CliffsNotes on

HEINLEIN'S WORKS



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Notes

including

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LIFE AND BACKGROUND OF THE AUTHOR

Robert Anson Heinlein was born in Butler, Missouri, on July 7, 1907, to Rex Ivan and Bam H. Heinlein. The family is of German, Irish, and French extraction, resident in America since before the American Revolution. Robert was one of seven children, four boys and three girls; when he was still quite young, the family moved from Butler to Kansas City, where he was educated in the Kansas City public school system. After finishing high school in 1924 and studying a year at the University of Missouri, Heinlein entered the U.S. Naval Academy at Annapolis, majoring in naval science. He graduated twentieth in a class of 243 (as well as distinguishing himself at fencing at the Academy) in 1929 and subsequently served on active duty in the navy as line officer on destroyers and the then-experimental aircraft carriers.

Heinlein retired from the Navy in 1934 as permanently disabled after a severe case of tuberculosis, so severe that he had described himself as an "invalid" in the 1930s. Nevertheless, he entered the University of California at Los Angeles in postgraduate courses in physics and mathematics, which he did not complete because of further health problems. He then spent a year of recuperation in Colorado.

After trying several fields, such as real estate, mining, politics, and architecture, Heinlein (who had been an avid reader of science fiction for most of his life) sold his first story to *Astounding Science Fiction* in 1939. It was written in four days, and he received \$70 for it. While not exactly a princely sum, it was good for a period that was still part of the Depression.

His success with the readers of science fiction was not instantaneous, but certainly rapid. By the end of 1941 and the entry of the United States into World War II, he was writing prolifically (under his own name and several pseudonyms) and had become a major figure in the field. Heinlein did no writing during World War II; his time was devoted to working as a civilian engineer in the Naval Air Material Center in Philadelphia. After the war, he returned to California and resumed writing, but not only for the science-fiction magazines. Taking advantage of the growing interest in science fiction, engendered by the ramifications of the atomic bomb and other scientific developments of the war, he pioneered new markets, such as the slick fiction magazines of the period, juveniles, and even film and early television writing. He has been credited with the invention of one of TV's earliest science-fiction heroes, "Tom Corbett: Space Cadet," and was one of three writers involved in the film which started a new trend in cinematic science fiction, "Destination Moon."

In 1948, Heinlein married Virginia Gerstenfeld, an engineer and chemist, with whom he had worked during the war. From 1950 to 1966, the Heinleins resided in Colorado, then returned to California, where they lived in a circular, highly engineered house, the design of which Heinlein had much to do with. He appeared as a guest commentator on network television, covering the first Lunar landing. He has won the Hugo award (one of two major awards in the field, this one voted by the membership of the Annual World Science-Fiction Convention) for *Double Star* (1956), *Starship Troopers* (1959), *Stranger in a Strange Land* (1961), and *The Moon is a Harsh Mistress* (1966). Although he has never won a Nebula (the annual award voted by the Science Fiction Writers of America) for a specific work, on April 26, 1975, he was presented a special "Grand Master Award" Nebula by the Science Fiction Writers of America.

Heinlein died on May 8, 1988, in Carmel, California.

INTRODUCTION TO THE WORKS

Robert A. Heinlein, despite his talents as a creator of science fiction, did not appear from nowhere; he particularly did not appear from nowhere with a book called *Stranger in a Strange Land*, though to the majority of his readers it may seem that he did just that. This was one of the first works of science fiction to make an impact on the general public. Heinlein had labored long before then, perfecting his skills as a science-fiction writer. Thus a brief look at the history of science fiction and the milieu in which Heinlein first began to write will be helpful in understanding this.

Frankenstein, as Brian Aldiss points out in his intelligent history of science fiction, Billion Year Spree, might well be considered the first true work of science fiction, a sort of mutant child of the Gothics. The literate minds of the nineteenth century were then beginning to view science as the inevitable vehicle of progress, a form of literature based on this premise--on the possible, if not probable, results of whatever science came up being a logical extension of this view.

The first wave peaked with Jules Verne and his adventure stories, usually built around one specific new invention; later, another peak was reached with H. G. Wells, with a more British view of the social problems raised by scientific progress. Then the impetus was transferred to America, a move probably directly related to the transfer of world power. Here science fiction suffered a change in status, a change it was not to overcome until very recently.

In America, it took root as popular literature, reading matter for the literate masses, and the most sought was action adventure. The fiction magazines of the early part of the twentieth century offered action adventure in several settings--the West; the cities, with stories of crime and detection; and, less often, on other worlds. The hero of these stories usually got there by semi-mystical means in the earliest examples, but a pseudo-scientific rationale became desirable for a more convincing story, and the space ship was adopted as the means of travel. The writer to first capture America with these concepts was Edgar Rice Burroughs, and he may well be regarded as the founding father of science fiction in the United States. The field became more sophisticated as the century progressed, but its virtues and flaws were directly analogous to those of Burroughs.

This was particularly true in the sense of an absolute morality as a condition of life. In Burroughs, the heroes were noble to the point of running a sword through anyone they felt to have a lesser standard than they; the heroines were perfectly happy at the slaughter of thousands if their honor could be protected. The only people allowed to waver were certain weak-willed women who would eventually die after saving the hero's life in some sort of noble gesture. This sense of an absolute good and an absolute evil would continue with science fiction through its history, though with much permutation and added sophistication. It is one of the controversial factors in Heinlein's work and is very probably one of the features that makes the field so popular today. In a world trying to make itself into one community for practical *and* moral reasons, it is satisfying to find something beyond it in time or space that is truly evil.

Other qualities inherited from the early days were a strong sense of narrative (science fiction could be considered the last great refuge of the story teller) and a basic concentration on concept and plot, at the expense of style and character. It is this last that made science fiction so long unacceptable to those who viewed literature as an art, with standards as rigid as any other art form. Most science fiction was badly written until very recently; for devotees, this could be ignored or overlooked because the concepts were so exciting. And for the most part, the men (and the very few women) who did the writing had little idea of writing as an art; at best, it was a craft--at worst, an easy way to make a living. What resulted were "yarns" (no accident that that was the euphemism for "story" in science fiction for a long time) in the classic sense of storytelling, with little or no style and an enormous and ever-growing basis of original

ideas.

The various genres of action adventure began to coalesce into specialized magazines in the 1920s. The first magazine devoted to science fiction was Hugo Gernsback's *Amazing Stories* in 1926 (one of the two major awards in the field is named the Hugo in memory of Gernsback). Several imitators soon appeared; one of them was entitled *Astounding Stories of Super Science*, its premiere issue dated January 1930. All of these were "pulp" magazines, so named from the cheap grade of paper on which they were printed. The covers, though they eventually reached a high technical level, were invariably garish by the esthetic standards of the day; the magazines were usually consigned to the rear of the newsstands with the other genre pulps, such as *Dime Mystery Magazine* and *Spicy Western Stories*. They were all considered as not particularly "nice," mainly because of the inevitable scantily clad girl on the cover, but anyone who read them knew that the contents were less titillating than the average movie musical of the time.

In 1937, a new editor took over *Astounding Stories* (the name had changed in 1931). He was the talented young writer John W. Campbell, Jr.; with an eye for fresh talent, he altered science fiction with the magazine by setting new and higher standards. Again it must be noted that these were not *literary* standards, necessarily; what Campbell (and the reading audience, it turned out) wanted were well-plotted stories that were coherent and scientifically valid.

The August 1939 issue of *Astounding Stories* featured on its cover the title of a work called "The Luck of Ignatz" by Lester Del Ray. Each story was editorially introduced by what was known as a "blurb," a sentence or two designed to capture reader interest. For one short story, the blurb read: "A new author suggests a means of determining the day a man must die--a startlingly plausible method!" The new author was Robert Heinlein; the story was called "Life-Line."

CRITICAL COMMENTARIES

THE EARLY NOVELS AND SHORT STORIES

Perhaps the simplest version of the "What if . . ." formula of science fiction is the gimmick story, gimmick in this sense referring not to a literary device but a conceptual one. It is a basic, if not *the* basic, form of science fiction dating at least as far back as Jules Verne, whose novels usually revolved around a new invention and its effect--which was, for Verne's purposes, usually high adventure. Even further back, *Frankenstein* can be viewed as such, involving as it does a single speculative scientific creation and its impact. By the 1930s, this form had generally been reduced to the short story; science-fiction novels were becoming increasingly complex. Robert A. Heinlein's first published story, "Life-Line," was a gimmick story.

"Life-Line," on the surface, is an average example of its kind and of its time. The 1930s gimmick story had evolved to the point of having a twist; the predictable results of the new concept would be shown, then followed by an unexpected ramification. In "Life-Line," Hugo Pinero invents a machine which measures an individual's temporal dimension, therefore allowing him to know the time of his own death. The logical extension is chaos in the insurance industry, which fights him through legal channels. The "twist" is Pinero's own death, brought about by hired thugs, and the destruction of his machine.

Typical of much science fiction of the period, as a story it is weak; as a concept, it is intriguing. And while it is dangerous to find pre-echoes of an author's output in a first work, there is much here that is seminal to Heinlein's entire work. For one thing, there is the rationalization of the mystical. Foretelling the future has always been a province of the occult; here, Heinlein gives a speculative scientific basis for it, as he will later with other aspects of "magic." For another, there is the single, capable man in

opposition to the group--in this case, two groups: Pinero's peers, who regard him as a charlatan because of his unorthodox claims and his lack of proper credentials, and the insurance companies, whose corporate villainy (eventually responsible for Pinero's murder) will appear again and again in Heinlein's work.

"Misfit," also published in 1939, is not a gimmick story in the usual sense, though it could be considered as much since it is built around an object of unusual capabilities. In this case, however, the "object" is a person, a rural youth who is a virtual "human calculator." An inductee in the Space Marines, he saves the project on which his division is working--the conversion of an asteroid into a space station--by his freak ability. (Referred to only as "Libby" in this story, he will return again in Heinlein's later works.) The basic quality of the story is in its setting aboard a space ship and the details of life in such an exotic locale. Here also are themes and situations which Heinlein will continue to enlarge on: the realistic minutiae of future backgrounds and circumstances of military life in the future. The story itself could be a preliminary sketch for his *Starman Jones*, to be published in 1953, in which an awkward youth achieves success as a spaceman with the help of a freak mental ability.

Heinlein takes another approach in his third published story, "Requiem." It could be called a mood piece, very rare in science fiction of the time. An old man, D. D. Harriman, who has become spectacularly rich through his involvement in the development of space travel, commissions and finances an extra-legal trip to the moon simply so that he himself can go along. His connection with interplanetary travel has come through his desire to do it, and not a desire for wealth. Ironically, when it does come about, various circumstances including health keep him from space. He arranges the final trip knowing it will bring about his death; he does, indeed, die on the moon.

"Requiem" was a story unusual for its time; it dealt with emotional reactions to a science-fiction concept rather than intellectualization or pure adventure.

Next came Heinlein's first published novel, *If This Goes On--*. (It might be noted that the term *novel* was loosely used in the pulp magazines; many stories labeled as such were more correctly novelettes or novellas.) Here is the initial Heinlein story to deal with a major challenge of science fiction--the creation of a totally speculative cultural setting in which a lengthy narrative can be set. In the field's short stories, a background that is alien and/or laid in the future can be suggested--the longer the story, the more details need be meshed into a consistent whole.

The background of *If This Goes On--* is a United States turned into a theocracy; the change has occurred sometime before that of the story, and the government of the Prophet Incarnate is well entrenched, using not only the standard measures of a dictatorship but the most advanced psychological techniques. The hero, John Lyle, is a member of the Angels of the Lord, the elite personal guard of the Prophet. The major theme of the novel is his change from a pious, well-indoctrinated upholder of the status quo into a revolutionary, and his adventures as part of an underground organization that eventually succeeds in overthrowing the government. The change is initiated by his love (or infatuation, really) for one of the female servants of the Prophet, whose religious functions are apparent to everyone but the naive John.

Heinlein's gift for evoking the details of a speculative setting are immediately evident in this work; the society ruled by "divine" inspiration and supplemented by expert thought control rings very true. Though the plot is a standard one, there are surprises. John Lyle's role in the formation of the revolution is not a major one until the end--and then by accident (as opposed to most early heroes of science fiction, who always led any action). And circumstance separates him from his revolutionary inspiration, Sister Judith, early in the story, and he eventually receives a literal "Dear John" letter from her; they do *not* walk into the revolutionary sunrise together.

The tale is certainly a propitious debut as an exercise in the longer form and as a thoughtful piece of

socio-scientific speculation. Here, also, a major Heinlein theme is introduced, perhaps *the* major Heinlein theme--that of revolution.

"Let There Be Light" (1940) is reminiscent of "Life-Line" in many ways; the gimmick is cold light, and the narrative is its invention and its ramifications. "The Roads Must Roll" (1940) also falls into the same category but has more impact due to a more exciting story line. The major speculative device here is a system of high-speed transport belts which have replaced the automobile-oriented highways as the major passenger-freight carriers of the United States. The story concerns a strike among the paramilitary union that maintains the roads.

"Coventry" (1940) is a novelette which follows closely on *If This Goes On--*. The revolution of that work has succeeded in establishing a sane, psychologically sound society. Criminals are regarded as antisocials and are exiled to Coventry, a large area rendered escape-proof, where they are free to live as they can. A misguided romantic, condemned as anti-social because he reacts against the culture in a violent manner, is sent to Coventry and quickly learns his lesson in the might-makes-right order that passes for government there. Here, Heinlein comes close to satire, as the atmosphere of Coventry is similar to that of our own society.

There is a surprising amount of precognition in "Blowups Happen" (1940), contrasting the psychological strains on men who are in charge of nuclear energy plants with the inherent explosive potential of the plants themselves, and the "blowups" of the title is applicable to both.

With the exception of "Let There Be Light," all the stories thus far appeared in *Astounding Science Fiction*, under the editorship of John W. Campbell, Jr. Campbell edited a companion magazine, *Unknown*, devoted to fantasy rather than science fiction. The establishment of a dividing line between the two related fields could occupy a volume greater than this one, but it might be succinctly, if unsatisfactorily, noted that the speculative factor of science fiction is scientific, whereas in fantasy it can be further afield. Qualities that Campbell seemed to require in either case, however, were consistency and interior logic; in other words, if magic was used in a story, it had to have rules and laws as all-encompassing as those of science.

This is exactly the approach taken by Heinlein in his first story for *Unknown*, published as "The Devil Makes the Law" (later retitled "Magic, Inc."). The background is a mundane world exactly like that of the 1940s with one major exception. Magic is used as a standard craft in many aspects of life; it is literally a technique similar to engineering. The misadventures of the hero as he fights a scheme to monopolize the magical services of his area make up the story; again, the capable individualist fights an organized and unfair system, and there is a realistic (or cynical, depending on one's viewpoint) look at politics.

