

Science Fiction

Readings & Assignments: Week Four

Science Fiction

Quiz: Week Four

1. "It's a Good Life": What was the population of Peaksville at the beginning of the story?
2. "A Saucer of Loneliness": How is the woman's loneliness brought to an end?
3. "The Cold Equations": How long did the Commander say the girl had before she must be jettisoned?
4. "Fondly Fahrenheit": When his android is destroyed, what does James do that also becomes a problem?
5. "The Tunnel Under the World": What day is it every day?
6. "The Country of the Kind": What unforeseen consequence results from this totally peaceful society?
7. "A Work of Art": What are the doctors called who recreate the personalities of famous people from the past?
8. "Call Me Joe": What does Cornelius realize is causing the equipment failure connecting Anglesey to Joe?

Science Fiction

Journal: Week Four

1. In “A Brief Introduction to Science Fiction and Its History,” Masri says that despite the many definitions of science fiction, one key element identified by many writers and critics is what? SF or “sf” can stand for science fiction or what other term?
2. In what ways does Masri contrast Golden Age SF to emerging “New Wave” SF of the 1960s?
3. “It’s a Good Life”: The handful of people who live in this place—controlled by an omnipotent, capricious, and sometimes cruel child—are forced to feign happiness and live in fear. One resident speaks out, and he is punished, perhaps executed. How much would you be willing to endure before you fought back, knowing that there might be fatal consequences? Or, how much should we weight a person’s age, a minor, for example, when he or she commits a serious crime? What about when Anthony tries to do something good but the result is terrible? Or, why are cornfields a metaphor of death or infinity in America?
4. “A Saucer of Loneliness”: Is this a SF story? Explain. Does loneliness make sense as an alien message of first contact? Explain. What messages have we used? Suggest a different message or a message to add or an existing one.
5. “The Cold Equations”: Is this story sexist? Explain. The story highlights the fact that the ship’s journey is based on precise calculations including time, distance, weight, thrust, and resistance, among others, and that a change in any of these figures would spell disaster. In what ways do our some of our social systems attempt to imitate scientific systems?
6. “Fondly Fahrenheit”: How does the author use the Fahrenheit scale to correspond to the level of passion in various scenes? How does the constant and progressive switching of narrative point of view correlate to Vandaleur’s state of mind?
7. “The Tunnel Under the World”: This story describes an entire city of tiny androids, each with the consciousness of a dead human being, living the same day over and over for sole purpose of marketing research. Is it an ethical practice to make them relive the same day for business purposes? What type of information do businesses collect about you today that you believe is either ethical or unethical?
8. “The Country of the Kind”: The main character is forced to live a life of isolation due to his violent nature. Would putting him to death be a better solution than letting him continue to suffer and also be a burden on or danger to society? Explain? What else is the author saying?

9. "A Work of Art": Strauss was distressed because he felt his work was not original, but rather a diluted version of old techniques and styles he had used before. Does creativity by definition have to always be something new? Explain.

10. "Call Me Joe": Cornelius wants to use disabled people for the future of colonizing the Jovian race. Ed Anglesey dies, but lives on as Joe on Jupiter in the end, no longer confined to his wheelchair. Discuss the SF, or social, or philosophical issues involved in this story.

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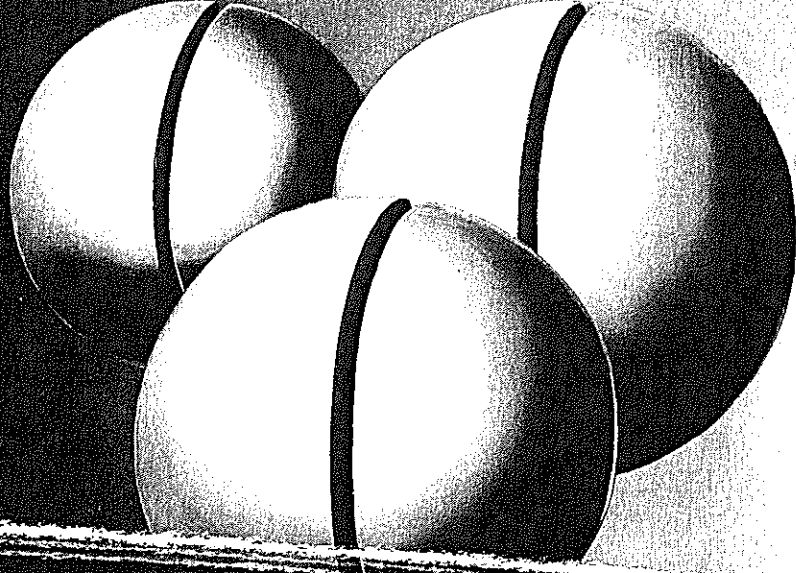
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Science Fiction

STORIES AND CONTEXTS

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Heather Masri

Science Fiction

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A Brief Introduction to Science Fiction and Its History

Why read science fiction? For those who already do, the answer is self-evident. Because it's fun. Because it's some of the smartest, most interesting literature being written today. For those who do not, a little more explanation may be helpful. Science fiction lays claim to a literary heritage that goes back to our earliest stories in myth and epic. Yet science fiction is also a uniquely modern genre, one informed by profound engagement with the most pressing issues of the contemporary world. It relies on a metaphorical and visionary mode of apprehension neglected by contemporary realistic fiction. Science fiction takes part in a symbolic discourse of meaning that addresses big questions such as "why" and "what if" — Why are we here? Where are we going? What if things had happened differently?

No one who is interested in modern literature, cultural studies, or the mass media can afford to ignore science fiction. A major publishing category with a rapidly expanding readership, science fiction also exerts a profound influence on mainstream culture, from fashion to popular music to film — six of the top ten grossing films of all time have been science fiction movies. (Three others were fantasy films.) Although the popularity of science fiction has sometimes been held against it, literary scholars, who once dismissed science fiction as escapist formula fiction suited only to maladjusted teenage boys, have increasingly recognized its value and significance, and science fiction is steadily gaining stature in the academy, particularly among those interested in literary theory or postmodernism. Science fiction is now seen as a complex and sophisticated body of literature in the same class as magical realism and postmodern fiction, two other genres that go against the dominant trend of realistic fiction and that appear to be gaining ground in shaping the future course of literature. Indeed, some critics see science fiction as the source of postmodern fiction and believe that it may well turn out to be the dominant form of literature in the twenty-first century.

This introduction offers a broad overview of how people have thought about science fiction and of the history of its development. For more thorough and in-depth analyses, consult the works included in *A Selective Guide to Science Fiction Research*.

