

Science Fiction: The Evolutionary Mythology of the Future

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Center for Future Consciousness

Science Fiction as a Way of Life

As a young boy growing up in the 1950s, I was drawn into the wondrous, strange, and at times frightening world of the future through the movies. At the Alhambra Theater in Waterbury, Connecticut, I watched—totally mesmerized—the classic science fiction movies, *The War of the Worlds*, *When Worlds Collide*, *Journey to the Center of the Earth*, *The Time Machine*, and the best of the best, *Forbidden Planet*.

I was so inspired after viewing *The War of the Worlds* that I wrote my first science fiction story and screenplay, about an alien invasion of the earth, convincing some of my friends to put on a play, build sets and props, and “volunteer” their mothers into making costumes. We were going to “live the future,” a future of space ships and great battles to defend the earth. We never did the play, but I still have the original handwritten story, dated 1954.

Science fiction is the most visible and influential form of futurist thinking in contemporary popular culture. It is so popular because in narrative form it speaks to the whole person—intellect, imagination, emotion, motivation, behavior, personal identity, and the senses. Readers and moviegoers are drawn into envisioning, feeling, and even acting out possible futures. Science fiction provokes psychologically holistic future consciousness, stimulating and engaging all the dimensions of the human mind. For many people within the vast and ever-growing science fiction community, science fiction has become a total way of life—a way of experiencing and creating reality, and in particular, the future.

My early experiences with science fiction cinema and my enthusiastic efforts in writing and producing it exemplify this “total person” immersion that science fiction can generate. Not only did science fiction permeate deep into my psyche through the sights, sounds, drama, and excitement of it all, it also instilled in me an urgent desire to share this powerful and elevating experience with others, to create and to collaborate in imagining the possibilities of the future through science fiction.

A superb contemporary example of how science fiction can become a way of life, of visualizing, feeling, and living an imagined future, is the TV comedy, *The Big Bang Theory*. Its characters, Sheldon, Leonard, Howard, and Rajesh, participate in numerous sub-cultures and sub-genres of science fiction, including comics and superheroes, cinema, *Star Trek*, and gaming; they collect memorabilia, posters, and action figures; attend conventions; regularly socialize through game playing and TV viewing; dress in science fiction costumes (vicariously adopting the identities of science fiction characters); and routinely (obsessively so) wait in long lines with other fans to view the latest science fiction films. It is a standing joke that Sheldon’s friends think he is an

alien. Sheldon's ego-ideal, indeed, is a combination of *Flash* and *Mr. Spock* (the latter haunting him in his dreams), a synthesis of speed, science, and intellect.

Science Fiction as Futurist Narrative

A big part of the psychological power and pull of science fiction can be found in its narrative form. Humans are psychologically disposed toward making sense of themselves and the world, and the universe as a whole through stories. Through the narratives we tell ourselves, we give meaning and purpose to our existence; we create our personal identities through internal self-narratives. Societies create a collective sense of identity and vision of the future through shared narratives, encompassing past, present, and future. Because science fiction is narrative in form, it naturally resonates with the deep structure and dynamics of the human mind. Science fiction, as narratives of the future, gives our lives meaning, drama, and a sense of action and direction.

As narratives with a primary focus on the possibilities of the future, the genre can be defined as follows: a literary and narrative approach to the future, involving plots, story lines and action sequences, specific settings, dramatic resolutions, and varied and unique characters, human and otherwise. Science fiction is imaginative, concrete, and often highly detailed scenario-building and thought experiments about the future set in the form of stories.

A good story about a possible future, with its drama, sensory detail, and nuances, is psychologically more compelling and realistic than an abstract futurist scenario or statistical prediction. Further, science fiction also personally draws us into a rich vicarious experience of the future through vivid and memorable characterizations. Science fiction contains a host of unique and strange characters, admirable, villainous, and enigmatic, concretely realized and richly described. We live the story through the characters; we personally connect with them, or are personally repelled by them.

All told, through narrative, vivid and concrete descriptions of scenarios and settings, compelling characters, and in cinematic productions, through multimedia stimulation, we are powerfully drawn into imagining and thinking about a possible future, and we are able to *feel the future* as well.

