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FROM HERE TO INFINITY

AN EXPLORATION OF SCIENCE FICTION LITERATURE

COURSE GUIDE



Professor Michael D.C. Drout
WHEATON COLLEGE

From Here to Infinity:
An Exploration of Science Fiction Literature

Professor Michael D.C. Drout
Wheaton College



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From Here to Infinity
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Professor Michael D.C. Drout



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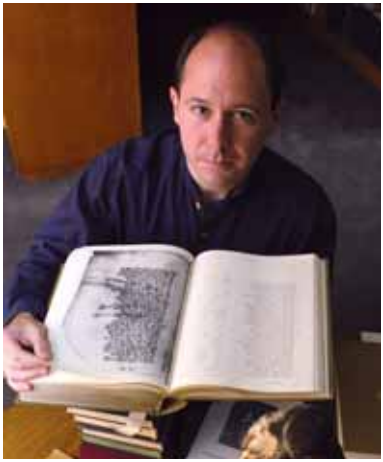
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About Your Professor

Michael D.C. Drout

Michael D.C. Drout is the William and Elsie Prentice Professor of English at Wheaton College in Norton, Massachusetts, where he teaches courses in Old and Middle English, medieval literature, Chaucer, fantasy, and science fiction.

Professor Drout received his Ph.D. in medieval literature from Loyola University in 1997. He also holds M.A. degrees from Stanford (journalism) and the University of Missouri-Columbia (English literature) and a B.A. from Carnegie Mellon.

In 2006, Professor Drout was chosen as a Millicent C. McIntosh Fellow by the Woodrow Wilson Foundation. In 2005, he was awarded the Prentice Professorship for outstanding teaching. The Wheaton College class of 2003 presented him with the Faculty Appreciation Award in that year. He is editor of J.R.R. Tolkien's *Beowulf and the Critics,* which won the Mythopoeic Scholarship Award for Inklings Studies for 2003. He is also the author of *How Tradition Works: A Meme-Based Cultural Poetics of the Anglo-Saxon Tenth Century* (Arizona Medieval and Renaissance Studies). Drout is one of the founding editors of the journal *Tolkien Studies* and is editor of *The J.R.R. Tolkien Encyclopedia* (Routledge).

Drout has published extensively on medieval literature, including articles on William Langland's *Piers Plowman, Beowulf,* the Anglo-Saxon wills, the Old English translation of the *Rule of Chrodegang,* the *Exeter Book* "wisdom poems," and Anglo-Saxon medical texts. He has also published articles on Ursula K. Le Guin's *Earthsea* books and Susan Cooper's *Dark Is Rising* series of children's fantasy novels. Drout has written an Old English grammar book, *King Alfred's Grammar,* which is available for free at his website, www.michaeldrout.com. He has given lectures in England, Finland, Italy, Canada, and throughout the United States.

Drout lives in Dedham, Massachusetts, with his wife Raquel D'Oyen, their daughter Rhys, and their son Mitchell.



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Introduction

Science fiction literature and films have contributed indelible images to the popular imagination, from H.G. Wells's *War of the Worlds* to Ray Bradbury's *Martian Chronicles* to the fiction of "cyberpunks" such as William Gibson. In addition to enthralling readers with breathtaking narratives and dazzling the imagination with mind-bending glimpses of possible futures, the best science fiction asks essential questions: What does it mean to be human? What are the consequences of human progress? Are we alone in the universe, and what does it mean if we're not?

Esteemed professor Michael D.C. Drout traces the history of science fiction in this series of stimulating lectures. From Mary Shelley's *Frankenstein* to today's cutting-edge authors, Drout offers a compelling analysis of the genre's most influential writers and texts, including a look at hard-boiled science fiction, the golden age of science fiction, New Wave writers, and contemporary trends in the field.

Lecture 1: What Is Science Fiction?

The Suggested Reading for this lecture is *On SF* by Thomas M. Disch.

Categories

Along with fantasy literature, science fiction is one of the most popular and commercially successful genres of the twentieth century. Because science fiction has spread so widely through popular culture, it has entered political discourse ("Star Wars" missile defense, "Andromeda Strain" viruses), completely conquered film, and even driven scientific discovery itself.

In this course, science fiction will be abbreviated as "SF" rather than "SciFi"; people who like SF call it that; people from the outside usually call it SciFi. SF is a genre, a category. "Genre" can just be a description, but it can also be a way of criticizing something—when literary critics call something "genre fiction," they do not mean it as a compliment. But SF has been largely immune to the critics. Not only has it been immensely popular, but the genre has managed to develop its own school of literary criticism, its own journals, and its own aesthetic theories: sometimes these mesh with those of mainstream literary criticism, but often they are parallel and separate institutions and practices. In fact, many major writers of SF, including Brian Aldiss, Thomas Disch, and Ursula K. Le Guin have become excellent critics of the genre—they usually are more convincing analysts than mainstream critics who turn their attention to SF. And unlike fantasy, which labors under the gigantic shadow of J.R.R. Tolkien, there is no one SF novel or series that heads up the genre, thus making SF more fragmented, and more diverse, than fantasy.

Mapping out the boundaries of the genre tends to be somewhat easier for SF than it is for fantasy, although there are some overlaps between SF and historical fiction, horror, fantasy, and even romance. To separate out SF from these other genres requires one to draw a few more distinctions. Generally, both SF and fantasy are about things that physically cannot happen, or at least cannot happen at the current stage of technological ability. Fantasy is (usually) set in an imaginary past while SF is (usually) set in an imaginary future. Fantasy uses magic (however that is defined), while SF generally uses advanced technology. But this isn't as easy a dividing line as we might like: magic and technology blend into each other following Arthur C. Clarke's Third Law: "Any sufficiently advanced technology is indistinguishable from magic." The difference between SF and fantasy, then, might only be that in most SF there's at least an attempt to explain the advanced technology in terms of the actual laws of physics and chemistry. This isn't always the case, as with the myriad of stories that require faster-than-light travel and do so with a little hand-waving and invocation of things like "Horst-Conrad Impellers that clutch

at the very fabric of spacetime." But in general, what makes something SF rather than fantasy is the future setting and the attempt to link up with the known laws of physics and chemistry.

Historical fiction is about things that could have happened, but didn't, and it is usually set in the past. But historical fiction has some clear connections to SF in works like Neal Stephenson's *Cryptonomicon* or the many "alternate history" books of Harry Turtledove. Romance tends to cut across the other genres and says more about the behavior of the characters in the story. Romance tends to be considered antithetical to SF, but the branch of SF often called "Space Opera" (such as *Star Wars* or the works of Anne McCaffrey) often contains strong romance elements.

Realistic and Not Realistic

For a variety of reasons, SF has a somewhat different relationship with realism than its cousin fantasy, which is usually seen as being the opposite of realism. Although SF and fantasy are often both describing impossible events, the technological elements of SF provide a fig leaf to critics who are really upset with fantasy's style but do not want to admit it. SF's styles are usually very close to those of mainstream commercial fiction (some of which eventually becomes mainstream high culture). So, for example, the style of William Gibson's *Neuromancer* comes straight from the award-winning mainstream author Jayne Anne Phillips (her 1979 book *Black Tickets* was obviously Gibson's major stylistic influence). Ray Bradbury's stories are also very much in the mainstream, stylistically, of the decades in which he has written.

This is not to say that SF's styles have always been accepted or respected by mainstream literary criticism. Nor should one expect them to be, as much SF is stylistically linked to the lowest-common-denominator writing of its own time period. For instance, much of, if not most of, the SF of the 1940s reads like "hard-boiled" detective fiction or film noir from the same time period. But SF seems in general to aim for a style of realism about unrealistic things, while fantasy often is written in a deliberately archaic or high style that seems to drive mainstream critics mad. SF's focus on realism makes sense if one sees a major aim of the genre to be the exploration of what might really happen. Fantasy doesn't have that luxury, as it is set in a past that one knows did not really have magic, or dragons, or wizards—there is no point in a fantasy author trying to convince readers that what is being discussed really happened. SF, on the other hand, can seek to make readers believe that they are reading an actual report of events in the near (or distant) future. The conventions of normal fiction, then, are more applicable to SF.

The Hard and the Soft

Within SF itself there are usually considered to be two major divisions, although the boundaries between them are hard to map precisely, and the same authors might work on one side and then the other. Hard SF is usually focused on examination of technology and its general effects more than it is on the specific characters in a story. The most famous hard SF writers include former physicists and engineers like Isaac Asimov, Arthur C. Clarke, and Robert A. Heinlein. Although hard SF writers do not only invent future technology, tech is a very, very important part of their writing. Hard SF writers

still develop characters, and they have themes, but they never let future technology and its implications out of the spotlight. The mysticism in Frank Herbert's *Dune* books might seem to make them soft SF, but the relentless focus on the technological underpinnings of nearly every action in the book keeps *Dune* (and the rest of Herbert's work) in the hard category.

Soft SF writers often use SF as an excuse to write about other things that interest them. *Star Wars* is soft SF, as is Margaret Atwood's *The Handmaid's Tale* (if it is even SF at all). Any work of SF in which the author does not explain how the technology works and does not take much time investigating its implications but instead focuses on the inner lives and struggles of the characters (that is, works more like mainstream fiction) could be soft SF.

Great books, like Samuel R. Delany's *Babel-17* and Ursula K. Le Guin's *The Left Hand of Darkness,* can be soft, and the more romance-oriented, space opera books, such as those by Piers Anthony or Anne McCaffrey, are certainly soft. Satirists like Kurt Vonnegut or George Orwell might also count as soft SF writers, though these authors may deserve a different category. It could even be argued that one of the foundations of the genre, Mary Shelley's *Frankenstein*, is soft SF (although Brian Aldiss would disagree).

Some critics would relabel SF as "speculative fiction," fiction that attempts to probe the future, either warning about its horrors or cheerleading its approach. And speculation *is* an important part of SF. But there is more. SF attempts to give readers a taste of the impossible. It opens new vistas and juxtaposes previously separate ideas. It is no coincidence that SF took off in popularity and quality at exactly the same time as the world was finally being completely explored and mapped. Civilizations yearn for frontiers and new worlds: As history closed off the real frontiers, SF invented new ones.

FOR GREATER UNDERSTANDING



Questions

1. Why is SF more diverse than fantasy?
2. What is the difference between hard and soft SF?

Suggested Reading

Disch, Thomas M. *On SF.* Ann Arbor, MI: University of Michigan Press, 2005.

Other Books of Interest

James, Edward, and Farah Mendelsohn, eds. *The Cambridge Companion to Science Fiction.* Cambridge: Cambridge University Press, 2003.

Roberts, Adam. *The History of Science Fiction.* London: Palgrave, 2006.

Scoles, Robert. *Structural Fabulation: An Essay on Fiction of the Future.* Notre Dame, IN: University of Notre Dame Press, 1975.

Shippey, Tom. *The Oxford Book of Science Fiction Stories.* New ed. Oxford: Oxford University Press, 2003.

Stableford, Brian. *Historical Dictionary of Science Fiction Literature.* Lanham, MD: Scarecrow Press, 2004.

Lecture 2: The Roots of Science Fiction

The Suggested Readings for this lecture are Mary Wollstonecraft Shelley's *Frankenstein*, Jules Verne's *Journey to the Center of the Earth,* and H.G. Wells's *The Island of Dr. Moreau.*

The Roots of the Genre

Some critics would trace the roots of SF all the way back to Plato and his story of Atlantis, or to medieval texts like Mandeville's *Travels* or the works of Rabelais. Others would begin the genre in the eighteenth century with Jonathan Swift's *Gulliver's Travels*. No less a writer than Vladimir Nabokov once said that if we were really being strict about definitions, Shakespeare's *The Tempest* would have to be labeled SF. But when one is talking about a body of works in a genre that are accepted as recognizably akin to today's SF, SF as it is now known really begins in the nineteenth century.

Many critics call Mary Wollstonecraft Shelley's *Frankenstein, or, The Modern Prometheus* the first SF novel. In the final analysis, it is not an SF novel, but *Frankenstein* is a great novel nonetheless, and it is at least *close* to being SF, so it is worth examining. Shelley wrote *Frankenstein* when she was only nineteen years old. It was published in 1818, though it became most widely known after the edition of 1831. Frankenstein is not the name of the monster, but of its creator, and the book is not very much at all like the famous film (which is, of course, great in its own way).

Shelley's monster is hideous because of his genesis in corpses and the experiments of his creator, but his heart is, at the beginning, pure. He seeks only love and companionship but because of his appearance people flee from him. When even his own creator refuses to accept him, the monster begins to punish Frankenstein through a series of murders. He offers to leave the world of men forever if Frankenstein will make a companion for him, and the scientist agrees and begins the construction of a female monster, but then he destroys his own work, bringing about the monster's final revenge: "I will be with you on your wedding night," the monster says, and he does not fail to follow through with the threat.

Frankenstein could be considered SF because the novel focuses on the personal and social implications of a technological experiment: Frankenstein's giving life to his creation. The real focus of the novel, however, is the moral responsibility of Frankenstein and the great misery felt by the monster after being rejected both by society and by its creator, and this is a situation that is not particularly relevant to the science (that is, the science is just a device to let the author write about what she wants to write about). And the science itself is really just mentioning famous alchemists' names and then inventing some German professors. But even if it is not SF (some would say it is horror, or gothic), it is a great book and does not deserve its juvenile reputation at all.

Jules Verne

A decade or two after *Frankenstein*, the French author Jules Verne became the first great writer fully within the SF genre. Verne published many books between 1864 and 1904, with his greatest productivity between 1864 and 1870, when many of his best novels were written. These were undeniably composed for a popular audience and have writing flaws that are absent in *Frankenstein*, but Verne engages directly with technology, and he clearly attempted to understand the cutting-edge science of his day. So, for example, *20,000 Leagues Under the Sea* imagines electrically powered submarines; *From the Earth to the Moon* gives an exceptionally long and detailed disquisition about the proper explosive to propel a projectile to the moon ("gun cotton" ignited by electrical sparks), and *Journey to the Center of the Earth* uses the details of nineteenth-century geology (though rejecting the idea that the center of the earth was molten, which most geologists believed at that time). In each case, Verne was doing what modern SF writers do: taking the current technological developments of his day and extrapolating them into the future.

H.G. Wells

It is that prophetic or predictive aspect of Verne's writing that unites him with the later British writer H.G. Wells, whose most famous works were published at the very end of the nineteenth century. Wells began writing books to prophesize about the future and to attempt to usher in the utopian society for which he longed (and which led him to his rather shameful flirtation with and support for Lenin and Stalin). He later moved into more straightforward entertainment, but there was always a strain of prediction in his books. Wells's most famous works, *The Time Machine*, *The Island of Doctor Moreau*, *The War of the Worlds*, and *The Invisible Man* all take elements of nineteenth-century science and extrapolate them into the future. Wells, like Verne and unlike Mary Shelley, also attempts to develop theoretical explanations for his science. So even though the actual mechanism of *The Time Machine* is not particularly well described (and how could it be?), Wells's discussion of the nature of time and time travel are given quite a plausible caste. Likewise, his most famous future—where the subterranean Morlocks run a dark world of machinery and prey upon the surface-dwelling, beautiful, carefree Eloi—was an extrapolation of social trends that were current in Wells's day.

Although *The Time Machine* and *The War of the Worlds* are probably Wells's most famous books, *The Island of Doctor Moreau* may be his greatest literary success. The strange half-human, half-animal creatures on the island (created by vivisection) are terrifying in their own right, and Wells's sophisticated discussion of the balance between bestial nature and humanity in all creatures is exceptionally *thought-provoking.* But the most powerful part of the novel is the moment when Prendick, the narrator, returns to England: his story is rejected as madness (which is to be expected), but when he begins to see the bestial nature in the people around him, one realizes that Wells had created a powerful metaphor for examining human nature. The creatures of Doctor Moreau are also interesting as antecedents of Cordwainer Smith's "Underpeople," and the feigned-manuscript tradition of *The Island of Doctor Moreau* and of Verne's *Journey to the Center of the Earth* was an inspiration for many of the best works of SF in the 1930s.

FOR GREATER UNDERSTANDING



Questions

1. What arguments can be made for and against *Frankenstein* as an SF novel?
2. What elements link the writings of Jules Verne and H.G. Wells?