Sixth Column (1941) was Heinlein's longest work to date and the most well-wrought in a literary sense, if not necessarily in the conceptual. The United States is conquered and occupied by "PanAsians" in the not-too-distant future; six men, isolated in an experimental weapons laboratory in the Rockies, succeed in overthrowing the invaders by means of a new weapon developed too late to repel the invasion. This unlikely premise is made remarkably convincing in a most entertaining fashion. The loyalist "guerrillas" pursue their ends under the guise of a new religion--religious freedom being the only freedom left to the country's inhabitants--and with their new weapon and their scientific ingenuity succeed in forming an underground which eventually rises. Again we have the twin theme of a spurious religion and revolution; in this case, the fake religion is used for positive ends and the revolution is technically a counter-revolution. (Sixth Column in its revised book publication has been re-titled The Day After Tomorrow.)

Heinlein's next short story, "And He Built a Crooked House" (1941), has become a minor classic in the field because of the intrinsic humor of the basic idea. An architect builds a house in the form of a

tesseract--a fourth-dimensional "cube" expressed in three dimensions (as a three-dimensional cube can be expressed in two dimensions--that is, implied as a drawing). When an earthquake jolts the house into its true shape, the architect and his clients are trapped in a bewildering maze of rooms which lead in an endless circle; the windows look out on such varied vistas as *down* the side of the Empire State Building and an upside-down seascape. It is a true *tour de force* gimmick story.

"Logic of Empire" (1941) postulates a situation in which the colonization of Venus is being accomplished in a manner reminiscent of a portion of the history of American colonization--by that form of legalized slavery known as indenture. A rich young man who is against this system signs a contract of indenture in a fit of drunken bravado; his education in the swamp farms of Venus makes up the body of the story. It is uncharacteristically negative in its tone, grimmer in its use of the well-thought-out extrapolative realism" that by now was becoming a Heinlein trademark; the downbeat and pessimistic ending is also unusual.

Only once has Heinlein collaborated; this was in the 1941 story "Beyond Doubt." It's a curious bit of work about the Easter Island statues and how they came to be; seemingly aiming at satire, the story concerns their creation and placement (by the sort of logical magic of "Magic, Inc.") as political cartoons in a hard-fought campaign on the legendary continent of Mu. "Beyond Doubt" has been anthologized only once and that was in the 1950s.

"They" was Heinlein's second story to be published in *Unknown* and therefore might be considered more as fantasy than science fiction. The theme is a variation on solipsism: The universe is centered around one particular individual and created and maintained for his benefit. In this case, it is the inhabitant of an asylum, committed by his wife for delusions that the world as he (and we) knows it is an illusion, a "stage set" built around him for unknown reasons. As it turns out, his view is the correct one.

As with "Blowups Happen," there is an almost eerie prescience to "Solution Unsatisfactory." Published in 1941, it speculates on the development of a super weapon (radioactivity induced by dusting rather than by a bomb) by the United States during World War II, its moral implications, and the socio-political consequences. While the details of the war vary from what came to pass in reality (U.S. involvement in World War II came in December 1941), and the results of possession and use of the radioactive dust differ sharply from the reality of the possession and use of the atomic bomb, the story does resemble what in science fiction would be called an alternate universe.

"Universe" (1941) may not have been the first story to deal with its particular theme, but it was the one to establish it as a standard one: a space ship big enough to operate as an independent environment to support human life for the time necessary to cross the immense distances of interstellar space, and, furthermore, the dramatic potential of a situation wherein the inhabitants of such a ship have forgotten the original purpose of ship and voyage and regard their environment as the universe. This is the situation in "Universe"; the normal inhabitants live an almost pastoral life, the tasks necessary for the upkeep of the ship maintained as ritual. They are in conflict with mutated humans-physical freaks--who live in unused portions of the enormous ship. One "mutie," a two-headed monstrosity of high intelligence, knows the reality of their life. He convinces a "normal" who is being held prisoner by the mutations, and they combine forces to persuade the rulers of the normal population that the voyage should be completed as planned.

Heinlein's novels continued to become more involved and conceptually intricate. The milieu of *Methuselah's Children* (1941) is a complex one; it involves a future (related to that of *If This Goes On*-and "Coventry") where a percentage of the population have achieved life spans up to three times that of normal humanity (and, in a few cases, beyond). This has been achieved by selective breeding for many generations--in fact, it dates back from 1974, when a foundation was endowed to further longevity. By the twenty-second century, the families concerned had grown to number 100,000 individuals, who

maintained their own organization, a secret one because of fear of prejudice from the rest of the population. This fear is justified; when the secret becomes public knowledge, the Families are accused of having a special "secret" and are turned on by the ordinary short-lived citizens. They manage to hijack an experimental interstellar ship and flee beyond the solar system--in essence, they are a hundred thousand refugees.

The Families find a planetary system with an inhabited world, but it is inhabited by beings whose culture is so alien and in ways so superior that the humans move on. The second inhabitable world that they find is a sort of Lotus Land; its natives benignly integrate the humans, but they soon realize that they must flee again to retain their humanity. They decide to return to Earth to fight for their rights. When they get back, they discover that, spurred by the awareness that longevity is possible, as proved by the Families, a rejuvenation process has been perfected that will be effective for all humanity.

As Alexei Panshin points out in *Heinlein in Dimension*, the novel's protagonist is really the 100,000 strong of the Families. But there are two major characters of importance who appear in other works: Andrew Jackson Libby, the intuitive genius of "Misfit," and Lazarus Long, one of the eldest members of the Families, who will return again in *Time Enough for Love*.

"--We Also Walk Dogs" (1941) is a short and amusing story of a business organization, "General Services," which offers to do anything (legal, that is) for a fee, of course. The problem is to arrange the physical circumstances of a conference to be held on Earth, the representatives to which will be from various worlds. The complexities are enormous--given differing needs of atmospheres, gravities, temperatures, and cultures--but with a major amount of clever maneuvering (including a slight bit of semi-blackmail involving a rare work of art coveted by a leading scientist), General Services manages to get gravity control invented and all is accomplished satisfactorily.

The story "Elsewhen" (1941) was first published as "Elsewhere"; the title relating to time is the more accurate since it has to do with an extremely complex theory of time and infinite possible universes. A university class in speculative metaphysics--five students and a teacher--discovers how to wander across the time field and find, variously, different universes in which each person gets involved. Here, given the complexity of the concept and the potential of the different individuals and their adventures, is enough material for a sizeable novel crammed into a short story.

Time again is the subject of "By His Bootstraps" (1941). This, like "And He Built a Crooked House," has become a classic in the field because of the sheer cleverness of the form. A young man, studying in his (locked) room, is suddenly confronted by another young man who seemingly has stepped out of thin air. He is taken through a "time gate" to a far future, where the listless remains of humanity (reminiscent of the Eloi in Wells' *The Time Machine*) live under the benevolent rule of an older man who seems different from them in vitality and knowledge. There are various trips back and forth through the "time gate," and the reader soon realizes that *all* the major characters are the same individual. At the time of its publication--and for many years after--"By His Bootstraps" was considered the succinct last word on the paradoxes of time travel.

"Common Sense" is a direct sequel to "Universe," which ended with the implication that the normal human beings and the mutants of the worldship would combine forces to finish the long-lost objective of the voyage (the story ends with the words "We've got to do it, you know."). In the sequel, power politics and narrow-mindedness on the part of the rulers of the normals interfere, and only a few escape to the planetary objective.

Heinlein has touched on the use of paranormal powers before; for example, telepathy was used as a viable form of communication in *If This Goes On--*. In "Lost Legacy" (published as "Lost Legion" in 1941), he

takes it as a central theme. Three people, two doctors and a most capable young woman, decide to study parapsychology and succeed in mastering the rudiments of telepathy, telekinesis, and various other powers. Again, we see the theme of the narrow-minded Establishment--the doctors are subjected to censure from their colleagues because of their interest in the subject. They discover that they are not alone; they are contacted by Ambrose Bierce (a writer whose total disappearance has long been a matter of historical speculation), who now belongs to a secret organization, all of whose members are adept in the paranormal arts, and who fight their negative counterparts in a never-ending war that takes place in and about the ranks of unsuspecting humanity. At the time of this story's publication, interest in parapsychology was minimal; Heinlein was again ahead of his time in speculating on a rational basis about matters considered sheer superstition by most.

Heinlein's first published story of 1942, "My Object All Sublime," is a minor humorous effort about turning the power of invisibility into a means of pedestrian revenge on bad drivers. It has remained uncollected since its initial publication.

In "Goldfish Bowl" (1942), two adventurous humans ascend a sort of permanent waterspout that has appeared off Hawaii and find themselves captive in a featureless spherical room where they are well fed and cared for, but they never see their captors. One of them speculates on intelligent life in the stratosphere, as incomprehensible to us as life on land must be to aquatic life; a comparative motif is that of the two goldfish that the other has kept as pets. Here is another atypical ending for Heinlein; the two die of loneliness and boredom.

"Pied Piper" (1942) is another story that has not appeared in a collection nor been anthologized; it deals with a mythical country which wins a war by kidnapping the enemy's children.

The next novel, *Beyond This Horizon*, is Heinlein's last until after World War II. Again, the reader is aware of an advance in skill--in this case, very definitely in the matter of characterization. Until now, Heinlein's characters had been very much functionaries of his concepts, a common fault in the science fiction of the period (if fault it can be called in a field where concept was the major point). In *Beyond This Horizon*, Heinlein's protagonist, Hamilton Felix, is a believable, idiosyncratic being--despite the fact that he is the product of many generations of selective breeding. His world is utopic, run along liberal scientific lines; children are planned for many selected traits, but marriage and sexual relationships are (if so desired) casual enough so that there is no coercion in breeding. The society is too complex to synopsize easily, but it is believable as an ideal for the majority of its citizens.

The major theme of the novel is a common one in utopic speculation--the ennui of the individual in an ideal situation--specifically here, Hamilton Felix, whose major genetic lack is the desire to procreate. He asks the question: "Why should I reproduce?" with the implication of "what is the meaning of life?" and the leaders of the society regard his inheritance to be so important that they tackle the question as a major research project, concentrating on the thesis that man is more than the sum of his physical parts.

There are also several sub-plots: one deals with a revolutionary group (whose "cause" echoes that of the malcontent romantic of "Coventry" who rebels against his sane society) with which Felix becomes involved as a sort of double agent; the revival of a twentieth-century man who has been held in a stasis field; and the trials and tribulations of Felix's best friend, Monroe-Alpha, who represents a more average citizen than Felix.

An answer is provided by Felix by the end of the novel, a speculative one that rounds off the work nicely and, incidentally, seems to anticipate (in another key, as it were) Arthur C. Clarke's most famous works-Childhood's End and 2001; A Space Odyssey.

Beyond This Horizon is lacking as a well-formed piece of literature, but here for the first time is the full realization of Heinlein's ability to evoke a working, breathing fictional social structure, used as a background for a plot that is both exciting (given the action-adventure antecedents of science fiction) and philosophically provocative. It is the basic model for most of the successful science fiction written since then.

The title character of "Waldo" is also a strong one, paradoxically because of his weakness. Permanently afflicted with *myasthenia gravis*, a congenital muscular debility, Waldo is an engineering genius who has fashioned himself a satellite home that orbits the Earth and provides him with a gravity-free environment. He is also profoundly misanthropic. As in "--We Also Walk Dogs" and "Let There Be Light," there is a problem to be solved; however, Waldo is a more interesting problem solver than the corporation of the first or the couple of the second. He is faced with the inexplicable failure of a new power source on which the country has become dependent. He finds the answer from a Pennsylvania "hex doctor," who unknowingly siphons power from another dimension. All these peculiar ingredients are meshed in a story which works either because of, or in spite of, them. It might be noted that the mechanical devices that Waldo uses for manipulation have since become realized and are familiarly known to the engineering/scientific community as "waldos."

Heinlein's final work before the creative hiatus of World War II is "The Unpleasant Profession of Jonathan Hoag" (1942). It is also the last major work in which he deals overtly with "fantasy," though, as in the earlier stories of a like nature, the supernatural elements are given a rational, if not scientific, basis. Here, a sophisticated and bright man-and-wife team of private detectives (more than a little reminiscent of a popular film team of the period--Nick and Nora Charles of the "Thin Man" series) is hired by a mild-mannered man (the Jonathan Hoag of the title) to find out what he does during the day--each work day is a blank for him. Blocked by a strange group of beings who live in a world behind mirrors, the couple find that the earth is the creation of an artist who is one of an order of beings infinitely superior to humanity. The story is diffuse and carried to too great a length, but there is an undercurrent of darkness and menace which is highly effective.

These last six stories, published in 1942, were all written earlier. At the outbreak of World War II, Heinlein's work with the U.S. Navy precluded any writing until 1946.

THE ADULT NOVELS AND SHORT STORIES

When Heinlein returned to writing in 1947 (or more probably 1946; the first postwar publication was in 1947), the field of science fiction was superficially the same. Almost all publication was still in magazine form; few genre works were reprinted (much less initially published) between book covers. Some pulp magazines had disappeared because of a wartime paper shortage, but a surprising number had managed to survive. *Astounding*, under the redoubtable John W. Campbell, Jr., was still on the scene, though *Unknown* was a permanent casualty, leaving a great gap for the readers and for the publication of fantasy for some time. *Astounding* was still the most "respectable" of the science fiction magazines because of its editorial intelligence, digest size, and covers eschewing the classic science-fiction triangle of hero, helpless female, and BEM (bug-eyed monster).

In 1949 and 1950, respectively, two magazines appeared which would herald the near immediate demise of the pulp magazine as it had been. In format they were imitators of *Astounding*, of digest size with dignified cover art. *Galaxy* (first issue October 1950) was devoted to science fiction, but with less of a technical bias than *Astounding*. *The Magazine of Fantasy and Science Fiction* (first issue Fall 1949) was more eclectic, dividing its material between science fiction and fantasy, filling the gap left by *Unknown's* demise. Both published important works by Heinlein.

The success of these two magazines indicated more than the end of the sensational-type pulps. They were the tangible results of a change in public attitude toward science fiction. World War II had been won through science; the atomic bomb and its potential forced all Americans to extrapolate to some degree-and extrapolation is a basic of science fiction. Even the "slick" magazines (as opposed to pulps), such as the *Saturday Evening Post*, took to publishing some examples. Robert Heinlein, however, was the only science-fiction author to make the transition. He also chose to tackle another field, one that in the long run was to wield more influence than the immediate vast audience found by the *Saturday Evening Post* stories (which may have been too conceptually rich for the general public). This was writing for young people; in 1946, he published the first of a series of "juveniles," which are so distinctive that they deserve to be considered as a separate body of work. This section, however, will be devoted to his fiction of that period that was nominally written for adults.