The Future of Everything

A common stereotype, reinforced by the techno razzle-dazzle of science fiction cinema and special effects, is that science fiction is predominately about the future of technology and science. But this vision is way too narrow. As it has historically evolved, science fiction has expanded to encompass the *future of everything*.

The name "science fiction" was coined by Hugo Gernsback around 1929 in his pulp magazine *Science Wonder Stories*. Gernsback, inspired by the writings of H.G. Wells and Jules Verne, envisioned a new literary genre that was gripping and entertaining but also educational. In his mind, its educational purpose was to teach about the future

possibilities of science and technology. But both before Gernsback and clearly afterwards, numerous “science fiction” writers have delved into the future of society, culture, ethics, the environment, the human mind, the sexes (and sex), and even spiritual topics and concerns. Throughout its history, all dimensions of the future have been explored in great depth and detail and from numerous perspectives by science fiction writers.

In challenging the techno-stereotype of science fiction in my teaching and writing, I often begin with Roger Zelazny’s *Science Fiction Hall of Fame* story “A Rose for Ecclesiastes.” This melodramatic tale, which takes place on Mars, involves a linguist, classics scholar and poet (not a mad scientist) who is studying Martian language and religious texts (there are humanoid Martians and an ancient Martian culture in the story). Amidst a debate he initiates with the enigmatic Martians on the value of the philosophy of *Ecclesiastes* (thus engaging the reader in issues of cross-cultural communication, religion, and the meaning of life), he is seduced by a beautiful Martian dancer named Braxa, and drawn, as an unknowing pawn, into the fulfillment of an ancient Martian prophecy on the renewal of life. The story’s focus is humanistic, psychological, and philosophical, rather than technological. As a second excellent example, Ursula LeGuin’s multiple-award winning novel, *The Dispossessed*, has very little to say about advanced technologies, but has quite a bit to say about the complex and often ambiguous nature of social utopias and dystopias and the purpose of life.

Good science fiction about the future frequently creates a fully realized, multidimensional vision, including not only the technological and scientific, but the psychological, cultural, moral, social, and environmental dimensions of future human existence. The real future will be an interactive synthesis of all these dimensions. As some prime examples of novels that create rich, multidimensional possible future human societies, I recommend John Brunner’s *Stand on Zanzibar*, Dan Simmons’ *Hyperion Cantos*, Neal Stephenson’s *The Diamond Age*, and Ian Macdonald’s *River of Gods*.

Just as science fiction can encompass and integrate all the main dimensions of reality in a futurist vision, it also frequently delves into the big picture of things: the universe as a whole and the place of humanity (or our descendants) within it.

A good example of this is James Blish’s *Science Fiction Hall of Fame* story “Surface Tension,” which I have used in teaching to illustrate science fiction’s cosmic perspective. The story is allegorical. A group of tiny humanoid creatures who live in a puddle of water on an alien world construct a “space ship,” challenging the collective mindset of their society that believes the puddle of water is the entirety of the universe, and break through the surface tension of the puddle. Landing on dry ground, they look up and see the stars for the first time—the universe is revealed. Through courage, imagination, and a spirit of adventure, they transcend the constraints, physical and psychological, of their tiny world and mindset, and tremendously expand their understanding of the cosmos and their place in it. As I have frequently stated, we are like the humanoid creatures in the water puddle. Blish’s plot wonderfully fulfills a central function of science fiction: to

expand our consciousness and perspective on reality to the farthest reaches of space, time, and mind—to engender in us a sense of wonder.

On the grandest of scales, however, no one surpasses Olaf Stapledon in taking the reader on colossal imaginative adventures that explore the future evolution of the human mind, society, ethics, philosophical enlightenment, and human transcendence. With this Oxford philosopher and science fiction writer, we ultimately journey on a cosmic quest in search of God.