Suggested Reading

Shelley, Mary Wollstonecraft. *Frankenstein.* New York: Pocket/Simon & Schuster, 2004.

Verne, Jules. *Journey to the Center of the Earth.* Trans. Robert Baldick. New York: Penguin, 2001.

Wells, H.G. *The Island of Dr. Moreau.* New York: Signet, 1977.

Other Books of Interest

Aldiss, Brian W., and David Wingrove. *Trillion Year Spree: The History of Science Fiction.* Yorkshire, UK: House of Starus, Ltd., 2001.

Shippey, Tom, ed. *Fictional Space: Essays on Contemporary Science Fiction.* Livingston, NJ: Humanities Press, 1991.

Lecture 3: Mysterious Lore, Marvelous Tech: The 1930s

The Suggested Readings for this lecture are L. Sprague de Camp's *Divide and Rule;* H.P. Lovecraft's *The Call of Cthulhu and Other Weird Stories* and *The Lurking Fear and Other Stories;* and Kim Mohan's (ed.) *More Amazing Stories.*

A Creative Decade

Students often look at the 1930s as consisting of breadlines in the Great Depression and the rise of fascism and national socialism in Europe. These things certainly did happen in the 1930s, but there is much more. The 1930s were perhaps the most creative and influential decade in the twentieth century and many of the artistic developments in the 1930s are still shaping contemporary culture. This is particularly true with regard to SF.

SF Magazines

The 1930s saw the birth of magazine SF, that is, SF in short-story form, widely distributed and mass-marketed. H.G. Wells and Jules Verne had wildly successful careers as proto-SF writers, but few other SF writers from the nineteenth century were able to find an audience. In the early decades of the twentieth century, Edgar Rice Burroughs managed to achieve success with SF in his *Mars* stories, but these tales, exciting page-turners that they are, are as much romance or adventure stories as they are SF. And few writers in the early part of the twentieth century were able to make a living with SF (Olaf Stapledon is an exception). That changed in the 1930s (although Aldous Huxley will be discussed later with the satirists, it is worth noting that he wrote *Brave New World* in 1932).

Magazine SF came from *Amazing Stories*, founded by Hugo Gernsback in 1926. *Amazing Stories* struggled at first, and Gernsback had to publish reprints of Verne and Wells. But as the decade wore on, more and more writers began contributing their works, forming a community of writers and readers. Gernsback was somewhat like Wells in having a taste for stories that instructed readers: he particularly wanted to teach readers actual science through SF, but, sadly, the science was often quite wrong and the heavy-handed instructional style tended to weaken what might have otherwise been good stories.

Nevertheless, *Amazing Stories* showed that there was a market for short SF stories, which also began to grow from short-story size to novellas—a good novella could fill an entire issue of *Amazing*. *Amazing Stories* was also immensely significant for what it did to the *look* of SF: *Amazing* did not invent the swoopy, finned spaceship or the silver-suited astronaut, but it did an enormous amount to disseminate these images (much of the "look and feel" of early SF was brought together at the 1939-40 World's Fair). Even the fonts used on the cover of *Amazing* still say "science fiction" to readers.

John Wood Campbell

In 1930, *Astounding Stories* entered the scene and rapidly superseded *Amazing Stories*. John W. Campbell is almost universally recognized as the greatest editor in the history of SF (though he had his detractors, who found him dictatorial). Campbell famously created the dictum that characters in SF should present fantastic elements of the future as if they were everyday objects or occurrences to the characters in the story: this technique of making the marvelous seem mundane contributes to the paradoxical realist nature of much SF writing. Some authors are better at the technique than others, making the act of taking a matter transporter no different than that of riding in an elevator. The technique is actually quite difficult to accomplish, because the author needs to describe the technology in detail for the benefit of the reader, but the character in the story would no more need to give a disquisition on the workings of a faster-than-light spaceship than would a contemporary character need to explain the internal combustion engine (even contemporary writers, such as William Gibson, have to find creative ways around this problem of explication).

Howard Phillips Lovecraft

Although the Campbell technique has, for the most part, triumphed in SF, there were alternatives in the 1930s, most strikingly in the works of H.P. Lovecraft. A tone of breathless, shocked excitement has some deep connections to the horror or gothic genre, as does Lovecraft's work. Often the tone arises in first-person narratives, given a justification or framing device of a newly discovered diary or mysterious manuscript (in this Lovecraft is similar to Jules Verne in *Journey to the Center of the Earth* and H.G. Wells in *The Island of Doctor Moreau*). Lovecraft's use of these framing devices, and his invention of supposedly famous books, such as the *Necronomicon*, give his writings an air of scientific and historical fact (these techniques would later be exploited by many other writers, possibly most successfully by Frank Herbert). Lovecraft's narrators are often scientists, drawn through their research into a dark world of secret cults, impossibly ancient histories, and terrifying monsters.

Lovecraft was one of the first writers to create a *mythos* throughout his works, linking up disparate short stories to make a larger story. His horrible monsters were from outer space and lived in the still-unexplored regions of the earth: Antarctica, the jungles of South America, the depths of the sea. But their followers and minions could be found anywhere within civilization. It is worth noting that Lovecraft was somewhat more marginal during his own time than his current popularity would indicate. The Lovecraft renaissance that began in the 1980s owes a great deal to fantasy role-playing games, the works of Stephen King, and, more recently, the Internet.

In his idea that there were evil alien presences spread throughout the world, Lovecraft fits in with clichéd ideas about the influence of the Red Scare on SF. But the timing of Lovecraft's publications with the first Red Scare in 1919 and the second in 1948 through 1950 does not really work. The theme of occupation—either by aliens or by foreigners with extreme technological prowess—is in fact a major theme in the SF of the 1930s. L. Sprague de

Camp's novella "Divide and Rule" is perhaps the most perfect example of this sort of story. Extraterrestrial "Hoppers" have set up a feudal system on Earth, but they are challenged by an underground revolution that uses as its supporting texts the works (banned by the Hoppers) of America's founding fathers. Eventually, the revolution is able to succeed and free the world of the Hoppers. This plot is very similar to that of the earlier *Buck Rogers* (1926) and to Robert A. Heinlein's later *Sixth Column* (1949), which, to be fair, was pushed by John W. Campbell and which Heinlein later claimed to be embarrassed by.

At the end of the 1930s, as America prepared to enter World War II, a new style of SF writing began to become more popular. It can be linked to some of the acknowledged "great" writers who were beginning to publish at the beginning of the "golden age" of the 1940s (including the "Big Three" of Isaac Asimov, Robert A. Heinlein, and Arthur C. Clarke) and to John W. Campbell's editorship. These writers were stylistically influenced by so-called "hard-boiled" detective fiction as well as by the experiences of military service, experiences that became, for a generation of men who came of age in the 1940s, one of the unifying themes of American life.

FOR GREATER UNDERSTANDING



Questions

1. Why were the 1930s such an influential period of artistic development?
2. What was the major stylistic difference between *Amazing Stories* and *Astounding Stories*?

Suggested Reading

De Camp, L. Sprague. *Divide and Rule.* Ed. Isaac Asimov. *The Mammoth Book of Classic Science Fiction: Short Novels of the 1930s.* New York: Carroll and Graf, 1988.

Lovecraft, Howard P. *The Call of Cthulhu and Other Weird Stories.* New York: Penguin, 1999.

———. *The Lurking Fear and Other Stories.* New York: Del Rey, 1985.

Mohan, Kim, ed. *More Amazing Stories.* New York: Tor Books, 1998.

Other Books of Interest

Burleson, Donald R. *Lovecraft: Disturbing the Universe.* Lexington, KY: University Press of Kentucky, 1990.

Stapledon, (William) Olaf. *Last and First Men and Star Maker: Two Science Fiction Novels.* Mineola, NY: Dover Publications, 1968.

Lecture 4: Hard-Boiled Science Fiction: The 1940s

The Suggested Readings for this lecture are Isaac Asimov's *The Big and the Little* and *I, Robot*; John W. Campbell's *Who Goes There?* and (as editor) *The First Astounding Science Fiction Anthology*; Lester del Rey's *Nerves*; and Theodore Sturgeon's *Killdozer!*

Tough Culture

As we might expect, the biggest single influence on SF in the 1940s was World War II. The experience of military service, of hard men doing hard things, and the mobilization and transportation throughout the world of vast numbers of young American men changed the culture forever. SF was no exception.

But art does not just "reflect" a culture: art creates the very culture it is reflecting in a kind of infinite hall of mirrors effect. The culture looks to the art (which is part of the culture) to help to understand the culture, and the art comes out of the culture and turns back around and influences it. Therefore, it is difficult to tell if people really spoke and acted in World War II and in the immediate postwar world the way they do in SF of the 1940s. It is likely that some did, and that by reading SF, others were inclined to act and speak that way.

The influence of art on culture and then back on art is also particularly obvious in the debt that much 1940s SF owes to hard-boiled detective fiction and film noir. Characters in 1940s SF tend to be fighting, hard-drinking, hard-living, tough men: at least the heroes are. There are also plenty of oily politicians and heads-in-the-clouds scientists, but one generalization that can be made about 1940s SF is that the hero is almost always a tough, can-do guy. In this, SF is different from film noir, in which the heroes often fail and, even when they succeed, they are deeply flawed. SF was more focused on successful characters.

A Golden Age

The 1940s are often called the golden age of SF. They might more accurately be called the golden age of magazine SF, since SF in novel form would become more popular in later decades. But in the 1940s, many of the great writers who shaped the genre for half a century began writing: Isaac Asimov, Robert A. Heinlein, Arthur C. Clarke, A.E. van Vogt, L. Sprague de Camp, Theodore Sturgeon, and Lester del Rey. All got their starts in the pages of John W. Campbell's *Astounding Stories*. Campbell himself shaped the work of these writers and kept SF alive and vibrant through the war.

Campbell is universally acknowledged as the most powerful editor in the history of SF. He enforced his views of "good" SF and pushed his authors to write the kinds of stories he preferred. This led to the many great "golden age" stories, but it also created a kind of monoculture (particularly in terms of style) to SF that later writers eventually rebelled against. Campbell famously wrote the following:

"Write me a creature that thinks *as well as* a man, or *better than* a man, but not *like* a man."

He wrote provocative (sometimes crankish) editorials and solicited stories in support of his ideas (and writers correctly realized that they stood a better chance of getting published if they wrote stories building upon Campbell's ideas).

Campbell, like Robert A. Heinlein, his most successful "discovery," was a strong supporter of the American social model. Campbell's support for individualism and freedom, however, often veered toward believing in the idea of a superman or superior group of people who deserve to have more free reign and more power than others. Campbell also seems to have been taken in by pseudo-science or scientific quackery: he solicited and published a great many stories on ESP, telepathy, and psionic powers, and *Astounding* published early pieces of L. Ron Hubbard's *Dianetics* material.

Campbell's greatest individual writing triumph properly belongs to the era of the 1930s, but it is worth discussing here as an example both of the hard-boiled style of 1940s fiction and also because it gives some insight into Campbell. "Who Goes There?" (which was the source for the film *The Thing*) is the story of a group of researchers in Antarctica who uncover an ancient spaceship. A creature that can perfectly mimic any living being (down to the microscopic detail of the cells) escapes. The story demonstrates the rapidly escalating paranoia of the men (though it is not really paranoia, because there *is* a monster) in their isolated environment. Deliberately cut off from all civilization so that they do not allow the creature to find other life forms, the men struggle with themselves and the thing, eventually finding a way to detect (and thus destroy) it by capitalizing on its single-minded determination to survive at every level—even its blood cells fight to survive.

Campbell's use of hard men, used to military discipline and ready to sacrifice themselves for the benefit of the rest of humanity, is emblematic of much of the SF of this period. Some of the great stories or short novels, such as Lester del Rey's *Nerves* and Theodore Sturgeon's *Killdozer!*, focus on groups of men (with the occasional strong woman character, usually a nurse) fighting to hold themselves together and to accomplish their dangerous and difficult task. The combination of pluck, ingenuity, cussedness, and can-do attitude seems to reflect very well the experiences of individuals who had served in the military or in wartime manufacturing plants (as did Heinlein, L. Sprague de Camp, and Isaac Asimov).

Isaac Asimov, Robert Heinlein, and Arthur C. Clarke are usually called the "Big Three" of the golden age. A discussion of Heinlein follows in the next chapter, and Clarke's greatest triumphs actually were published in later decades, but Asimov, although he also had later successes, developed some of his major themes and perfected his writing style during the forties. Asimov was possibly the most prolific writer ever, and it is impossible to even begin to summarize his many accomplishments in scholarship, popularization, and various forms of fiction.

Isaac Asimov

The *Foundation* books—*Foundation* (1951), *Foundation and Empire* (1952), and *Second Foundation* (1953)—re-create in some ways the history of the Roman Empire with an SF twist.

Psycho-historian Hari Seldon has developed methods by which human history may be predicted with complete accuracy (in the grosser details). People retain their individual freedom, but the big picture stays the same—there is a similarity to the physics problem of the difficulty of predicting the behavior of individual particles while the behavior of large groupings of particles can be predicted.

Seldon predicts that the Galactic Empire will fall, leading to thirty thousand years of anarchy, but that anarchy can be reduced to one thousand years if an *Encyclopedia Galactica* can be written. Seldon and the psycho-historians are exiled to the planet Terminus to write their encyclopedia, but all of this has been a ruse by Seldon, who sets up the Foundation as a secret rebellion against the empire.

The series follows the twists of this future history as the Foundation becomes more and more powerful, weathering "Seldon Crisis" after "Seldon Crisis" (all foreseen by Hari Seldon). The Foundation develops a scientific or techno religion and demonstrates that trading and technology are more powerful than brute power.

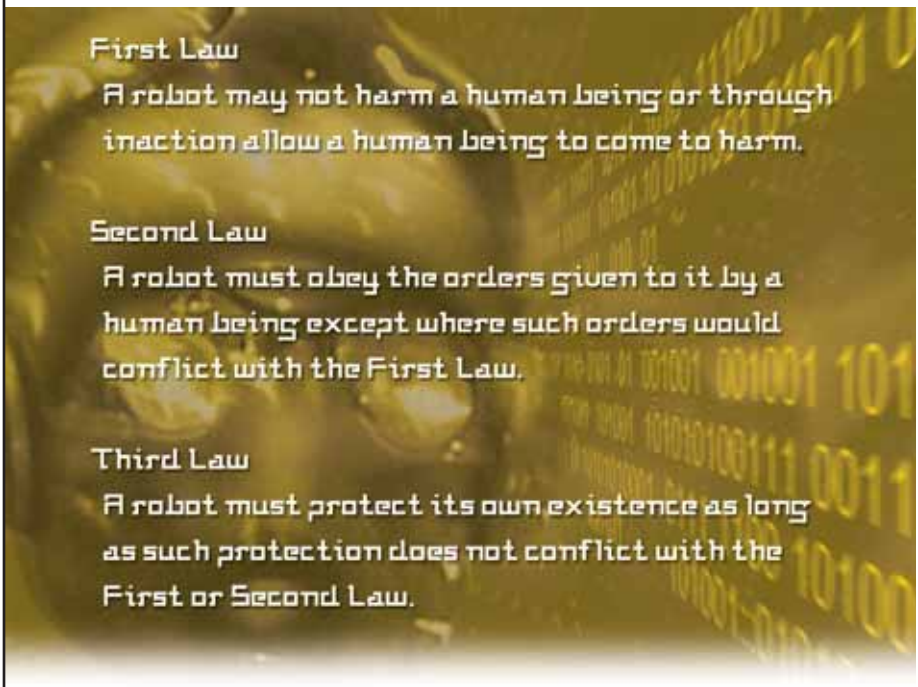
Eventually, a secret "Second Foundation" of telepaths comes to light. Hari Seldon founded this Foundation as well, and its telepathic members have been guiding history to make it fit the Seldon plan for the restoration of empire.

The Mule—an individual with telepathic powers—almost destroys Seldon's plan, but he is eventually defeated by the telepaths of the Second Foundation. Various twists on what and where the "real" Second Foundation is—on Terminus or on Trantor, the old imperial capital—allow for some ambiguity in the story. Asimov eventually returned to the *Foundation* novels in the 1980s, but the later stories did not have the force of the originals. The original *Foundation* trilogy gave impetus to vast "future histories" that took in entire galaxies and set the stage for *Dune* and other more sophisticated texts.