Heinlein's first published story after World War II was "The Green Hills of Earth," published in the *Saturday Evening Post*. It and the three to follow ("Space Jockey," "Columbus Was a Dope," and "It's Great to Be Back!") all were geared to a wider audience than those earlier works written for the "in" readers of the genre pulps. Essentially, they took a mundane situation and translated it into terms of the future. Here, Heinlein's extrapolative talent for detail is paramount; the stories' main interest lies in their backgrounds and in the invention of innumerable little circumstances of life.

"The Green Hills of Earth" is melodrama of the seagoing variety translated to space voyaging. Rhysling, an ordinary spaceman with a talent for versifying (mostly ribald), is blinded in a shipboard accident and makes his living thereafter by entertaining in the ports of Mars and aboard ships. When stricter regulations are enforced aboard spacecrafts, he is denied his customary free passage by an officer; he fast-talks his free ride anyway and dies in the engine room of massive radiation while averting an atomic disaster. His more acceptable lyrics have been luckily collected and published (but his most famous--"The Green Hills of Earth"--is improvised over the ship's intercom as he is dying), and he becomes the heroic poet of the space age.

The situation of "Space Jockey" is also reminiscent of the sea, concerning as it does the strains on the marriage of a space pilot brought on by the demands of the job--the long absences, irregular schedules, and constant danger. It describes in detail one trip between Earth and Moon, as the pilot and his wife separately consider if they can stand the strain. All ends happily.

"Columbus Was a Dope" is a minor vignette. Three ordinary men talk in a bar about the exploration of space (and, by implication, the expansion of humanity). One, the conservative, declares flatly that "Columbus was a dope." No particular conclusion is reached, but at the end it is revealed that the bar is a taken-for-granted establishment--on the moon.

"It's Great to be Back!" is about another ordinary couple, tired of living with the "hardships" of the restricted life in the Lunar colony, who decide to return to Earth. The trials of readjusting to various earthly matters (such as heavier gravity and dust--unknown in the roofed, air-conditioned Moon cities) and the ignorant, albeit good-natured, questions and remarks of their insular terrestrial acquaintances drive them back to the moon.

All four of these stories took what would have been hackneyed plot lines and translated them into another mode, the futuristic; three were published in the *Saturday Evening Post* ("Columbus Was a Dope" appeared in *Startling Stones*, which with its companion *Thrilling Wonder Stories* had become the most adventurous of the standard pulps).

That a story such as Heinlein's next, "Jerry Is a Man" ("Jerry Was A Man") (1947), could appear in a pulp

magazine, particularly one with the lurid name of *Thrilling Wonder Stories*, demonstrates how far science fiction had outgrown its format. Here Heinlein grapples with a major philosophical problem--what is a human being?--that would not really penetrate the public consciousness until the question of the intelligence of porpoises arose in the mid 1960s.

Here is a future where genetic manipulation is commonplace. Rich people acquire genetically exotic pets, and anthropoids, bred for limited intelligence, are an important source of cheap labor. A very well-to-do lady, in the process of buying a winged horse for her husband and a miniature elephant for herself, makes the acquaintance at the breeding ranch of a semi-intelligent anthropoid laborer named Jerry. She is horrified to discover that Jerry is to be put to death because his poor eyesight has prevented him from operating as a paying asset to the company; she acquires custody of Jerry and brings suit against the company. The battle involves Jerry's status as an intelligent being. With the help of an unprincipled but humanitarian lawyer (one of several preliminary sketches for Jubal Harshaw of *Stranger in a Strange Land*), Jerry's humanity is established. The story is sentimental in the best sense, but for its time, the importance of its theme raises the story above sentimentality.

Heinlein's next publication was in *Argosy*, a men's fiction magazine not quite so prestigious as the *Saturday Evening Post* but still a cut above the pulps. Entitled "Water is for Washing" (1947), it is appropriate to its source as an adventure story about a man caught in a tidal wave flooding the Imperial Valley of California. Heinlein attempts to add some dimension to the pure thriller element by characterizing the protagonist as a personality neurotically afraid of water, who is cured by the traumatic experience of surviving the flood.

"The Black Pits of Luna" was the last Heinlein story to be published in the *Saturday Evening Post*. It is similar in tone to many of the juvenile novels (the first, *Rocket Ship Galileo*, had just been published) primarily because the narrator is an adolescent. He and his family have come to the moon on a combined business and pleasure trip. During a sightseeing tour onto the Lunar surface, his bratty younger brother wanders off and must be found before the air in his vacuum suit runs out. Again, this is an ordinary incident (a tourist family in Yellowstone Park) translated into exotic futuristic terms.

"Gentlemen, Be Seated" (1948) is another *Argosy* story, aimed at male readers. It's essentially nothing but a risqué story--risqué, that is, for its period. Three men are trapped in a Lunar mining tunnel, surrounded by a vacuum, which has a slow leak. The only patching material available is the bare buttocks of the trapped men. Harmless and even pointless as it may seem now, the story could not then have been published in either the *Saturday Evening Post* or the supposedly raunchy pulps, whose daring extended no further than the well-developed bust lines of their cover girls.

"Ordeal in Space" (1948) appeared in the very staid *Town and Country* magazine. A space man who has been accidentally cast adrift suffers neurotic agoraphobia as a result. Taking an ordinary Earthside job, he regains his nerve by rescuing a kitten from a ledge outside the window of a friend's high-rise apartment, where he is (unwillingly) spending the night. It is very similar to "Water Is for Washing"; the later story is conceived in terms of character, the earlier in the violent terms of the tidal wave.

Heinlein returns to pure fantasy briefly in "Our Fair City" (1948), which involves a corrupt city government, a cynical-but-honest journalist, and a sentient "whirlwind" (the small variety that occurs on city streets). It is an amusing bit of whimsy that appears to have been written earlier, perhaps for the defunct *Unknown*.

Heinlein, in a sense, returned home when "Gulf" appeared in *Astounding* in 1949. A novelette serialized in two parts, it is an oddly schizophrenic work--an action-adventure story which tends to turn into a philosophical tract. There had been hints of polemic in Heinlein's stories before this, but in "Gulf" the

narrative at times is brought to a stop for philosophical justification.

The background is a future that is atypically characterless; there is little of the profligate invention of detail which had by then become a Heinlein trademark. In a sense, this clears the deck for the pell-mell plot about a government agent who is transporting the plans of an "ultimate weapon" from the moon to his headquarters on Earth. There is a great deal of minute-by-minute skullduggery as he checks into a hotel; he mails the plans to an anonymous post office box, but is captured by the "other side," whose identity neither he nor the reader is quite sure of. The agent is helped to escape by another prisoner, Baldwin, whose allegiance is also left in doubt.

On returning to the home office, the agent finds that he is blamed for the loss of the plans which have not turned up where they should have. He quits in disgust and finds himself in danger from both sides (the anti-government forces, it turns out, are led by the world's richest woman, Mrs. Keithley, who wants to rule the world through the weapon, then blow it up on her death).

The ex-agent now seeks out Baldwin as his only alternative. Baldwin, it seems, is the leader of a third force, an organization of supermen. Their superiority does not lie in any wild talents, but simply in the ability to *think* better, to use more of their minds' latent capacity. They are portrayed as preferable to either side, and the ex-agent is accepted as a candidate. Baldwin had obtained the plans and destroyed them. The villainous Mrs. Keithley, though, has obtained another set and is well on her way to absolute power.

Here the story stops and we read long conversations justifying the extra-legal and superficially non-humanitarian methods of the new men as the hero is trained to use his mind fully. There is a last-minute wrap-up as he and a female "new man" dispose of Mrs. Keithley and die themselves in the process. The action-adventure sections of the story are as much fun--and as unlikely--as a James Bond opus. The polemical content anticipates the controversial novels yet to come.

Another area of controversy is anticipated in "Delilah and the Space-Rigger" (1949), which appeared in *Blue Book*, an unlikely locale considering the story's theme (*Blue Book* was, like *Argosy*, devoted to "men's fiction"). It tackles a future women's liberation situation--the first female to be hired on a space construction job.

"The Long Watch" (1949), is a story quite representative of its original place of publication--in this case, the *American Legion Magazine*. A heroic officer thwarts a military coup d'etat at the Lunar base containing the atomic missiles which insure peace on Earth. By dismantling the bombs, he is condemned to a slow death from radiation.

"Destination Moon" (1950) is essentially a rewrite of the film of the same name on which Heinlein worked as a writer. It appeared in *Short Stories Magazine*.

The first collection of Heinlein's short stories also contained an original work which gave its title to the entire book, "The Man Who Sold the Moon" (1950). In it is revealed the details of the early career of D. D. Harriman, who went to the moon to die in Heinlein's third published work, "Requiem." It is an interesting speculation on how man will first achieve interplanetary flight. Because it has been proved erroneous by subsequent events (the thesis is that space travel will be powered by atomics) does not make it any the less an interesting fictional exercise.

Heinlein's debut in the new magazine *Galaxy* was with a major novel, *The Puppet Masters* (1951), his first for adults since the war. It is a pure and simple action piece with an old theme, humanity against invading aliens. Like "Gulf," it takes place in a rather neutral future and involves a government agent, this

one a member of an elite corps responsible only to the president. Sam (his real name is Elihu, but Sam is an alias used mostly throughout) is initially assigned to check a "flying saucer" landing (the initial saucer hysteria was just ending in 1951). It seems a harmless hoax, but he and his fellow agents sense something badly amiss (not to mention the four other agents who are missing from the area). They eventually learn that aliens have indeed landed; they are slug-like beings that can dominate a human mind by attaching themselves to the body of the host. The parasite has then available to it all the host's knowledge as well. And to make matters worse, the slug is of a size to remain hidden under clothing.

As Sam and his co-agents try desperately to convince the government, the aliens spread through the Midwest. The problem of alerting the government is not the simple "call out the troops" solution of alien-invasion movies; it is a slow and agonizing process, hindered by the fact that slug-dominated communities seem very much business-as-usual on the surface. Only when the slugs make inroads into Washington is the government fully convinced; much of the story is devoted to that problem and it is handled extremely realistically.

When all-out war on the aliens is decided on, it is realized that essentially much of the population--those that are slug-dominated--are being held hostage (there is a good chance of recovery if the parasite is removed). At one point in the story, Sam himself is used as a host, a horrifyingly evoked situation.

The final solution is one used by H. G. Wells--a disease which affects the parasite but does not kill the host. The denouement of the book is typically Heinleinesque, however. Far from being content that Earth has been saved, humanity sets out to conquer the slugs at their home base, a moon of Jupiter.

Most of Heinlein's works, like much of science fiction in general, wears well; the reader does not have to make concessions for the fact that a particular work was written at a particular period (excepting, of course, those works which have been overtaken by real events, such as "The Man Who Sold the Moon," which are still valid as fictional experience). But "The Year of the Jackpot" gains from an awareness of when it was published, which was 1953. This was toward the beginning of what may have been one of the most staid and conformist periods in the history of the United States.

The major figure of "The Year of the Jackpot" is a statistician; as an avocation, he collects odd facts, major and minor, from the news and his own sources, and graphs them. The time is a future not too distant from the 1950s; aberrant behavior is on the rise in large and small ways. Potiphar, the statistician, becomes involved in a minor manifestation of this by "rescuing" a young woman who removes her clothes at a bus stop (he gives her his coat); they become friendly and he tells her that all the statistical cycles, major and minor, of every variety, are due to peak at exactly the same time later in the year. This does indeed happen; anarchy and chaos reign. Due to their foreknowledge, the pair manage to survive, even escaping the nuclear bombing of Los Angeles. But Potiphar has not anticipated the ultimate cycle, an astronomical one: the sun explodes.

It is the details that give the story its added resonance--not, as usual with Heinlein, the mundane details of a future society. These details were aberrant to the 1950s reader, but nudity, transvestitism, and other behavior were oddly "reminiscent" to a later reader of events of the 1960s, as if Heinlein had somehow seen a distorted image of what was to come and worked it into a story.

"Project Nightmare" (1953) again handles the theme of wild power. As a project for using telepathy, telekinesis and the like are being proposed for use in the country's defense. The United States is given an ultimatum by Russia (this was published at the height of the Cold War), and a hastily formed team of people with demonstrated ability in ESP manage to control the atomic bombs at a distance until the U.S. has regained mastery of the situation.

"Sky Lift" is a study of the debilitating effects of multiple gravities on a space ship pilot who must get a serum to the stricken scientific community orbiting Pluto. The trip itself is described in nightmarish terms of semi-delirium; the pilot succeeds in his mission but is permanently brain damaged.

Heinlein's last adult novel, *The Puppet Masters* was an adult novel of violence and action; his next adult novel, *Double Star* (1956), was almost the antithesis, a novel of political intrigue with almost no violence at all. The time is a middling distant future; humanity has colonized the habitable planets and satellites of the solar system and is ruled as a loose confederation in the form of a constitutional empire. The emperor, a descendant of the House of Orange, has his capital at New Batavia on the moon.

Lorenzo Smythe, a down-and-out actor, buys a drink for a space man in a bar, hoping to find him an easy mark in one way or another. Instead, he is offered a job. Dak, the space man, is mysterious about the details. Lorenzo is half-coaxed, half-coerced by circumstance onto a ship bound for Mars, where he discovers the "engagement" to be the impersonation of one of the solar system's most powerful political figures, Joseph Bonforte, whom Lorenzo resembles. Bonforte has been kidnapped by the radical wing of the opposition party just before he is to take part in a ceremony of extreme political importance, his adoption into a Martian "nest." If Bonforte does not appear, relations with the intelligent and powerful Martian native race will be in jeopardy. The plan is for the kidnapping to be kept quiet; Lorenzo will substitute for Bonforte at the adoption ceremony.

Lorenzo carries this off (despite a xenophobic dislike of the alien Martians, which is hypnotically overcome), but the immediate subterfuge mushrooms when Bonforte is found, dangerously weakened and ill from drugs used by his captors. Crisis follows crisis as the opposition government, then in power, falls, and Bonforte (Lorenzo) is named Supreme Minister of a caretaker government, runs in an election, and wins--all the time expecting the real Bonforte to recover and take over. Bonforte dies on the evening of the election victory; Lorenzo, having been immersed in the character of the man for so long, decides to continue the impersonation permanently.

All of this is not so unlikely as it sounds, paradoxically because Heinlein has such a firm grasp of the realities of power politics. No political figure acts as an individual; he is invariably the figurehead (active or passive) of a team. Bonforte's team is portrayed as intensely able and loyal, inspired by the charismatic personality of their leader. Lorenzo has the talents to physically imitate Bonforte; his team takes care of the decisions and policymaking with which he is unfamiliar. The novel, in fact, is almost a primer on power politics since it is told from Lorenzo's point of view, and he begins the adventure almost totally ignorant of the subject.