Olaf Stapledon's novels, *Last and First Men* and *Star Maker*, propel us on journeys that progressively extend outward covering billions of years into the future and the entire trans-galactic spatial expanse of the universe. Stapledon's fundamental narrative is the cosmic evolution of intelligence and communal consciousness; we see ourselves within the biggest picture imaginable to the human mind. Other more recent science fiction novels that realize cosmic perspectives on the future of humanity and the universe, include Stephen Baxter's *Xeelee* and *Manifold* series, Greg Egan's *Diaspora*, Robert Charles Wilson's *Darwinia*, and for a comic excursion into the mind-boggling, farthest reaches of space, time, and artificial intelligence, Charles Stross and Cory Doctorow's post-Singularity novel, *The Rapture of the Nerds*.

The Mythology of the Future

Cosmic narratives of the future lead us to consider a key feature of the genre: *Science fiction is the mythology of the future*. There are many historical seeds and tributaries in the emergence and ongoing development of modern science fiction, including utopian thinking, Gothic romance, the birth of modern science, and the Enlightenment philosophy of secular progress, but of special note, we can historically trace science fiction back to fantastical and mythic tales of ancient times. Though modern science fiction (to a degree at least) broke free of the theories of reality that informed ancient myths, the genre has retained many of the mythic features at psychological, literary, and social levels. In contemporary times, science fiction serves many of the same functions that ancient myths provided for humanity.

Consider:

- Ancient myths were narratives; rather than abstract theories of reality, myths recounted significant events happening in a dramatic sequence.
- Myths contained various personified entities (deities and supernatural and fantastic beings), often serving as role models for humanity.
- Myths embodied archetypal themes, such as life, death, and resurrection; good versus evil; and the hero's journey, and conveyed fundamental life lessons.
- Myths were often cosmic and transcendent in scope.
- The imagery in myth was often bizarre, fantastic, and highly imaginative.
- Myths provided personal meaning and a sense of connection with the cosmos.
- Myths were motivational and inspirational.
- Myths engaged human emotion, inclusive of hope, fear, awe, and wonder.

- Through rites and rituals, myths provoked personal immersive participation.
- Myths frequently illustrated ethical principles.
- Myths possessed an aesthetic dimension.
- Numerous icons, totems, images, and objects of worship were associated with myths.
- Myths embodied deep and profound truths about life, the universe, and everything.

All told, myths effectively tapped into fundamental human psychology and sociology, which is what made them so powerful in giving meaning and direction to human life.

I suggest that science fiction has all the same qualities of myth as listed above. The one significant difference is that science fiction is informed by contemporary theory and belief systems regarding the nature of reality—in particular, what is scientifically plausible—rather than being based on ancient and often supernatural theories of reality.

Contrary to popular misconceptions, ancient myths did offer visions of the future (and not just simply ‘origin’ stories), but with the emergence of modern science fiction, the new visions of the future were derived from the European Enlightenment theory that through science, technology, and reason the future could be different than the past, and through human effort, hopefully for the better. I should add though that these differences are only relative rather than absolute. There are many science fiction stories that combine scientific and mystical-spiritual-supernatural themes (*Star Wars* and *The Matrix* for example).

Scientific and techno-rational visions of the future also generated fear and apprehension, and consequently, emerging out the Gothic and Romantic movements (the philosophical adversaries of Enlightenment positivism), we find frightening “mythic” tales, such as *Frankenstein*—“the modern Prometheus.” Is embracing the scientific vision of reality and philosophy of self-empowerment a good thing? Whether positive and hopeful, or negative and frightening, the stories of modern science fiction, though mythic in form, grapple with the scientific vision of reality and secular theory of technological progress.

A good example of the mythic and archetypal within a scientific-technological setting is the movie *Close Encounters of the Third Kind*. Here we see strange beings from a “higher realm” communicate with humans, transmitting a mysterious musical message and psychically implanting various enigmatic symbols in human consciousness that capture and possess the minds of human characters, drawing them on a challenging journey of adventure and discovery that eventually leads to enlightenment and transcendence into the heavens.