Asimov's *Robot* books are also very influential on subsequent depictions of artificial intelligence and artificial consciousness. Asimov invents the "positronic brain" (the inverse of an electronic brain) that, with a little mumbo-jumbo, can become effectively conscious. But this is consciousness without complete free will because of the famous Three Laws of Robotics.

I, Robot (1950) collects most of the best early robot stories and puts them into a coherent arc. The stories always turn on conflicts between the Laws and what the robot is asked to do. Asimov writes very much in the hard-boiled vein, with characters engaged in rather unsophisticated verbal combat and unrealistically strong emotional reactions working as drivers of the plot. Asimov eventually has the machines take over earth, but because of the Laws, they rule completely benevolently.

At the very end of the 1940s, many of the dreams of the earlier decades—rocket flight, atomic power—had come to pass. That they had occurred as nightmares (the German V1 and V2 rockets, the destruction of Hiroshima and Nagasaki), did not stop the next decade of SF writers from rushing forward, filled with excitement and optimism at the possibility that the dreams could come true.



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FOR GREATER UNDERSTANDING



Questions

1. How is the influence of art on culture—and of culture on art—seen in 1940s SF?
2. What kind of SF was promoted by John W. Campbell?

Suggested Reading

Asimov, Isaac. "The Big and the Little." Ed. Isaac Asimov. *The Mammoth Book of Classic Science Fiction: Short Novels of the 1940s.* New York: Carroll and Graf, 1988.

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Campbell, John W., ed. *The First Astounding Science Fiction Anthology.* New York: Berkley Books, 1964.

———. *Who Goes There?* Ed. Isaac Asimov. *The Mammoth Book of Classic Science Fiction: Short Novels of the 1930s.* New York: Carroll and Graf, 1988.

Del Rey, Lester. *Nerves.* Ed. Isaac Asimov. *The Mammoth Book of Classic Science Fiction: Short Novels of the 1940s.* New York: Carroll and Graf, 1988.

Sturgeon, Theodore. "Killdozer!" Ed. Isaac Asimov. *The Mammoth Book of Classic Science Fiction: Short Novels of the 1940s.* New York: Carroll and Graf, 1988.

Other Books of Interest

Asimov, Isaac. *Foundation Trilogy.* New York: Bantam Books, 1992.

Westfahl, Gary. *The Mechanics of Wonder: The Creation of the Idea of Science Fiction.* Liverpool, UK: Liverpool University Press, 1999.

Lecture 5: The Grand Master: Robert A. Heinlein

The Suggested Readings for this lecture are Robert A. Heinlein's *The Past Through Tomorrow, The Moon Is a Harsh Mistress, The Rolling Stones, Starship Troopers,* and *Stranger in a Strange Land.*

Crossing Over

Beginning in the 1940s, SF was dominated by the "Big Three": Robert A. Heinlein, Isaac Asimov, and Arthur C. Clarke. All three writers wrote defining, masterful works and shaped SF for the next few decades, but only Heinlein managed to cross over from SF into mainstream literature. Heinlein also managed to be influential not only in such areas as the space program and the science and engineering fields, but also in children's literature and the counterculture of the 1960s. When in 1974 the Science Fiction Writers of America gave their first Grand Master award for lifetime achievement, it was no surprise that it went to Heinlein.

Robert Anson Heinlein was born in 1907 and grew up in Kansas City, Missouri. He attended the Naval Academy in 1929 and served as an officer in the Navy until 1934. Heinlein's first published story, "Life Line," appeared in 1939—he claimed that he turned to writing in order to pay off his mortgage. Heinlein began to publish regularly in John W. Campbell's *Astounding* magazine, tying his stories together into a "Future History," which would lead from "the past through tomorrow." Heinlein's stories were characterized by an effective mixture of action, character (including many strong female characters), and big ideas. Throughout the 1940s and 1950s, Heinlein was one of *Astounding*'s most popular and prolific writers.

The Juveniles

A big reason for Heinlein's enormous influence on engineers and scientists was his publication of his "juvenile" novels. Beginning with *Rocket Ship Galileo* in 1947 and then progressing at approximately one per year for slightly more than a decade, the novels include *Space Cadet* (1948), *Red Planet* (1949), *Farmer in the Sky* (1950), *Between Planets* (1951), *The Rolling Stones* (1952), *Starman Jones* (1953), *The Star Beast* (1954), *Tunnel in the Sky* (1955), *Time for the Stars* (1956), *Citizen of the Galaxy* (1957), *Have Space Suit—Will Travel* (1958), *Starship Troopers* (1959), and *Podcayne of Mars* (1963). Heinlein's "juveniles" may have been written for children, but they were models of fine writing, big ideas, strong, moral characters, and action. It is hard to overstate their influence on more than one generation of kids who grew up to run the space program and lead technical revolution after technical revolution in American industry.

The juveniles all feature the education of young people—usually boys—either in formal settings (the Space Patrol, a "solo survival" test, a mission to

travel to the stars) or informal, oftentimes chaotic circumstances (a backyard rocket project, an independent-minded and quirky family, slavery in a distant galaxy). Heinlein's characters almost always accomplish amazing things through application of intelligence, hard work, and a strongly rooted moral sense. Although some of the technical details of the books have not worn well (Heinlein radically underestimated the importance of computers for a long time), the characters are still vibrant, and their core small-town, middle-American morality, in Heinlein's hands, is not stifling or xenophobic, but rather even-handed and ruthlessly fair. His juvenile novels create a solar system (and even a galaxy) where—even in futures that contain slavery and war—one young person can make a real difference. This sense of empowerment, of making the everyday person heroic (even though it often turns out that, unbeknownst to him, the everyday person has heroic or genius parents) makes the Heinlein juveniles exceptionally appealing.

Starship Troopers

Starship Troopers, usually seen as Heinlein's final juvenile (though *Podcayne of Mars* was published a few years later), is perhaps the most misunderstood SF book in literary history. *Starship Troopers* (in part because of its publication date at the very end of the 1950s) seems to have angered more SF writers than any other novel before or since. The novel follows Juan Rico from callow juvenile through his enlistment into the Mobile Infantry to combat against the "Bugs," an evil, arachnid, communist society that has attacked earth. Through a series of adventures—and a very long series of lectures on "History and Moral Philosophy," Juan comes to understand the importance of the military and his place in it.

Many critics have—unfairly—called Heinlein's novel "fascist" because it celebrates the military. Harry Harrison wrote an excellent, funny novel of his own, *Bill, the Galactic Hero,* to lampoon the military, and more than one critic has stated that *Bill* "refuted" *Starship Troopers*. But to call the novel "fascist" is not only to misunderstand *Starship Troopers* but to call into question the critic's knowledge of either the novel or of fascism. Heinlein's future absolutely bans coerced military service—or coerced service of any kind—and most individuals never bother to serve, being more interested in their private pursuit of happiness. But if one wants to vote or hold elected office, then he or she must volunteer to serve, though that service may not be military. While individuals are serving, they are not allowed to vote, the exercise of opinion being appropriate for free individuals but not for people under military discipline. Heinlein's suggestion that the franchise and political power should be earned not granted is certainly controversial, but it is a good thinking point. His celebration is not of the destructive power of the military or of the will to power that dominates others, but of the camaraderie, teamwork, and responsibility that develops in military situations. This may not be to everyone's taste, but it is hardly fascist.

Stranger in a Strange Land

Heinlein's most famous novel and perhaps the most famous SF novel of all time is 1961's *Stranger in a Strange Land*. One reason that the novel is so famous and has penetrated so widely into the culture is that it is not

particularly SF-heavy. The gimmick is that the novel is about the first man from Mars, and Michael Valentine Smith is just that: the first human born on Mars, raised by the Martians when his parents, who were part of a Mars expedition, were killed. Michael is eventually brought back to earth and at first is baby-like in his ignorance of human culture. The first half of the book is an exploration of Michael's rescue from the forces of the government, his meeting with the cantankerous writer/doctor/lawyer Jubal Harshaw, and his attempts to understand human culture (particularly sex). The second half of the novel takes a wildly unexpected turn when Michael founds his own religion, eventually being martyred by an angry mob. *Stranger in a Strange Land* is more about analyzing contemporary culture than it is about the future or space or Mars: Michael's naïve and innocent persona allows Heinlein to examine contemporary America from a new, critical perspective. The book also has a lot to say about sexuality and sexual openness, and it was adopted by the counterculture of the 1960s. Heinlein's invented word *grok*, which means to understand completely or deeply, has entered into the American lexicon, particularly among engineers and scientists.

The Moon Is a Harsh Mistress

Perhaps Heinlein's best novel is 1966's *The Moon Is a Harsh Mistress*. The story of a successful independence movement, the novel was both celebrated and reviled for supplying a blueprint of a revolutionary organization: it was seen as both liberating and dangerous. In *The Moon Is a Harsh Mistress*, Luna has been used as a prison colony (prisoners' bodies rapidly adapt to the lower gravity and they cannot return to earth, so even a short sentence leads to permanent exile). "Loonies" have developed a free-market, laissez-faire social system with an enormous amount of freedom—except that the Lunar Authority, run by the oppressive United Nations, has in the end ultimate power over them.



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As was usually the case in a Heinlein novel, the story is focused around the education of one somewhat naïve and painfully honest character, Manuel Garcia O'Kelly Davis, who, through gallantry and personal loyalty, is drawn into a conspiracy to overthrow the Lunar Authority. Manny has befriended Mike, the Authority's central computer, who

has “awakened” to consciousness. Manny, Mike, a strong female character, Wyoming Knott, and Professor Bernardo de la Paz form and run a successful conspiracy that eventually leads to Luna’s independence. But there is a price paid for freedom both in lives and, at the end of the book, in somewhat reduced freedom itself.

The Moon Is a Harsh Mistress has been seen as a libertarian manifesto, and in it Heinlein coined one of his other contributions to the American lexicon, TANSTAAFL (“There ain’t no such thing as a free lunch”). *The Moon Is a Harsh Mistress* is stylistically innovative, somewhat in the way of *A Clockwork Orange,* with Manny’s narrative style that mixes Russian syntax rules with Australian and American slang. The book was ahead of its time in terms of everything from “open” marriages to racial mixing, and, although the idea of farming wheat on the moon and sending it back to a starving Earth seems rather unlikely, the book has not been as overtaken by events the way many other great SF stories of the 1960s have.

The Grand Master

Once he evolved out of his very early socialist stage, Heinlein was unapologetically pro-American, pro-capitalist, and pro-freedom, but it is a mistake (made by far too many left-leaning critics) to see him as shallow, narrow-minded, or jingoistic. Heinlein did not really follow anyone. He was rather immune to being led (although he wrote on and reacted to the topics of the day). He was anti-authoritarian (though he believed in military discipline for those in the military). He always insisted that he wrote first to entertain and only developed his big ideas secondarily, but his big ideas are bigger than those of most other SF writers. The discipline created by the need to work with the demands of the market make his SF so eminently readable that many critics miss the artistry—a subtle, non-obvious artistry—with which he wrote. But none of these things are actually self-contradictory. Rather, they show that Heinlein followed his own path—consistent in its own terms, but beholden to no one else.

FOR GREATER UNDERSTANDING



Questions

1. What are the major characteristics of the stories of Robert A. Heinlein?
2. What are the arguments against *Starship Troopers* being a fascist novel?

Suggested Reading

Heinlein, Robert A. *The Moon Is a Harsh Mistress.* New York: Orb, 1997.

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Lecture 6: Onward and Outward: The 1950s, Space Travel, Apocalypticism, and the Beautiful Weirdness of Cordwainer Smith

The Suggested Readings for this lecture are Walter M. Miller, Jr.'s *A Canticle for Leibowitz*; Cordwainer Smith's *The Rediscovery of Man: The Complete Short Science Fiction of Cordwainer Smith*; and *The Majesty of Kindness: The Dialectic of Cordwainer Smith*.

Golden Age Redux

Many scholars of SF lump together the 1940s and 1950s as the golden age of SF, and it is true that there is a lot of continuity between the decades. The "Big Three" writers of the 1940s (Heinlein, Asimov, and Clarke) continued to dominate the magazine SF of the 1950s, and John W. Campbell exercised his great influence, continuing the focus on space travel, intelligent aliens, and technology, but also expanding it into ideas about telepathy, psionics, and other pseudo-science.

But there are also some big differences between the SF of the 1940s and that of the 1950s. Although 1950s SF is still for the most part optimistic, with an even stronger focus on the new frontier of space, new strands of anxiety begin to enter into the culture. In a very real sense, the last frontiers of earth—Antarctica, the highest mountains, the deepest jungles, the sea beneath the polar ice cap—finally closed in the 1950s. These settings had been immensely important to 1930s SF and were still relevant in the 1940s; now they were exchanged almost entirely for the frontier of outer space. The imaginary civilizations of much 1950s SF were no longer scrubbed and perfect utopias, but rather social structures—like Cordwainer Smith's "Instrumentality"—with serious flaws. The 1950s also saw the great expansions of what could be called "apocalyptic" SF: stories focused around the destruction of the world (usually by atomic weapons or their side effects) followed by an eventual rebirth of a new civilization.

SF Film

Film is mostly beyond the scope of this course (SF film really deserves a full course of its own), but the themes of SF fiction are so perfectly illustrated by many of the films of the 1950s that it is worth examining them for a moment. *Forbidden Planet* (1956) depicts a mission to a planet on which an alien civilization had achieved technological miracles—the control of matter and energy simply by minds—only to be destroyed by their own inner demons ("monsters from the id") empowered by their technology. Back on Earth were the wonderful "Big Bug" films: *Them!* (1954) about giant ants, *Tarantula* (1955) about a gigantic spider, and *The Deadly Mantis* (1957) about a huge praying mantis. The themes of these films were a twist on the *Frankenstein* story that has since become a standard interpretation (although it is not actually in Mary Shelley's book): that science has gone too far, leading to the destruction of a species or planet.

A Canticle for Leibowitz

The very best of the apocalyptic works of the 1950s is Walter M. Miller's *A Canticle for Leibowitz*. A brilliant combination of pseudo-medieval historical fiction and SF, *Canticle* begins just outside the monastery of Leibowitz Abbey, where brother Francis Gerard of Utah is keeping a vigil. We eventually learn that Leibowitz Abbey was founded after the "Flame Deluge," a nuclear war that had set civilization back to a nearly primitive state. Leibowitz had attempted to preserve human knowledge in the face of the "Simplification," in which books were burned and technology destroyed. The monks at the abbey study the "memorabilia," the fragments of lost knowledge.

The novel is separated into three books, "Fiat Homo" (Let There Be Man), "Fiat Lux" (Let There Be Light), and "Fiat Voluntas Tua" (Thy Will Be Done). "Fiat Homo" is about the discovery of additional memorabilia of Leibowitz by Brother Gerard and the struggles of the abbey to have the saint canonized by the Church in New Rome. Mutants, social deterioration, and anarchy are revealed.

"Fiat Lux" is about the first steps of a renaissance arising out of the knowledge preserved in the monasteries. "Fiat Voluntas Tua" takes place even further into the future. Mankind has developed interstellar travel and a new Flame Deluge (nuclear war) is coming, but this time the Church is prepared and leads an exodus from Earth. The book ends with the destruction of humankind—and possibly all life—on Earth. *A Canticle for Leibowitz* is the only novel Miller completed during his lifetime—he died by his own hand in 1996. *Canticle* is beautifully written, morally complex, and quite frankly disturbing. Its final passages encapsulate the kind of eerie beauty combined with the horror of loneliness that characterize the best apocalyptic fiction:

> The breakers beat monotonously at the shores, casting up driftwood. An abandoned seaplane floated beyond the breakers. After a while the breakers caught the seaplane and threw it on the shore with the driftwood. It tilted and fractured a wing. There were shrimp carousing in the breakers, and the whiting that fed on the shrimp, and the shark that munched the whiting and found them admirable, in the sportive brutality of the sea.



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> A wind came across the ocean, sweeping with it a pall of fine white ash. The ash fell into the sea and into the breakers. The breakers washed dead shrimp ashore with the driftwood. Then they washed up the whiting. The shark swam out to his deepest waters and brooded in the cold clean currents. He was very hungry that season.

