

Q&A Margaret Atwood Speculative realist

Novelist Margaret Atwood's essay collection In Other Worlds: SF and the Human Imagination, published this month, is a companion piece to her dystopian fictional world of global warming and engineered plagues. The Canadian author discusses where she gets her science, and her concerns for the future.

Does science run in your family?

My father was an entomologist — he studied sawflies, budworms and insects that eat trees, so as a

In Other Worlds: SF and the Human Imagination MARGARET ATWOOD Nan A. Talese/Virago: 2011.272 pp. \$24.95/£17.99

child I spent a lot of time in the forest. My brother is a neuroscientist who studies synapses, one nephew is a physicist studying the composition of the Universe, another is a materials engineer studying crystal structure. My grades were a bit better in science than in English, so I easily could have become a biologist: I'd probably be cloning potatoes now, making them glow in the dark. But I started writing instead.

You say in your new book that your novels are not science fiction, but speculative fiction. What's the difference?

It is hard to draw that line. A lot of what is labelled science fiction has nothing to do with science. It tends to be something that doesn't fit into any other genre, so it is all put in the same box. But to me there is a difference between a science-fiction novel such as Ursula LeGuin's *The Left Hand of Darkness* which contains things that are very unlikely to happen, or impossible — and a speculative novel such as George Orwell's *1984*, which really could happen. My books are more like the latter — I don't write about Planet X.

You also note that we're preoccupied today with dystopias. Why is that?

We're not feeling very hopeful about our future. In the nineteenth century, everybody thought they had a bright idea that would make life better. We wrote about utopias and model communities. The future was seen as a place of infinite advance. Then came the two World Wars and a number of totalitarian societies that came in on a utopian ticket. The Soviet Union promised wonderful things and put on a good show, but meanwhile Stalin was starving Ukraine and butchering millions of people. We remember those experiences and know too much about them. It has become less and less possible to write a utopia that isn't some form of Stepford Wives or Brave New World.

What sort of future do you imagine in your books *Oryx and Crake* and *The Year of the Flood*?

Genetic engineering is commonplace. A scientist named Crake designs a race of improved humans that are better adapted to their environment. They don't have to wear clothes because they've got built-in sun

⇒ NATURE.COM For author Tom Wolfe's take on science: go.nature.com/mepdrg block and insect repellent. They'll never have to farm because they eat leaves. They're all beautiful and mate seasonally, so there's

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no sexual jealousy. And they will drop dead at the age of 35, so they won't have agerelated illnesses. To make room for them, Crake arranges to eliminate everybody else with a bioengineered epidemic. Having fun yet? However, not everybody is eliminated. *Oryx and Crake* is told from the point of view of one survivor. In *The Year of the Flood*, which tells a parallel story, we find that a few other people have also survived because they took precautions.

How do you keep track of science?

A number of scientists follow me on Twitter. They pass along reports of advances such as transplanting human brain cells into animals, or making meat in the lab, or creating a new gene. Some of the things I wrote about in *Oryx and Crake* hadn't actually happened then, although you could see them coming and they have been done since. Other things that people thought I'd made up, like the goat–spider mix and the light-up rabbit, were already real.

In Other Worlds cautions that, given the risks of biotechnology and cryogenics, "we should leave well enough alone". Why?

Humans will play with their toys until something blows up. Once you let it out of the box, it is hard to put it back in. We now have the ability to create human-specific diseases to which nobody has any immunity and deploy them simultaneously all over the world. Cryogenics, on the other hand, is a nonstarter: you get your head frozen, the money runs out, your relatives die, and you're cat food.

Why does science scare some people?

Science is attractive to those who like solving puzzles. But it is not so appealing for people who want to be cuddled (or even reprimanded), who want to feel that things make sense, or that somebody's looking after them. Scientists do not offer certainty, and they do not offer a universe that is centred around humans. Religions offer a world view in which you are important.

Does the future worry you?

I'm past the age when things scare me. But if I were younger, I would be looking down the line with some apprehension. A world with more than 9 billion people is not going to be very habitable. We've already used 90% of the fish in the sea. Global warming will make it worse: more droughts, more extreme weather and limited harvests. People think they will fix the problem with technology, but famine may fix it for us. Either way it will be a pretty miserable life. The infinite inventiveness of humans sometimes makes me feel hopeful, but we're just as capable of inventing horrible things as good things.

INTERVIEW BY JASCHA HOFFMAN