Defining "Science Fiction"

"Science fiction," like any genre or period title — "Romantic poetry," for instance, or "Medieval romance," or even "the novel" — is a category of convenience,

a shorthand reference for a more complex phenomenon. Like all such labels, it can never fully account for the richness and variety of the individual works of literature that fall within it. Nonetheless, so long as we're aware of their limitations, such labels can be quite useful. Naming an object gives us a kind of power over it, allowing us to see it as distinct from other things with other names, and thus, ideally, to see more deeply into its true nature.

Given science fiction's prevalence in the mass media, most people feel they have an intuitive grasp of what is meant by the term. If asked to define it, they may point to cinematic examples — *Star Trek*, *Star Wars*, *The Matrix* — or describe a characteristic subject matter — robots and spaceships, time travel and aliens, marvelous inventions and futuristic settings. These are descriptive lists rather than theories of meaning, however, and as such they can only get us so far. On their own, they don't do much to increase our understanding of what is distinctive about science fiction as literature, nor do they do much to explain its unique resonance in modern society, where language and concepts borrowed from the genre are applied to everything from politics to computer engineering. Many people, of course, can and do read science fiction for the sheer pleasure of it, without feeling any particular need for analysis, but anyone who wants to understand its larger significance will find it useful to examine how the genre has been defined and to review its historical development.

Definitions of science fiction have focused on various aspects of the genre, whether subject matter, form, tone, relationship to audience, or some combination of these factors. Science fiction has been variously described as the literature of change or as a modern mythology; it can be seen as a response to the Industrial Revolution or to the primacy of science as the modern epistemology. The most productive definitions generally focus on the genre's distinctive techniques and procedures, defining it not so much through a particular subject matter as through its approach to the subject matter. Viewed this way, science fiction can be seen as a speculative mode of thought that might be compared to the scientific method or pictured as a complex and unique interaction between a story and its readers.

In seeking to define this new form of literature, some have emphasized the importance of science, either as subject matter or as a conceptual grounding that distinguishes it from fantasy. Early critics like the influential editors Hugo Gernsback and John W. Campbell Jr. sometimes emphasized the educative or prophetic nature of science fiction, presenting it as an informed look at the progress and prospects of modern science — perhaps as a way of defending a literature that was then viewed by many as escapist and trivial. Subsequent writers such as Sam Moskowitz, a fan who became one of the first scholarly critics, took a broader view of the relevance of science, emphasizing plausibility as an identifying characteristic that distinguished it from fantasy. Science fiction writer and influential editor Judith Merril suggested rather that science served as a conceptual model for a particular mode of thought, one that made a disciplined use of hypotheses to test the boundaries of the real.¹

Another feature of the genre that has been pointed to is its emphasis on change, and, as with the presence of science, this characteristic is sometimes used to distinguish it from fantasy, which tends to envision change as part of a recurrent mythic cycle rather than a genuine disjuncture. As noted, Gernsback and Campbell saw one of science fiction's key roles as predicting technological and social change, and some science fiction writers agreed, particularly those with scientific training, such as Isaac Asimov and Robert A. Heinlein — though they generally saw themselves as well-informed and shrewd observers rather than prophets. Outside the science fiction community, "Futurists" such as Alvin Toffler also adopted the idea of science fiction's potential to help us cope with technological and social change. According to this theory, science fiction provides a kind of social service by helping a culture think about the outcomes of its actions and adjust to a world of increasingly quick technological and sociological change. The extent to which science fiction functions as prediction has undoubtedly been overstated, but the idea of change itself — and the speculation about outcomes and adjustments to change — does seem to be one of science fiction's central concerns. In one way or another, change has been identified as a key element by many writers and critics.²

No one definition of science fiction is universally accepted or likely to prove definitive. The one thing almost everyone agrees on is that science fiction is a branch of imaginative or "fantastic" literature, a category that also includes not only fantasy and horror but also various kinds of surreal and postmodern literature not generally associated with so-called genre fiction. These genres all share an approach to reality that is different from "realistic" literature; they portray a world that is not merely fictional but radically different from the one we normally think of ourselves as inhabiting. All fantastic literature lays claim to a shared heritage in the older literary genres of epic, romance, utopia, imaginary voyage, and gothic tale. Fantastic literature introduces one or more elements — whether mythic, supernatural, technological, philosophical, or satiric — that represent a fundamental divergence from the structures and procedures of the known world. Because of this greater freedom in the imaginative exploration of ideas, fantastic literature at its best can be mind altering and can change the way we look at our own world.

Given this fundamental similarity, it is sometimes difficult to separate the various genres of fantastic literature, particularly as the readership and even, in many cases, the authorship tend to overlap, with many writers producing work in more than one genre, and many books that could plausibly fit into multiple categories. Indeed, many writers and scholars, following Heinlein and Merril, now prefer to use the broader term "speculative fiction" or the ambiguous term "SF" or "sf," which can stand for either science fiction or speculative fiction.³ (That practice is generally followed in this volume

2. Brooks Landon provides a useful discussion of their convergence in *Science Fiction: A Guide* (1988).

as well, except when specifically making a distinction between science fiction and other forms of speculative fiction.)

Although we can't always make clear divisions among genres, some differences are worth considering. One of the most commonly made distinctions is that science fiction, however fanciful, insists on a connection with the world we know. So while each science fictional universe is predicated on a difference — physical, social, or psychological — that sets it apart from our own world in some essential way, that world tends to be governed by principles of causality, physics, and human nature that we recognize as possible, based on our current understanding of reality. Just how plausible this altered reality is may vary and may change over time as science advances and new theories emerge, but the principle of plausibility is the same. Sometimes the story offers no more than a gesture toward plausibility, a suggestion that an explanation exists — but that gesture in itself is arguably significant. Moreover, as opposed to other imaginative genres like fantasy, in science fiction the nature of the difference between the fictional world and our own is often in itself an essential part of the subject matter of the story.

Comparing Washington Irving's "Rip van Winkle" with H. G. Wells's *The Time Machine* may help illustrate the difference. The protagonists of both stories travel into the future, but Irving sees no need to explain van Winkle's enchanted sleep, whereas for Wells the concept of a time machine is central. That Wells's description of the machine is vague and that such a machine could not be built on the basis of scientific understanding in Wells's time, and may never be possible, is secondary to the impulse to offer a plausible explanation. This insistence on a relationship between the reader's world and the fictional one produces a specific effect that Darko Suvin, perhaps the most influential academic critic of science fiction, has argued distinguishes science fiction from other modes of fantastic literature. Suvin emphasizes the importance of the interaction between reality and speculation, identification and distancing, produced by a combination of rational plausibility and the difference provided by the "novum," or new thing. He defines science fiction as "a literature of cognitive estrangement" and argues that what makes it distinctive is a particular kind of consciousness — the simultaneous alienation and self-recognition the work produces in its readers.⁴