The images in this paragraph, the heartbreaking pall of fine white ash that is all that man has ever created, not only sums up apocalypticism but also points the way toward the more imagistic, surreal work of the 1960s.

Cordwainer Smith

Cordwainer Smith is a writer who is in some ways *sui generis*. Although he published in SF magazines (most frequently *Galaxy*, a competitor to *Astounding*), Smith in many ways worked outside the tradition, at least in the sense that he was not really in dialogue with other writers. Instead, he adopted standard SF ideas and took them in his own radically weird and distinctive direction.

Smith's real name was Paul Myron Anthony Linebarger, and his personal background is as unusual as his fiction. His godfather was the Chinese nationalist Sun Yat-Sen. He was a friend of Chiang Kai-shek, and he literally wrote the book on *Psychological Warfare* (1948). Nearly all of Smith's stories are set thousands of years in the future, in a galaxy dominated by the Instrumentality, a powerful, universal government whose credo is "Watch, but do not govern; stop war, but do not wage it; protect, but do not control; and first, survive!" The Instrumentality has brought about a kind of boring, sterile utopia in which change is mostly prevented. All labor is done by the Underpeople, genetically engineered animals who have been made nearly human so that they can accomplish greater tasks (this allows the Instrumentality to outlaw slavery but still benefit from slave labor). One of the major themes in Smith's work is the eventual emancipation of the Underpeople, and in a horrifying and profoundly emotional story, "The Dead Lady of Clown Town," he depicts the martyrdom of d'Joan, a leader of the Underpeople. Her death eventually leads to their freedom.

The consummate strangeness of Smith is visible from his very earliest stories, such as "Scanners Live in Vain," in which he postulates that the great loneliness, the "Pain of Space" in the "Great Up and Out," would require men who guided spaceships to be radically modified. These are the "Scanners" and the "Habermans." Scanners have voluntarily cut all the nerves relating to feeling, smell, hearing, and taste so that they do not feel the Pain of Space, relying instead on Scanning—paying conscious attention to electronic monitors—to keep themselves alive. In this infra-human state, they work to maintain their power, even being willing to murder. Only one Scanner, Martel, who is "cranched" (his nerves temporarily reconnected), recognizes what the Scanners are about to do.

There are many bizarre and powerful Smith stories collected in *The Rediscovery of Man*. The horrifying "A Planet Named Shayol," for example, in which prisoners are left on a planet in which they must constantly grow extra body parts that can be harvested for transplantation, is a story that stays with readers for a long, disturbing time afterwards, as does the character of

B'dikkat, a bull-man Underperson. The laminated mouse brain that protects the female character in "Think Blue, Count Two" is also a haunting image, as is C'mell, the girlygirl cat-girl of "The Ballad of Lost C'mell." Cordwainer Smith loved animals and made them much more a part of the future—albeit as Underpeople—than is common in SF. Cats protect spaceships from extra-dimensional attacks in "The Game of Rat and Dragon."

The key idea in Smith's complex future history, the "Rediscovery of Man," is that the apparent perfection and stability of the Instrumentality is leading mankind to stagnation and decay. Chance, luck, suffering, mistakes, hunger, error—the prices paid for freedom—all need to be let back in to human culture in order for people once again to thrive. Smith's insistence on the rediscovery of man leads the way for the radically different SF of the 1960s and 1970s.

FOR GREATER UNDERSTANDING

Questions

1. How do SF films of the 1950s illustrate the themes of SF fiction of that era?
2. In what ways does the final passage of *A Canticle for Leibowitz* encapsulate qualities of the best apocalyptic fiction?

Suggested Reading

Miller, Walter M., Jr. *A Canticle for Leibowitz.* New York: Bantam, 1997.

Smith, Cordwainer. *The Rediscovery of Man: The Complete Short Science Fiction of Cordwainer Smith.* Ed. James A. Mann. Framingham, MA: NESFA Press, 1993.

Wolfe, Gary T., and Carol T. Williams. *The Majesty of Kindness: The Dialectic of Cordwainer Smith.* Ed. Tom Clareson. *Voices for the Future.* Vol. 3. Bowling Green, KY: Bowling Green University Popular Press, 1984.

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Lewis, Anthony R. *Concordance to Cordwainer Smith.* Framingham, MA: NESFA Press, 1993.

Shippey, Tom, ed. *Fictional Space: Essays on Contemporary Science Fiction.* Livingston, NJ: Humanities Press, 1991.

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Lecture 7: A New Set of Questions: The "New Wave" of the 1960s and 1970s

The Suggested Readings for this lecture are Samuel R. Delaney's *Babel-17*; Philip K. Dick's *Do Androids Dream of Electric Sheep?*; Thomas Disch's *Camp Concentration*; and Michael Moorcock's *New Worlds: An Anthology.*

A New Style of Science Fiction

In most critical histories of SF, the 1960s and 1970s are characterized as the time of the "New Wave," when a group of young, brash writers changed the face of SF forever. There is some truth to this story, but it risks using "New Wave" in terms that are too broad. The actual New Wave, which was closely associated with Michael Moorcock's *New Worlds* magazine, included writers such as J.G. Ballard, Ray Bradbury, Harlan Ellison, and Fritz Leiber. William S. Burroughs, though he is not really an SF writer, is also usually included in the New Wave. Other writers who fit stylistically include Thomas Disch and Samuel R. Delany. The subsequent two lectures focus in much more depth on two of the major strands of writing to come out of the 1960s and 1970s, surrealism (whose most effective writers include Ballard, Burroughs, and Bradbury) and world-building (represented by Frank Herbert, but also including Ursula K. Le Guin and others). This lecture, however, focuses on the broader range of New Wave writers and their works.

The New Wave writers were reacting strongly against the main traditions of SF. Many of them were extremely leftist in political persuasion and worked their politics into their writing. They were focused on stylistic innovation and experimentation and for the most part rejected the attention given to technology and space travel that had characterized golden age SF. Thus their "social science fiction" was quite different from that written by Asimov or Heinlein, who tended to work analytically in their extrapolation of trends: New Wave writers often zeroed in on one particular idea and explored it in depth—and in the internal lives of characters—rather than working in grand visions.

Dystopian Future

A key idea that shows up in New Wave story after New Wave story is that of the increase of entropy leading eventually to the "heat death of the universe." The idea is that the universe had been running down since the Big Bang, because entropy—disorder—always increases. Eventually everything will be reduced to a uniform soup of cold, dark matter. This incredibly pessimistic vision underpins many of the great novels and stories from the time period.

In Philip K. Dick's brilliant *Do Androids Dream of Electric Sheep?*, Earth has been nearly depopulated by radioactive dust. Most of humanity has emigrated to colonies on Mars and elsewhere; those who remain are in some way defective. Most animals have died, and the value of the remaining ones has increased so much that people dream of owning a goat or even a rabbit.

Those who cannot afford a live animal have electric ones (hence the title). The main character of the novel is a bounty hunter who destroys rogue androids. The androids are made of biological materials and are so similar to humans that they can only be detected by very sophisticated tests that measure empathy (which they lack). The dystopian future, the strange fixation on the various prices of animals, and the disconcerting coldness of the androids were influential upon much later SF, particularly the cyberpunk works that will be discussed in lecture ten (although at least some of this influence is through the movie *Blade Runner*, which was based on *Do Androids Dream of Electric Sheep?*, though the movie makes some major changes to the plot and background).

Dick's connection to the entropy theme is his idea of "kipple," the detritus of human activity—broken furniture and old clothes and ripped paper. Kipple will eventually swallow the universe, characters in *Do Androids Dream of Electric Sheep?* say, and it cannot be defeated, only temporarily held at bay. *Do Androids Dream of Electric Sheep?* is emblematic of the themes of alienation found throughout Dick's works: characters discover that people around them are dead, androids or robots, supernatural beings, or hallucinations. Dick's alienated, nondescript main characters are in some ways like the later characters found in cyberpunk, though Dick's characters are less active and heroic than, for example, William Gibson's.

Thomas Disch

Thomas Disch's novel *Camp Concentration* is one of the best of the New Wave. Disch's narrator, Louis Sacchetti, a poet, has been imprisoned for being a conscientious objector to what sounds like an escalated Vietnam War in which tactical nuclear weapons are being used. Sacchetti is brought to a special prison that is operated by a major corporation doing research and development for the government. Here, prisoners are given Pallidine, a drug/infection derived from the syphilis spirochete. Pallidine makes people geniuses but then rots their brains and kills them within nine or ten months. Disch's first-person narrative follows the journal of Sacchetti as he first becomes a genius and then goes insane from the drug. It includes poetry (some of it quite good), bizarre observations, and opaque passages, all attempting to show both the genius and the breakdown



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of Sacchetti. That the novel is as fragmented as the character's eventual psyche is characteristic of New Wave fiction.

Samuel R. Delany

Along with Philip K. Dick, Samuel R. Delany is the New Wave writer who had the most influence on later authors. Delany is known as one of the New Wave writers who put sex, sexuality, and homosexuality into SF. He has become somewhat of an icon of postmodernists, who praise his unusual stylistic innovations and complex and conflicted characters. His most successful novel, *Babel-17*, deals with themes of language and the difficulty of communication as well as personal and sexual freedom and what we would now call cultural diversity.

Babel-17 takes place in a future in which the Alliance (which includes Earth and the colonized planets of the solar system as well as other worlds and races) is at war with the Invaders. The Invaders have developed a secret weapon that is actually a language, Babel-17, which works in the brain to create a schizoid second personality that works for the Invaders. Babel-17 is a language that is nearly a form of mathematics: learning it gives the speaker enormous analytical power, as the relationships of objects in the real world are represented in abstract form by the language (this is a strong form of the Sapir-Whorfian approach in linguistics that hypothesizes that language shapes thought; it is less accepted today than it was in the 1960s, but it was exceptionally influential on various SF writers). Babel-17 has defeated the best efforts of the Alliance codebreakers, so the military enlists the aid of Rydra Wong, the most famous poet in the known universe (and also, happily, a certified starship captain).

Rydra puts together a starship crew by recruiting volunteers in "transport town." This is the most interesting section of the novel and has given Delany his deserved reputation for his celebration of human variety. Delany divides people into two groups, "Customs," who are buttoned-down, civil-servant types, and "Transport," who, like traditional sailors, indulge in body modification and unconventional sexuality. The genius of this section of the book is to show it through the eyes of Danil D. Appleby, a Customs agent who is initially repelled by the people of Transport. Delany also develops the idea of a "triple," a closely bonded trio of either two men and a woman or two women and a man. In order to survive the stress of navigating the ship, the three must be linked sexually and emotionally. The Customs Agent's initial reaction of "perverts!" and his evolution through toleration into acceptance and eventually to celebration of the diversity of human experience makes *Babel-17* feel far less dated than other, much newer SF.

The New Wave carried SF into "inner space" as well as outer space, and it allowed writers to develop new techniques, styles, and approaches to SF. Although the New Wave as a movement was dead by 1975 (because of many of its more extreme political views not wearing particularly well), its influence is still being felt in the wide range of SF that it opened up.

FOR GREATER UNDERSTANDING



Questions

1. What were the two major strands to come out of the SF writing of the 1960s and 1970s?
2. How does the idea of entropy factor in the fiction of New Wave writers?

Suggested Reading

Delany, Samuel R. *Babel-17.* New York: Vintage, 2002.

Dick, Philip K. *Do Androids Dream of Electric Sheep?* New York: Del Rey, 1996.

Disch, Thomas M. *Camp Concentration.* New York: Vintage, 1999.

Moorcock, Michael. *New Worlds: An Anthology.* New York: Avalon Publishing, 2004.

Other Books of Interest

Harlan Ellison, ed. *Dangerous Visions: The 35th Anniversary Edition.* New York: I Books, 2002.

Lecture 8: The World Builder: Frank Herbert

The Suggested Readings for this lecture are Frank Herbert's *Dune* and *Dune Messiah.*

Detailing Civilization

Possibly the most important thing that happened to SF in the 1960s was the publication of Frank Herbert's novel *Dune* in 1965 (the novel had been serialized in the magazine *Analog* from 1963 to 1965). *Dune* would go on to become the best-selling SF novel of all time and Herbert would spend the next twenty years writing sequels (and his son has been cowriting prequels for some years now). But the popularity of the novel was one of the *least* important things about it. *Dune* illustrates one of the major impulses of 1960s SF: world-building on a previously unprecedented scale. Although J.R.R. Tolkien had already made the creation of alternative worlds a major part of fantasy, and SF had depicted other civilizations since the 1930s, the degree of complex realization that *Dune* brought to the genre opened up new possibilities for many writers.

The World of Dune

The detailed and complex worlds created by Herbert in *Dune* (and in his critically neglected, but perhaps even more intellectually brilliant series of books set on the planet of Pandora) come from some of the same impulses developed by the surrealist SF writers like Ballard and Bradbury, but with a twist: Ballard and Bradbury are interested in creating beautiful or terrifying or striking images, and SF is their vehicle for doing this. Herbert and his followers also care about the images—think of the Fremen riding their giant sandworms into battle—but they care just as much about the intellectual and historical back story. Both surrealists and world-builders attempt to encompass and contain the vastness of their ideas, but in two very different ways. The surrealists work in short forms that give sharp, artificial boundaries to their works; the world-builders keep building, augmenting, explaining, and writing appendices, glossaries, and back-stories.

Dune is set between twenty-two thousand and thirty thousand years into the future, after a great human diaspora has colonized many thousands of worlds. The galaxy operates under a hybrid feudal/mercantile system in which a Spacing Guild keeps civilizations in touch with each other and under the sway of an Emperor and a variety of Great Houses. These compete economically through a sort of future version of the British East India Company, CHOAM (Combine Honnete Ober Advancer Mercantiles). The civilization is mostly static, with a place for everyone and everyone in his place, though there is much jockeying for position among the Great Houses. Herbert introduces several gimmicks that separate his world from the SF that had come before. First,

there had been a “Butlerian Jihad” that had eliminated all computers—the central commandment is “Thou Shalt Not Make a Machine in the Image of a Human Mind.” To compensate for the lack of computers, humans have learned to develop their own capabilities: Mentats, who can calculate and strategize, Guild Navigators, who can use limited prescience to navigate “fold-space” (which is how Herbert avoids the faster-than-light problem of communication between star systems), and the Bene Gesserit, women who can access a store of “ancestral memories” spanning centuries and light years.

There are so many complex plot arcs in *Dune* that it would take a book-length study to examine them all. But the major focus is young Paul Atreides, the heir of the Great House of that name. The Atreides have just been given control over Arrakis, Dune, the Desert Planet, the only source for mélange, the geriatric spice, the ultimate drug. Spice allows Guild Navigators to see the future and pilot their ships. It prevents disease and leads to an exceptionally long human lifespan. It gives the Bene Gesserit their ability to access ancestral female memories. And it gives Paul the ability to see the future.

The plot of *Dune* revolves around Paul’s disinheritance after his house’s great rivals, the Harkonnens, have killed his father and driven him into exile in the desert. Paul and his mother, the Lady Jessica, befriend the Fremen, a desert people who manage to survive in Arrakis’s barren wastelands, riding the great sandworms, harvesting the spice, and collecting water for their dreamed-of ecological transformation project: they hope to make the surface of Dune a place where plants grow and water runs across the ground. Paul ends up ruling the Fremen and eventually leading them to victory over both the Harkonnens and the Emperor himself, so that at the end of the first novel, Paul becomes Emperor, leader of the Fremen, and the head of a new religion for which he is both prophet and god.

The idea of “training” is very important to Herbert. Paul has been trained in everything from knife fighting—one of Herbert’s other gimmicks is that projectile weapons are ineffective against the force shields that have been invented, so knives and swords have returned to prominence—to Mentat computation, to the power of the Voice, which allows him to command more easily. Paul is, in the words of Herbert’s editor John W. Campbell, a teenaged superman.