Heinlein has never in his work shown much sympathy for artists and the various fields of the arts. Much more unlikely than the major line of the plot is the transition in Lorenzo's character. Portrayed initially just short of caricature as the stereotyped "ham," vain, egocentric, and petty, his change into the *persona* of a brilliant politician seems far-fetched. It might be viewed as another variation on a constant theme to be found in the "juvenile" novels, that of the maturing of man-child into man, since Heinlein seems to view Lorenzo (and, by extension, actors and other artists) as a child. Despite this flaw, *Double Star* is as stimulating in its own way as is the action-packed *Puppet Masters*.

"The Elephant Circuit" (1957--later titled "The Man Who Traveled in Elephants") is a bit of whimsy about a retired salesman--a widower--who had always shared a private joke with his wife about "traveling in elephants." She had always traveled with him; after her death, he continues a lonely circuit of the state and county fairs they had always loved. The bus he's on has an accident, and he emerges supposedly unscratched to find a fair that is the apotheosis of all American celebrations rolled into one. There, too, he finds his faithful dog, long dead, and his wife.

The Door into Summer (1957) returns to an often-used Heinlein theme: time travel. Here it comes in two varieties--The Time Machine variety and The Sleeper Wakes variety. Dan Davis, an engineer with a genius for inventing electronic housekeeping devices, decides to take "cold sleep" (a form of frozen suspended animation) because his fiancée and his partner have cheated him out of the small but potentially lucrative business which they have built on Dan's inventions. He opts for the year 2000 (the story begins in 1970, fifteen years in the future when it was first published). When he revives (a pauper, again because of his ex-fiancée's machinations), he has a difficult time making his way in what, to him, is a hectic and very changed world. He obtains a job with the large corporation that now owns the patents of his early inventions, more as a publicity gimmick than for any intrinsic value he has to the firm. While there, he discovers some designs, dated after his time in cold sleep began, which seem to be his. Driven by what seems inevitable fate (and various other motives, such as revenge on the pair who betrayed him), he searches out an abandoned experimental project in time travel and manages to get himself thrown back to 1970, where he rearranges matters to suit himself (including the cold sleep of the girl whom he realizes he loves), and he again cold sleeps until 2000, when he picks up where he left off there with everything in order.

Based somewhat on "By His Bootstraps," with its main character's circular (or spiral) path in time affecting himself at different points, *The Door into Summer* is different from the earlier, shorter work because at no point does Dan have a chance to free himself from his fated path. It might be argued that the one place he does have that choice is in the decision to return to 1970, but even there Heinlein conveys the inevitability of it, augmented but not dictated by Dan's own motives. Dan seems to feel--given the clue of his own designs from a past where he should not have been--that what was, will be, with no choice on his part, In fact, much of the suspense of the book lies in the question of whether he will fulfill those "predictions"--forward and backward--which the reader has been made aware of.

Here, Heinlein has the opportunity to fully decorate a novel with the minutiae of daily living; California in the year 2000 is a most convincing evocation (as is his California of 1970, even if it does diverge appreciably from reality).

Another adult short story in Heinlein's writing career is a far cry from the rather cloying sentimentality of "The Elephant Circuit"; in fact, "All You Zombies--" is almost vicious in its style and its effect. Again the complexities of time travel are explored; the hub of this very short tale is a person who is his/her own parents. An awkward orphan girl is made pregnant by a stranger; when her child is delivered, the doctor discovers that "she" is a true hermaphrodite, but with more chance of successful adjustment as a male. When a time traveling recruiter offers the transformed "him" the chance, "he" returns and impregnates his former self. The child, in the meantime, is carried back to the doorstep of the orphanage where he/she grew up. Then we discover that the recruiter is he/she thirty years later. The story is thus similar to "By His Bootstraps" but flavored with the cynicism and unpleasantness of the main character. The implications of this creature's origins are tied up in the negative tone of this statement near the end of the story which deserves to be quoted: "I know where I came from--but where did all you zombies come from?"

THE JUVENILE NOVELS

In 1947, Heinlein published a novel which began a separate dimension in his work. *Rocket Ship Galileo* was the first of a series of books ostensibly written for teenagers, and rather specifically until the last few, for male teenagers. The test of an enduring "juvenile" novel has always seemed to be whether it could be read with pleasure by adults *and* the age group for which it was intended; after getting into stride, Heinlein provided works which certainly met this criterion. To many people, these works are his most successfully realized, combining the straightforward narrative action at which he excels with his talent for

extrapolating the minutiae of future cultures.

Though successful enough to inspire a second attempt, *Rocket Ship Galileo* is probably the only one of these that cannot be readily enjoyed by anyone past adolescence. It concerns three boys, the uncle of one being a noted atomic scientist, who accompany the uncle on the first trip to the moon. While better than the usual "we-just-knocked-this-rocket-ship-together-in-the-back-yard" level of inter-planetary juveniles up to then, it is still a Hardy Boys-type thriller with leftover Nazis (who have also made it to the moon) as the villains. Nevertheless, the technical details are not glossed over, and to the science-minded generations just developing, it was doubtless a relief not to be talked down to.

Space Cadet was a remarkable jump above the first attempt at writing for young people, primarily because of the complexity of its detailed future milieu. In the 70s of the twenty-first century, humanity is more or less united in a Solar Federation, consisting of Earth, Mars, Venus, Luna, and the Jovian moon Ganymede. The Federation is policed by the Space Patrol, a paramilitary organization which acts as the repository for weapons "too dangerous to entrust to military men." The story is devoted to the training of a cadet for membership in the Patrol (and, as such, is a preliminary sketch for the later Starship Troopers). Since the cadets essentially train on the job after passing the stringent entrance tests the major part of the action takes place on a Patrol ship where the hero, young Matt Dodson, is being initiated to rules and regulations.

Beyond the detailed observation of life aboard a small space ship, there are only two principal events to the narrative. The ship to which Matt is assigned is ordered to search for a missing sister ship in an asteroid belt; when the ship is found, the victim of a freak accident, there is also found evidence that intelligent life once existed on Lucifer, the exploded planet of which the asteroids are the remains. (This is a typical Heinleinian imaginative "throwaway" plot device.) Then Matt's ship is assigned to investigate a problem on Venus, still a frontier planet. Matt and his companions become involved with the native Venusian race, an amphibious and matriarchal one. Here is an early attempt by Heinlein to create an extraterrestrial culture; he does so admirably, making the Venusians both alien and comprehensible (and amusing--the clan matriarch at one point says, in effect, "Chase your fish and I'll chase mine" at unwanted interference).

Red Planet, Farmer in the Sky, and *Between Planets,* the next three juvenile novels to be published, all share one theme: the exploitation of Mars, Ganymede, and Venus, respectively, by commercial colonial corporations modeled on the British East India Company (updated, of course).

In *Red Planet*, the Martian colonists are still a relatively small group, consisting primarily of technicians and engineers working on the project to free oxygen from the Martian deserts to enrich the thin air of the planet. The adolescent hero, Jim Marlowe, and a friend run away from their boarding school (on Mars), which has been put into the charge of a tyrannical corporation headmaster. They also learn that the corporation has some unpleasant plans in store for the colonists, and the main body of the book is devoted to the pair's journey across the Martian deserts to the home colony, and the action the colonists take against the Mars Company. Here again are myriad details of what life on Mars would be like for humans, all carefully based on scientific fact. We also meet Heinlein's Martians for the first time; here is the basic model for that ancient and semi-mystical race that will result in the Martian culture so important to *Stranger in a Strange Land*.

In *Farmer in the Sky*, the conflict between colonists and corporation is less abrupt. The hero, again an adolescent, is Bill Lermer. The story follows him as he and his recently widowed father apply for and become colonists on Ganymede. The principal corporate mistake is to send too many people for the overloaded facilities of the colony; the principal narrative concern is how the Lermers make a farm literally out of nothing in the stony wastes of Ganymede. Two sub-themes are Bill's adjustment to his

father's remarriage (a more emotionally complex problem than a juvenile Heinlein hero has encountered heretofore) and his involvement in the foundation of the Boy Scouts of Ganymede (a condensed version was first published in *Boys' Life* magazine as "Satellite Scout"). Heinlein makes the latter less sticky than it might be, mainly by calling attention to the fact that in the frontier life of the planetary colonies, scouting will regain the fundamental values it may have lost in an urbanized society.

There is another abrupt jump in what might be called literary texture in the next book, *Between Planets*. Here, Heinlein presents a rather complex cloak-and-dagger type plot in an equally complex cultural milieu. It is basically the Solar Federation of *Space Cadet*, but Venus, tired of being exploited by the rulers of the earth-centered Federation, revolts. It is almost a case of the American colonies against Britain (one of the characters, in fact, enlarges on the comparison). Don Harvey, the leading character, gets involved in the struggle, though his loyalties are not easily placed. His mother is Venusian colonial; his father was born on Earth. They now live on Mars, and he himself was born in space (on a ship, needless to say). He is on his way to join them when hostilities break out, and he is trans-shipped to Venus. The intrigue involves the plans for a breakthrough secret weapon which Don is unknowingly carrying with him, developed by a semi-secret order of scientists to which his parents belong. The melodrama is handled as convincingly as the various settings; the details of a decadent, overcrowded Earth and a frontier Venus are made very real. Here again is another nicely conceived alien race--the highly cultured "dragons" of Venus.

The Rolling Stones is an almost plotless romp; the Stones are a family resident in the by now wellestablished Lunar settlement. Roger Stone is an engineer turned scriptwriter (he writes three episodes each week of "The Scourge of the Spaceways" for Earth's entertainment channels) as well as being exmayor of Luna City. His wife is a doctor, and his mother, Hazel, is a founding "father" of the original Luna Free State. The children are fifteen-year-old twins, Castor and Pollux (the protagonists), their older sister Meade, and a younger brother, Lowell. The book is simply a chronicle of the family's travels after they decide to buy a used space ship; the moon has become too crowded and "civilized" for their various independent tastes. Major stops are Mars, just struggling to become self-supporting (reference is again made to the ancient race of Martians), and the brawling frontier settlements of the Asteroid Belt, a recreation of the mining towns of the nineteenth century. Heinlein experiments a bit with character here; the twins are not quite the bland, nice young men that the heroes of this series have been up to now; they are venal and headstrong, and while all of this series are concerned with coming of age in one way or another, the Stone twins start a step behind in maturity. The two-year trip is shown as an exercise in discipline; Grandmother Hazel breaks down and admits they may be able to join the human race when they actually give something away toward the end of the book. She herself is a neatly drawn portrait of the independent pioneer woman; we see her in an earlier incarnation in *The Moon Is a Harsh Mistress*.

In *Starman Jones*, Heinlein writes his ultimate Horatio Alger story: An Ozark farm boy whose only connection with space travel is a deceased uncle who had been an interstellar astrogator becomes, through pluck, luck, and the ability to remember verbatim everything he has ever read, the acting captain of a startraveling liner. Even this Heinlein makes acceptable (though just barely) with, again, the solidly realized details of life aboard a space ship and a background of an earth where even the lowliest profession is totally controlled by its guild, an interesting speculation into the ultimate growth of unionism. Whereas in earlier books, the "villain" was often viewed as a corporation, the union here is viewed negatively as the other side of the coin of the limitation of freedom.

Compared to the simplicity of the preceding two books' structure, *The Star Beast* is a complex work. Earth has taken its place in a galactic system of many intelligent races, but the level of ordinary life seems little changed from the twentieth century. John Thomas Stuart XI lives with his widowed mother in a suburban American setting which seems to differ from the contemporary only in the family pet, Lummox. The Stuart family has a long history of space exploration; Lummox was brought to Earth by John Thomas

Stuart VIII from an exploratory mission. He was then a tiny, affectionate beast; over the succeeding generations, he has become literally as big as a house and is, seemingly, immortal. There are also signs of independent intelligence, but on a very low level. The first part of the book is devoted to the results of an innocent but destructive rampage when Lummox strays from the yard: A trial concerns the question of Lummox's status as animal or intelligent being, reminiscent of the early short story "Jerry Is a Man."

Alternating with this account are scenes concerning the problems of the Under-Secretary of Spatial Affairs for the federation of cultures to which Earth belongs, a Mr. Kiku. His department is vaguely interested in the Lummox affair since it concerns an extraterrestrial, but Mr. Kiku is much more concerned with the demands of a heretofore unknown race, the Hroshii, and that they return an important individual of their race when, for some reason, they believe to be on Earth. It is, of course, eventually determined that Lummox is that individual. Despite Heinlein's attempts to rationalize the discrepancies, it is almost impossible to believe that a being from a race as superior as the Hroshii would be unidentifiable as an intelligent entity. Since this is the point of the book, it is severely flawed. Nonetheless, John Thomas' frantic attempts to save his "pet" make for suspenseful narrative, and the workings of Mr. Kiku's department are a quick and valid course in the realities of political diplomacy.

Heinlein returns to strictly human affairs in *Tunnel in the Sky;* though the setting is again a universe where man has traveled to the stars, aliens are mentioned but briefly. Starships are also abandoned; the mode of transportation is the "gate," a form of matter transmitter--instantaneous transmission of an object from one point to another. Again life on an overcrowded Earth is geared to frontiersmanship; an important high-school-level course is basic survival. The final exam consists of the class being transported to a hostile environment; if you live, you pass. The test is for a matter of days; the class in question, because of a "gate" failure, is marooned on a primitive planet for over a year. The story is as old as *Robinson Crusoe* or *The Swiss Family Robinson* and as enduringly enthralling, updated with alien but believable animal life and the attempts of the class to form a workable society. Again the protagonist, Rod Walker, goes through a maturing process, but the formative details are the primitive, not the futuristic.

After the rousing adventure of *Tunnel in the Sky* comes a novel whose major impact is dramatic. Within its limits, *Time for the Stars* incorporates at least one theory of the ideal science-fiction work: The speculative idea should not only give rise to an interestingly speculative milieu, but the two combined should provide the action and the characters with their basic and distinctive dramatic impetus.

Though the basis for *Time for the Stars* is the exploration of space beyond the solar system, it is not the fundamental speculative idea. That is too common a theme in science fiction to provide a unique flavor; what is needed--and provided here--is a distinctive twist on a problem raised by such exploration: The answer to the all-important question of communication between ship and Earth base can be maintained given the enormous distances and incredible speeds (approaching the speed of light) involved, which preclude anything like radio.

Heinlein's answer is to speculate that the human race, as a whole, is latently telepathic, but this ability can be heightened in pairs of individuals who are very close--primarily (but not exclusively) twins. In addition, the telepathic communication thus established is instantaneous, disobeying every law of physics. In less capable hands, this would be the sheerest pseudo-scientific fantasy; Heinlein's delineation of the device makes the book a painless introduction to Einsteinian (and post-Einsteinian) theory. Beyond this, however, the speculative idea gives rise to an odd and moving human situation which is the core of the book.

