

## Reflections

### Climate change and science fiction: What we can (not) learn from disaster films

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As bad as the current COVID pandemic is for us humans, for a short time, it seemed to be a blessing for the climate, the air, and the environment; the economy lay idle, air traffic came to a standstill, carbon dioxide emission decreased worldwide, and smog disappeared from cities (e.g., Carbon Brief 2020). Yet this was only a snapshot. Climate activists' possible hopes that our consumer behaviour or the structure of the global economic system would transform in the long term seem to be wishful thinking.

So how can we manage to mitigate or live with human-made global warming in a post-COVID era? In our current geological epoch of the Anthropocene—the increasing human influence on the Earth system, including the negative consequences such as climate change, species extinction, and overexploitation of resources (Crutzen 2002)—scientists and activists are increasingly turning to science-fiction where doomsday scenarios are teeming. The idea is to use the “genre of the future” to find possible answers to the future challenges of climate change and ecocide, i.e., to educate the people and, in addition, to bring about a positive change in behaviour. Particularly, science-fiction films should therefore not only entertain but also encourage more sustainable conduct. But can a pop-cultural/artistic genre really perform the balancing act between these two goals?

Let us take a look at the different scenarios that the genre offers. We can roughly distinguish between two distinct science fiction narratives when it comes to dealing with the aftermath of the Anthropocene. In one narrative, humanity needs to cope with the consequences of self-inflicted global warming and environmental catastrophes on Earth. More recently, a new term has been established for books, films, and comics on this topic: climate fiction or cli-fi for short. Popular themes include post-apocalyptic visions of the future in which people have to fight for survival. In *Waterworld* (1995), for example, the polar caps have melted and—about

450 years into the future—flooded large parts of the Earth. In *Mad Max: Fury Road* (2015), the world has become a dry wasteland around the year 2045 after nuclear, oil, and water wars. And in *Snowpiercer* (2003)—set in 2031 (playing only 11 years in the future)—efforts to stem climate change through geoengineering (see Maynard 2018) have led to a new ice age and the extinction of all but a few people trapped in a train. Common to all these dystopian ideas is that life on Earth is characterized by scarcity and either anarchic or dictatorial structures of rule.

In the other—escapist—narratives, people seek their salvation away from Earth on space stations or other planets. In *Interstellar* (2014), in the year 2067, humanity will not be able to feed itself for much longer due to climate change and environmental destruction, which prompts a project to find a new habitable planet. The situation is similar in the film *Cargo* (2009), in which, in the year 2267, the surviving humans of an ecological collapse haven taken refuge on a poorly equipped space station in Earth's orbit. In the animated film *Wall-E* (2008), Earth is equally uninhabitable, with the result that people in the 29th century live on spaceships, fully cared for by machines, but have completely degenerated. In the year 2154 of the film *Elysium* (2013), Earth is still habitable, but the super-rich elite has bought its way onto a paradise-like space station, while the rest of the human race tries to somehow get by on Earth under precarious circumstances.

Both narratives show us two things: on the one hand, the consequences of the Anthropocene exacerbate existing inequalities: it is the group of people who were already vulnerable, marginalized, and poor who suffer the most from climate change and ecological collapse. On the other hand, the general Western discourse—which includes Hollywood cli-fi films—describes the negative consequences of the Anthropocene as relevant only insofar as they affect Western societies and nations. In that sense, the Earth that is, in fact, endangered by

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the Anthropocene is part of the ideal temperate climate zone. We see this in the imagination of an ideal climate in the space habitat on the way to the newly found habitable planet in *Interstellar*, which looks like a perfect imitation of a perfect piece of mid-Western USA: everything is green, there is a baseball field, fertile farmland, and neat farmhouses. Non-Western societies and nations, however, have for centuries lived in a world marked by extreme weather and climate, colonialism, exploitation, and genocide, and have faced the end of their worlds (Rothe 2019: 163). Does the global North just continue to pursue a certain lifestyle at the expense of others?

Nonetheless, one might think that in light of such horror scenarios, film audiences should rethink or even change their behaviour, because we certainly do not want to live in those possible futures—unless perhaps we are among the privileged few. Such a shift in thinking seems to be at least the wish of activists like Daniel Bloom, who developed the term cli-fi more than ten years ago (Bloom 2014b). According to this view, cli-fi could play an important role in bringing scientific findings to the attention of people—especially younger people—through dramatic plots and emotions, giving them hope that it is not too late to fight climate change (Bloom 2014a, Perkins-Kirkpatrick 2017).

Yet this view has two major flaws. Firstly, the benefits of emotionally charged disaster education and scare tactics are dubious at best and can backfire in paralysing people and giving them a sense of hopelessness (Becker 2017, Bryan 2020). Having said that, secondly, providing people with hope can be a “shadowy mirror” since “[l]iterature has always been a humanist endeavour: it intrinsically and helplessly affirms the value of the species” (Waldman 2018). To return to our film examples, there is, even in the worst climatic post-apocalypse, a glimpse of hope: in *Waterworld*, humans find the mainland in the shape of the top of Mount Everest; in *Mad Max: Fury Road*, the dictator is disempowered, and his water supplies are released; and in *Snowpiercer*, the surviving humans meet animals in the end. Humanity seems to go on somehow, so why change anything? This becomes especially

clear in the escapist narratives because leaving Earth does not change the basic human attitude that nature would “exist” to serve humankind. We just search for a new planet to exploit, or we return to Earth as soon as a blade of grass grows there again—and we continue as before.

Science fiction does not offer us easy solutions to complex problems. The educational benefit, however, is to see our current values under a magnifying glass: We as humans will always survive no matter what. But what if there is no new technology, no place, no space station, no other planet to save us? To critically question these narratives of hope, but at the same time, not being paralyzed by hopelessness, is the real science fiction.

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