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Complexity and Tragedy

The politics in *Dune* are quite deliberately Byzantine. It is not just that everyone wants money and power, but that there are hidden agendas for each of the main power groups (Emperor, Great Houses, Guild, Bene Gesserit, Fremen, and later Ixians, Tleilaxu, etc.) and agendas within the agendas. Herbert's idea of feints within feints makes the struggles for power in his stories particularly realistic (and hard to follow). His technical innovations—shields, lasguns, stillsuits, ornithopters, etc.—are equally complex, and he shows them firmly embedded in the cultures in which they exist rather than presenting them with a "gee whiz" attitude. Herbert also gives his characters powers beyond those of ordinary humans, including most significantly Paul Atreides's power to see the future. This prescience, which Herbert explains as limited but also exceptionally powerful, becomes a major theme of the latter books, in which the characters struggle to escape from their visions.

Herbert intended for *Dune* and *Dune Messiah* to be published together, but John W. Campbell rejected *Dune Messiah*, in which Paul's great triumph at the end of *Dune* turns to tragedy. Herbert's vision, which so contradicted Campbell's, was that charismatic political leadership was a terrible thing that more often than not led to societal destruction. Herbert thought that John F. Kennedy and his cult had been a disaster for America. But the only way for Herbert to communicate this idea was to build up a hero that all readers loved and then show him brought low, responsible for tyranny and the deaths of billions.

The theme of all the subsequent books in the *Dune* series (*Dune Messiah, Children of Dune, God Emperor of Dune, Heretics of Dune,* and *Chapterhouse Dune*) is the quest to find human freedom. Herbert realized that seeing the future, by anyone, was incompatible with human freedom and, perhaps, human survival. So in *Children of Dune* he has Paul's son Leto view the "Golden Path," the only way for humanity to survive the next three thousand years. But Leto must pay the price by transforming into a human/sandworm hybrid and ruling as God Emperor for thousands of years. *God Emperor* is the most difficult but most brilliant of the *Dune* books: Herbert creates a character who must bring about his own overthrow and destruction in order to lead his species to freedom.

Big Themes

Large themes of religion and attempts to get inside the mind of a godlike being are also found in Herbert's lesser-known but conceptually brilliant tetralogy: *Destination: Void, The Jesus Incident, The Lazarus Effect,* and *The Ascension Factor*.

In *Destination: Void,* a group of clones create an artificial consciousness in order to save their own lives and the lives of the hibernating colonists who depend upon them in their giant "void-ship." In the society from which they came, clones are property, so it is acceptable to experiment on them. That is just what has happened: the Organic Mental Cores (disembodied brains) that were supposed to run the ship have gone insane. The work that must be done to keep the ship intact and running is too much for normal people, so they must build a true artificial consciousness. Eventually they create "Ship," who says, "Now you must decide how you will WorSHIP me."

The sequel to *Destination: Void*, *The Jesus Incident*, is possibly Herbert's best book except for *Dune*. Ship has brought humans to the planet of Pandora, which is filled with deadly demons on land and sentient kelp in the sea. The demons—Hooded Dashers, Hylighters, Nerve Runners—make movement outdoors almost impossible. But the humans are trying to exterminate the demons and the kelp. They are also breeding and recombining clones (with kelp genes) as mutant slaves for various purposes.



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Herbert discusses the atrocities humans commit, arguing, provocatively, that the "Jesus Incident," the crucifixion, occurred because those who crucified Christ were actually desperately hoping that he would come off the cross or that they would be punished: even if they had to die, it would eliminate their doubt.

Eventually, an apocalyptic battle eliminates evil leaders and unites humans and clones with the hive-mind intelligence of Pandora, Avata, but this intelligence is killed/goes dormant because of the viruses and poisons brewed up by the devilish Jesus Lewis.

In *The Lazarus Effect*, it is revealed that killing off kelp destroyed the land; people now live on floating islands (genetically mixed mutants) or undersea (pure-strain human "Mermen"). The story turns on who will get control, the Mermen or the Islanders, and what will be the ruling ideology: acceptance of diversity and difference or rigid hierarchy based on appearance and genetics. *The Ascension Factor* continues the story, though it was published after Herbert's death and is not nearly as successful as the other books.

Overall Themes

Herbert uses other worlds to figure out what it means to be human, not just as individuals, but as part of a society. Where do you draw lines? What makes people no longer human? Can you expand the circle? His shorthand definition of "human"—"like me"—is perhaps the simplest and most profound heuristic that has been applied to this difficult question. In fact, Herbert spent his life trying to show how far one can stretch the bounds of "like me," and those he influenced have continued in the exploration.

FOR GREATER UNDERSTANDING



Questions

1. How did *Dune* open up new possibilities for other SF writers?
2. Why did Herbert want *Dune* and *Dune Messiah* to be published together?

Suggested Reading

Herbert, Frank. *Dune.* New York: Ace, 1990.

———. *Dune Messiah.* New York: Ace, 1987.

Other Books of Interest

Herbert, Frank. *The Ascension Factor.* New York: Putnam, 1988.

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———. *The Lazarus Effect.* New York: Putnam, 1983.

McNelly, Willis E. *The Dune Encyclopedia.* New York: Berkley, 1984.

O'Reilly, Timothy. *Frank Herbert.* Ungar Publishing Company, 1981.

Lecture 9: The Surrealists: Ballard and Bradbury

The Suggested Readings for this lecture are J.G. Ballard's *The Best Short Stories of J.G. Ballard* and Ray Bradbury's *The Martian Chronicles.*

More Real

The SF of the 1960s and 1970s was not all specifically New Wave (in the sense that it was not all tied to Michael Moorcock's *New Worlds* magazine). There are in fact two major "movements" within the 1960s and 1970s, which can be described as "surrealism" and "world building." The surrealists, inspired by the artistic movement of surrealism, were more concerned with creating specific images—both amazingly beautiful and hideously ugly. They were more interested in how SF could be a vehicle for these artistic impulses than they were in further developing the genre of SF itself. The surrealists were also intensely focused on *style*, both at the sentence level and at the structure of the story or novel. Their work is often described as hallucinatory or psychedelic (and a number of them were in fact inspired by drug use). Some of the writers examined in lecture seven, such as Philip K. Dick, might be described as surrealists, but the writers discussed here, J.G. Ballard and Ray Bradbury, were far less interested in *story* than was Dick.

The artistic movement of surrealism began in the 1920s in France and was mostly moribund by 1950, so it is particularly interesting that it ended up influencing SF in the 1960s and 1970s. Surrealism does not mean, as so many people seem to believe, "un-real," but rather "more-real" or "hyper-real." The



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basic idea behind the movement was to create art that tapped deep unconscious impulses and expressed unconscious images and desires. The literary side of surrealism was never particularly successful, and it had exceptionally little influence, in its time, on English-language fiction. But authors like Burroughs, Ballard, and Bradbury found ways, through SF, to do surrealist things in prose.

James Graham Ballard

Although Ray Bradbury is usually celebrated as one of the greatest writers of SF, I think J.G. Ballard is actually the best of the surrealists. Ballard works at every level from the very small, jewel-like image to the epic scale of the "heat death of the universe." His stylistic innovations were quite often too much for the SF community and in fact managed to alienate a great many readers. Ballard created some of the most absolutely beautiful and haunting images in SF—birds turned to crystal, London rising out of tropical floodwaters, a new river bursting forth and rushing through the desert, a scattering of jeweled insects, a desert of Martian sand engulfing a Florida town—and some of the most disgusting—people being sexually excited by autopsy reports or detailed examinations of car-crash victims. Ballard is probably most well-known for his autobiographical novel *Empire of the Sun*, which described his experience as a child in World War II Shanghai, when he was separated from his parents and interned by the Japanese. Although the novel is not at all SF, some characteristically Ballardian images, such as crashed aircraft and empty swimming pools, are found throughout the book.

Three Strands

There are three major strands of Ballard's work, all of them surrealist, but in different ways. Books like *The Drowned World*, *The Crystal World*, *Hello America*, *The Unlimited Dream Company,* and *The Day of Creation* and stories like those contained in *Vermillion Sands, The Voices of Time*, *The Venus Hunters*, and *The Terminal Beach* transform the physical world in bizarre ways and then watch the progression of psychologically maladjusted characters as they view the transformation. In *The Drowned World*, the polar ice caps have melted and London is mostly submerged. Characters dive into the ruins to retrieve objects of art, but also to engage in their own troubled relationship with time. In *The Crystal World*, an unexplained phenomenon has caused objects to leave crystalline "time-trails" behind them. The crystal can only be melted away through the power of jewels, a recurring image for Ballard. In the stories in *Vermillion Sands*, Ballard invents a desert resort in which people sail across the sand on yachts, hunt flying sand-rays, and sculpt the clouds. The effect of all of these books is to create beautiful, haunting images of loneliness. They are surrealist tableaux, and the images drive the story. Ballard also shows his investment in the "heat death of the universe" idea so beloved of the New Wave writers in stories like "The Voices of Time" and "The Terminal Beach."

The second strand in Ballard's writing develops more traditional dystopias, though always with a special twist of the familiar turning radically strange and people suddenly behaving in psychotic ways. In *High Rise, The Concrete Island,* and *Running Wild*, Ballard focuses on characters driven to savagery

by post-industrial alienation. A luxury high-rise apartment becomes an insane battleground, a car-crash victim has to survive for days on an island between motorways and constantly watched children go insane and murder their parents.


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Finally, in works like *Crash*, *The Atrocity Exhibition*, and *War Fever,* Ballard focuses on characters bizarrely fixated on the linkage between sex and death. Usually this fixation is mediated through a rather disgusting obsession with bodily functions, as in *Crash,* where the characters are sexually excited by car-accident victims and their wounds, or many of Ballard's disturbing stories, such as "The Assassination of John Fitzgerald Kennedy Considered as a Down Hill Motor Race" or "Notes Towards a Mental Breakdown," in which characters interact with their own psychoses and the mass-media culture. Ballard has often used the *forms* of science writing (technical reports, memos) in ways that other writers have not attempted, and it is in this stream of his writing that he most frequently uses this technique. The stories and novels that fit this category have been among the most celebrated of Ballard's works by critics, but they have not worn particularly well and are not enjoyed in the same ways as his more purely surrealist and imagistic books.

Ray Bradbury

Ray Bradbury has often been called the greatest of all SF writers, but his work is not really SF. It is surrealism, although there is no denying that at the level of the sentence and the image he writes beautifully. Bradbury uses a few of the conventions of SF to allow himself to talk about what really interests him: Earth in the here and now.

In *The Martian Chronicles*, usually considered to be his greatest work, Bradbury is quite similar to Ballard's surrealism in that he uses the imagined landscape of Mars and the lives of its inhabitants as an excuse to develop beautiful, surreal imagery.

> They had a house of crystal pillars on the planet Mars by the edge of an empty sea, and every morning you could see Mrs. K eating the golden fruits that grew from the crystal walls, or cleaning the house with handfuls of magnetic dust which, taking all dirt with it, blew away on the hot wind. Afternoons, when the fossil sea was warm and motionless, and the wine trees stood stiff in the yard, and the little distant Martian bone town was all enclosed, and no one drifted out their doors, you could see Mr. K himself in his room, reading from a metal book with raised hieroglyphs over which he brushed his hand, as one might play a harp. And from the book, as his fingers stroked, a voice sang, a soft ancient voice, which told tales of when the sea was red steam on the shore and ancient men had carried clouds of metal insects and electric spiders into battle.

These images of beauty—the brown Martian people with their gold coin eyes, the empty seas, the silver masks and tiled pavements, the Martians eating food cooked on hot lava and sailing across the sand in beautiful ships—are very much like those of Ballard, particularly Ballard's stories in *Vermillion Sands* (and his "The Cage of Sand" may be connected to *The Martian Chronicles*). Bradbury continually plays up feelings of loneliness and isolation and connects them to beauty: In this way he is in the surrealist camp of Yves Tanguy, Paul Delvaux, and some of the works of Max Ernst.

There are also images of horror: the dried up, mummified bodies of the Martians being used by little boys to make music, the Martian who becomes the lost dead relative or friend of anyone who sees him, the people standing on Mars and watching as the Earth catches fire. In Bradbury's stories, Mars is a beautiful, fertile planet to which Earth exports all of its greed, violence, and destruction. "We Earth Men have a talent for ruining big, beautiful things," says one of Bradbury's characters, an archaeologist. Several expeditions are sent from Earth to Mars, the first three being killed by the Martians (in one story, the Earth Men are sent to an insane asylum). But the Martians eventually succumb to chicken pox, which turns their bodies into black flakes of dead flesh around white bones, and the planet is settled. It is later deserted when nearly all the colonists return to Earth in order to attempt to save the planet from war. But then life on Earth is destroyed, and the novel/story collection ends with one of two families on Mars, isolated, the new "Martians."

Of course, all of this was made obsolete and impossible by better research and by the *Viking* missions in the 1970s, but that only makes *The Martian Chronicles* operate as pure surrealism now, when in the 1940s and 1950s the stories might have been seen as attempts at being predictive (at least in terms of how the humans behaved). It is also very interesting to see how much of *The Martian Chronicles* Kim Stanley Robinson manages to work into his *Mars* series. Although *The Martian Chronicles* is perhaps not read as much as it once was, it is amazingly influential among SF writers who have written about Mars.

Surrealism is more integrated into SF now than it was in the 1960s and 1970s, the same way surrealism is more integrated into art and film. For example, the imagery in William Gibson's *Neuromancer* and *Count Zero* (discussed in the next lecture) derives from surrealism; *Count Zero*, in particular,

borrows from American quasi-surrealist Joseph Cornel. As with the great experiments in early modernism—stream of consciousness, fragmented narrative, interpenetrating time—writers moved beyond the experiments and took the techniques as pieces rather than as wholes.

FOR GREATER UNDERSTANDING

Questions

1. What are the three major strands of Ballard's work?
2. How is Bradbury's *The Martian Chronicles* connected to Ballard's stories?

Suggested Reading

Ballard, James G. *The Best Short Stories of J.G. Ballard.* New York: Picador, 2001.

Bradbury, Ray. *The Martian Chronicles.* New York: Spectra, 1984.

Other Books of Interest

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Lecture 10: The Computer Revolution: Cyberpunk and the 1980s

The Suggested Readings for this lecture are William Gibson's *Burning Chrome, Count Zero,* and *Neuromancer* and Rudy Rucker's *Software.*

The Dollar Factor

Many SF enthusiasts believe that SF was almost destroyed by 1980, when the immense success of George Lucas's *Star Wars* had brought SF to new levels of popularity and injected so much money into the genre that a vast amount of very bad, imitative SF was published in an attempt to capitalize on the *Star Wars* phenomenon. One paradoxical result of the influx of money into SF is that magazine SF became *less* popular in the eighties as readers bought paperback novels in far greater numbers. Separate from this mass of generic SF (almost all of which is now forgotten) was the work of a small group of writers who were attempting to be innovative in both content and style. Their style became known as cyberpunk (the title came from a Bruce Bethke story, but the word and the idea were popularized by the editor Gardner Dozios).

Cyberpunk

Cyberpunk's most visible writer was William Gibson, whose *Neuromancer* still defines the genre. Bruce Sterling rode on Gibson's coattails, being more well known, at first, for his writing in support of cyberpunk than his own fiction (some of Sterling's later works are much better). Other notable cyberpunk writers are the mathematician Rudy Rucker, John Shirley, and Pat Cadigan. James Patrick Kelley is not usually classified as one of the cyberpunk authors, but his work is quite similar. Neal Stephenson, the subject of the next lecture, obviously comes out of cyberpunk, but he transcends the subgenre.

Unfortunately, cyberpunk gained the attention of mainstream academics who really did not know very much about SF and made enormous pronouncements seemingly based only on a quick reading of *Neuromancer* and some Bruce Sterling manifesto. So there was a great deal of heat, and very little light generated in 1980s criticism about cyberpunk. Twenty years later, it is becoming clear what was innovative, what was faddish, and what works were monuments in the genre.

Neuromancer

The most important of these, and really one of the great monuments of twentieth-century SF, is William Gibson's *Neuromancer*. Although many commentators focus on Gibson's envisioning of the Internet (the "Matrix") and his down-and-out characters, the real innovation in *Neuromancer* is the style. Gibson borrowed heavily from Jayne Ann Phillips's style in her short-story collection *Black Tickets* (1979), getting from her the headlong rush of story and description—as well as, perhaps, the underground sensibility—that

so characterizes his writing in the 1980s. The plot of *Neuromancer* is driven by an artificial intelligence, Wintermute, that is attempting to break free of the limits placed on it by its programming (and by the brilliantly named "Turing Police") by merging with another AI. Case, a down-on-his-luck hacker, Molly, a "Razorgirl," Armitage (a schizophrenic former Green Beret), and Riviera (a dangerous psychotic with the ability to project realistic holograms from his body) are manipulated by Wintermute to cut the electromagnetic shackles that hobble it, thus allowing it to merge with Neuromancer and form a new entity.