The idea that science fiction requires a special form of cognition from both writers and readers is common. Samuel R. Delany, a science fiction writer who is also a leading theorist, has emphasized the peculiar way science fiction breaks down the usual barriers between the literal and the metaphorical. By asking readers to participate in the mental construction of an alternate world, science fiction makes high demands on audience participation.⁵ In this sense, science fiction shares something with surreal and postmodern fiction, which forces the reader to struggle to create meaning,

as well as with the older genre of the philosophical tale, which encourages readers to question their assumptions and to view their own society and beliefs from a new perspective. Science fiction has often been called a literature of ideas, a distinction science fiction writers sometimes object to because it seems to minimize other literary qualities such as character development, psychological depth, or prose style. Yet ideas, in one way or another, are at the heart of every science fiction story, in a way they are not in most other forms of contemporary fiction. In this context, it is useful to remember how much our current sense of literary merit is based on the rather narrow model set by the nineteenth-century novel, excluding earlier forms of prose fiction that have their own distinctive merits. Science fiction can exhibit all the strengths traditionally associated with the realist novel, but it also has access to other ways of seeing that allow a more free play of the imagination. Because of its different relationship to speculation and the realm of ideas, science fiction calls attention to our assumptions, thwarts our expectations, and turns common metaphors into literal realities, thus allowing us to see more clearly the implications of the metaphors we live within.

Influences and Origins

The earliest source to which science fiction can trace its lineage is perhaps the oldest literary genre of all, the epic typified in the west by *The Epic of Gilgamesh* (2000 BCE or earlier) and Homer's *Odyssey* (circa 700 BCE), followed by the romances of medieval Europe, from *Beowulf* (circa eighth to tenth century CE) to the many tales of King Arthur. These are old stories with powerful mythic elements. They are often nationalistic, illustrating the ideals of the culture they grow out of or describing the people's origins and heroic exploits. Frequently they involve some kind of quest and include supernatural elements or journeys to strange lands. Like the epic and the romance, science fiction looks beyond the world as we know it and, directly or indirectly, carries a message about the values of the culture in which it arises. Like mythology, it addresses questions about the nature of reality, the character of the past, the course of the future, the order of the universe, and what it means to be human.

Another venerable ancestor is the utopian tradition, which begins in the west with Plato's *Republic* (fourth century BCE) and takes its name from Thomas More's *Utopia*, published in 1516. Utopias, whether speculative political treatises like *Republic* or fictional accounts like *Utopia*, are thought experiments that explore the hypothetical conditions of an ideal state. More coined the term "utopia," meaning "no place" with a pun on "good place" (eutopia), as a sly acknowledgment of the impossibility of a perfect society. But what is most striking about utopian works is not the difficulty required to achieve them but the extent to which the achievement — could it be obtained — is problematic. As planned societies, utopias are necessarily restrictive and always have a cost to maintain. There is therefore often

4. Darko Suvin, *Metamorphoses of Science Fiction* (New Haven: Yale UP, 1979) 4.

describe the opposite of a utopia, a nightmare society sometimes based on a worst-case scenario of what the writer's own society could become. In fact, both utopias and dystopias tend to be critiques of the author's own society, either through contrast to or as warnings about the direction of current conditions. This critical bent links utopias to the tradition of satire.

Because they depend on radically different social conditions from the author's known world, utopian stories also overlap with the genre of imaginary voyages, fanciful tales of journeys to imaginary and often bizarre lands, or imagined journeys to real but little-known places. As with utopias, imaginary voyages often have an element of satire: the strange locales are used as lenses through which to view the writer's own country and times (morals, customs, politics) from an altered perspective, thus revealing them to be ridiculous or flawed. In earlier times, much of the distant world was unknown or poorly known, so European writers could plausibly describe an unknown land somewhere "over the sea." Many science fiction stories extend the tradition of the imaginary voyage. Now that everything on earth is thoroughly mapped and communication networks are worldwide, we place these imaginary kingdoms on distant planets that are still unexplored or in future times. One of the earliest examples of an imaginary voyage is Lucian of Samosata's "A True Story," an account of a voyage to the moon written in the first century CE. Jonathan Swift's *Gulliver's Travels* (1726) is a more modern exemplar of the genre and, given its explicit treatment of science in Book Three, some have claimed it as the starting point of the genre of science fiction.

A final element in the ancestry of science fiction is the so-called Gothic, a reworking of medieval romance, popular in the eighteenth and nineteenth centuries, epitomized by works like Horace Walpole's *Castle of Otranto* (1765), Anne Radcliffe's *The Mysteries of Udolpho* (1794), Edgar Allan Poe's "The Fall of the House of Usher" (1839), Bram Stoker's *Dracula* (1897), and, most significantly, Mary Shelley's *Frankenstein* (1818), a novel widely though not universally acknowledged as the first true work of science fiction. (See Aldiss and Wingrove, *Trillion Year Spree*, 25–52, for a particularly persuasive and influential argument for this claim.) These stories feature dark themes and settings, often including haunted castles, ruins, graveyards, and desolate landscapes. Usually there is a supernatural element, and the events may take place in medieval times or settings. The Gothic can be seen as an early countertradition to the realistic novel, a Romantic revolt against Enlightenment rationalism and a critique of the domination of science and technology at the dawn of the Industrial Revolution.

Although many of the forerunners of sf were British, it was part of a larger European phenomenon that also includes writers such as the German Romanticist E. T. A. Hoffmann, whose "The Sandman" (1817) may also be considered a prototype. Like *Frankenstein*, it is a gothic tale about the hubris of creating an artificial being, drawing parallels between science and black magic. Some of the genre's most notable early practitioners were French authors like J. H. Rosny aîné and astronomer Camille Flammarion, both of whom explored clearly science fictional themes such as alien life and apocalyptic disasters. The critical figure to emerge in France, however, and

a man justly considered the father of modern sf, was Jules Verne, an enthusiastic advocate for progress who wrote exciting adventure stories centered on technological innovations. In books like *Voyage to the Center of the Earth* (1864) and *20,000 Leagues Under the Sea* (1869), Verne took the genre of the imaginary voyage and grounded it firmly in existing science. He also lent science fiction a flavor of optimism and adventure, heroism and ingenuity that would be crucial in the development of the genre.

Of equal importance was British writer H. G. Wells, who offered a counterweight to Verne's optimism. Wells wrote a darker, more socially oriented, and more speculative brand of sf. In novels like *The Time Machine* (1895) and *War of the Worlds* (1898), he combined satiric and dystopic themes with scientific inventions and progressive social theory. And while Verne scorned Wells for his ignorance of science, Wells prided himself on his predictive powers and, in fact, both men foresaw inventions and events that did come to pass. Wells also introduced or popularized many of the themes that would become central to sf, such as time travel and alien invasion. Taken together, Verne and Wells are the first indisputably canonical writers of the modern sf canon.