A second example is *2001: A Space Odyssey*. Both the book and the movie embody the mythic narrative theme of death and resurrection. God-like beings from outer space guide humanity and our technological evolution (the animal bone used as a weapon by our ape-like ancestors evolving and morphing into a spaceship) through the use of mysterious monoliths (iconic objects of worship). Eventually we are lead on a journey to

the farther reaches of the universe and the accelerated aging and death of the central human character, who is then “resurrected” as a celestial and ethereal Starchild, the next step in human evolution. The transformation, at the story’s end, is from a material being to a being of light (metaphorically, the spiritual). The gods raise us from the dead and make us anew. Such has been the mythic hope of humanity through the ages, except here it is realized through advanced technology, space travel, and hyper-evolved aliens.

In an article in *The Futurist* a number of years ago, “New Myths for a New Millennium,” Stanley Krippner and his co-authors argued that myths are critical to the human mind and human society and that we need new myths for the future—myths that make sense within a modern mindset and philosophy. Such new myths, I suggest, are the stories of science fiction. In fact, with the emergence of the cinema in the last hundred years, we can create and present our myths in a psychologically holistic, multi-sensory fashion. The power of modern special effects allows us to produce and share highly realistic and immersive simulations of fantastical and futuristic possibilities.

To quote Stapledon, from his novel *Last and First Men*,

“The activity we are undertaking is not science, but art...Yet our aim is not merely to create aesthetically admirable fiction. We must achieve neither mere history, nor mere fiction, but myth. A true myth is one which, within the universe of a certain culture ... expresses richly, and often perhaps tragically, the highest aspirations possible within a culture.”

Science fiction, a continually evolving and highly diverse creation of human minds, is the mythology of the future because, being informed and inspired by contemporary thought, science, and cutting-edge speculation (the ideas and hopes of a culture), it creates myths about the future that will engage, guide, and inspire us in the future in the ongoing creation of the future.

Evolution and Science Fiction

Bringing to center stage the concept of evolution, I would enrich my description of science fiction by stating that it is the “evolutionary mythology of the future.” For one thing, science fiction is a continually evolving genre of futurist themes, scenarios, and thought experiments, where new writers build upon the heritage of great works of the past. Informed by its heritage, science fiction involves the ongoing, purposeful evolution of human future consciousness.

But also, from early on, science fiction has grappled with understanding evolution and progress. As mentioned above, both Enlightenment philosophy, with its vision of secular progress, and the Romantic recoil, with its apprehensions over industrial and technological progress, laid the modern seeds of science fiction. Together they express the double-edged sword of fear and hope regarding human change in the future. The

theory of evolution, as developed through the nineteenth and twentieth centuries, further expanded the vistas and ongoing debates over where all this change was heading.

The central scientific narrative of contemporary times is cosmic evolution: The universe as a totality, and everything in it, including humanity, is a result of evolutionary processes. Cosmic evolution lays out a “story of us all.” How does humanity fit into this cosmic drama of time and change, for better or worse? This is an ongoing question within science fiction.

Science fiction writers since the time of H.G. Wells, if not before, have pondered the meaning and message of evolution as a framework for understanding both the past and the future. Evolution though is a double-edged sword; there is becoming and passing away; emergence and extinction; order and chaos; creation and destruction, all enveloped in a sea of natural law and irreducible uncertainties. These dualities and tensions in the cosmic evolutionary narrative provide a dynamic context for creating drama and adventure within science fiction stories. The risks, uncertainties, potential catastrophes, and varied possibilities within the evolutionary saga give great dramatic energy to futurist science fiction. Aside from Wells and Stapledon, science fiction writers such as Camille Flammarion in *The Last Days of the World*, A.E. van Vogt in *Slan*, Stephen Baxter in *Evolution* and *The Time Ships*, Greg Bear in *Darwin’s Radio*, Charles Stross in *Accelerando*, Robert Sawyer in *Hominids*, and Robert Silverberg in his psychedelic trip in human evolution, *Son of Man*, have explored the evolution of the universe and humankind’s evolutionary journey and potentialities within it.

Science Fiction and Futures Studies

In further exploring the historical evolution of science fiction, we can gain a better understanding of the connection between science fiction and non-fictional approaches to the future. There are many different methods within the general arena of non-fiction futurist thinking (or futures studies), such as trend extrapolation; scenario building; the collective polling and integration of facts and expert opinions; foresight exercises; scanning; probabilistic predictions; imaging preferable futures; causal layer analysis; and wild card scenarios.