Tom Bartlett is a twin and the first-person narrator. He and Pat are identical; they are in their mid-teens and subject to the antagonisms and dependencies which twins have on even deeper levels than most siblings. They are aware of their "specialness," even beyond their twinship; their father, in the

overcrowded Earth of the future, must pay extra tax for them, and the family is, by law, confined to an apartment that is too small. They take part in the research by which the foundation concerned with solving the problems of interstellar flight hopes to conquer the communication problem; when it turns out to be feasible, they are offered lucrative contracts under which one is to stay on Earth, the other to go into space in one of the twelve ships sent out to scout for planets with colonial potential.

The relationship between the twins becomes clear when it is determined which one is to go. Pat wins, as he always seems to in any important argument; however, near the end of the training period, he has a serious accident (subconsciously induced because he is afraid to go), and Tom embarks instead.

The second section of the story is devoted to another of Heinlein's convincing evocations of life on a space ship, this one holding about two hundred people. There are several half-pairs of communicators aboard; they are literally "spare parts" in case something happens to any of the other partners.

It is here that the ramifications of the speculative idea appear. As a ship approaches the speed of light, time for these on board becomes distorted--speeded up--to the point where a subjective week for the travelers will be more than a year for those on Earth. Pat is rapidly becoming older than his twin. Further study of the telepathic phenomenon has shown that if younger relatives can be tuned into the communication "circuit" at an early age, rapport can be developed in this way; as Tom and Pat grow further apart, Tom "links" with Pat's daughter, Molly. As earth years pass (just months on the ship), the rapport is transferred to *her* daughter Kathleen, and finally to Kathleen's child, Vicky.

During all this time, the ship finds and studies several planetary systems. On a world that is mostly ocean, the ship's personnel are attacked by intelligent marine creatures; only forty are left alive. As they nevertheless prepare to carry on their mission, they are intercepted by a newly designed ship sent from Earth which, due to theories developed from the simultaneity of the telepathic phenomenon, can travel interstellar distances without the tremendous time lags. Tom and his companions are returned to Earth almost immediately; four years have passed for them, but seventy-one years have passed on Earth.

In a poignant final chapter, Tom finds himself on an Earth that is strange to him; he is superannuated. He meets Pat, now eighty-nine years old, who tries to treat him as a boy. And he meets Vicky, his great grandniece, with whom he has been in telepathic contact since her childhood; she is now almost his age. As they meet face to face, they realize that there is an emotion there that they will never find with anyone else.

Here is a unique human situation developed out of a speculative "gimmick"; though presented in simple terms and with no great sophistication, few science-fiction novels have so neatly combined the dramatic and the scientific.

The crowning achievement of the series, however, is the next novel, *Citizen of the Galaxy*. Though it may lack the poignant dramatic simplicity of *Time for the Stars*, it takes the fundamental theme of the entire series, boy-into-man, and paints it on a far more crowded and complex canvas than Heinlein has used so far. The background universe seems to be human dominated, though there are intelligent alien species also. However, the human race has spread far and wide through the galaxy, diversifying in social and even physical ways; the original Terran stock, it should be noted, has mutated into some strains. The narrative is set in four of these diverse human settings, all of which are evoked in detailed depth.

The culture of the Nine Worlds bears some resemblance to the Medieval Mohammedan culture; though all the appurtenances of a highly technological civilization are present, the social order ranges from an absolute monarch (the Sargon) and highly favored aristocracy down to slaves. This is a backwater of the Galaxy; the Terran Hegemony, led by Earth, has no direct relations with the Sargonate because, primarily,

of the slavery question.

Baslim, a half-blind, crippled beggar, buys for a minute sum a starved, maltreated pre-adolescent boy just off a slave ship. The boy remembers nothing of his origins, though Baslim suspects that he comes from within the Terran Hegemony (slavers and pirates operate as they did in the Caribbean in the eighteenth century; space is too vast to police satisfactorily). Baslim raises the boy, Thorby, and educates him; Thorby learns that Baslim is something more than the beggar he seems, but is not sure what. Their relationship develops into mutual trust and love; Baslim considers Thorby his adopted son and worries about his future. He implants, by hypnosis, messages in the boy's mind to various space ship captains that Thorby should deliver if anything happens to Baslim.

Something *does* happen to Baslim; Thorby returns one day to find him missing and their dwelling a ruin; the Sargonese police have been there. Moving out into the city's underworld that he knows well, Thorby finds that Baslim has been beheaded and that he himself is sought. One of the ships which Baslim has mentioned is in port; Thorby, through his underworld connections, arranges to meet the captain and delivers a message that has been implanted (it is in a language unknown to him--ancient Finnish, as it happens). Captain Krausa smuggles Thorby aboard his ship, the *Sisu*, under the noses of the Sargonese guards and takes him off the planet.

The people of the *Sisu* are part of a culture called the Free Traders, one of the most intricate and well-drawn "created" cultures that science fiction, as a whole, has produced. Given the thesis of a space ship on which many people can live, Heinlein goes a step further and presumes a culture that lives in space, landing only to trade and take on supplies purchased with the profits from their trade. Each ship is a clan, run by ritual and tradition which seem arbitrary but are actually guarantors of cultural and genetic balance in these small worlds--for that also is what each ship of the Traders is, a minute world unto itself. One of the traditions of the Traders is complete contempt for the planet-bound population of the rest of the Galaxy.

Thorby, as a *fraki*--a groundhog--is subject to that contempt, but it seems that Baslim had once done the entire culture of the Free Traders a great service; he had rescued a ship from slavers, losing an eye and a leg in the process. Thorby had known that Baslim was not just a beggar--he had run too many strange errands for him--but he had not known that Baslim was a hero of the Hegemonic Guard and engaged, at his death, in spying out the roots of the slave trade. In return, the people adopt Thorby--an unheard of step--as one of themselves. For two years, Thorby learns to become one of the people of the *Sisu*.

Captain Krausa, however, is uneasy; Baslim's instructions had been to deliver Thorby to a ship of the Hegemony in hopes his parentage could be traced. The captain had hoped that Thorby had been of the Traders (many of whom were the prey of slavers), but the records of all births and ship losses did not bear this out. And "debts must be paid" according to the lore of the People (as they call themselves). Thorby is uneasily aware that, rich as the life of a Free Trader is compared to that of a beggar in the Sargonate, it is still a form of slavery--to tradition and custom--of which "Pop" (Baslim) would have disapproved. So when, at a gathering of the People, the captain turns him over to a ship of the Hegemonic Guard, Thorby goes willingly, though not happily.

The captain of the guard ship is a bit baffled as to what to do with Thorby, but he also knows of Baslim and his heroic reputation (a legend in the Guard) and decides to help. The best way is to enlist Thorby, therefore insuring an automatic search of his identity; while this takes place, Thorby learns the discipline and traditions of the military service, similar and yet different from that of the People.

Eventually, the identification comes through. Thorby is Rudbek of Rudbek, son and heir of one of the most powerful financial family empires of Terra itself. His parents, while on a pleasure trip in their space

yacht, had disappeared with Thorby; he, evidently, had been sold into slavery.

He is greeted at Terra by a host of family and retainers, foremost among them his cousin-by-marriage, Leda, and her father, who had been appointed guardian of the Rudbek estates. His former professions stand him in good stead--beggar, merchant, and military man; Thorby refuses to become the figurehead that Leda's father had hoped him to be and, furthermore, learns that a part of his vast financial empire may well be involved in the slave trade that no one on Terra even knows to exist. After an epic court battle, he wins control with the help of Leda and a crusty lawyer obviously modeled on Clarence Darrow (and serving in turn as a model for Jubal in *Stranger in a Strange Land*). He had hoped to enlist in the Exotic Corps of the Hegemonic Guard to carry on Baslim's slave-trade-busting activities; instead he faces the responsibility of his financial empire.

All the themes are drawn together here--freedom, learning, maturity. *Citizen of the Galaxy* may technically be a juvenile book, but few science-fiction works have equaled its scope.

Have Space Suit--Will Travel also has scope, but like its title, it's almost a joke, an extended shaggy dog story. Heinlein here returns to the light touch of Star Beast and The Rolling Stones. The joke is an "in" one: many of the better works of science fiction of the 1940s had had a distinctive form, starting with a mundanely minor circumstance and carrying it to cosmic proportions. Here Heinlein does just that, with his tongue slightly in his cheek; he also employs several cliches of science-fiction--flying saucers, bugeved monsters, and invasions from space--as held by the general public to embody the genre. Clifford (Kip) Russell is a soda jerk of the near future, but he longs to go to the moon, just opened to tourism by Thomas Cook & Sons. He plans his college career around this and also enters a contest sponsored by a soap company which offers as the first prize a trip to the moon. Instead, he wins a space suit, an authentic one used in the construction of a space station. He refurbishes it and while wearing it one night in his back yard receives signals that seem to come from a space ship. Homing on his signal, two "flying saucers" land; Kip is rendered unconscious, and when he awakes, he is on the way to the moon. He is in the ship of an alien race who have established an advance base on the moon, preparatory to taking over the earth. He has two fellow prisoners: a precocious child named Peewee, whom his captors hope to trade for her father (a famous scientist), and another alien whom Peewee thinks of as the "Mother thing," an intelligent cat-like being who projects warmth and love. "She" is apparently a representative of a Galactic union pitted against the aliens who have captured Kip and Peewee.

Having landed on the moon, they attempt to escape to the nearest human settlement but are recaptured in sight of their goal after an epic trek in space suits. Kip is again rendered unconscious and awakes on the way to the planet Pluto. There he is kept prisoner until the "Mother thing" effects a *coup* which Kip manages to finish off, though freezing himself badly in Pluto's incredibly cold atmosphere; when he awakes, he is on a planet of the stellar system of Vega, the home world of the "Mother thing." After her race has helped in his recovery, he is informed that he must act as witness in the trial of the aliens who had captured him. He and Peewee are transported to the center of the united intelligences of the three galaxies, and he finds himself totally outside our own galaxy in the Lesser Magellanic Cloud.

There he not only witnesses the trial of the evil aliens (which results in their planet being expelled from our dimension entirely), but finds himself representing the human race (along with Peewee) in a trial as an upstart, trouble-mongering race. Due to Kip's spirited defense, humanity is saved. He is returned to Earth in time for college.

This is another romp, but a good one; the reader shares Kip's bogglement at each jump, involving progressively more and more millions of miles, and the trial scene in the great capitol of the civilized races is an impressive one.

The last of the juveniles, *Podkayne of Mars*, is also light adventure. There is, however, a major innovation in this book: the protagonist is female. The story is told in the first person by Podkayne Fries, a second-generation "Martian" (a term technically reserved for the native inhabitants). It is an account of her trip to Venus on a luxury liner and the dangerous situation she finds herself in because of the political involvement of her uncle, with whom she is traveling. The universe of *Podkayne* is again limited to the solar system; Mars and Luna are free republics, and Venus is run by a corporation. The political intrigue is motivated by the attempts of the two free worlds to persuade Venus to side with them against an exploitative Earth.

Aside from the use of a female as a central character, the novel offers little that is new. Again the details of life aboard a luxury space liner are deftly evoked (from a passenger's point of view as opposed to the crew's-eye view of *Starman Jones*); the cultures of Venus and Mars have some fresh details but are essentially no different from earlier evocations. And even the first-person female device had been used in the short story, "The Menace from Earth," published some years before. It's an enjoyable work but hardly up to the standards set by several of the earlier ones.

The Heinlein juvenile novels (as noted, several transcend the "juvenile" label) have earned for themselves a secure place in the history of science fiction. The obvious reason is their quality; while they all share a particular form and a particular theme to a great degree, the variety of invention and detail within these thirteen novels is amazing. In the sections dealing with voyages aboard space ships, for instance, each has its own flavor, and yet each has that distinctive feeling of *rightness*, of verity, that can only be called *Heinleinesque*. Descriptions of space traveling had been attempted before but never with this attention to detail and the minutiae so thoroughly conceived. It is safe to say that until a new concept of traveling in space is created, or unless reality catches up to Heinlein and unexpectedly proves him wrong, every space ship in science fiction will echo his ideas in one way or another.

The same holds true with the other concepts, even those so general as speculatively conceived cultures. From the determined agrarians of *Farmer* in *the Sky* to the Free Traders of the *Sisu* in *Citizen of the Galaxy*, they ring true.

There is a subtler reason, too, why these books have their place in the history of the genre. They appeared when they were needed, when the maturing intelligence of the children of the 1950s and early 1960s wanted new and optimistic horizons. Many of the enormous number of science-fiction readers of today were introduced to the field through these books, and it was that generation that had grown up on them that adopted *Stranger in a Strange Land* as a mature expression of that earlier reading matter. And it was *Stranger* and a very few other works that called an older generation's attention to the fact of a new and important branch of literature.

THE TRANSITIONAL NOVELS

The five novels following Heinlein's abandonment of the short story form are labeled "transitional" for several reasons. They are a varied lot; there seems to be a process of search for subject matter in progress here. The first and last of the five--*Starship Troopers* and *The Moon Is A Harsh Mistress*--are the most superficially similar (action-adventure novels in highly detailed, speculative milieus), but the differences in the two, primarily in technique, almost balance out the similarities. There is also a transition in attitudes and philosophy. The contrasting natures of these five novels, in fact, might suggest a quest for the ideal vehicle for the expression of a philosophy, an abandonment of the pulp magazine writer's "story for story's sake" without sacrificing the good story *per se*.

Science fiction itself was on the verge of a transition; in the late 1950s and the early 1960s, a new

generation of writers appeared, who had been the young readers turned on to the field in the post World War II expansion and were subject to all the factors that would result in the cultural revolution of the mid 1960s. Paradoxically, their lack of discrimination toward a "pop" medium such as science fiction would result in higher literary standards because these younger writers would feel no discrepancy in being a creative artist *and* a science-fiction writer (who knows how many excellent writers would have turned to the field earlier if there had not been the culturally snobbish attitude toward pulp fiction?).

Starship Troopers (serialized as Starship Soldiers in The Magazine of Fantasy and Science Fiction in 1959, published in book form the same year) is regarded by many as a juvenile; it was published before the last real juvenile, the minor but amusing *Podkayne of Mars*. However, the form and content, plus an adult protagonist, force it into another category.

The book is only vaguely plotted; Heinlein uses a device rare for him, the literary flashback, probably to provide a more dramatic form for what is essentially the highly detailed account of the training and psychology of a soldier--specifically, an infantryman--in the middle distant future.

The background is a universe in which humanity has achieved interstellar travel and has made contact with at least two other intelligent races. Politically, humanity is united in the Terra Federation; the franchise is extended *only* to those individuals who have volunteered to serve in the Federation's armed forces.