Modern Development of the Genre

Many outside the sf community today consider science fiction to be "genre" fiction in the derogatory sense — a specialized, formulaic type of popular writing to be relegated to the guilty-pleasure aisles of large bookstores, somewhere between Mystery and Romance. This view was consolidated in the 1950s during the height of sf magazine popularity and was reinforced by a slew of B-grade "sci-fi" monster movies. However, in the earliest years of what we might call sf proper — the mid-nineteenth to early twentieth centuries — it was not a genre distinct from the mainstream of literature. Respected writers such as Nathaniel Hawthorne, Edgar Allan Poe, and E. M. Forster all wrote within the genre. The late nineteenth century, however, saw the beginning of a trend that would open vast new markets for sf writers, while at the same time lead to the separation of science fiction from mainstream literature: the popularity, especially in the United States, of mass-market magazines printed on cheap ("pulp") paper and circulated largely to an audience of young men. In the nineteenth century, pulp magazines had included all kinds of adventure stories, but beginning in the 1920s they began to specialize, some focusing on detective stories, for instance, and others on sf. While "pulp" is generally a derogatory term, and production demands sometimes led to second-rate hackwork, some very fine and unjustly neglected stories were printed in this period, some of which are reprinted in this anthology. The separation of sf from mainstream literature had benefits as well as drawbacks, allowing writers the freedom to experiment outside the constraints and conventions of dominant literary movements and leading, eventually, to a period of remarkable fertility and invention by World War II.

As editor of *Astounding Science-Fiction*, John W. Campbell Jr. presided over this period, which came to be known as the "Golden Age" of sf,

a period variously dated but generally said to begin in 1938 and end in the 1940s or 1950s. Like all golden ages, this is a semimythical period created largely in retrospect and linned in nostalgia. Yet there is some truth in it as well; these years were indeed a golden age for magazine writing and, hence, for the short story as a distinctive form. Circulation was at its peak; Campbell published established writers like L. Sprague de Camp and C. L. Moore as well as rising stars like Robert A. Heinlein and Isaac Asimov, and later Alfred Bester and Arthur C. Clarke. The literary quality of the writing during this period, while inconsistent, was on a steady rise, while the stories contained a freshness and an energy seldom reproduced since. The period also saw the rise of fandom, a unique subculture in which fans and authors mingled with unusual intimacy at sf conventions in the United States and, much later, around the world.

By the end of the 1950s, sf was a firmly established genre, if still poorly understood outside a small community of writers and fans. Many of its key themes had been articulated, a set of conventions and a shared vocabulary established. It was also dominated by writers from the United States. One sign of its successful consolidation was that a younger generation of writers, initially particularly in the United Kingdom, began to chafe at the perceived limits of the genre, leading to the first of many internal disputes over the direction sf should take. A group of British writers in the 1960s, who came to be known as the New Wave, were critical of the literary quality of some magazine fiction and of the cheery advocacy of scientific progress and conservative sociopolitical values that had come to mark much American sf. New Wave writers advocated a more stylistically self-conscious and speculative fiction that was less interested in technological gimmicks than in social structures and the effects of technology on human beings — in short, sf that was more Wellsian and less Vernian. Michael Moorcock and J. G. Ballard championed the cause, to which stylistically adventurous American writers like Roger Zelazny, Harlan Ellison, and Samuel R. Delany were also sometimes linked. These writers tended to blur the boundaries between science fiction and fantasy and often had a countercultural sensibility in their attitude toward authority and their incorporation of previously taboo subject matter like sex and drugs. Although some in the field deplored the new trend, the movement was never a monolithic one, and fears of a crisis within the genre can now be seen as exaggerated. Like most struggles within the sf community, the result was an enrichment of possibilities rather than a catastrophic schism. Principles derived from the New Wave, such as the emphasis on literary technique and a broader range of forms and topics, were widely incorporated by writers outside the movement and had a salutary effect on the genre as a whole. The sociopolitical concerns of New Wave writers and those inspired by them, including writers from outside the genre, like Kurt Vonnegut Jr., also raised the public profile of sf and helped it to reach a larger audience.

Shortly after the rise of the New Wave, another phenomenon began that would affect the course of sf. While — contrary to popular mythology — sf writers had always included women (Leigh Brackett, C. L. Moore, Judith

Merril), during the late 1960s and early 1970s women's voices became especially prominent and women writers were credited with expanding the horizons of sf yet again. Women writers such as Kate Wilhelm, Ursula K. Le Guin, Joanna Russ, and James Tiptree Jr. (a pseudonym for Alice Sheldon), along with some male writers such as Thomas M. Disch and Delany, opened new avenues of inquiry into gender and sexual identity, family and social structure, the media and the body. This shift was partly influenced by New Wave sf but also corresponded to larger social forces such as the women's movement.

The 1980s saw yet another infusion of new ideas and forms. The subgenre that came to be known as "cyberpunk" was influenced by the New Wave and by feminist writers of the 1970s, as well as by long-established writers like Philip K. Dick. Cyberpunk stories typically combined a vision of a near-future, high-tech society with a film-noir sensibility reminiscent of detective-story writers like Raymond Chandler and Dashiell Hammett. Cyberpunk writers were fascinated by the new technological possibilities offered by the burgeoning field of computer science, but, unlike earlier technophilic writers, they often took a darker view of the consequences. Their protagonists tended to be alienated outsiders, living on the criminal fringes of a society dominated by ruthless transnational corporate conglomerates. Writers like Bruce Sterling and William Gibson brought a harsher, more urban feel to sf, a tone, as the name suggests, related to punk rock as well as to cybernetics — a term often associated with artificial human-machine interfaces but more properly referring to information systems of any kind. This fascination with information is evident in the style of cyberpunk stories as well, which often produce an exhilarating sense of information overload as the reader is enveloped by layers of unexplained terms and images and thrust into the middle of a complex plot that even the story's characters find mysterious and confusing. Cyberpunk, like New Wave before it, was condemned by some and heralded by others; like New Wave, it was controversial at first but was soon assimilated into the larger sf tradition, enriching the genre with new themes and stylistic techniques and initiating a trend toward grittier realism and more moral ambiguity that continues to be influential.

