things, from species to machines, places to weather systems. Incorporating climate change into fiction is not a straightforward task. The contentiousness of climate change makes this task yet more difficult. From the first plot choices, a novelist faces legion questions about the relationship between climate science and the novel. Which set of predictions should the novelist follow? Should the novel be set in the near future, when changes might be harder to discern, or in a distant, harder-to-predict future, when changes might be undeniable? Which threats are most serious or most likely? How do changing predictions about “tipping points,” extreme weather, desertification, raised sea levels, or the Gulf Stream affect the novel’s imaginative possibilities? Is it acceptable to oversell the threat or compress the timescale to provide more dramatic possibilities? If the climate has indeed changed in the fictional world, how will characters know about it? Will scientists explain things, or the media, or will civilization be so decimated that scientists and reporters are neither possible nor needed? The novel could focus on the human practices that exacerbate the greenhouse effect—carbon dioxide emissions, energy corporations, individual consumption—or the meteorological details of future climate.[3] Some novels have adopted an elegiac mode for the loss of our present world, while others have investigated amelioration strategies, like carbon sinks, cap-and-trade schemes, and alternative energy. [4., p. 198] Beneath all of these choices lies an even more fundamental problem: the way that science enters fiction. This issue gets to the heart of what it means for science to be true and what it means for fiction to be distinguished from fact.

Many excellent novels pointedly avoid the tension between scientific prediction and fiction by making climate change self-evident in the novel's world. In T. C. Boyle's *A Friend of the Earth*, violent storms threaten a rock star's compound, where a broken-down environmentalist tries to keep the last surviving members of several species alive. In Paolo Bacigalupi's *The Windup Girl*, a fragile network of sea walls, levies, and pumps keeps a Thai city from being flooded by the swollen ocean. And in novels like Maggie Gee's *The Ice People* and Doris Lessing's *Mara and Dann*, the very issue of human responsibility for the climate is superseded when anthropogenic global warming is replaced by a new ice age, leading to the collapse of European civilization. In such novels, scientific predictions are embedded in the novel's setting. The climate may be influenced by humans, but the novel's conflicts run along familiar plotlines of humans combating nature and other humans who would further upset a "natural" balance.

Other novels avoid representing scientific uncertainty and practice by turning thick scientific predictions into tomorrow's scientific givens. In the last two decades, public debate has included the detailed techniques of climate science: Antarctic ice cores and carbon dioxide counts in Mauna Loa have come under scrutiny; surveys of glaciers and species have been folded into the controversy; polls of scientists have explored the importance of scientific consensus; studies' origins in corporate or environmentalist money have been unearthed; conspiracies by university scientists have been alleged; and so on. In Susannah Waters's *Cold Comfort*, the teenaged protagonist keeps a scrapbook of newspaper stories about climate change, delivering much information, even as part of her family's home sinks under the thawing permafrost and Native hunting patterns change due to the unprecedented breakup of sea ice. In James Herbert's *Portent*, an omniscient narrator describes natural disasters across the world, divorced from the plot's characters. Scientific knowledge can be put in the mouth of future technicians, newsreaders, Native elders, or the narrator itself, making fictional climate change an unquestionable certainty for the reader.

Despite these strategies, the majority of novels about climate change include at least one scientist. There are crude ways to use such a character: dumping information on the reader, foretelling plagues on humanity to build suspense, granting the sheen of respectability to wild speculations. [1., p. 32] There is a wide variation of the types of science practiced by characters, as well as the roles they play in the novel. In Clive Cussler's *Arctic Drift*, the novel's heroes are marine biologists who chart changes in chemical composition and plankton levels in the Pacific Ocean; their scientific skills help them discover that an energy magnate is dumping greenhouse gases while pocketing the Canadian government's sequestration subsidies. Also, a minor character discovers an efficient way to

break down carbon dioxide using the rare element ruthenium, before nearly being assassinated by the energy magnate's henchman. These scientists allow *Arctic Drift* to explore the economic interests in the current energy regime, as well as proposed strategies for emissions reductions. In *Carbon Dreams*, by Susan M. Gaines, the protagonist is a biological chemist in the 1980s using tiny plankton as a biomarker to understand the last 150 million years of global climate. Her relationships with oceanographers, botanists, chemists, geologists, and paleontologists, as well as a romantic interest with an environmental campaigner and organic farmer, allow the novel to explore the emergence of a scientific consensus about climate change and the resulting duties to the scientific community, political environmentalism, and impartial "pure" research. In Liz Jenson's *The Rapture*, a physicist character helps the novel negotiate between rational and theological explanations for natural catastrophes, a pattern repeated in many other novels. In such works, scientific characters play a fundamental role in the investigation of the meaning of climate change for the wider public.

Other novels use scientists to explore what it means to be human in a climate-changed world. In Margaret Atwood's *Oryx and Crake*, one of the main characters engineers new animals and humanoids, perfecting them after the collapse of human and "natural" animal populations. And Maggie Gee's *The Ice People* features a nanotechnology engineer who helps build "Doves," self-replicating robots that replace babies in a world of plummeting birth rates. In Sarah Moss's *Cold Earth*, a team of archaeologists explores the fate of Greenlanders who faced a historic shift in weather patterns, even as they are accidentally trapped in similar conditions. Novels such as these may not be particularly interested in the science of climate change per se, but they use science to unpack global warming's meaning for human beings.

All and all, by making climate change self-evident in the novel's setting, many great books deliberately avoid the conflict between science and fiction. By transforming complex scientific predictions into scientific givens of the future, other novels avoid depicting scientific uncertainty and practice. Beside these strategies, scientists are included in most climate change books. They play a fundamental role, developing the meaning of climate change while helping to frame questions about both knowledge and the novel as a formal entity.

#### References.

1. Adam Trexler, "Mediating Climate Change: Ecocriticism, Science Studies," in *Oxford Handbook of Ecocriticism*, ed. Greg Garrard (Oxford: Oxford University Press, 2014).

2. Adam Trexler and Adeline Johns-Putra, "Climate Change in Literature and Literary Criticism," *Wiley Interdisciplinary Reviews: Climate Change* 2.2 (Mar.–Apr. 2011): 185–200.
3. Angela Evancie, "So Hot Right Now: Has Climate Change Created a New Literary Genre?" *NPR Books*, 20 Apr. 2013, <http://www.npr.org/2013/04/20/176713022/so-hot-right-now-has-climate-change-created-a-new-literary-genre>;
4. Myles Allen, "A Novel View of Global Warming," *Nature* 433 (20 Jan. 2005): 198