Gibson's first great gimmick is to make computer hacking into something much more *visually* exciting than what it actually is (it is really only typing; all the excitement comes from its problem-solving aspect, which is hard to portray). Case diving and swooping through the visual representations of data, dodging black ice and piloting a virus like a shark makes for great visuals and speeds up the pace of the story. Gibson also portrayed the globalized, multicultural world better (and more presciently) than previous writers. The adoption of discrete bits of other cultures into the matrix of existing national cultures, and Gibson's translation of other cultures into unlikely places—for example, the Rastafarian "Zionites" in low-Earth orbit—was both unexpected and believable.

Count Zero

Neuromancer ended up being just the first of Gibson's "Sprawl" trilogy, and the sequel, *Count Zero,* may very well be a better book than *Neuromancer*, although it is enough like its illustrious predecessor to let Gibson's first book retain the mantle of "most innovative." *Count Zero* further develops Gibson's technique (which has now probably become too predictable) of following disparate characters throughout a story arc, only bringing them together at the very end. In this case, the characters are Bobby Newmark, a would-be cyberspace "cowboy" from the housing projects of New Jersey; Marly Krushkhova, an art dealer who has previously been scammed into selling a fake Joseph Cornell box; Turner, a corporate security specialist; and, eventually, Angie, the daughter of a high-level corporate defector whose father has, apparently, been fed innovative ideas by an artificial intelligence that now lives in the Matrix. The plot is convoluted, with corporate-sponsored assassinations, voodoo cults that communicate with self-replicating programs in the Matrix, and a lonely artificial intelligence that manufactures "boxes" that encapsulate human sadness.

***Mona Lisa Overdrive* and Later Works**

Mona Lisa Overdrive, the final book in the "Sprawl" trilogy, is less effective than the first two, if only because Gibson had, at this stage, begun to be a prisoner of his style. But the conclusion of the book is so interesting that it is worth taking a minute to discuss. Bobby Newmark, the "Count Zero" of that book, has acquired a huge mass of "biosoft" called the Aleph. The idea comes, almost certainly, from the Jorge Luis Borges story of that name, in which a single, secret location contains a point that contains all other points. The Aleph in *Mona Lisa Overdrive* is a gigantic virtual-reality system that seems to contain nearly all of the main characters from the previous books.

At the end, they are all living in the Aleph, attached to a gigantic solar-powered robot in the middle of a poisoned, brownfield area. They should be, Gibson seems to be saying, safe and "alive" in the Aleph for a very long time. It is close to giving his characters eternal life and a remarkably soft-hearted gesture from a writer who, in his fiction, often strikes a "tough-as-nails" pose.

In the later books, *Virtual Light*, *Idoru,* and *All Tomorrow's Parties,* Gibson became more and more interested in fashion and mass culture. From the vantage point of only a few years later, he does seem prescient, particularly in some aspects of *Idoru*, but the later books lack the energy and the feelings of high stakes that are so effectively created in *Neuromancer* and *Count Zero* (and slightly less so in *Mona Lisa Overdrive*).

There is also a strange chain from William S. Burroughs's *Naked Lunch* to the band Steely Dan (whose name comes from a sexual appliance in the Burroughs book) to William Gibson, who drops Steely Dan allusions throughout his books, particularly in *Count Zero*.

Other Punkers

Gibson is the 800-pound gorilla of cyberpunk writers, but there are a few worth mentioning also. Bruce Sterling is the person most frequently cited along with Gibson, but he is a significantly lesser writer, mostly because his best works feel derivative of Gibson. Rudy Rucker, on the other hand, is so frighteningly original that his works can veer close to the unreadable. But he takes many of the same AI themes as Gibson and develops them in much more convincing detail, in many ways setting the stage for the artificial consciousness work of Greg Egan, which is probably the most exciting contemporary SF.

Rucker's *Ware* tetralogy, *Software* (1982), *Wetware* (1988), *Freeware* (1997), and *Realware* (2000), includes some of the strangest good books you will ever read. *Software* tells the story of how robots could finally achieve true self-awareness by being designed to evolve continuously. The robots eventually become "boppers," self-aware machines living on the moon. They are in conflict with each other and with humans. In the later books, attempts are made to create human-robot hybrids ("Meatbops"), and eventually, as a response to a genetically engineered plague called "chipmold," designed to destroy the Boppers, "Moldies" are created who have a whole set of additional abilities. Rucker freely mixes sex, drugs, and artificial intelligence in a complex, confusing, and ultimately appealing blend.

Although there is no longer a movement called cyberpunk (and the movement itself, though it generated much publicity, was less of a unified effort than a convenient label), the influence of the specific authors and works, particularly Gibson and *Neuromancer,* has continued to be felt, not only in mass culture and film (as the success of the *Matrix* films shows), but also in other SF, such as the writing of Neal Stephenson, the subject of the next lecture.

FOR GREATER UNDERSTANDING



Questions

1. What was the major innovation of *Neuromancer*?
2. What is the significance of the artist Joseph Cornell to Gibson's *Count Zero*?

Suggested Reading

Gibson, William. *Burning Chrome.* New York: EOS, 2003.

———. *Count Zero.* New York: Ace, 1987.

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Rucker, Rudy. *Software.* New York: EOS, 1982.

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Gibson, William. *All Tomorrow's Parties.* New York: Ace, 2000.

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Slusser, George E., and Tom Shippey, eds. *Fiction 2000: Cyberpunk and the Future of Narrative.* Athens, GA: University of Georgia Press, 1992.

Sterling, Bruce. *Mirrorshades: The Cyberpunk Anthology.* New York: Ace, 1988.

Lecture 11: Post-Punk: Neal Stephenson

The Suggested Readings for this lecture are Neal Stephenson's *Cryptonomicon, The Diamond Age,* and *Snow Crash.*



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But Is It Science Fiction?

Neal Stephenson may be the best SF writer working today (that is, if he is still working in SF). His *Snow Crash* and *The Diamond Age* were without doubt the best SF novels of the 1990s, and his remarkably successful *Cryptonomicon* (whether it is actually SF or not) closed out the decade with a bang. Stephenson's first two novels, *The Big U* and *Zodiac,* give a few hints of the ways his style would develop. *The Big U*, like *Cryptonomicon* and to some degree *Snow Crash,* challenges readers to decide whether or not the author is writing a serious story (that is, you, the reader, are supposed to believe it is at least possible) or satire. So some of *The Big U* is a fairly amusing college story, but it then veers off into armed clashes in dormitories, secret underground waste-disposal facilities, and mutant creatures living in sewers.

Snow Crash

Snow Crash, published in 1992, is set in an anarchic near future in which central institutions of government have atrophied to the point where people live in enclaves with their own borders and laws and in which Mafia franchises openly recruit on college campuses. The world is an exciting, frightening mixture of free-for-all capitalism, organized crime, and media culture. The successor to the Internet is the "metaverse," a complex virtual reality system that people enter into as avatars (this is Stephenson's gimmick to make some of

the hacking scenes more exciting—people can swordfight and race motorcycles in the metaverse and, with the advent of a new dual virus called Snow Crash, avatars can even cause their human users to die in the real world).

Snow Crash introduces one of Stephenson's now-characteristic strong female characters, the fifteen-year-old skateboard-riding courier Y.T. She teams up with out-of-work hacker, swordsman, and investigator Hiro Protagonist for a series of adventures involving the predatory owner of the international cable system (that, among other things, supports the metaverse), ancient Sumerian tablets and the neurological virus developed from them, and a plot to take over the minds of most of the world's people. *Snow Crash* contains a convoluted and fantastic plot, so instead of a rushed summary, the following are some of the book's themes.

There has been a strong libertarian streak in SF running all the way back to Heinlein. In general, SF has been suspicious of governments (although there was a brief run of happy World Government stories in the fifties, such as Heinlein's juvenile novel *Space Cadet*). In *Snow Crash*, Stephenson tries to envision what the world would be like without powerful governments. And although he is certainly at least libertarian-leaning in perspective, he is an honest enough writer to note that not everything is perfect. Radical personal freedom is great, but it also empowers crazy, dangerous people like Raven, who has his own hydrogen bomb that he carries in his motorcycle sidecar. A government reduced to contracting out computer programmers is at least incapable of oppressing its citizens or waging war, but it also leaves many people behind in a look-out-for-yourself world.

The Diamond Age

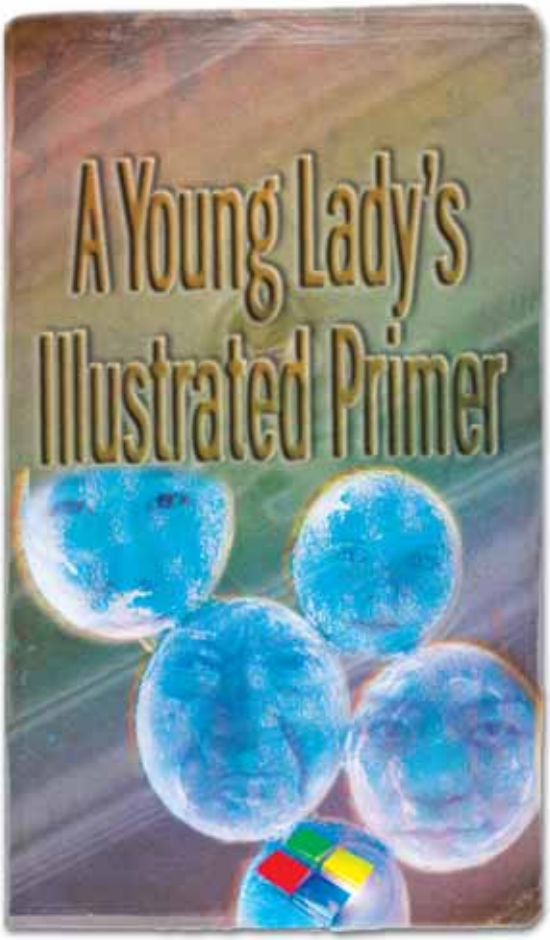
Solving some of the problems created by the free-wheeling, anarcho-capitalistic, utterly individualistic future of *Snow Crash* is the project Stephenson takes on in *The Diamond Age*. Set about a century after *Snow Crash*, *Diamond Age* depicts a world in which successful nanotechnology has delivered a bounty of goods and power to those individuals who possess it. Goods are delivered by "matter compiler," which prevents people from compiling their own nuclear bombs or viruses (this is called "feed" technology). Stephenson takes up and reexamines many of the ideas of *The Moon Is a Harsh Mistress*, and in fact, *The Diamond Age* is probably the finest political SF novel since Heinlein's.

The free-for-all of the *Snow Crash* years led people to realize that they needed the protection and support of "a powerful tribe." Thus "phyles" have formed, some based on ethnic identity and others, called "synthetic," on shared beliefs. The three great phyles are Han (Chinese), Nippon (Japanese), and New Atlantis (also called the Victorians, or Vickies; the English-speaking peoples—but only those who choose to join). The Vickies and their interactions with the Han are the focus of most of the novel, which takes places in the New Territories near China.

The most insightful leader of the Victorians begins to wonder if the next generation of Vickies will be as successful as previous generations: they have inherited their parents' culture without building it themselves (as a reaction against the previous culture), and their lives are not "interesting" enough.

Lord Finkle-McGraw tries to find a way to avoid this problem by commissioning a special interactive book, *A Young Lady's Illustrated Primer*. The book uses artificial intelligence, "smart paper," and other elements of extremely advanced technology to help educate young girls. A copy falls into the hands of one of the high-ranking officials in the Han phyle, Dr. X, who blackmails the engineer who designed it. Dr. X and the Han believe that "feed" technology is unsuitable for Chinese culture and has brought with it dependency and cultural decay. They are searching for "seed" technology, but the Victorians fear that seed nanotech will lead to anarchy and destruction.

The story follows one of Stephenson's great female characters, Nell, who escapes from a hideously abusive childhood by accidentally acquiring a stolen copy of the *Young Lady's Illustrated Primer*. She is taken in by the Victorians and learns their culture, but as an outsider who can more easily judge that culture. Her early abusive childhood has actually made her stronger than the other Vickies, even those who are as smart as she is. Here is another problem often confronted in SF: no sane parents would inflict Nell's childhood on their own child. Yet if Nell did not have her childhood, she would not be as strong and great as she is. This is a compelling illustration of a central problem in American culture: avoiding a Great Depression and a World War is obviously a very, very good thing, but it also (possibly) means that the next generation will not be as strong and self-reliant as those who suffered through Depression and war. *Starship Troopers, Dune,* and Heinlein's juveniles (in particular *Citizen of the Galaxy*) take up this idea.



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Stephenson examines education, freedom, rebellion, and conformity, pointing out the trade-offs that people make and the means by which they learn to cooperate. "It is the most difficult thing in the world to get educated, Western

individuals to work together," says one of Nell's teachers (who is possibly a much-older Y.T.), which is why the Vickies use such, well, *Victorian* methods to compel cooperation. The social cohesion and work ethic of the Vickies lead to great things, but they also retard creativity and are socially oppressive.

But Stephenson also portrays the dangers faced by someone who wants to step outside the social system and live as an independent individual. As he shows (in a rather horrifying set of scenes), a person can be as brilliant, educated, and empowered as possible, but he or she is still easily preyed upon by a moron holding a sharp stick. This is an important lesson, and one not particularly common in SF, with its standard empowerment of teenagers with exceptional talents (see Paul Atreides in *Dune*, the characters in Orson Scott Card's *Ender's Game*, any number of Heinlein heroes, and many, many others).

Cryptonomicon

Is *Cryptonomicon* an SF novel, or is it historical fiction, or something else? Was it originally SF when it was published in 1999, but now, because of technical developments, has it moved into another genre? Some commentators use the term "slipstream" to label the novel, but this is not particularly helpful in that it creates another category without defining it. Harry Turtledove has been doing some of this for years, with his various "alternate history" historical fictions in which, for example, the South wins the Civil War.

Cryptonomicon is historical fiction in the sense that half of the novel is set in the World War II era, following several characters through their adventures in Detachment 2702, whose job is to convince the Nazis that their codes have not been broken (even though they have been). This leads to adventure and hilarity, as the characters must often do bizarre and improbable things in order to even out the probability of events that would otherwise show the Nazis that the codes are no longer secure. The book also follows Lawrence Waterhouse as he breaks the codes, working with Alan Turing in England's Bletchley Park and traveling throughout the world.

The other half of the plot is set roughly contemporary—or a few years after—the publication date of 1999, and it follows the adventures of Lawrence Waterhouse's grandson, Randy, as he and his colleagues begin a high-tech start-up company, which becomes a data haven in a Pacific island country, which leads Randy on a hunt for gold buried in the Philippines by the Japanese army at the end of World War II.

Cryptonomicon takes some of the political ideas developed in *The Diamond Age* and *Snow Crash* and puts them into our current world. Again, Stephenson is intellectually honest enough of a writer to note that creating, say, a data haven that allows people to be free of government interference also allows dangerous criminals to act more freely. He philosophizes that there is a constant need for individuals who do not seek violence or conquest to band together and use technology against those who do, putting this as a struggle between the worshippers of Athena and those of Ares (Mars). He also suggests that the Holocaust and the Japanese atrocities in World War II were enabled by individuals not being armed and trained to resist—though he also notes problems with that approach as well.

Into the Past and the Future

Since *Cryptonomicon*, Stephenson has written *The Baroque Cycle*, a massive trilogy set in the seventeenth and eighteenth centuries, comprised of *Quicksilver*, *The Confusion*, and *The System of the World*. *The Baroque Cycle* is a kind of prequel to *Cryptonomicon*, where the ancestors of various characters in that book have their own adventures. Stephenson continues to be interested in cryptography, money, technological development, and political speculation. He continues to mix actual historical figures with his invented characters. Although *The Baroque Cycle* is not quite SF, not quite alternate history, and not quite historical fiction, it is a real achievement in terms of speculation and invention. Stephenson has stated that additional, related books will be set in the future beyond *Cryptonomicon*, and we can hope that he, the most talented and influential writer of the 1990s, returns to the SF fold.