H. G. Wells embraced both fictional and non-fictional approaches to the future, sometimes weaving the two together, as in *The World Set Free*. Though his writings can be roughly divided into science fiction versus futures studies, in his mind, each approach informed the other. He thought out the scientific implications of the theory of evolution as a prelude to writing his classic novels *The Time Machine* and *The Island of Dr. Moreau*. He studied human history (and wrote books on it) as a prelude to writing the *The War of the Worlds*, *The War in the Air*, and *The Shape of Things to Come*.

Since Wells, numerous writers and researchers on the future have explored both science fiction and futures studies, drawing ideas from both domains, cross-fertilizing, and synthesizing. The futurist Alvin Toffler loved science fiction; the science fiction writers Arthur C. Clarke, Isaac Asimov, Frederick Pohl, and David Brin, to name just a

few, all have delved into writing non-fiction on the future. (Brin presents, in his recent science fiction novel *Existence*, a superb narrative synthesis of ongoing research in SETI and a fictitious future encounter with aliens.) As the science fiction writer Thomas Disch, states, in his book *The Dreams Our Stuff is Made Of*, science fiction has deeply influenced the development of visions of the future and ongoing advances in technology —arguing that “science fiction has conquered the world.” Science fiction permeates into futurist thinking and vice versa.

As a prime example, it is impossible to disentangle contemporary thinking on the future evolution of computers, the Internet, artificial intelligence, and the experience of living this emerging future from the writings and ideas of cyberpunk science fiction. Cyberpunk is both a sub-genre in science fiction and in contemporary culture a way of life and mode of thinking about the future. William Gibson’s seminal cyberpunk novel *Neuromancer* not only anticipated but helped to create a techno-futurist mindset within contemporary pop culture. Looking at the non-fiction writings of Rudy Rucker in his *Mondo 2000* publications and his amazingly creative, crazy, and pyrotechnical display in his science fiction epic *The Ware Tetralogy*, the ideas and themes from his fiction and non-fiction blend together into a phantasmagoric vision of the future. Ray Kurzweil’s books *The Age of Spiritual Machines* and *The Singularity is Near*, though non-fiction and based upon data-driven predictions, often read like pages from science fiction.

To further reinforce the connection between science fiction and futures studies, although science fiction tells stories about the future, it also presents thought experiments about the future. Science fiction writers think out the details and implications of their speculative ideas, both as a prelude to writing the story, as well as within the actual content of the narrative, in order to get the readers thinking about the future. Science fiction writers ask such questions as “What if?” and “If this goes on, then what?” Such questions are raised and considered within the stories. Science fiction is “idea literature.” It ponders and speculates on the possibilities of the future, and the reader is asked to think along with the writer. This is more than simply story telling; it exercises in imagination, speculation, critical thinking, hypothesis testing, trend extrapolation, and even planning, as it pertains to preferable futures, all aspects of futures studies.

Science fiction is especially valuable in exercising the cognitive, imaginative, and intellectual capacities of future consciousness because of its pluralistic nature. There is a myriad of thought experiments in science fiction—to be compared and debated—and as many philosophical perspectives on the future as there are science fiction writers. This diversity of perspectives reinforces the fundamental principle within much of futures studies thinking that the future is different possibilities rather than singular certainties.

A Brief History

As our everyday lives, worldly concerns, and imagination and speculations on the future have transformed and evolved, so has science fiction. Through the latter part of the nineteenth and early twentieth centuries, numerous science fiction stories considered the amazing possibilities of technological progress and the consequent impact on

human life and society. See, for example, *The Future Eve* by Auguste Villiers de l'Isle-Adam, Fritz Lang's movie *Metropolis*, and E.M. Forster's prescient *Science Fiction Hall of Fame* story "The Machine Stops." Reflecting worries of the time, there were also numerous stories about future war, some of which were written by Wells, such as his prophetic *The War in the Air*. Perhaps as a form of escapism from the First World War, Edgar Rice Burroughs wrote his famous and extremely popular stories of John Carter's adventures on Mars.