While sf continues to evolve as a body of literature, it has also had a profound impact on the larger culture, both directly and through the medium of film. Although an examination of sf's influence on popular culture is beyond the scope of this introduction, it's important to note the degree to which sf now informs the way we see the world. (See Thomas M. Disch, *The Dreams Our Stuff Is Made Of* and other works listed under "Science Fiction and Culture" for more.) Increasingly, sf has also gained prestige and standing in scholarly circles. The first special session of the Modern Language Association devoted to sf was in 1958 and led to the publication of *Extrapolation*, the first scholarly journal devoted to the genre — followed by *Foundation* in 1972 and *Science-Fiction Studies* in 1973. The British Science Fiction Writers Association (BFSA) was founded in 1958; Damon Knight founded the professional association Science Fiction Writers of

America (SFWA; now Science Fiction and Fantasy Writers of America, but still generally referred to by the original acronym) in 1965. The Science Fiction Research Association was founded in 1970 to support the scholarly study of sf. And though sf is still dominated by English-language publications, it is becoming increasingly international; particularly distinct traditions emerged in the former Soviet Union and Eastern Europe, sometimes in opposition to the U.S. forms, and in Japan, which has been uniquely blessed and cursed by modern technology and has used sf to explore questions of national identity.

Science fiction today is an enormously popular and increasingly diverse literature that encompasses a breathtaking variety of forms, as old traditions are carried on and new modes introduced. A distinction has often been made between "hard" sf — sf that is grounded in science and traces its lineage from Verne through the Golden Age — and "soft" sf — sf with broader social concerns in the mode of Wells, the New Wave, and feminist sf. Recognizable examples of both forms continue to be written today, but increasingly the distinction (sometimes useful, but always problematic) has blurred as the two variants intermingle. It is difficult to identify a dominant new direction in the field, although a number of commentators point to a trend in which the form and concerns of science fiction and fantasy appear to be merging with those of mainstream literature. Magical realism and postmodern fiction, two genres that challenge the conventions of naturalistic fiction, are growing in international popularity and stature, with writers from Salman Rushdie and Isabelle Allende to Italo Calvino, Mark Helprin, Orhan Pamuk, and José Saramago. Meanwhile, sf writers such as Terry Bisson and James Morrow continue, in the tradition of Delany and Ballard, to extend the boundaries from within the genre toward an increasingly postmodern form, while former cyberpunk Neal Stephenson's recent work occupies an ambiguous space between sf and mainstream and may be claimed by either side. This trend has been greeted with alarm by some, who fear science fiction will lose its distinctive identity as it is submerged into the broader literature, but it is welcomed by others, who appreciate the greater range of freedom offered by a less programmatic approach. Most provocatively, some critics have hailed the trend as evidence that science fiction — as has long been argued by James Gunn, in his important anthology series *The Road to Science Fiction* and elsewhere — is the *dominant* literary mode of the modern era. In this view, far from being assimilated into mainstream literature, sf is itself the larger genre into which modern fiction is gradually being subsumed. Whatever the truth may be, the growing number of science fiction novels published each year is a testament to the genre's popularity and suggests, as Gardner Dozois frequently points out in the introductions to his standard-setting best-of-the-year anthologies, that science fiction is not in any immediate danger of disappearing. Science fiction remains a healthy and continually evolving genre in its own right, even as it exerts a growing influence on the broader literary and popular culture.

A Selective Guide to Science Fiction Research

What follows is an abbreviated list of useful sources for further research. For readers conducting advanced scholarship, several excellent annotated bibliographies provide more detailed and complete reviews of criticism, including Brooks Landon's *Science Fiction After 1900* and Veronica Hollinger's "Contemporary Trends in Science Fiction Criticism, 1980–1999" (see bibliographic listings at the end of this section for details).

The most complete critical guide is Neil Barron's *Anatomy of Wonder*, which includes annotated bibliographies of primary and secondary literature, useful historical surveys, and articles on related subjects, such as science fiction film and the teaching of science fiction, all written by leading critics. *The Encyclopedia of Science Fiction* is a crucial reference for information on specific authors, themes, subgenres, and terminology; more than a simple compendium of facts, many of its entries are incisive and provocative critical essays. *Speculations on Speculation*, edited by James Gunn and Matthew Candelaria, provides an excellent introduction to some of the field's most important theoretical approaches, bringing together influential essays by writers and scholars like Samuel R. Delany, Ursula K. Le Guin, Darko Suvin, Brian Aldiss, Robert Scholes, Alexei Panshin, and David Hartwell, as well as Gunn himself. *The Cambridge Companion to Science Fiction*, edited by Edward James and Farah Mendlesohn, is another important reference work, with essays on history, subgenres, and theoretical approaches by leading critics and writers.

Most of the selections listed under "History and Criticism" are general introductions, but also included are some important works that explore more focused themes, such as feminism or postmodernism. For in-depth research, as well as for single-author studies, please consult the texts listed under "Reference Works" for additional sources. Readers who review the critical books listed in the references section will notice a difference in style between the earlier and later works. The first sf critics were either writers or fans, and early scholars — whether they precisely fit these categories — also tend to write as insiders, giving much attention to the social history of sf. Such books are rich in detail and unsurpassed in texture and immediacy, but they can also be somewhat digressive and focus more on celebration of the genre than on in-depth analysis. That said, the ideas in these books have been very influential on the development of later theory. Recent critics tend to be more academic (though many continue to be sf writers or fans or

Arthur C. Clarke

Chuck didn't reply, so George swung round in his saddle. He could just see Chuck's face, a white oval turned toward the sky.

"Look," whispered Chuck, and George lifted his eyes to heaven. (There is always a last time for everything.)

Overhead, without any fuss, the stars were going out.

IT'S A GOOD LIFE

by Jerome Bixby

Aunt Amy was out on the front porch, rocking back and forth in the highbacked chair and fanning herself, when Bill Soames rode his bicycle up the road and stopped in front of the house.

Perspiring under the afternoon 'sun,' Bill lifted the box of groceries out of the big basket over the front wheel of the bike, and came up the front walk.

Little Anthony was sitting on the lawn, playing with a rat. He had caught the rat down in the basement—he had made it think that it smelled cheese, the most rich-smelling and crumbly-delicious cheese a rat had ever thought it smelled, and it had come out of its hole, and now Anthony had hold of it with his mind and was making it do tricks.

When the rat saw Bill Soames coming, it tried to run, but Anthony thought at it, and it turned a flip-flop on the grass, and lay trembling, its eyes gleaming in small black terror.

Bill Soames hurried past Anthony and reached the front steps, mumbling. He always mumbled when he came to the Fremont house, or passed by it, or even thought of it. Everybody did. They thought about silly things, things that didn't mean very much, like two-and-two-is-four-and-twice-is-eight and so on; they tried to jumble up their thoughts and keep them skipping back and forth, so Anthony couldn't read their minds. The mumbling helped. Because if Anthony got anything strong out of your thoughts, he might take a notion to do something about it—like curing your wife's sick headaches or your kid's mumps, or getting your old milk cow back on schedule, or fixing the privy. And while

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Anthony mightn't actually mean any harm, he couldn't be expected to have much notion of what was the right thing to do in such cases.

That was if he liked you. He might try to help you, in his way. And that could be pretty horrible.

If he didn't like you . . . well, that could be worse.

