





Books reviewed in this essay:

Margaret Atwood. *Oryx and Crake*.
New York: Anchor, 2003.

Greg Bear. *Darwin's Radio*.
New York: Ballantine, 1999.

Kazuo Ishiguro. *Never Let Me Go*.
New York: Vintage, 2005.

PLAUSIBLE WORLDS

Human Genetics in Fiction

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EVER SINCE DON QUIXOTE TILTED HIS LANCE against the windmill, novels have expressed ways to fight the sense of futility so often induced by technological change. Whether we make our living inside or outside the scientific guild, whether we are inclined toward naive optimism or fatalistic despair, we can learn a great deal from three fiction writers who grapple with the challenges that genetics and biotechnologies pose to human thinking and feeling.

Oryx and Crake, by Margaret Atwood, depicts a future world both terrifying and ridiculous, dominated by corporations that have grown rich and powerful selling their transgenic products to the masses. The pigoon, for example, made by OrganInc, is a pig that can grow five to six human-tissue organs at once, each easy to harvest for smooth transplant to a human body. ChickieNobs are a tasty fast food made from transgenic chickens that are all breast, actually twelve breasts—no bones, no feathers, no head, just twelve bulbs of meat, covered by “stippled whitish-yellow skin,” connected by fleshy tubes. These are the products of a future world seen in retrospect by the novel, a world already ruined, given to readers piece

by narrative piece, from the post-apocalyptic vantage point of Atwood’s narrator, Jimmy, also known as Snowman to the docile new species of humanity who survive the apocalypse. The circumstances of the survivors’ creation and of the catastrophe that has left Snowman alone with them are not fully explained until the end of the novel. Readers learn early on that Jimmy is good with words, and he is good at making people laugh. In high school, he meets Crake, a biotech genius with a taste for reading the ancient Stoics. Jimmy and Crake become friends, watching executions and assisted suicides on the web and trolling through porn sites. They become rivals when they fall in love with a girl that they see on one of these sites, Oryx. When the love triangle between Jimmy, Oryx, and Crake goes wrong, the world suffers.

Atwood writes everywhere with beautiful and cutting precision. She makes Jimmy the fallible Moses of her story, writing a genesis account of the world before the fall of Adam and Eve, or, in this case, Crake and Oryx, a fall in which Jimmy is complicit. Atwood paints the lives of her charmingly deprived biotech nobility with profound satire, the depths of which can-

not easily be reached with a single reading. Her novel will be strong tonic to anyone who feels constitutionally cheerful about the future; it also works as a lightning rod for a certain kind of misanthropy, which enjoys fondling the idea that humanity will soon be extinct. Instead of endorsing that antipathy, with *Oryx and Crake*, Atwood channels it into the ground.

Kazuo Ishiguro's *Never Let Me Go* is the story of "Kathy H." and her closest friends, Ruth and Tommy, who meet as children at a school called Hailsham. Its committed teachers, rigorous curriculum, special emphasis on creativity, and countryside setting give Hailsham all the trappings of an elite prep school, but the children are not preparing for college or prestigious careers. The children at Hailsham have been artificially conceived to serve as organ donors until they "complete" (or die), usually in their early thirties. Some, like Kathy, delay their initial donations by serving as "carers" to other donors. What drives the novel is not the gradual illumination of the truth about the school and its children. Rather, it is the weight of unacknowledged love and unexpressed grief that gives the novel its force.

Kathy's story turns less around a lost past than a lost future, the sorrow of finding your life already laid out and the future fully disclosed. So she concentrates on moments of uncertainty: when her Hailsham group first leaves the school, and they stand together at their new house "uncertain about the future"; or the moment in Norfolk when she and Tommy decide to go searching for her lost tape, and they "had nothing but fun and laughter before us." Such moments are the counterpoint to the far-from-great expectations given to Kathy and her friends at Hailsham. Through Kathy's account, Ishiguro subtly shifts the moral center of what it means to be human away from origins (how the children were conceived), education (the manners that they learn), and creativity (what the children paint and write), toward participation in an open future, and it is Kathy's lack of such a future, exacerbated by her love for Tommy, that she cannot fully grieve or put into words. She can only find consolation performing her role. To read *Never Let Me Go* is to be a donor waiting for completion under Kathy's expert narrative care.

Darwin's Radio, by Greg Bear, weaves together the story of Mitch Rafelson, an anthropologist with an uncanny gift for discovering ancient human remains; Kaye Lang, a microbiologist who studies retroviruses; and Christopher Dicken, an epidemiologist who works as a "virus hunter" for the U.S.

government. Kaye's pathbreaking research turns out to be the key to understanding an outbreak of bizarre stillbirths around the world. When various government agencies and the biotech industry mobilize to find a cure, they create a political juggernaut at least as dangerous as the disease, and Mitch, Kaye, and Dicken struggle to prove that the virus, SHEVA, is not actually a disease but a genetic messenger. The central idea of the novel is that over the centuries the human genome has been steadily compiling instructions for adapting to social change, but these instructions, and the specific adaptations they code for, have lain dormant, unexpressed in the seeming waste places of the human genome. SHEVA is the genome's radio signal that now is the time to adapt. The result is a new species of human beings.

Bear's artistry shows itself in the way he makes the gradual understanding of SHEVA part of the plot of his novel, so that readers experience how close scientific discovery is to novelistic discovery. *Darwin's Radio* and its sequel, *Darwin's Children* (Del Rey, 2003), explore the possibility of living with a new species of humanity made so by nature, better equipped for life together than either the cyborgs of *Blade Runner* or the mutants of *X-Men*. Bear also ventures into territories of human experience that Atwood and Ishiguro do not, writing beautifully about Kaye's surprising encounter with a transcendent, personal presence that "found her very good." Notwithstanding the allusion to the early chapters of Genesis, Bear's description breaks ranks with modern-day creationists who keep their god confined to the gaps of what science does not know and to literalistic readings of what happened "in the beginning." At the same time, by imagining the adaptive potential latent in the human genome, Bear ruffles the feathers of orthodox neo-Darwinists, for whom change can only occur gradually through random mutation.

With Atwood we can criticize more sharply the collusion between literary banality, represented by Jimmy, and scientific self-absorption, represented by Crake. With Ishiguro we can learn to sympathize with those powerless to change the roles prescribed to them by new technology, but neither of their novels will make us want to learn more about the science, or, for that matter, care much for scientists. Greg Bear is better in this regard because he includes genomics theory and the lives of ordinary scientists within the compass of his fiction, provoking readers to envision a future world that is plausibly good. ■