FOR GREATER UNDERSTANDING



Questions

1. What gimmick does Stephenson use to make hacking scenes more exciting in *Snow Crash*?
2. What issues does Stephenson tackle in *The Diamond Age*?

Suggested Reading

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———. *The Baroque Cycle: The System of the World.* New York: Harper Perennial, 2004.

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Lecture 12: Women and Gender

The Suggested Readings for this lecture are Octavia Butler's *Dawn* and *Bloodchild and Other Stories* and Ursula K. Le Guin's *The Left Hand of Darkness* and *The Dispossessed.*

Women SF Writers

It is quite an old-fashioned approach—or at least it is very 1980s—to have a separate section for women and gender. But the fact is that SF has tended to be *very* segregated by gender even up through the 1970s. The audience was assumed to be all male, and the well-known authors were, until the 1970s, all male. In the late 1960s and early 1970s, female authors did appear on the scene. They have been, in retrospect, criticized for being too much in the vein of "soft" SF, not holding to the canons of plausibility that supposedly defined the genre. But as shown, a great deal of the SF of the 1970s did not follow the rules of "hard" SF, and it's not clear at all that this is a bad thing or, even if it were a bad thing, that it is the fault of women.

At the end of the 1960s and the beginning of the 1970s, a great number of female writers entered the SF genre, including Ursula K. Le Guin, Anne McCaffrey, Kate Wilhelm, James Tiptree, Jr. (the pseudonym of Alice Sheldon), Joanna Russ, C.J. Cherryh, Tanith Lee, and Octavia Butler. Later, in the 1980s, Pat Cadigan, Connie Willis, and Pat Murphy became well known. Critics argue back and forth over whether there is an essential female sensibility that these writers have in common, but it is difficult to say. Few of them seem interested in technology for its own sake, but the same could be said for many of the male writers of the same time period. The female writers I have listed above do not always talk about gender, and they do not always have female narrators or heroines. Some of them do talk very seriously about gender, using SF as a means to imagine human societies that do not necessarily follow the social and sexual assumptions of the culture. But certainly not all female SF writers are interested in breaking taboos or reenvisioning society. Anne McCaffrey, one of the most popular writers on this list, is often seen as a romance writer using SF and fantasy settings (and is criticized for it), but some of her works, such as *Crystal Singer,* have at least elements of the same surrealist feel as J.G. Ballard's *Vermillion Sands* or *The Crystal World*: SF as an enabling genre to create images of profound beauty.

There are quite a number of accomplished contemporary female SF authors, but two of the very best, if not the best, are legends Ursula K. Le Guin and Octavia Butler.

Ursula K. Le Guin

Ursula K. Le Guin (who also happens to be one of the great fantasy writers of the twentieth century) is one of the most influential and accomplished SF

writers of the past fifty years. She is often classed with the New Wave writers of the 1960s and 1970s (which is when she began to be published), though she had no direct connection to those writers or to Michael Moorcock's *New Worlds* magazine.

Le Guin is the daughter of the great anthropologist Arthur Kroeber, one of the founders of that discipline. She herself is an anthropologist of unknown civilizations, using many of the forms of anthropological description, and having an anthropologist's sensibility, but applying these approaches to the worlds of her imagination rather than to living human cultures. Her "soft" SF (and she is one of the writers for whom that term was coined) is noticeably short on physics and chemistry and noticeably long on social analysis, character development, and the reimagining of the human mind and the social organism.

Le Guin's most famous and successful science fiction books are those loosely joined together by their connections to the "Ekumen," a loose federation of human societies. In Le Guin's stories, humans spread throughout the galaxy from the ancestral homeworld of Hain. But the main civilization collapsed and the colony planets (which include Earth) forgot their roots. The Ekumen (which is taken from the Greek word *oikoumene*, "the inhabited world," and is also used in the Modern English word "ecumenical") arises as the various planets develop interstellar travel and communication and then attempt to form an organization based on the exchange of culture and technology rather than on coercion.

The Left Hand of Darkness

The Left Hand of Darkness (1969) is perhaps Le Guin's most famous and accomplished SF novel. In it she depicts the travails of Genly Ai, an envoy from the Ekumen to the winter planet of Gethen. The Gethenians are hermaphrodites, possibly a result of genetic engineering by the Hain. They are, for three weeks of each month, sexually neuter, but once a month they enter Kemmer, in which they can become either biologically female or biologically male. Gethenians cannot predict which gender they will become when Kemmering, though the sexual partner changes into the opposite gender. If a partner becomes pregnant, that Gethenian maintains the female sex until the child is weaned.

Le Guin's efforts to envision a neuter society are mediated through the figure of Ai, the anthropologist. His job as Envoy is to convince the Gethenians that they should welcome the Ekumen. He visits the feudal monarchy of Karhide and the bureaucracy/totalitarianism of Orgoreyn, attempting to negotiate the complexities of Gethenian society, which is based on "Shifgrethor," a concept related to "face" or "prestige," but particularly difficult for a non-neuter to understand. Le Guin attempts to separate out which human traits are strictly human and which are based on gender. In later years, she decided that her work was flawed because she mapped masculine characteristics onto her neuter characters.

The Dispossessed

The Dispossessed is one of the three great political SF novels (along with *The Moon Is a Harsh Mistress* and *The Diamond Age*). In it, Le Guin examines the problems of anarchism and centralization, equality and inequality,



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surplus and subsistence. The planet Urras is rich, fertile, and extremely unequal. Poverty-stricken individuals live in miserable slums next to individuals so wealthy that they can buy almost any comfort or pleasure. Urras's moon Anarres, which is large enough to have an atmosphere, is a harsh place where survival is difficult. The inhabitants of Anarres are exiles, sent away from Urras after a failed anarchists' revolution. They attempt to live in conformity with their anarchist principles, dividing up labor, working and living communally, even assigning names by random via computer. But the revolutionary zeal has not lasted for so many years and the society is exceptionally poor, backward, and xenophobic.

The main character, Shevek, is a physicist who is working to develop an ansible (a key device in *The Left Hand of Darkness*) that can enable faster-than-light communication. In order to accomplish his goal, he needs to work with more advanced physicists from Urras, and he eventually travels there and experiences both the wealth and the poverty (and most troubling for him, the inequality) of Urras.

The Dispossessed is such an effective novel because Le Guin is able to look at the strengths and weaknesses of both of her imagined societies. Everything is not wonderful on Anarres, not only because the lack of specialization and efficient organization leads to grinding poverty for all, but also because rules and social coercion keep creeping back into the culture, reducing the freedom of individuals. All is not bad on Urras, which, despite its inequality, is able to produce immense advances in science, art, and medicine that cannot be produced on Anarres. Le Guin's great strength in this, as in her other novels, is her essential honesty and her willingness to face up to the problems that she has created in her invented societies. Although a feminist, she does not argue that the elimination of the masculine/feminine dichotomy would bring about a utopia. Likewise, although she is politically liberal, she is willing to see the flaws in communal societies and the strengths in hierarchy—even as she criticizes it.

Octavia Butler

Octavia Butler, who died at the early age of fifty-eight just a few days before the recording of this lecture, may have had more mainstream literary credibility even than Ursula K. Le Guin. She was the first SF writer to win a

MacArthur Foundation "Genius" grant and has been included in recent mainstream literary scholarship (which has taken her quite seriously, although some mainstream critics seem to get confused by the SF genre elements in her writing—Butler is not being ironic or campy; she is using SF seriously).

Butler may be most well known for her time-travel novel *Kindred*, in which a black woman (in order to save her own life) travels back in time to the antebellum South to save the life of a white slave owner. But *Kindred,* as excellent a novel as it is, is really not SF (Butler herself called it a "grim fantasy" and notes that it would be SF if there were some mechanism for the time travel, but there is not).

Butler's *Patternmaster* novels, *Patternmaster* (1976), *Mind of My Mind* (1977), *Survivor* (1978), *Wild Seed* (1980), and *Clay's Ark* (1984), discuss telepathic aliens who jump from one human to another, possessing each in turn. Doro, the telepathic creature, is attempting to breed a race of telepaths; he later loses control of them. The *Patternist* or *Patternmaster* novels are interesting examinations of what it means to be human and the problems of power, freedom, and control, but Butler's best SF was still ahead of her.

The Xenogensis Trilogy

Some knowledgeable critics argue that Butler's *Xenogensis* trilogy—*Dawn*, (1987), *Adulthood Rites* (1988), and *Imago* (1989)—is her greatest SF accomplishment. The first book takes place on Earth after most of humanity has been destroyed. A race of physically repulsive aliens, the Oankali, are attempting to repopulate the earth with human-alien crosses. Oankali come in three genders, masculine, feminine, and ooloi (the ooloi mix the genes of the first two genders). Oankali are masters of biology: their interstellar ships are organic, as is all their science. They seek out new genes and life forms and interbreed with them to capture new genetic material—they are particularly attracted to human cancer cells. Previous imagined aliens often wanted to eat humans (which was silly, because it would be much easier for them to raise cows) or dominate us, or sterilize our planet, but none before have wanted to merge with us in the manner of the Oankali.

In the Oankali, Butler has created possibly the most repulsive, *alien* aliens in SF history. Not because they are hideous, slime-covered horrors like those invented by Lovecraft, not even because they are disgusting and cruel like the evil "wormfaces" of Heinlein's *Have Space Suit—Will Travel*, but because they are *so* alien that it is almost impossible for the readers to come to identify with them. And yet the story requires at least some level of identification. Butler's genius is in some ways like Le Guin's in that she is willing to present the complexities and flaws on both "sides" of her characters—some of the humans are unreasonable, and they have just destroyed their planet with a nuclear war. But the Oankali are so horrible, and their intention of creating a new race that is neither human nor Oankali, but something else (the "constructs") is terrifying. When Akin, the son of Lilith (the main character of *Dawn*), is captured by resisters, humans who do not want to join with the Oankali, he begins to sympathize with them and eventually convinces the Oankali to allow him to colonize Mars.

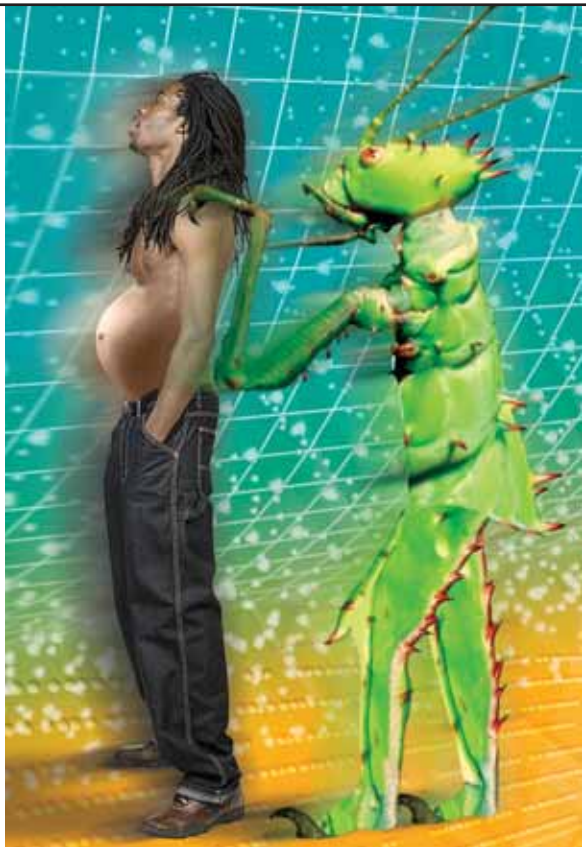
The *Parables*

The *Xenogensis* books are brilliant, but they are also very, very difficult. *The Parable of the Sower* (1993) and *The Parable of the Talents* (1998) are emotionally devastating, but they are not difficult in the same way as are the *Xenogensis* books. *The Parable of the Sower* takes place after the "pox," a combination of economic, climatic, and biological collapse that causes the social structure of the United States to disintegrate. *Clockwork Orange*—style violence dominates the culture as honest people cower inside walled enclaves. Southern California is oppressed with drought, social chaos, and economic dislocation. The narrator of the story, Lauren Olamina, has a disease called "hyperempathy" (caused by her mother's drug use while pregnant). Lauren can feel whatever she sees other people feeling. When her walled enclave near Los Angeles is attacked by scavengers and drug addicts and her family and friends are killed, she travels as a refugee to Northern California, where she forms a community, Acorn, based on her teachings of Earthseed, a religion that believes "God is Change" and is focused on surviving in a sustainable way on Earth and then colonizing other planets. In *Parable of the Talents*, Acorn is taken over by religious fundamentalists who commit atrocities. The book works as a very harsh criticism of fundamentalist religion—not all of it, maybe, is fair, but it is very emotionally powerful. Lauren, the narrator of the first book, loses her child when Earthseed children are kidnapped by fundamentalists and placed in foster homes. Eventually, she must choose between Earthseed and trying to find Larkin, her daughter. From the point of view of the daughter, Lauren is horrible: obsessed and exploitive, and Butler does not disprove this thesis. But by the end of the novel, Earthseed is reestablished and, several decades later, is about to send off its first interstellar ship. *Parable of the Talents* is not quite as good as *Parable of the Sower*, but it is a literary tragedy that Butler did not live to write a third book.



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Bloodchild



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Butler's story "Bloodchild" should be ranked among the top two or three SF short stories of all time. "Bloodchild" tells the story of human refugees who have landed on a planet populated by the T'lic, intelligent insectoid creatures larger than humans. The T'lic require a mammalian host in which to implant their eggs, which hatch as parasites and feed off of the blood of the host. A T'lic that has implanted the eggs in a human host can inject that host with venom that takes away pain, and then remove the larvae in a surgical operation so that both human and T'lic can live. But it is an exploitive relationship. The T'lic have created a preserve where humans may live, and they try to create close bonds with the humans that they will eventually implant, but the humans (of course) hate being parasitized. However, the alternative is for the T'lic to open the preserve to all T'lic, making the humans even worse off. "Bloodchild" shows how SF can engage with the most difficult themes of slavery, domination, and dependence in such a way that readers can wrestle with the underlying issues (of race, gender, oppression, and mutual exploitation) without immediately becoming bogged down in contemporary political problems.

Complex Social Futures

Whether or not Butler's and Le Guin's SF demonstrates a specifically female sensibility, it is certainly true that these authors have envisioned the social future more richly and complexly than most previous SF writers (it is also clear that for whatever reason, female SF writers, such as Connie Willis, seem to be the contemporary leaders in time-travel fiction). Butler, Le Guin, and other female SF writers often engage with their societies and characters at a much more fine-grained level of detail than Heinlein or even Stephenson. Still, it seems reasonable to believe that as SF becomes more and more mainstream, more and more women will be writing good SF and more and more women will be reading it.

FOR GREATER UNDERSTANDING

Questions

1. How would one describe the “soft” SF of Ursula K. Le Guin?
2. What makes Butler’s “Bloodchild” one of the best SF short stories of all time?

Suggested Reading

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———. *Rocannon’s World.* New York: Ace, 1982.

———. *The Wave in the Mind: Talks and Essays on the Writer, the Reader, and the Imagination.* Boston: Shambhala Publications, 2004.

Sargent, Pamela, ed. *Women of Wonder, the Classic Years: Science Fiction by Women from the 1940s to the 1970s.* New York: Harvest Books, 1995.

Lecture 13: The Satirists

The Suggested Readings for this lecture are Douglas Adams's *The Hitchhiker's Guide to the Galaxy*, Anthony Burgess's *A Clockwork Orange*, Aldous Huxley's *Brave New World*, and Kurt Vonnegut's *Cat's Cradle.*

Unhappy Futures

Some major writers who are at least sometimes classified as SF writers have thus far been left out of this course. These writers, George Orwell, Aldous Huxley, Anthony Burgess, and Kurt Vonnegut, have enormous mainstream respect. They have used SF tropes in their writing or, at the very least, set their stories in the future or in an unknown past. But they are really mainstream authors who are far more concerned about social commentary than they are about SF itself. Thus, they are dubbed, for the purposes of this course, the satirists. And although he is fully within the SF genre (unlike the authors listed above), Douglas Adams will be discussed here as well. Adams is satirizing SF itself as much as he is the world around him, and his humor is often done (thankfully!) for the sake of humor itself rather than for making a point. Though he quite often does make satirical points about society as a whole, his satire is not angry, apocalyptic, or too serious.