Bill Soames set the box of groceries on the porch railing, and stopped his mumbling long enough to say, "Everything' you wanted, Miss Amy." "Oh, fine, William," Amy Fremont said lightly. "My, ain't it terrible hot today?"

Bill Soames almost cringed. His eyes pleaded with her. He shook his head violently *no*, and then interrupted his mumbling again, though obviously he didn't want to: "Oh, don't say that, Miss Amy . . . it's fine, just fine. A real *good* day!"

Amy Fremont got up from the rocking chair, and came across the porch. She was a tall woman, thin, a smiling vacancy in her eyes. About a year ago, Anthony had gotten mad at her, because she'd told him he shouldn't have turned the cat into a cat-rug, and although he had always obeyed her more than anyone else, which was hardly at all, this time he'd snapped at her. With his mind. And that had been the end of Amy Fremont's bright eyes, and the end of Amy Fremont as everyone had known her. And that was when word got around in Peaksville (population: 46) that even the members of Anthony's own family weren't safe. After that, everyone was twice as careful.

Someday Anthony might undo what he'd done to Aunt Amy. Anthony's Mom and Pop hoped he would. When he was older, and maybe sorry. If it was possible, that is. Because Aunt Amy had changed a lot, and besides, now Anthony wouldn't obey anyone.

"Land alive, William," Aunt Amy said, "you don't have to mumble like that. Anthony wouldn't hurt you. My goodness, Anthony likes you!" She raised her voice and called to Anthony, who had tired of the rat and was making it eat itself. "Don't you, dear? Don't you like Mr. Soames?"

Anthony looked across the lawn at the grocery man—a bright, wet, purple gaze. He didn't say anything. Bill Soames tried to smile at him. After a second Anthony returned his attention to the rat. It had already devoured its tail, or at least chewed it off—for Anthony had made it bite faster than it could swallow, and little pink and red furry pieces lay around it on the green grass. Now the rat was having trouble reaching its hindquarters.

Mumbling silently, thinking of nothing in particular as hard as he could, Bill Soames went stiff-legged down the walk, mounted his bicycle and pedaled off.

"We'll see you tonight, William," Aunt Amy called after him.

As Bill Soames pumped the pedals, he was wishing deep down that he could pump twice as fast, to get away from Anthony all the faster, and away from Aunt Amy, who sometimes just forgot how *careful* you had to be. And he shouldn't have thought that. Because Anthony caught it. He caught the desire to get away from the Fremont house as if it was something *bad*, and his purple gaze blinked, and he snapped a small, silky thought after Bill Soames—just a small one, because he was in a good mood today, and besides, he liked Bill Soames, or at least didn't dislike him, at least today. Bill Soames wanted to go away—so, petulantly, Anthony helped him.

Pedaling with superhuman speed—or rather, appearing to, because in reality the bicycle was pedaling *him*—Bill Soames vanished down the road in a cloud of dust, his thin, terrified wail drifting back across the summerlike heat.

Anthony looked at the rat. It had devoured half its belly, and had died from pain. He thought it into a grave out deep in the cornfield—his father had once said, smiling, that he might do that with the things he killed—and went around the house, casting his odd shadow in the hot, brassy light from above.

In the kitchen, Aunt Amy was unpacking the groceries. She put the Mason-jarred goods on the shelves, and the meat and milk in the icebox, and the beet sugar and coarse flour in big cans under the sink. She put the cardboard box in the corner, by the door, for Mr. Soames to pick up next time he came. It was stained and battered and torn and worn fuzzy, but it was one of the few left in Peaksville. In faded red letters it said *Campbell's Soup*. The last cans of soup, or of anything else, had been eaten long ago, except for a small communal hoard which the villagers dipped into for special occasions—but the box lingered on, like a coffin, and when it and the other boxes were gone, the men would have to make some out of wood.

Aunt Amy went out in back, where Anthony's Mom—Aunt Amy's sister—sat in the shade of the house, shelling peas. The peas, every time Mom ran a finger along a pod, went *lollop-lollop-lollop* into the pan on her lap.

"William brought the groceries," Aunt Amy said. She sat down wearily in the straightbacked chair beside Mom, and began fanning herself again. She wasn't really old; but ever since Anthony had snapped at her with his mind, something had seemed to be wrong with her body as well as her mind, and she was tired all the time.

"Oh, good," said Mom. *Lollop* went the fat peas into the pan.

Everybody in Peaksville always said "Oh, fine," or "Good," or "Say, that's swell!" when almost anything happened or was mentioned—even unhappy things like accidents or even deaths. They'd always say "Good," because if they didn't try to cover up how they really felt, Anthony might overhear with his mind, and then nobody knew what might happen. Like the time Mrs. Kent's husband, Sam, had come walking back from the graveyard, because Anthony liked Mrs. Kent and had heard her mourning.

Lollop.

"Tonight's television night," said Aunt Amy. "I'm glad. I look forward to it so much every week. I wonder what we'll see tonight?"

"Did Bill bring the meat?" asked Mom.

"Yes." Aunt Amy fanned herself, looking up at the featureless brassy glare of the sky. "Goodness, it's so hot. I wish Anthony would make it just a little cooler—"
"Amy!"

"Oh!" Mom's sharp tone had penetrated, where Bill Soames' agonized expression had failed. Aunt Amy put one thin hand to her mouth in exaggerated alarm. "Oh... I'm sorry, dear." Her pale blue eyes shuttled around, right and left, to see if Anthony was in sight. Not that it would make any difference if he was or wasn't—he didn't have to be near you to know what you were thinking. Usually, though, unless he had his attention on somebody, he would be occupied with thoughts of his own.

But some things attracted his attention—you could never be sure just what.

"This weather's just *fine*," Mom said.

Lollop.

"Oh, yes," Aunt Amy said. "It's a wonderful day. I wouldn't want it changed for the world!"

Lollop.

Lollop.

"What time is it?" Mom asked.

Aunt Amy was sitting where she could see through the kitchen window to the alarm clock on the shelf above the stove. "Four-thirty," she said.

Lollop.

"I want tonight to be something special," Mom said. "Did Bill bring a good lean roast?"

"Good and lean, dear. They butchered just today, you know, and sent us over the best piece."

"Dan Hollis will be so surprised when he finds out that tonight's television party is a birthday party for him too!"

"Oh I think he will! Are you sure nobody's told him?"

"Everybody swore they wouldn't."

"That'll be real nice," Aunt Amy nodded, looking off across the cornfield. "A birthday party."

"Well—" Mom put the pan of peas down beside her, stood up and brushed her apron. "I'd better get the roast on. Then we can set the table." She picked up the peas.

Anthony came around the corner of the house. He didn't look at them, but continued on down through the carefully kept garden—all the gardens in Peaksville were carefully kept, very carefully kept—and went past the rustling, useless hulk that had been the Fremont family car, and went smoothly over the fence and out into the cornfield.