The hero and narrator is Juan Rico (whose "nationality" is revealed almost in passing, late in the book, as Filipino). The first chapter is a detailed first-person view of a military action against an alien planet; Rico is involved as an assistant section leader. The infantry is "dropped" by space ship onto the planet's surface and kept in accurate formation by means of sophisticated communications equipment built into their powered space suits; they create as much havoc as possible with an arsenal of weapons up to, and including, small nuclear bombs. This action is taken against an extra-terrestrial race dubbed the "skinnies" by the troopers; they are not the prime enemy (these are the "bugs," insectoid aliens who operate by a group mentality), but they are co-belligerents that the Terra Federation is trying to force into changing sides by a show of force.

The preparation, the "drop," the battle, and the retrieval of troops are drawn in detail; then there is the flashback to Juan's enlistment (against his family's wishes--"We have always stayed out of politics," says his father) and training. The enlistment is nominally for two years, but the first interplanetary war breaks out during Juan's hitch; slowly but surely, he finds himself becoming a career soldier by choice. His period in boot camp is minutely described; he becomes a trooper, takes part in actions such as that described in the opening of the book, and learns the mystique of the army. The second half of the book begins just after that engagement and is a mirror image of the first part. Juan is persuaded to apply for officer training, goes to OCS, and eventually takes part, as an officer, in the battle that leads to victory for humanity.

On this fairly mundane structure, Heinlein has combined his customary ability to extrapolate details of the future with the same kind of detailed look at the military life drawn very much from contemporary models. The non-military reader may find the latter aspect as intriguing as the former, though it might be noted that it is an idealized image Heinlein is creating--not of the spotless knight in shining armor variety that, say, was projected in films of World War II, but idealized on a different level; plenty of dirt, sweat, and blood are here, but, for instance, *all* of the command figures (for example, sergeants and officers) are tough and mean on the outside but vastly concerned and paternal toward their men interiorly. There are no Pattons in Heinlein's future military, and as with so much extrapolative fiction, it could be argued that the basis for this army (all volunteer, franchise-rewarded) might create the idealized image he has drawn.

For the science-fiction fan, the fascination of the book is the speculative equipment with which the military works--the obvious space ships (fighting vessels and transports) as well as the more original concept of the powered suits, infinitely more protective than medieval armor, but also enabling their wearer to be almost totally mobile by use of the built-in jets and negative feedback and circuitry. These matters and the more generalized speculation on a society based on voting rights only for those who have "graduated" from the military are the major substance of the work.

Stranger in a Strange Land (1961) is Heinlein working in high gear. Here he has found a suitable plot vehicle for expressing an outside point of view of our society as well as formulating alternate social modes as contrast. Here many elements of his past work come together: the science fictional, of course; the didactic; and the satirical and the whimsical. Almost all of the major themes are here, too: the uniquely capable individual, religion as a positive/negative force, "supernatural" powers made rational, and a revolutionary subversion of society (though not, as usual, one of force).

The first expedition to Mars consisted of four married couples. A message is received that Mars has been reached and a landing will be attempted, then no further word is sent. Due to political problems on Earth, there is no second expedition for twenty-five years. When the next (all male) human party gets to Mars, they find none of the original eight alive, but they do find a child had been born to one of the couples and had been raised and nurtured by the native Martian race. Michael Valentine Smith, now in his mid twenties, returns to Earth, the product of a totally alien culture.

The Martian race is an old one, brilliant in its mentality and with many powers unknown to humanity. The native Martian goes through five life stages, the last being *after* death or more aptly, in this case, discorporation; the Martian culture is guided and ruled by a vast body of discorporate "Old Ones" (of whom, incidentally, the human visitors are unaware). The lack of natural resources on Mars has developed customs such as the eating of the dead and a ritual known as water sharing, a total commitment to another individual, symbolized by giving them the precious substance. Martians also have the talent of "grokking," an empathetic ability to grasp fully the essence of a person, thing, or situation.

Smith is placed in an Earth hospital because his body is unused to the heavier gravity, but also as a form of protective custody. He is important, not only to science but as the vastly wealthy heir of the first expedition and the possible "owner" of Mars due to a complex legal precedent of the Federation (the current political organization of terrestrial nations).

A reporter, Ben Caxton, feels that Smith is being held under duress because of his political importance. Acquainted with Jill Boardman, a nurse at the hospital, Ben enlists her aid in a plan to remove Smith. Ben is kidnapped by Federation agents and Jill proceeds alone and succeeds in getting Smith out. The only next step she can think of is the home of Jubal Harshaw, an irascible old doctor/lawyer, an acquaintance of Ben's. Jubal provides shelter for the two and takes Smith's cause out of sheer orneriness, but also because Smith's combination of innocence and intelligence have an extraordinary effect.

After complex maneuvering by Jubal, Smith is "freed"; he stays in Jubal's house and makes remarkable progress, both physically and mentally due to his Martian training (which includes the power to totally annihilate people or things which he groks to be wrong). Eventually Smith goes out on his own to learn about humanity and takes Jill with him. He places himself in many human environments, among them working as a magician in a traveling carnival. Humanity remains a mystery to him despite Jill's valiant attempts at interpretation, but he is finally enlightened by watching a cage of monkeys in a zoo.

He then begins a pseudo-religion, ostensibly a revivalist faith but in reality a way to find those humans most likely to raise themselves to Smith's superior status by learning Martian concepts. Since this involves radical social and sexual divergences from the accepted norm, the sect is attacked--despite initial

successes in finding converts. Eventually Smith is set upon by a mob and killed; his major followers--Jill, Jubal, Ben, and others--eat his body and set out to continue Smith's activities in combining terrestrial and Martian sensibilities.

Here is a true work of science fiction (many readers interpret Smith's powers as mystical, but it is implied that they are simply a product of an alien and more knowledgeable psychology) that operates on more than one level, a far cry from the field's action-adventure origins. Heinlein views our civilization through an outsider's eyes (a viewpoint possible only in science fiction as the sole literary genre to deal with non-human intelligence); he also supplies speculative alternatives. There is considerable room for satire here, and while certain of the more illogical elements of human society are heightened, for the most part the exaggeration is not so broad as it might be. However, there could be some question about several whimsical sections scattered through the book that take place in a very literal heaven involving conversations between two haloed gentlemen about the events of the narrative.

Heinlein has here told--or retold--one of the oldest myths of humanity, that of the divine leader, born and/or raised in supernatural (literally, beyond the natural) circumstances, who returns to teach those of his people who are receptive and who is killed by unbelievers.

Around 1960, the success of Tolkien's *The Lord of the Rings* revived a dormant sub-genre of fantasy, the "created world" story which had been more or less originated by William Morris, extended by Lord Dunsany, and, save for a few exceptions (Fletcher Pratt's *The Well of the Unicorn* and Fritz Leiber's Grey Mouser series), few authors attempted until the appearance of Tolkien's epic work. Then the sub-genre revived and was dubbed "sword and sorcery" since it featured heroics usually involving swordplay and magic used as a rational source of power. Heinlein's next novel was his own version of such a heroic fantasy, and after the weightiness of the last two novels, it can only be described as a romp.

Approximately the first two-thirds of Glory Road (1963) is a thoroughly rousing adventure with, indeed, swords and what would seem to be sorcery (the reader who has encountered Heinlein's approach to "magic" before, however, will guess that there is a rationale even before it appears). The narrator, Oscar Gordon, is just out of the army, where he had been a "military adviser" in the early days of the struggle in Viet Nam. He is killing time on the Riviera while deciding what to do next and sees an unusual ad in the Paris Herald Tribune, which is headed "Hero Wanted." Answering it, he meets a Puckish old man and a gloriously beautiful woman who is called Star. She gives him an expert physical examination and asks if he will take part in a glorious adventure. Dazzled by Star, Oscar agrees and is mysteriously transported to a woodland glade with her and the old man, Rufo. All appurtenances are of the mold of the heroic adventure--swords, archery equipment (Star tells him that firearms do not work here), and costumes in the style of Robin Hood. All of these are provided by Rufo from a "magic box," a tiny cube that opens to enormous size. Star will tell him little of their quest save that they are to retrieve the "Egg of the Phoenix" from the "Eater of Souls." Rufo acts as manservant and squire, and Oscar, reared on the romances of Edgar Rice Burroughs, begins to believe that he really is in a heroic adventure; this is reinforced when he discovers that the configurations of the stars, plus a rapidly moving tiny moonlet, prove them to be on a world other than Earth.

They go through a series of unlikely adventures involving extraordinary beasts and even more extraordinary "people" as they make their way toward the "gate" that leads to the world of the Eater of Souls. On the way, Star agrees to marry Oscar; they wed in a ceremony of their own devising. The three finally reach the gate after vanquishing some authentic fire-breathing dragons. The world they enter is an uneasy one in form and atmosphere: space, shapes, and colors are not quite right. Star tells Oscar that humans cannot exist here for very long. The Egg is encased in a huge tower that is one continuous maze on the inside; Star has a clue to threading the maze and the three enter the tower. Oscar loses Star and Rufo but finds the Egg and its guardian, whom he bests and kills in an exhausting duel (with swords, of

course). Wounded, he is found unconscious, but clutching the Egg, by the others; they beat a hasty retreat from the tower to another gate, which will take them to Star's world. Rufo, who had evinced a mysterious indignation at their marriage, loses his temper as they switch worlds through various gates and reveals these facts: there are many worlds in many adjacent universes; the intra-dimensional gates are the traveling points between them (Earth is an intersection but is considered too barbaric to join the Empire of Worlds). Star is Empress of the Twenty Universes, immortal to all intents and purposes--and Rufo's grandmother! Rufo thinks she has conned Oscar.

She has, in a way. The "Egg" is a sort of recording of the personalities of her more than three hundred predecessors, used to program her own brain with--literally--the wisdom of the ages. It had been stolen by some negative types who had wished to do harm to the Empire by depriving Star of it before her programming had been completed. The computers at her disposal had indicated that only Oscar, of all the inhabitants of all the known worlds, could regain the Egg by a combination of skill and luck.

So Oscar finds himself consort of the Empress of the Twenty Universes, who seems to love him as much as he does her. He is happy for a while but eventually grows restless. Star, though a perfect mate, is obviously wedded to her incredibly complex job; Oscar is--as he puts it--an out-of-work hero. He tries returning to Earth but finds it shoddy and primitive. So, contacting Rufo by a prearranged signal, he sets out on the Glory Road again to find adventure.

Glory Road may sound downright ridiculous in synopsis, but it may well be Heinlein's most delightful book. It has all the extravagance and glamour of the sword-and-sorcery genre, always underscored by the usual solid Heinlein rationalization, plus the addition of the ironic last section of the book which answers the question, what happens after the hero saves the princess? The relationship between Oscar and Star, paradoxically, is one of the most human relationships which Heinlein has created, and their mutual dilemma of loving incompatibility is made very real, despite its unlikely causative factors.

Farnham's Freehold (1964) begins with Hugh Farnham, his family, and a guest having an evening of bridge. The time is the near future; there is an international crisis in progress. The family consists of Hugh's wife, Grace, an incipient alcoholic, his son Duke, and his daughter Karen; the guest is Barbara, a college friend of Karen's. Hugh is subjected to abuse from Grace and Duke for being overly worried about the crisis; Duke accuses Hugh of responsibility for Grace's condition by frightening her with such actions as building a bomb shelter.

Late in the evening, the crisis peaks when they learn that nuclear missiles are headed toward the U.S. and presumably their area, a prime military target. They go into the shelter, accompanied by the Farnham's black house-boy, Joe. There are several shocks; the instruments show that there is intense heat and radioactivity outside. During the night, Hugh and Barbara discover their mutual attraction and make love while the others sleep. There is one final tremendous shock; the next morning they emerge to discover that the bomb shelter is sitting by itself in the middle of a wooded mountainous terrain. There is no sign of people whatsoever. The environment is still obviously terrestrial and certain local landmarks are recognizable; the general theory is that the tremendous power of the final bomb transported them to an alternate Earth where humanity has never evolved.

There is a long struggle for survival in the wilderness using what aids Hugh had stocked the shelter with. Game is plentiful and they begin cultivation. Conflict between Hugh and Duke continues, and Grace does not adjust to the radical change, particularly the lack of alcohol, and retreats further from reality. Hugh finds Joe and Barbara to be the most helpful of the group. Karen dies in childbirth (she had been pregnant before the attack). Barbara is also pregnant, by Hugh from that first night, though they have not continued their affair.

Suddenly they discover that their world is inhabited. They are captured by a group of black men and taken to a large settlement, the summer residence of Ponse, a noble in this civilization, which seems of high technological skills but socially very static. It turns out that they have been carried not to an alternate Earth but the future of their own, where the only survivors of the nuclear holocaust were Africans, who resettled the globe and developed a civilization based on slavery--the slaves invariably being white. Luckily, Ponse is an antiquarian and is fascinated by what Hugh can tell him of past civilizations. The whites are installed as slaves in Ponse's household, while Joe is accepted as a free member of society. Grace becomes Ponse's slave mistress; Duke is castrated, as is common with all male slaves except studs.

Despite his comfortable situation, Hugh cannot bear the loss of freedom and plans to escape with Barbara and the twin sons she has borne. They are captured in the attempt, and Ponse magnanimously offers to send them back to their own time, for he had ordered the construction of a time machine. Hugh, Barbara, and the twins return to a time just before the nuclear attack; they find Barbara's car parked outside the Farnham house and make for a mine in the mountains where Hugh feels they will be safe. They do indeed survive and hope to lay the groundwork for a future different from that which they have seen.

In *Farnham's Freehold*, Heinlein uses a device he is fond of, the circular trip in time--the translation forward, then the fortuitous discovery of a means to return and set things right. However, here it is not the main point, nor is it the survival-in-the-wilderness theme which echoes *Tunnel in the Sky*. Though it takes awhile to get there, the major impact of the book is through the social reversal of the historical reality of slavery. There is also more concentration on character and personal relationships, a trend apparent since *Stranger*.

The Moon Is a Harsh Mistress (1966) returns to a prime theme, that of revolution. It is very simply the story of a revolution from inception to accomplishment. The revolutionaries are the inhabitants of the Lunar colonies; in a situation reminiscent of the British colonization of Australia, the moon has been used as a penal colony for the criminals of Earth, including many political offenders. By the time of the story, there is a large population divided into several communities, only a fraction of which are legally prisoners; the rest are free-born descendants who cannot return to Earth because of the physiological problems of having been born in the moon's lower gravity. Earth has been growing more and more dependent on the materials shipped from the moon but still runs the Lunar colonies in a despotic and exploitative manner.

