Tech Flesh 5: An Interview with Nancy Kress

Eugene Thacker

CTheory: Your novel *Beggars in Spain* introduces readers to a genetically altered future of the "Sleepless," a generation of individuals that are genetically modified to need no sleep, are highly intelligent, are resistant to many diseases...there are even intimations of immortality in the Sleepless. What was it about genetics and biotech that drew you to imagine the Sleepless? Why did you choose the particular characteristics that you did?

Nancy Kress: When I first conceived of the *Sleepless*, it was long before my interest in biotech. The motive was pure jealousy. I need a lot of sleep, and I envy short-sleepers. I always thought that if I could get by on six hours a night, I could accomplish so much more.

The other characteristics of the *Sleepless*, such as intelligence and health, are logical choices for any parent who is having a child genetically engineered. It seemed to me that if we could manipulate something as complex as sleep, we could also manipulate those characteristics. Near-immortality, however, was added as a plot device. I don't really think that's in our genes no matter how we adjust them.

CTheory: The worlds of Sleepers and *Sleepless* in the trilogy are divided by what seems to be a form of genetic discrimination: the genetically-modified against the biologically natural. Do you see similar divisions playing themselves out in genetics, and in what ways?

Nancy Kress: Divisions are inevitable, and they will follow the same lines that divisions in quality of health care follow: finances. Just as many expensive elective treatments in health care are currently available to the rich but no one else, so will many forms of genetic enhancement, at least for a while. This is already happening. In some instances, people with "bad" genetic profiles have been denied health insurance. This is true even though they carry the genetic marker for the disease but have not yet developed it themselves. In the near future, court cases and government regulations are going to have to address issues of genetic privacy, insurance, and employment. They're big issues.

CTheory: What are your own responses as a science fiction writer to the human genome project?

Nancy Kress: My response is tremendous excitement. I can't imagine anyone not being interested in this understanding of the basis of life itself...and even more interested in the manipulation of life that will surely follow. In fact, it is already well underway. We are using somatic gene therapy to help disease victims whose bodies cannot make needed proteins. We are using choice-among-embryos *in vitro* fertilization to ensure couples who carry genetic diseases have a healthy baby. We have manipulated organisms into producing medicines. Just a few weeks ago as I write this, the first commercial sale of a cloned animal, a champion cow, took place in Iowa. As we learn more about the human genome than simply the long, long listing of its base pairs as we learn where individual genes are located and what they do we will gain more and more power to create health, abundance, and beauty for ourselves. My biggest regret is that I'm not going to be around for a thousand years to observe what happens.

CTheory: What social roles do you think science fiction can have in response to scientific fields such as genetics and biotech? As a writer, do you think of these domains as sharply divided, or close together?

Nancy Kress: They're very close. Genetics decodes the DNA, identifying how our genes create proteins, switch on and off, and interact with each other. Biotech then puts this knowledge to practical use. Without genetics, biotech has nothing to work with. Without biotech, genetics has only limited funding.

Science fiction acts as a theoretical laboratory, a "thought experiment," for exploring the implications of genetics and biotech. Those implications can be ethical, social, or biological. The function of SF other than to be interesting literature! is to say, "If we did this in science...then what?" SF writers thus predict not THE future (we have a pretty lousy track record at that) but a plethora of futures.

In addition, I've heard many scientists say they studied science because of an early interest in SF.

CTheory: Often in the mass media and in press releases from biotech corporations we are presented with a future in which biotech promises to be able to eradicate disease and improve health and even quality of life. But what do you see as the darkside of this research? What are some specific danger-zones that you see in current biotech and genetics research and application?

Nancy Kress: Some of the specific danger zones I already mentioned: discrimination on the basis of personal genetic information, and division between those who can afford biotech solutions and advantages and those who cannot. Another danger with plant biotech is that some super-resistant crop could begin to proliferate dangerously

without enemies, taking over ecologies (of course, we already have that with kudzu and loosestrife, neither of which was engineered). A final, very real danger, is terrorism with genetically engineered viruses or parasites for which we have no antidotes (I wrote about this in my thriller *Stinger*).

CTheory: Much of biotech research gains its support both scientific and economic from the ways in which it says "this research will lead to these kinds of applications in the future..." Is there something that biotech could learn from SF here in terms of socially-conscious extrapolation? Is there something SF-like in this process of imagining the future?

Nancy Kress: Biotech already does do the same kind of extrapolation SF does ("What if we could get this bacteria to produce insulin?"), although in a much more limited and near-future way than SF's wide scope. I can't say whether or not drug companies wrestle with ethical extrapolations as well. So far, it hasn't been very necessary no one disputes the good of using biotech to cure or prevent diseases. The university labs are a different story: Witness the controversy over, as I write this, NIH-funded research on human stem cells. Universities also have proliferating bioethics departments to do exactly what SF does: imagine consequences of future genetic engineering.

CTheory: Although there have been many scientific utopias about genetics, it is rare that we see attempts to imagine workable futures. In *Beggars in Spain*, however, we see attempts by characters to bridge the gap that has divided the *Sleepless* from the rest of humanity. Do you see such attempts as possibilities with the effects of genetics and biotech?

Nancy Kress: Before we can reconnect, we have to divide. Genetic engineering is a long way from that. Our first germ-line attempts will undoubtedly be to correct defective genes in an embryo, something very few people would object to. Later, and gradually, will come altering such simple things as eye color. Later still, we may or may not learn to manipulate complex characteristics like intelligence. But all this will be private. It probably won't be possible for a very long time to discern who is genetically modified and who is just born physically lucky unless we do make such dramatic modifications as sleeplessness. But how will the real-world scenarios play themselves out? I have no idea. That's why I wish I could be here to find out!

Nancy Kress is the author of eighteen books: three fantasy novels, seven SF novels, two thrillers, three collections of short stories, one YA novel, and two books on writing fiction. She is perhaps best known for the "Sleepless" trilogy that began with *Beggars in Spain*. The novel was based on a Nebula and Hugo-winning novella of the same name; the series then continued with*Beggars and Choosers* and *Beggars Ride*. In 1996 Kress temporarily switched genres to write *Oaths and*

Miracles (Forge, 1996), a thriller about Mafia penetration of the biotech industry. This was followed in 1998 by *Stinger* (Forge/Tor), about the introduction of a genetically-engineered and very nasty form of malaria into Maryland. Her most recent book is *Probability Moon*, the start of a trilogy, which takes place off-World and includes such grand old SF tropes as aliens and a space war. In short fiction, Kress has won three Nebulas and a Hugo. Her work has been translated into Swedish, French, Italian, German, Spanish, Portuguese, Polish, Croatian, Lithuanian, Romanian, Japanese, and Russian. She is the monthly "Fiction" columnist for *Writer's Digest*magazine.

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