"Isn't this a lovely day!" said Mom, a little loudly, as they went toward the back door.

Aunt Amy fanned herself. "A beautiful day, dear. Just *fine*!"

Out in the cornfield, Anthony walked between the tall, rustling rows of green stalks. He liked to smell the corn. The alive corn overhead, and the old dead corn underfoot. Rich Ohio earth, thick with weeds and brown, dry-rotting ears of corn, pressed between his bare toes with every step—he had made it rain last night so everything would smell and feel nice today.

He walked clear to the edge of the cornfield, and over to where a grove of shadowy green trees covered cool, moist, dark ground, and lots of leafy undergrowth, and jumbled moss-covered rocks, and a small spring that made a clear, clean pool. Here Anthony liked to rest and watch the birds and insects and small animals that rustled and scampered and chirped about. He liked to lie on the cool ground and look up through the moving greenness overhead, and watch the insects flit in the hazy soft sunbeams that stood like slanting, glowing bars between ground and treetops. Somehow, he liked the thoughts of the little creatures in this place better than the thoughts outside; and while the thoughts he picked up here weren't very strong or very clear, he could get enough out of them to know what the little creatures liked and wanted, and he spent a lot of time making the grove more like what they wanted it to be. The spring hadn't always been here; but one time he had found thirst in one small furry mind, and had brought subterranean water to the surface in a clear cold flow, and had watched blinking as the creature drank, feeling its pleasure. Later he had made the pool, when he found a small urge to swim.

He had made rocks and trees and bushes and caves, and sunlight here

and shadows there, because he had felt in all the tiny minds around him the desire—or the instinctive want—for this kind of resting place, and that kind of mating place, and this kind of place to play, and that kind of home.

And somehow the creatures from all the fields and pastures around the grove had seemed to know that this was a good place, for there were always more of them coming in—every time Anthony came out here there were more creatures than the last time, and more desires and needs to be tended to. Every time there would be some kind of creature he had never seen before, and he would find its mind, and see what it wanted, and then give it to it.

He liked to help them. He liked to feel their simple gratification.

Today, he rested beneath a thick elm, and lifted his purple gaze to a red and black bird that had just come to the grove. It twittered on a branch over his head, and hopped back and forth, and thought its tiny thoughts, and Anthony made a big, soft nest for it, and pretty soon it hopped in.

A long, brown, sleek-furred animal was drinking at the pool. Anthony found its mind next. The animal was thinking about a smaller creature that was scurrying along the ground on the other side of the pool, grubbing for insects. The little creature didn't know that it was in danger. The long, brown animal finished drinking and tensed its legs to leap, and Anthony thought it into a grave in the cornfield.

He didn't like those kinds of thoughts. They reminded him of the thoughts outside the grove. A long time ago some of the people outside had thought that way about *him*, and one night they'd hidden and waited for him to come back from the grove—and he'd just thought them all into the cornfield. Since then, the rest of the people hadn't thought that way—at least, very clearly. Now their thoughts were all mixed up and confusing whenever they thought about him or near him, so he didn't pay much attention.

He liked to help them too, sometimes—but it wasn't simple, or very gratifying either. They never thought happy thoughts when he did—just the jumble. So he spent more time out here.

He watched all the birds and insects and furry creatures for a while and played with a bird, making it soar and dip and streak madly around tree trunks until, accidentally, when another bird caught his attention for a moment, he ran it into a rock. Petulantly, he thought the rock into a grave in the cornfield; but he couldn't do anything more with the bird. Not because it was dead, though it was; but because it had a broken wing. So he went back to the house. He didn't feel like walking back

through the cornfield, so he just *went* to the house, right down into the basement.

It was nice down here. Nice and dark and damp and sort of fragrant, because once Mom had been making preserves in a rack along the far wall, and then she'd stopped coming down ever since Anthony had started spending time here, and the preserves had spoiled and leaked down and spread over the dirt floor, and Anthony liked the smell.

He caught another rat, making it smell cheese, and after he played with it, he thought it into a grave right beside the long animal he'd killed in the grove. Aunt Amy hated rats, and so he killed a lot of them, because he liked Aunt Amy most of all and sometimes did things that Aunt Amy wanted. Her mind was more like the little furry minds out in the grove. She hadn't thought anything bad at all about him for a long time.

After the rat, he played with a big black spider in the corner under the stairs, making it run back and forth until its web shook and shimmered in the light from the cellar window like a reflection in silvery water. Then he drove fruit flies into the web until the spider was frantic trying to wind them all up. The spider liked flies, and its thoughts were stronger than theirs, so he did it. There was something bad in the way it liked flies, but it wasn't clear—and besides, Aunt Amy hated flies too.

He heard footsteps overhead—Mom moving around in the kitchen. He blinked his purple gaze, and almost decided to make her hold still—but instead he *went* up to the attic, and, after looking out the circular window at the front end of the long V-roofed room for a while at the front lawn and the dusty road and Henderson's tip-waving wheatfield beyond, he curled into an unlikely shape and went partly to sleep.

Soon people would be coming for television, he heard Mom think. He went more to sleep. He liked television night. Aunt Amy had always liked television a lot, so one time he had thought some for her, and a few other people had been there at the time, and Aunt Amy had felt disappointed when they wanted to leave. He'd done something to them for that—and now everybody came to television.

He liked all the attention he got when they did.

* * *

Anthony's father came home around six-thirty, looking tired and dirty and bloody. He'd been over in Dun's pasture with the other men, helping pick out the cow to be slaughtered this month and doing the job, and then butchering the meat and salting it away in Soames's ice-house. Not a job he cared for, but every man had his turn. Yesterday, he had helped scythe down old McIntyre's wheat. Tomorrow, they

would start thrashing. By hand. Everything in Peaksville had to be done by hand.

He kissed his wife on the cheek and sat down at the kitchen table. He smiled and said, "Where's Anthony?"

"Around someplace," Mom said.

Aunt Amy was over at the wood-burning stove, stirring the big pot of peas. Mom went back to the oven and opened it and basted the roast.

"Well, it's been a good day," Dad said. By rote. Then he looked at the mixing bowl and breadboard on the table. He sniffed at the dough. "M'm," he said. "I could eat a loaf all by myself, I'm so hungry."

"No one told Dan Hollis about its being a birthday party, did they?" his wife asked.

"Nope. We kept as quiet as mummies."

"We've fixed up such a lovely surprise!"

"Um? What?"

"Well . . . you know how much Dan likes music. Well, last week

Theima Dunn found a *record* in her attic!"

"No!"

"Yes! And we had Ethel sort of ask—you know, without really asking—if he had that one. And he said no. Isn't that a wonderful surprise?"