The 1920s through the 1940s saw the explosive development of "space operas" and journeys to other planets, star systems, and galaxies—for example, the *Skylark* and *Lensmen* series of "Doc Smith"—fueling the optimism and imagination of young scientists and technologists. The "Golden Age" of science fiction burst forth, ignited by John Campbell as editor of *Astounding Science Fiction*. Robots became a popular theme, beginning with Karel Čapek's science fiction play *Rossum's Universal Robots* and continuing with Isaac Asimov's *I, Robot* stories. Čapek also wrote two brilliant comical satires on human society during this period: *The Absolute at Large* and *War with the Newts*. "Future histories" of civilization were created, including Asimov's famous *Foundation* series and Robert Heinlein's equally well-known "future history" stories, most of which are collected together in his *The Past through Tomorrow*.

In the 1950s—the Silver Age of science fiction—humanity worried about the "Bomb," an anxiety reflected within science fiction by numerous cataclysmic and apocalyptic stories, including Walter Miller's classic *A Canticle for Leibowitz*. Numerous disaster and alien invasion movies appeared on the screen. But in the 1950s and 1960s we also find the fantastical tales of Alfred Bester, *The Demolished Man* and *The Stars, My Destination*, which integrated future technology, crime and obsession, and psychic abilities, as well as the psycho-techno, reality-questioning, hallucinogenic stories of Philip K. Dick, such as *The Man in the High Castle*, *The Three Stigmata of Palmer Eldritch*, and *Do Androids Dream of Electric Sheep?*

In the 1950s through the 1970s, culminating in the "New Wave" movement, the focus of science fiction increasingly turned toward social, cultural, gender, and psychological possibilities in the future; inner space replaced outer space as the "final frontier." Science fiction, reflecting ongoing transformations in pop culture, became more literary, more mystical and mythic, and more challenging of tradition and cultural norms, such as in the writings of Roger Zelazny (*Lord of Light*), Harlan Ellison (*Dangerous Visions* and *Deathbird Stories*), and Philip Jose Farmer (*Flesh* and *The Lovers*). Women science fiction writers, including LeGuin, James Tiptree, Jr., Joanna Russ, and Vonda McIntyre, offered a powerful new voice in the genre, giving us nightmarish futurist projections of intensified repression of women, as well as stories of female emancipation. Space operas continued through the 1970s and 1980s, such as in *Star Trek* and *Star Wars* and Larry Niven's gargantuan creation of technological imagination, *Ringworld*. Stories of the end of the world continued as well, such as J.G. Ballard's eerie and hypnotic *The Crystal World* and *The Drowned World*.

Given the twentieth century's continuous anxiety over the future, an ongoing stream of dystopian science fiction novels has been produced over the last hundred years. Beginning with Wells' turn of the century *The Sleeper Awakes*, we find in later decades such powerful and disquieting novels as Yevgeny Zamyatin's *We*, Aldous Huxley's *Brave New World*, George Orwell's *1984*, and Margaret Atwood's *The Handmaid's Tale*. In Octavia Butler's *Parable of the Sower* and *Parable of the Talents* the struggle to realize a better world is set within the context of an extremely dangerous, brutal, and corrupt near future world. Some of these novels have minimal emphasis on technological extrapolation, but they all consider possible psychological and social developments in the future that would produce depressive and fearful human societies, and they all ask the reader to consider how such dystopian realities could possibly come to pass.

From the 1980s up to the present, artificial intelligence and computer technology have come into increasing focus, both stimulating and reflecting technological research and pop culture thinking. *Bladerunner* by Ridley Scott (inspired by Dick's science fiction), and *Neuromancer*, by William Gibson, captured the feel of dark, techno-infused cyberpunk human reality. Neal Stephenson weaved together cyberpunk, virtual reality, drugs, and just about everything else, in his scintillating and rambunctious novel *Snow Crash*—a mental trip, if ever there was one, into the future. Just how crazy can it get? Is the evolution of computer networks, virtual reality, and A.I. to be embraced or feared? Meanwhile, authors such as Orson Scott Card, in his award winning novels *Ender's Game* and *Speaker for the Dead*, astutely and creatively explored psychological, ethical, and even religious futurist themes.