As noted in lecture two, SF had a precursor in what could be called "futurism" or "prophetic literature." H.G. Wells was drawn into the SF genre through this kind of writing, and Jules Verne's first, unpublished novel, *Paris in the Twentieth Century*, was also futurism. The futurists are connected to SF in that they (obviously) attempt to extrapolate current trends into the future. Much of this writing is tendentious, with the author's pet political theories being shown to lead to happiness and prosperity or his opponents' ideology seen as driving humanity into extinction or miserable slavery.

It might be reasonable to call this lecture "The Dystopians," because all of the works discussed here depict nightmare futures (though their inhabitants do not always realize that this is so; in fact, one of the major themes of many of these twentieth-century works is the blindness of the mass of humanity to its own suffering).



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Brave New World

Such is certainly the theme of Aldous Huxley's brilliant 1932 novel, *Brave New World*. In the twenty-sixth century, poverty, disease,

warfare, and unhappiness have been eliminated via eugenics, state planning, and high technology. But families, art, literature, philosophy, and religion have been eliminated in exchange. Workers are manipulated while being raised in artificial wombs so that they only develop as much intelligence and physical strength as is required for their jobs (they are ranked in castes, alpha through epsilon). This idea, that the future will be in desperate need of some kind of low-skilled slaves, appears in SF works by a number of authors, including Cordwainer Smith (the "Underpeople") and Frank Herbert (the clones in the *Destination: Void* books).

Brave New World tells of a "savage" born (not decanted from a bottle) on a reservation, who then travels back to the World State and sees it with the eyes of an outsider. He is appalled at the artificial happiness and the sexual promiscuity. John, having read much Shakespeare, wishes to live as people did in the old world, feeling things intensely and not taking the narcotic *soma*. He eventually kills himself over recriminations for actions that no one else in the World State thinks are wrong.

Huxley originally began *Brave New World* as a critique of H.G. Wells's more utopian future novel *Men Like Gods*, but the logic of his work took him in new directions. Huxley's view, that human happiness would not be achieved without a steep price, was at odds with much of the later utopian SF of the 1930s and 1940s.

1984

George Orwell's *1984* (1949) is even more famous than Huxley's *Brave New World* and is a staple of high school and college reading lists. Trappings of SF itself are somewhat sparse—the two-way telescreen, which would have been a major technological breakthrough in the late 1940s, is the only obvious piece of technology in the novel. The biggest link between *1984* and the other SF we have discussed is Orwell's invention of "Newspeak," a language developed by the Ingsoc Party to constrain the thought of new generations of individuals. Newspeak is a strong illustration of the Sapir-Whorf hypothesis (also seen in *Babel-17* and which is quite common in other SF novels of the 1940s through the 1960s) that the structure and content of a language limits and controls the thoughts that speakers of that language can develop or express.

A Clockwork Orange

Anthony Burgess's *A Clockwork Orange* (1962) is in some ways very much like Octavia Butler's *Parable of the Sower* in its depiction of a society in which violence has escalated beyond the ability of anyone to control or limit it. Stylistically the book is like Heinlein's *The Moon Is a Harsh Mistress*, but rather than pseudo-Russian syntax, Burgess uses Russian vocabulary dropped into English. The society in *A Clockwork Orange* uses conditioning to attempt to eliminate violence, but this ends up being a failure. Alex, the main character, cannot survive completely without violence; he cannot be a false thing, a "clockwork orange."

Kurt Vonnegut

Kurt Vonnegut has often been misunderstood as not really being an SF writer. Partly this is done to allow critics to claim him for the literary mainstream, and partly because social satire is far more important to Vonnegut than specific technical speculations, but that only makes Vonnegut at least tangentially related to the "soft" SF of the 1960s and 1970s.

Vonnegut is possessed of a vision that is simultaneously dark and humorous. *The Sirens of Titan* (1959) is a book that makes readers laugh out loud and then sink into depression the minute it is finished. *Sirens* depicts all of human history as being manipulated by the Tralfamadorians so that an explorer, Salo, can have his spaceship fixed and thus be permitted to resume his journey to deliver a greeting to an alien race. In the end, the focus of all of human history is a small strip of metal, rounded on one side, with two holes punched in it, and Salo's message is a single dot, which means "Greetings" in Tralfamadorian.

In *Cat's Cradle* (1963), Vonnegut invents "Ice-9," a new crystal structure that causes water to solidify at any temperature under 114 degrees. Although exhibiting Vonnegut's characteristic humor and dark vision, it is also connected to the many apocalyptic stories of the 1950s.

Vonnegut's short stories collected in *Welcome to the Monkey House* (1968), particularly the title story and "Harrison Bergeron," show that even though possessed of strong opinions, he is not unwilling to examine the other side of issues. In "Harrison Bergeron," everyone is finally equal because anyone with better abilities or more physical beauty is forcibly handicapped. As can be seen from this story and from Huxley's *Brave New World*, many SF writers fear forced equality, or forced mediocrity, as much as they fear the hierarchy and totalitarianism so well represented by Orwell's Ingsoc Party.

In his masterpiece *Slaughterhouse 5* (1969), Vonnegut uses time travel and other SF tropes to create a confused, dreamlike quality that suggests that his hero Billy Pilgrim is in fact insane. The SF is less important in *Slaughterhouse 5* than are Vonnegut's descriptions of the fire-bombing of Dresden and its aftermath, but they are still relevant to the plot and the tone of the novel.



The Handmaid's Tale

One other dystopian novel, an artistic failure though commercially successful and written by a great writer, was Margaret Atwood's *The Handmaid's Tale* (1985). The novel describes an oppressive religious dictatorship that has taken over the United States and forced women of childbearing age who are not married or who have committed "gender crimes" to be "handmaids," for the purpose of producing new children for already married men (an ecological disaster has reduced fertility). The novel has a good gimmick, although many of the political

and religious ideas had been discussed years earlier in Heinlein's *If This Goes On*. Atwood's approach to gender issues is original and her characters are well-realized, but, as some SF commentators note, you know that it is "serious literature" because it has no ending; an SF writer couldn't get away with that, but an "important" writer like Atwood can.



Douglas Adams

After all these depressing dystopias, it is pleasant to conclude with the gentle satire and hilarious humor of Douglas Adams, whose *Hitchhiker's Guide to the Galaxy* books—*The Hitchhiker's Guide to the Galaxy* (1979), *The Restaurant at the End of the Universe* (1980), *Life, the Universe, and Everything* (1982), *So Long, and Thanks for All the Fish* (1984), and *Mostly Harmless* (1992)—poke fun at the tropes of SF and at the absurdities of contemporary life. The same kind of absurdity that Vonnegut employs is used by Adams: Earth is a gigantic computer developed by some pan-dimensional creatures (which look like mice) for the purpose of figuring out the answer to the ultimate question in the universe. Actually, the mice already have the answer, 42, but they need to run Earth in order to discover the question. Unfortunately, Earth is accidentally demolished to make room for a hyperspace bypass just a few days before the conclusion of its ten-million-year programming run. Only Arthur Dent, the protagonist, survives, and he goes on a series of adventures with Zaphod Beeblebrox, the two-headed former President of the Galaxy; Ford Prefect, a correspondent for *The Hitchhiker's Guide to the Galaxy*; Trillian (aka Tricia McMillan), a brilliant astrophysicist who has previously left Earth with Zaphod; and Marvin the Paranoid Android. Adams's humor is so effective because he skewers the high seriousness that regular SF (and even many of the satirists) adopt. His light touch and creativity have made *The Hitchhiker's Guide* immensely influential in the worlds of high-tech and computer science.

The satirists show how powerful SF tropes are within contemporary culture. SF gives them freedom to examine the human condition in a new light, highlighting different elements of society, culture, and behavior and critiquing the way things are by comparing them to the way things might be (even if the chances of these things coming to pass are very slim indeed).

FOR GREATER UNDERSTANDING

Questions

1. What is the distinction between SF writers and the satirists?
2. How is *A Clockwork Orange* like Octavia Butler's *Parable of the Sower*?

Suggested Reading

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Lecture 14: The Shape of Things to Come

The Suggested Readings for this lecture are Greg Egan's *Axiomatic, Diaspora,* and *Permutation City*, and Kim Stanley Robinson's *Red Mars, Green Mars,* and *Blue Mars.*

Even in a comprehensive course like this one, there are many great SF books and authors that just did not fit into the discussions given above. There was important SF written in the 1990s even though it was not really part of a "movement" like the cyberpunk of the 1980s. Kim Stanley Robinson's *Mars* books, for instance, are among the most completely realized SF in several decades, and Greg Egan's explorations of artificial consciousness blur the boundaries between SF, philosophy, and literature.

The Best SF Not Mentioned Above

James Patrick Kelly is often classed as a "cyberpunk" writer, but really only because he wrote in the same time period. Kelly's *Think Like a Dinosaur* combines big ideas with surrealist imagery. One of his best stories, *Mr. Boy,* is about a person who is genetically "twanked" so as to remain physically a young boy for years upon years. His mother has been "twanked" into a gigantic body shaped like the Statue of Liberty.

Usually seen as a horror writer, George R.R. Martin often uses science fiction themes in his work (for example, vampires on a spaceship). His short story "Sandkings" is one of the more horrifying, nightmare-inducing pieces you are likely to read.

Ann Maxwell's *The Jaws of Menx* (1981) is a one-off, a phenomenally beautiful novel that combines the imagery of the best surrealist SF (like Ballard's *The Crystal World*) with a high-stakes plot and a variety of interesting characters. Maxwell is apparently the pen name of the romance novelist Elizabeth Lowell. Her other work is not bad, but not great. But the world of Menx, from its smoke trees to its colorful wiris, to the beauty and terror of the Mountains of Madness, is one of the rare SF worlds that one never forgets.

Peter Kocan's *Flies of a Summer* (1988) is about a band of human children kept as slaves by alien creatures called "Margai." The children are never allowed contact with other, older humans, and so they are unable to pass on lessons learned. But one brave youth helps them to escape from the Margai and gain freedom. *Flies of a Summer* illustrates how slavery could be maintained and also how the hold of the owners might be broken. It can profitably be read along with Octavia Butler's *Kindred*.

This course has been closely focused on English-language SF, if only to keep the discussion manageable. SF is not, however, limited to the English-language world, and one author in particular, the Polish writer Stanislaw Lem, deserves to be mentioned not only because his stories and novels are

so good, but because his translator, Michael Kandel, has managed to take puns, jokes, and plays on words in Polish and translate them into puns, jokes, and plays on words in English. In 1972, Lem's *Solaris* was made into a great film (though the beginning is somewhat dull) by Andrei Tarkovsky (it was remade in 2002, but that version is not particularly good). Lem's best work may be the stories collected in *The Cyberiad* (1967, translated into English in 1974). He anticipates some of the themes of artificial consciousness later developed by Egan.

Film has also been mostly beyond the scope of this talk, but one film in particular, *Gattaca* (1997), written and directed by Andrew Niccol, deserves mention not only for it being one of the best treatments of the ideas of biological determinism and eugenics, but also for developing a look and feel that was as original as *Bladerunner*'s was in its time.

The Best of the 1990s and Beyond

Kim Stanley Robinson

Besides Stephenson, the most widely read and respected writer of the 1990s is Kim Stanley Robinson, whose *Red Mars*, *Green Mars*, *Blue Mars,* and *The Martians* are the most fully realized investigation of what extraterrestrial colonization might really be like. The *Mars* books, although they are very much about relationships, politics, and ideology, are also just about as hard as it is possible for SF to be.

The books follow the planned colonization of Mars from the training of colonists in Antarctica (Robinson also wrote a novel of that name set on the icy polar continent) to their arrival on Mars and their ongoing terraforming efforts. Robinson marries very hard SF with very soft depictions of relationships and politics. He delineates ongoing battles between the "Greens," who want to make Mars as much like Earth as possible, and the "Reds," who want the Red Planet to retain its lifeless beauty. Eventually a compromise is reached (when Robinson is describing the compromise and the constitutions



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thus arrived at, he slips into the trap of being tediously didactic). *Green Mars* chronicles the successful ecological transformation when plants are able to grow on Mars. *Blue Mars* depicts the rise of liquid water in rivers and seas—the novel also chronicles ecological devastation on Earth (due to volcanic melting of the western ice shelf of Antarctica) and the colonization of the solar system. Robinson also deals with problems created by extreme longevity (treatments that give life spans of greater than two hundred years have been generated). One of his big—and depressing—ideas is that even in the future, and even on Mars, there will be idiotic terrorists who think that their ideology and special insight grants them the right to kill others who disagree with them. This is (sadly) probably true.

Greg Egan

The Australian writer Greg Egan writes the hardest of hard SF, inventing new, plausible-sounding kinds of physics and discussing, in detail, the problem of artificial consciousness. At this time, there is no group name for the set of books and stories that Egan has used to discuss artificial consciousness, but these include the novels *Permutation City* (1994) and *Diaspora* (1997), and to some degree *Schild's Ladder* (2002), as well as the short stories "Learning to Be Me" and "Border Guards." Egan examines the very challenging question (based to some degree on the philosophical works of Daniel C. Dennett) of how a machine might become conscious—an old question, but Egan approaches it from the mathematical point of view. People can become "jewel heads," transferring their consciousness to an indestructible optical computer inside their skulls; they can go even further and become Gleisners, conscious robots, or even upload their consciousness into larger computational systems, becoming infomorphs or polis citizens. Egan seems never content to have merely one big idea brewing in his stories, but continues to pile on future history, social organization, physics, and exo-biology. He is well-versed in mathematics, being able to discuss the ways that Wang Tiles can be used to create a Universal Turing Machine and thus, possibly, to make a nearly two-dimensional life-form have consciousness.

Egan also has enormous talent for finding ways to illustrate mathematical ideas, such as the "strange attractor" in "Unstable Orbit in the Space of Lies." This brilliant story also touches on the problem of how to have a true "counter-culture," and points out that resistance to a dominant culture can become a confining culture in itself. At this stage of his writing, however, Egan's ideas are possibly too complex and sophisticated for him to achieve the wide renown he deserves (although *Permutation City* and the short story "Border Guards" won major awards). But aficionados of hard SF eagerly await his newest works and perhaps the decade of the oughts will be his decade.

Conclusions

In his Nobel Prize acceptance speech, William Faulkner wrote that literature is the study of "the human heart in conflict with itself." This quotation has been a touchstone of literary criticism throughout the modern period (and really, Faulkner was just taking many of Henry James's ideas and putting them into a pithy aphorism). But SF, in the great tradition of science and scientists, looks at the quotation and starts to ask some irreverent and perhaps

even naïve or stupid-sounding questions: Well, what do you mean by "human," anyway? Okay, the heart is in conflict with itself, but what is the brain doing this whole time? Well, if you mean to equate the "heart" and the "self," then how can a self really be in conflict with itself? Doesn't that imply that there might be more than one "self"? Who gets to determine who has that self? Does that make something human? What about creatures that aren't human? Can you write literature about them, also?

The novelist and philosopher Iris Murdoch once wrote that the purpose of the novel is to prove that other people really exist. SF takes Murdoch's idea several steps further, showing that literature can create "people" inside of what might have been considered "things." SF's ability to make computers (Egan, Heinlein), robots (Asimov), or hideous aliens (Butler) "human" demonstrates the great and frightening power of all literature. This power can be dangerous; it can make us sympathize with—even identify with—people and creatures that we would not otherwise like and whom we may have rejected on ethical or political grounds. But it can also help us to expand the circle, allowing into the category of "human" a wider variety of *people* than we previously have. Frank Herbert wrote that each of us carries inside a very concise definition of what it means to be human: "Like me." SF, at its best, works to ensure that there are more rather than fewer beings included in that category. SF thus lets us explore ourselves: we approach humanity in new ways because the people on other planets are always, at heart, us.

FOR GREATER UNDERSTANDING

Questions

1. How does Egan use mathematics in his writing?
2. What questions might SF writers ask of Faulkner's quote that literature is the study of "the human heart in conflict with itself"?

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