The hero-narrator, Manuel Garcia O'Kelly--or Mannie--is a Lunar-born computer technician; he has just discovered that the master computer which controls most of the electronic equipment on the moon has become a self-aware entity. Mannie dubs it Mike and proceeds to make friends with it. Mike is astonishingly naive and yet, of course, incredibly brilliant. Mannie keeps the secret of Mike's development of personality to himself. When Mannie becomes involved, almost by accident, in the asyet-unsuccessful Lunar revolutionary movement, he thinks to involve Mike, who agrees to go along since he forecasts the total ruin of the colonies if the exploitation continues. Mike, in fact, plans and leads the revolutionary movement; his identity as a computer is known only to Mannie and two of his close associates.

After much subversive activity, things are brought to a head by the rape-murder of a Lunar girl by Terran guards. There is an armed outbreak and the natives gain control of the colonies, though it is tenuous; Mannie and an associate spend an uncomfortable period on Earth negotiating as emissaries of the free Lunar Republic. After a final invasion by force fails, Earth concedes the Republic its freedom. Mike is damaged in the fighting, however, and while he continues to function, his personality disappears forever.

The Moon Is a Harsh Mistress is a novel of one continuous narrative line--the progress of a scientifically planned revolution. It is "decorated," as it were, with the usual Heinlein gift for extrapolating a complete

culture. The Lunarian culture here is a logical product of its circumstances; Heinlein has created a civilization both familiar and alien with such ramifications as involved and myriad marriage customs forced by the unbalanced ratio of the sexes, and a system of total free enterprise in which such things as insurance and social security are handled by bookies.

Also of interest is the character of Mike, the computer, who reflects a viewpoint much like that of Michael Valentine Smith in *Stranger in a Strange Land*, a viewpoint that is non-human and provides opportunity for an objective assessment of humanity.

An unusual aspect of this novel among Heinlein's works is that it is written (in the first person) in a highly stylized *argot*--that of the Lunar colonies which had included many foreign words and expressions, primarily Russian. There is a similarity here to the complex language of Anthony Burgess' *A Clockwork Orange*. These five novels could well be considered Heinlein's mature output, a culmination of all his work with the two streams of the "juveniles" and the "pulp" background, works concentrated on action and concept rather than style. But the following two novels are so radically different that there is justification in viewing these last five, no matter what their level of accomplishment, as transitional.

THE NOVELS OF THE 1970s

Heinlein's 1970s' novels would seem on the surface to be an unlikely pair to be considered together; superficially, they are very dissimilar.

I Will Fear No Evil (1970) is a single-line narrative with few embellishments. The time is the near future; the social atmosphere of the U.S. is that of a near breakdown of law and order. The country is described as a "de facto anarchy under an elected dictator." America's richest man, Johann Sebastian Bach Smith, is extremely old and ill, kept alive only by advanced life support systems. He enlists the aid of his longtime lawyer and friend, Jake Salomon, in finding a donor body for the first brain transplant, possible through the skills of a discredited surgeon. A list of potential donors is drawn up; one of them is killed by a mugger and only after the operation is performed and Smith's brain has successfully adapted to the new body does he discover it to be that of his capable and very beautiful secretary, Eunice Branca. Smith is happy with his new, young body but sincerely regretful that it has meant the loss of Eunice, as is Salomon, who has been having an affair with her.

To Smith's surprise, he finds Eunice's personality sharing the body with him; they do not share one another's memories but can communicate in a sort of telepathic conversation.

While there are some outside incidents such as the legal tangles of the case and its attendant publicity, most of the rest of the novel deals primarily with Joan Eunice's (as he has dubbed herself) emotional-sexual relationships with the people of both sexes in her life. Among other things, she arranges to become pregnant by frozen sperm from her old body. Eventually she marries Salomon, who dies on their honeymoon; his personality joins the two already in Joan Eunice's body. Joan-Eunice-Jake despairs of Earth's future and emigrates to the moon, where she dies bearing the child, which lives.

It might be noted that there is almost no attempt to rationalize the survival of the personalities of Eunice and Salomon after death; this is perhaps the first truly *supernatural* event that Heinlein has dealt with. The birth of a child of whom the father and the mother are in ways the same person is, of course, a variation on the theme of "All You Zombies--."

In contrast to *I Will Fear No Evil*, the enormous *Time Enough for Love* (1973) is by far a longer and more ambitious work. The setting is the universe of over two thousand years in the future, wherein humanity

has spread to the stars, led by the long-lived Howard families of *Methuselah's Children*. Lazarus Long, the major figure of that novel, still lives but is determined on a course of self destruction, due mainly to the boredom of a 2000+-year life span in which he has encountered every possible human situation. He is forcibly rescued and subjected to rejuvenation techniques by Ira Weatheral, chairman pro tem of the Howard families (Lazarus is the permanent chairman by seniority), which are centered on the planet Secundus. Ira tells Lazarus that he needs the benefit of the long experience of the Senior (as Lazarus is known); Secundus is becoming decadent and Ira is thinking of emigrating to a frontier planet. Lazarus agrees to postpone self-destruction and to informally narrate his memoirs if Ira will bring the full resources of the advanced world of Secundus to bear in finding a set of circumstances which will be new to him.

Over a period of time, Lazarus spins several lengthy tales from his past and, in the meantime, gathers around him a sort of family (most of whom are among the vast number of descendents he has acquired over the years; this includes Ira, who is related to Lazarus through several lines). Among them are Ishtar and Galahad, rejuvenation technicians who have been instrumental in Lazarus's own case; Ira's daughter Hamadryad; and Minerva, the master computer of Secundus who has acquired a self-aware female personality. "She" is in love with Ira. Lazarus introduces her to his ship computer, Dora, who is also self-aware, with a female orientation, but less sophisticated than Minerva.

After an "Intermission," consisting of excerpts from the notebooks of Lazarus Long (several pages of rather self-consciously clever aphorisms, such as "one man's theology is another man's belly laugh"), the story is picked up over a decade later on Tertius, a newly settled planet to which Lazarus, Ira, Ishtar, Galahad, and Hamadryad have emigrated, along with several thousand other residents of Secundus who had become dissatisfied. Minerva is also present, literally incorporate; she has acquired a flesh-and-blood body by the highly evolved genetic science of this culture; she is a "composite clone." Through something of the same means, Hamadryad and Ishtar have borne "twins," who are technically female clones of Lazarus. They are called Lapis Lazuli and Lorelei Lee and are on the brink of extremely precocious adolescence.

A message is sent from Secundus by the new chairman pro tem, who considers Tertius a colony. The messenger is Justin Foote, Chief Archivist of the Howard Foundation, who has been working on collating Lazarus' memoirs. He is invited to stay and join Lazarus' "family" and accepts since all the material for his work is contained in Minerva's computer-successor, Athena.

In the meantime, Minerva and Athena have hit upon a "new" experience for Lazarus. Using a side effect of star travel, they have discovered a method of traveling backward in time, considered impossible until then. Lazarus is transported back to Earth in the time of his childhood, 1916. He is "dropped" by his computer ship, Dora, and the twins in the American Midwest and makes his way to Kansas City, where he arranges to meet his family and his five-year-old self; he becomes an intimate family friend and acquires money enough to live fairly well by investment, based on his prior knowledge of the coming war. He finds himself falling in love with his mother, Maureen, who is an extremely liberal-minded woman beneath her proper Midwestern matron facade.

World War I breaks out and Lazarus, who had intended to avoid it by going to South America, is impelled by the strong patriotic feelings of his family to enlist. Just before he is sent to France, he and Maureen go to bed together.

In France, he is fatally wounded but is recovered by his future family (the plan had been that he would be picked up by Dora ten years after the drop into the past, but Ishtar had surgically planted a signaling device in his body in case of an emergency), who will presumably be able to restore his wrecked body with their advanced medical techniques.

It is difficult to convey in synopsis the complexity of *Time Enough for Love*. The several anecdotal reminiscences told by Lazarus are almost self-contained novellas in themselves, and the sexual and emotional interplay among the characters, based on cultural mores of the future, can only be capsulized by saying that almost everyone ends up having sex with everyone else with a maximum of discussion.

Here again, though, is the theme of returning in time and also, peripherally, that of revolution, hinted at in the relations between the frontier Tertius and the over-civilized Secundus.

The two novels are indeed superficially different--the one-situation of *I Will Fear No Evil* against the many-faceted *Time Enough for Love*. But their similarities outweigh the difference in form, particularly considered in contrast to the rest of Heinlein's work. The most noticeable similarity between the two is the high incidence of dialogue in both works. Unlike many science-fiction writers, Heinlein has always had a facility for dialogue and has used it extensively, but invariably balanced with action. Here, dialogue makes up approximately ninety percent of the two works. The heart of *I Will Fear No Evil* is the interior conversations between Joan and Eunice; there are almost no exterior events. The greater length of *Time Enough for Love* allows for more action, but it is almost exclusively confined to Lazarus' reminiscences until the return to the past.

This preoccupation with dialogue seems to serve two related purposes: as a didactic vehicle for the expression of philosophy (a tendency more and more apparent since *Stranger in a Strange Land*) and as evidence of a greater concern with human relationships, particularly those concerning sexual matters. A more ephemeral indication of the different flavors of these last two novels is the reaction of longtime Heinlein aficionados. *Time Enough for Love*, in particular, had been well received by the mainstream critics who had been paying attention to Heinlein since the success of *Stranger*, but within the ranks of the close-knit world of science fiction, there was much negative reaction from those who had been reading his work for a number of years. It might be speculated that Heinlein had crossed the indefinable line that yet divides science fiction as a genre from mainstream literature. Nevertheless, in all fairness, it must be noted that *Time Enough for Love* was among the leading contenders for both the major science fiction awards for 1973 (the Hugo and the Nebula), though losing in both cases to Arthur C. Clarke's *Rendezvous with Rama*, a work much more representative of classic science fiction.

CRITICAL ESSAYS

THE "FUTURE HISTORY" FRAMEWORK

Perhaps too much has been made of that part of Heinlein's output which has been given the collective title of the "Future History" stories. This group takes place in a future based on common assumptions, a device not uncommon in science fiction; in fact, it might be considered a form unique to the field.

If an author of mainstream fiction produces a series of stories set in, say, contemporary San Francisco that does not have any characters in common, they are considered separate entities with no particular connection, save a common setting. That setting is also shared with reality and any other authors' works that also happen to be set in San Francisco. However, if a science fiction or fantasy author *creates* a milieu--a future, a mythical past, or simply a created world á la Dunsany--and sets several works in that milieu, even if they have no other connecting links, they are much more closely connected.

Examples in the field are many. Isaac Asimov's Foundation trilogy was originally a number of short stories and novelettes laid in a common future and sharing the same theme. It also had linked characters in some cases (the heroine of *Second Foundation* is a descendant of two major characters in *Foundation and Empire*). The various parts add up to an epic and a surprisingly well-formed whole.

On the other hand, several of Ursula K. LeGuin's novels are laid in a common future universe, a fact of which little is made. There are almost no overt connections and only by a hint or two in each novel is the reader informed that there *is* a connection.

Heinlein's "Future History" series falls somewhere between these two extremes. In the writing chronology, they have appeared from 1939 ("Life-Line," the first published story, is rather arbitrarily included; "Misfit," the second, is very definitely a part) through 1973 (*Time Enough for Love*). Their interior chronology runs from more or less the present to *Time Enough for Love's* 2000+ years ahead.

The entire body of the "Future History" stories (aside from *Time Enough for Love*) was published in an collection, *The Past Through Tomorrow* (1967). It includes a chart showing the major characters and events of this projected future (this was a revised version of a chart published in *Astounding* in 1941, which included projected titles in the series. The later version dropped some of these and added a number of works written between the two versions).

While some characters appear in several of the stories (particularly Andrew Libby, the mathematical genius of "Misfit") and there are numerous cross-references (Rhysling, the blind poet of "The Green Hills of Earth" is quoted or referred to often), there is no real attempt to make a whole greater than the parts.

It might be argued that *Time Enough for Love* was an attempt at tying the series together. It does, of course, concentrate on a character and a situation (Lazarus Long and the Howard families) from the earlier *Methuselah's Children*. There are references to the two alien races mentioned in the earlier work, and there is a follow-up reference to the castaways of "Common Sense" (in an aside which must be mysterious to those who have not read that story). Nevertheless, while *Time Enough for Love* may be an ultimate conclusion to the series, it does not unite them appreciably in any way.

None of the so-called juveniles are included in the future history chart except the short story "The Menace from Earth," but most of the juvenile novels might also be considered to have a common milieu. The Patrol of *Space Cadet* appears briefly in several other works, and there are passing references to a common past of the solar system, specifically the planet Lucifer, whose remains form the asteroid belt. For the most part, the Martians that appear in several of the books seem to be identical, down to the references of an unfortunate incident between the Martian and human race at their first meeting, which is mentioned in both *Red Planet* and *The Rolling Stones*. This incident may well be the basis for an incident mentioned in *Stranger in a Strange Land;* certainly the Martians of *Red Planet* are a preliminary sketch for the Martians of *Stranger*. And the character of Hazel Stone from *The Rolling Stones* is depicted by Heinlein at an earlier age in *The Moon Is a Harsh Mistress*.

While it is amusing and satisfying for the reader to discover and identify these various linkages, there is no major significance in them. Awareness of these various links between the works--in the "Future History" stories or otherwise--is hardly necessary for appreciation for any of the individual stories.

THE MAJOR THEMES IN HEINLEIN'S WORKS

Science fiction, even today, carries the stigma of its pulp fiction background for many people--at best, as escapist literature; at worst, as mindless adventure with no substance beyond that of immediate action. Robert Heinlein gives the lie to this image, however, even from his earliest pulp fiction days. Anyone reading a Heinlein work of any length greater than a short story must be aware that an active and firmly opinionated intelligence is at work.

This has inevitably sparked controversy within the science-fiction world and beyond the confines of that

world since the success of *Stranger in a Strange Land*. While the cult status of that book in particular has verified the popularity of Heinlein's philosophy, there has been an equally strong reaction wherein the author has been labeled "racist," "sexist," "militaristic" and even "fascist." Anyone reading even slightly below the surface of his works should realize that any of these epithets are patently simplistic; there are ingrained philosophical tenets which may run counter to the fashionable liberalism of the 1960s (which, paradoxically enough, Heinlein may have had some responsibility for through his popular juveniles), but which are hardly fascist or any of the other negative "ists."

Heinlein has been quoted as saying that his characters do not necessarily speak for the author. This, of course, is a basic assumption with any writer; nonetheless, there is a consistency of opinion over the entire body of work which does express a philosophy. Inevitably, it has changed over the years, as well as becoming more dominant in the writing itself. The influence of *Stranger* perhaps encouraged Heinlein to be more direct about his views in the works which followed that one.