As argued above, the best science fiction weaves together, in intricate thought experiments, the future possibilities of all major dimensions of human reality. Synthesizing computer and bio-technology, virtual reality, future wars, human thought control, and space travel, with amazingly inventive aliens often thrown in, the last few decades have given us the award winning novels of David Brin, *Startide Rising* and *The Uplift War*, and Vernor Vinge's *Marooned in Real Time*, *A Fire Upon the Deep*, *A Deepness in the Sky*, and *Rainbows End*.

Approaching the third millennium, in works, such as Greg Bear's *Queen of Angels* and Stephenson's *The Diamond Age*, we find nanotechnology integrated with psycho-technology and set in the context of richly complex future societies. Both novels are also illustrative of science fiction with a global, cross-cultural dimension, as are Ian McDonald's stupendous mytho-technic vision of a future India, *River of Gods*, and Paolo Bacigalupi's gritty futurist tale of Bangkok, *The Wind-Up Girl*. Biotechnology, a futurist issue of great contemporary interest, is another key theme in *The Wind-Up Girl*. Biotechnology's application to humans and its social ramifications are also superbly examined in *Beggars in Spain* by Nancy Kress.

In large part due to the accelerative evolution of special effects, beginning with *2001* and *Star Wars*, science fiction movies rocketed to the top in cinematic popularity. Over the last few decades the biggest money making movies have been almost universally

science fiction. Though many science fiction movies continue to suffer from shallow and derivative plots and characters, there have been a number of noteworthy cinematic creations. In the 1980s, *Bladerunner* and *Brazil* presented dark and riveting images of the near future; in the 1990s the popular *Terminator* and *Matrix* series warned of future worlds ruled by computer artificial intelligence, and *Twelve Monkeys* offered a head-spinning time travel story, involving a post-catastrophic future world destroyed by biotechnology; in the last ten years, two of the most complex and philosophical science fiction movies ever made, *Cloud Atlas* and *Watchmen*, were produced, weaving together issues of history and the ultimate destiny of humanity. During this same time, *Avatar*, perhaps the most beautiful movie ever made, delved into the ongoing issue of living in harmony with nature versus living in a capitalist, industrialized, and technologically driven future that robs us of our humanity and most important values.

Coming up to the relative present, a time beset with increasing concerns over the future of the environment, this theme is brilliantly explored in the writings of Kim Stanley Robinson in his epochal *Mars Trilogy* and his recent novel *2312*. While all Robinson's works are highly integrative and expansive in scope (covering the psycho-social-political and the technological), his *Mars Trilogy*, a modern and highly realistic "utopian dream" set on another planet, gives new life to a seminal inspiration of science fiction literature: the utopia, and places his trilogy among the most compelling and rich utopian visions that have emerged in science fiction. Among these must also be counted Edward Bellamy's *Looking Backward*, Well's *The Shape of Things to Come*, Poul Anderson's *Brain Wave*, Arthur C. Clarke's *Childhood's End*, and Joe Haldeman's magnificent, multiple-award winning *Forever Peace*, which weaves together mythic "end of the world" prophecy with advanced psycho-technology.

An Evolutionary Mythology of the Future

Containing tales both bright and depressing, psychological and technological, and personal and cosmic, of a future complex, ambiguous, and forever growing and shifting, science fiction is the evolutionary mythology of the future. The genre has long been an arena for thoughtfully working out the meaning, details, and implications of contemporary concerns and futurist ideas, both influencing and reflecting the currents of thought in culture at large, and its narrative form lends it a psychological power out of reach of non-fiction futurist thinking. Amplified in psychological impact through immersive cinematic productions, science fiction compels us to feel the future as well as to think about it. Its archetypal, mythic, and cosmic qualities, informed by modern science, technology, and philosophical thinking, provide a medium for the ongoing creation of futurist myths to guide, inspire, and warn us about the multitudinous possibilities of the future.