Throughout Heinlein's writings, various preoccupations are manifest. There is the "survival-in-the-wilderness" theme of *Tunnel in the Sky* and *Farnham's Freehold*. There is the structural theme of the circle in time which occurs often, from the succinct complexity of "By His Bootstraps" to the nostalgic return of Lazarus Long in *Time Enough for Love*. Each of these minor themes is symptomatic of a view of humanity and its potential, or perhaps more accurately, a blueprint for Heinlein's conception of what humanity and its potential should be.

The three major themes are immortality, sex, and politics. Obviously the last two are general to the point of meaninglessness; however, Heinlein's use of these is very specific. The theme of immortality (or a life span beyond the normal) does not lend itself to much in the way of philosophizing. It is, of necessity, a subject usable only in science fiction or fantasy, and notable only for its frequent appearance in Heinlein's work. The very first published story, "Life-Line," deals with a negative aspect of this, concerning as it does the predictability of an individual's moment of death. To name some of the other instances, there is immortality-through-reincarnation in *Beyond This Horizon*, long life through selective breeding in *Methuselah's Children*, the extension of personal time because of relativity in *Time for the Stars*, cold sleep in *The Door into Summer*, and the recapturing of youth by a brain transplant in *I Will Fear No Evil*. The previously mentioned circle-in-time structure is also a manifestation of the extension or manipulation of the human life span. In myriad variations, the cheating of an individual's termination is used again and again.

Sex and politics are considerably more controversial than theoretical immortality, and here is where Heinlein's views become an arena for discussion. Before going into specifics, it may serve a purpose to make a general point. The overall attitude projected by Heinlein through his work is very much of the nineteenth century. This is neither so paradoxical nor so derogatory as it may sound. Science fiction may deal with the future, but it cannot, of course, be *of* the future. Most writers of Heinlein's generation necessarily reflect values of an earlier period. Aesthetically, in fact, this may be a prime factor in Heinlein's success. The right combination of the expected and the unexpected, the accepted and the inventive, and the working out of the ordinary in terms of the extraordinary--these are often ingredients of the artistically satisfying creation.

Be that as it may, the values projected over the years in Heinlein's writing are those of enlightened nineteenth-century America; one can find them reflected in such diverse places as the image of the shrewd Yankee trader and the basic tenets of the Mormon church. Rights of the individual, cleverness and knowledge gained by experience as positive virtues (as opposed to intellectualism and academia), and advancement by personal ability (linked to a strong belief in the survival of the fittest) are important factors.

There is also a consistent nostalgia *for* the nineteenth century, particularly as manifested in Midwestern and pioneer America, evident in many of the works. Heinlein seems uncomfortable working with highly sophisticated futures (in a social, rather than mechanical, sense); his preference seems to lie with frontier planets and the opening up of new worlds. Typical are the minutely detailed remaking of Ganymede in *Farmer in the Sky* and the determination of Hazel Stone to find the equivalent of Daniel Boone's "elbow room" in *The Rolling Stones*. More overtly, this nostalgia is expressed in the delight in small-town Americana of "The Man Who Traveled in Elephants" and the expressions of approval by Lazarus Long for the Kansas City of 1916 in *Time Enough for Love*.

A primary facet of Heinlein's expression of a social and political philosophy is his strong technical (specifically, engineering) bias. Here again is what could be viewed as an enlightened but reactionary attitude which boils down to the theory that man is a rational animal; therefore, he should act rationally. Heinlein's ideal human society would work as smoothly as a well-engineered machine, and it is irrationality, stupidity, and ignorance that prevent this. There is a key statement in *Starship Troopers* in which this is expressed: "Everything of any importance is founded on mathematics." (Or as stated slightly differently in *The Rolling Stones:* ". . . any person skilled with mathematical tools could learn anything else he needed to know, with or without a master.")

The irrational has no place in Heinlein's universe, save as an impediment to progress. Several of his earlier "fantasies" reflect this in their theme of making the supernatural into a rational structure (most obviously in "Magic, Inc.").

It might be argued that the pervasive theme of revolution (*If This Goes On--, Red Planet, The Moon Is a Harsh Mistress*) is an advocacy of anarchy or chaos. But Heinlein's revolutions are invariably *against* an exploitative and/or irrational force. The colonial Venusian's revolt in *Between Planets* is "to establish our own independence, to manage our own affairs, to throw off the crushing yoke of absentee ownership," all rational motives. "Absentee ownership" is a particular Heinlein target; the fact that lives and affairs are managed by powers (corporate or individual) that are not present, therefore incapable of rationally understanding immediate problems and needs, is a perfectly valid excuse for violence.

Heinlein has claimed that he doesn't believe in villainy, that he has never created a villain who thought of himself as a villain. While one can find a couple of exceptions (Mrs. Keithley of "Gulf," and perhaps Wormface of *Have Space Suit--Will Travel*), this absence of deliberate evil is generally true. Most of Heinlein's negative characters are so because of ignorance or stupidity, individual (the un-understanding parents of *The Star Beast* or *Tunnel in the Sky*) or corporate (the guilds in *Starman Jones*, the colonial corporations of several books, and the mob in *Stranger in a Strange Land*).

This is in a way paradoxical since there is also reflected a strong sense of absolute right and wrong; there are few gray areas (as noted in the first chapter, a pervasive moral tone of the field of science fiction since its beginnings). However, there is again what might be called a technical or engineering view. What works is good; what does not work is bad. Anti-social behavior hinders society from working smoothly; therefore, it is bad. But this must be combined with individual free will or it is meaningless.

This is also reflected in the use of organized religions, invariably a fraud in Heinlein's works. They can be negative and oppressive (*If This Goes On--*) or used for beneficial purposes (*The Day After Tomorrow*, *Stranger in a Strange Land*), but they are always phony.

Despite the consistent view of a rational and utopic potential for humanity, there have been changes over the years toward humanity's political institutions. Several attitudes have been expressed, sometimes overlapping. One is the view that democracy, though sloppy and inefficient, is still the best system devised so far. Then again there have been flirtations with elitism and the hypothesis that people trained

to use their minds are best qualified to rule, as proposed in "Gulf." A variation on this was one of the most controversial of Heinlein's proposals, that of franchise limited to military veterans in *Starship Troopers*. This was the cause of the accusation of "militarism"--sheer nonsense if the book is read closely since the franchise was to be granted only *after* military service. It should be more correctly interpreted that the right of the vote be extended only to those who had learned mental and physical discipline--both provided for in Heinlein's future armed forces, an idea as old as the Golden Age of Greece.

While he has never forsaken his hopeful view of a potentially rational society, there is evidence of an ongoing disillusionment (*not* cynicism; Heinlein has always held a "cynical"--or "realistic"--view of human institutions). This is probably best demonstrated by a statement repeated several times in *Time Enough for Love*: "When a place gets crowded enough to require IDs, social collapse is not far away." Beginning with at least a bias toward democracy and *against* other institutions and forms which inhibit human freedoms, the change seems to have been toward distrust of *any* collective group which holds power over the individual.

Heinlein has always projected a future of racial and national mixtures. In almost every work dealing with the future, it is at least implied that the components of the society are from an Earth where the various human strains have intermixed and melded. For instance, two of the colonial comrades of the American hero of *Farmer in the Sky* are named Sergei Roskov and Douglas MacArthur Okajima. We learn that the native language of the protagonist of *Starship Troopers* is Tagalog, a Filipino language implying a mixed Spanish and Oriental ancestry. One of the most capable of Heinlein's many capable female characters is Caroline Mishiyeni, a Zulu girl, in *Tunnel in the Sky*.

It is true that in some of the earlier works, Heinlein has made use of racial stereotypes embarrassing to contemporary sensibilities, but one need only look at films of the same period to realize that this is a product of a time, not a particular author.

Heinlein's most provocative work dealing directly with a racial question is, of course, *Farnham's Freehold*. Here, Heinlein is using the speculative potential of science fiction to make a point at a time when it seemed that that point should be made: *What if* there were a black civilization based on slavery of whites? and would it be any better than the reverse? His answer was patently *no*. Detractors can claim that raising such a speculation at an inflammatory time was adding fuel to a fire. Defenders can claim equally that an illustration has been invented to show a balanced view.

But the total overview of Heinlein's attitude toward race has to be the same as that projected in his attitude toward humankind in general; ability is the primarily important factor and is not limited to any one group.

Curiously enough, there is a slight tendency toward xenophobia in Heinlein's creation of extraterrestrials. The only totally sympathetic alien race to be found in his work is that of the "Mother-thing" in *Have Space Suit--Will Travel*. Otherwise, they are just that: *alien*. Perhaps portrayed amusingly or with admiration, with individuals that are viewed positively (Willis in *Red Planet*, Lummox in *The Star Beast*), nonetheless there is always a hint of menace in their very difference from man. The Martians of *Stranger in a Strange Land* are the perfect example.

Before discussing Heinlein's sexual themes, it is probably necessary to take a look at his female characters and through them, his attitude toward women in general. It is, at the least, ambiguous.

On one hand, the general attitude toward gender is very much like that toward race; ability is the important matter, and women are as able as men. Mary Lou Martin in "Let There Be Light" is a brilliant theoretical scientist; the heroine of "Lost Legacy" takes as many chances and is as capable as the men, as are the heroines of "Gulf" and *The Puppet Masters*. Star, of *Glory Road*, is the Empress of the Twenty

Galaxies and obviously the right woman for the job. And, of course, "Delilah and the Space-Rigger" is specifically concerned with the acceptance of a female electronics engineer on a job in space. Even the over-precocious and rather rapacious Podkayne has a high degree of intelligence.

On the other hand, Heinlein tends often to view the female as a race more alien than the Hroshii. The adolescent heroes of the juvenile novels say things such as "Girls . . . were much odder than dragons. Probably another race entirely." Now this may be pubescent characterization, but the view tends to surface in other situations also. The possibility that this is a period manifestation (the lack of communication between the sexes was a great source of mid-twentieth-century humor) is precluded by the fact that the attitude becomes more prevalent in the later works, though distinctly more sophisticated also.

The emphasis on the difference between the sexes grows stronger in the later works as the emphasis on sexuality in writing and subject matters grows also. *I Will Fear No Evil* seems to concern itself entirely with this question, and the conclusion seems to be that male and female are not simply similar beings with different apparatuses, but beings who because of different apparatuses have entirely different psychological processes. By the time of *Time Enough for Love*, it is implied that women are superior, a concession of value never before made by Heinlein to any one particular segment of humanity.

As for relations between the sexes, until comparatively recently, science fiction was perhaps the most asexual of literary fields.

Some of Heinlein's early works have been rewritten to include a more realistic and more casual attitude toward sex, an attitude that would have been taboo in the puritan pulps of the 1940s. Sexuality per se did not play much of a part in his work until *Stranger*. After that, sex has been a leading topic in the 1970s novels, *Time Enough for Love* and *I Will Fear No Evil*. To a lesser degree, it is a subject (mostly of conversation and conjecture) in *Glory Road* and only of passing importance to *Farnham's Freehold* and *The Moon Is a Harsh Mistress*. Nowhere, though, does it become even vaguely explicit until the motherson affair of *Time Enough for Love*.

There is another, subtler aspect of sexuality in Heinlein's writing. It is a preoccupation with what may be called the male-as-female, which only evidences itself obliquely in the early works but reaches fruition in the basic subject matter of *I Will Fear No Evil*. The alert reader will note small hints in the pre-1960 stories. In *If This Goes On--*, the hero, in an emergency which requires a change of identities, is told that he can assume that of a woman. In *Beyond This Horizon*, the men chat briefly about the color of their fingernail polish. Lazarus Long has a preference for kilts, and the men of *Starship Troopers* are characterized as habitually wearing earrings and other jewelry. Even in the rigidly conformist attitudes toward male dress of pre-1960s America, all this might be viewed as particularly inventive extrapolation for extra color. But transvestites are presented negatively but prominently as a major social aberration in "The Year of the Jackpot," and "All You Zombies--" features a sex change (female to male in this case, perhaps necessitated by plot demands). In "The Menace from Earth" and *Podkayne of Mars*, Heinlein tackles the near-impossible task of a first-person narrative from the point of view of the adolescent female.

Finally in *I Will Fear No Evil*, he comes to ultimate grips with the male-as-female theme with the device of a male brain transplanted into a female body. There are specific descriptions in great detail of Joan-Eunice's acquisition of knowledge as how to dress and appear female, though almost no information as to her acquisition of female sexual behavior, despite the importance in the book of her sexual conquests. This seems more of a concern with transvestism than, say, disguised homosexuality. The latter is approached (as between males) almost squeamishly in *Stranger*, though intra-female contacts are implicitly condoned. This acceptance of lesbianism is even more overt in *I Will Fear No Evil*, where

several of the female characters are susceptible to the hero's feminine charms, as are two of the male characters who are described as homosexual (in distinctly awkward terms).

The handling of homosexuality seems very much a struggle through the classic male-American gender consciousness: Lesbianism is a harmless and rather titillating aberration, but male homosexual contacts are threatening and less easily coped with. *Time Enough for Love* seems finally to come to terms with a pan-sexuality which is the ultimate resolution of what has come before.

But Heinlein still does not succeed in resolving the ambiguous position of the female in his work despite what could be regarded as her increasing dominance. In *I Will Fear No Evil*, great emphasis is placed on Joan-Eunice's face and body, as well as that of other female characters. This is made the obvious reason that "she" has such great success in seduction. But "she" places no value on the sexual attractiveness of her male partners (though, again, "she" does on that of her female partners). The only reason she seems to have for going to bed with any man is that he is pleasant--a nice guy.

In other words, Heinlein's concept of the female demands not only the positive abilities of his ideal men (intelligence and competence), but a valueless giving of herself sexually. She must be the all-giving mother as well as the exciting sexual partner, and it is this combination that (literally) characterizes Heinlein's ultimate female--Lazarus Long's mother, Maureen.

Despite the preoccupation with sex that pervades the last two novels in particular, Heinlein fails with it. Where social and political situations can be speculatively handled with an engineering bias and at least the potential of well-run machinery in a way that will convince the reader (the first duty of any writer of science fiction or fantasy), the attempt to rationalize human sexuality does not work. The result is simply a lack of passion of any sort--positive or negative--and one feels that the numerous couplings in the 1970s novels are as unconvincing in human terms as the coupling of two railroad cars.

The failure to convince in the less rational aspects of human endeavor--sex and the few attempts at handling the arts, for instance--may or may not be balanced by the extraordinary extrapolations in the social and scientific fields throughout Heinlein's work. This question must be left up to the individual reader.

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Since books in their various editions tend to go in and out of print with startling rapidity (particularly paperbacks), and since publishers tend to change, this is not intended as a guide to the various editions and publishers of Heinlein's works. Its primary purpose is to establish which stories are contained in which Heinlein collections and the original publication dates of all the fiction. Heinlein stories have appeared also in numerous anthologies (including at least one story listed here as "uncollected," which was part of an anthology that is long out of print).

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