"Well, now, it sure is. A record, imagine! That's a real nice thing to find! What record is it?"

"Perry Como, singing *You Are My Sunshine*."

"Well, I'll be darned. I always liked that tune." Some raw carrots were lying on the table. Dad picked up a small one, scrubbed it on his chest, and took a bite. "How did Theima happen to find it?"

"Oh, you know—just looking around for new things."

"M'm." Dad chewed the carrot. "Say, who has that picture we found a while back? I kind of liked it—that old clipper sailing along—"

"The Smiths. Next week the Sipichs get it, and they give the Smiths old McIntyre's music-box, and we give the Sipichs—" and she went down the tentative order of things that would exchange hands among the women at church this Sunday.

He nodded. "Looks like we can't have the picture for a while, I guess. Look, honey, you might try to get that detective book back from the Reillys. I was so busy the week we had it, I never got to finish all the stories—"

"I'll try," his wife said doubtfully. "But I hear the van Husens have a stereoscope they found in the cellar." Her voice was just a little accusing. "They had it two whole months before they told anybody about it—"

"Say," Dad said, looking interested. "That'd be nice, too. Lots of pictures?"

"I suppose so. I'll see on Sunday. I'd like to have it—but we still owe the van Husens for their canary. I don't know why that bird had to pick our house to die . . . it must have been sick when we got it. Now there's just no satisfying Betty van Husen—she even hinted she'd like our *piano* for a while!"

"Well, honey, you try for the stereoscope—or just anything you think we'll like." At last he swallowed the carrot. It had been a little young and tough. Anthony's whims about the weather made it so that people never knew what crops would come up, or what shape they'd be in if they did. All they could do was plant a lot; and always enough of something came up any one season to live on. Just once there had been a grain surplus; tons of it had been hauled to the edge of Peaksville and dumped off into the nothingness. Otherwise, nobody could have breathed, when it started to spoil.

"You know," Dad went on. "It's nice to have the new things around. It's nice to think that there's probably still a lot of stuff nobody's found yet, in cellars and attics and barns and down behind things. They help, somehow. As much as anything can help—"

"Sh-h!" Mom glanced nervously around.

"Oh," Dad said, smiling hastily. "It's all right! The new things are good! It's nice to be able to have something around you've never seen before, and know that something you've given somebody else is making them happy . . . that's a real good thing."

"A good thing," his wife echoed.

"Pretty soon," Aunt Amy said, from the stove, "there won't be any more new things. We'll have found everything there is to find. Goodness, that'll be too bad—"

"Amy!"

"Well—" her pale eyes were shallow and fixed, a sign of her recent vagueness. "It will be kind of a shame—no new things—"

"Don't talk like that," Mom said, trembling. "Amy, be quiet!"

"It's good," said Dad, in the loud, familiar, wanting-to-be-overheard tone of voice. "Such talk is good. It's okay, honey—don't you see? It's good for Amy to talk any way she wants. It's good for her to feel bad. Everything's good. Everything *has* to be good . . ."

Anthony's mother was pale. And so was Aunt Amy—the peril of the moment had suddenly penetrated the clouds surrounding her mind. Sometimes it was difficult to handle words so that they might not prove disastrous. You just never *knew*. There were so many things it was wise not to say, or even think—but remonstration for saying or thinking them

might be just as bad, if Anthony heard and decided to do anything about it. You could just never tell what Anthony was liable to do. Everything had to be good. Had to be fine just as it was, even if it wasn't. Always. Because any change might be worse. So terribly much worse.

"Oh, my goodness, yes, of course it's good," Mom said. "You talk any way you want to, Amy, and it's just fine. Of course, you want to remember that some ways are *better* than others . . ."

Aunt Amy stirred the peas, fright in her pale eyes. "Oh, yes," she said. "But I don't feel like talking right now. It's *good* that I don't feel like talking."

Dad said tiredly, smiling, "I'm going out and wash up."

* * *

They started arriving around eight o'clock. By that time, Mom and Aunt Amy had the big table in the dining room set, and two more tables off to the side. The candles were burning, and the chairs situated, and Dad had a big fire going in the fireplace.

The first to arrive were the Sipichs, John and Mary. John wore his best suit, and was well-scrubbed and pink-faced after his day in McIntyre's pasture. The suit was neatly pressed, but getting threadbare at elbows and cuffs. Old McIntyre was working on a loom, designing it out of school-books, but so far it was slow going. McIntyre was a capable man with wood and tools, but a loom was a big order when you couldn't get metal parts. McIntyre had been one of the ones who, at first, had wanted to try to get Anthony to make things the villagers needed, like clothes and canned goods and medical supplies and gasoline. Since then, he felt that what had happened to the whole Terrance family and Joe Kinney was his fault, and he worked hard trying to make it up to the rest of them. And since then, no one had tried to get Anthony to do anything.

Mary Sipich was a small, cheerful woman in a simple dress. She immediately set about helping Mom and Aunt Amy put the finishing touches on the dinner.

The next arrivals were the Smiths and the Dunns, who lived right next to each other down the road, only a few yards from the nothingness. They drove up in the Smiths' wagon, drawn by their old horse.

Then the Reillys showed up, from across the darkened wheatfield, and the evening really began. Pat Reilly sat down at the big upright in the front room, and began to play from the popular sheet music on the rack. He played softly, as expressively as he could—and nobody sang. Anthony liked piano playing a whole lot, but not singing; often he would come up from the basement, or down from the attic, or just *come*, and

443
sit on top of the piano, nodding his head as Pat played *Lover* or *Boulder* or *Broken Dreams* or *Night and Day*. He seemed to prefer ballads, sweet-sounding songs—but the one time somebody had started to sing, Anthony had looked over from the top of the piano and done something that made everybody afraid of singing from then on. Later, they'd decided that the piano was what Anthony had heard first, before anybody had ever tried to sing, and now anything else added to it didn't sound right and distracted him from his pleasure.

So, every television night, Pat would play the piano, and that was the beginning of the evening. Wherever Anthony was, the music would make him happy, and put him in a good mood, and he would know that they were gathering for television and waiting for him.

By eight-thirty everybody had shown up, except for the seventeen children and Mrs. Soames who was off watching them in the school-house at the far end of town. The children of Peaksville were never, never allowed near the Fremont house—not since little Fred Smith had tried to play with Anthony on a dare. The younger children weren't even told about Anthony. The others had mostly forgotten about him, or were told that he was a nice, nice goblin but they must never go near him.

Dan and Ethel Hollis came late, and Dan walked in not suspecting a thing. Pat Reilly had played the piano until his hands ached—he'd worked pretty hard with them today—and now he got up, and everybody gathered around to wish Dan Hollis a happy birthday.

"Well, I'll be darned," Dan grinned. "This is swell. I wasn't expecting this at all . . . gosh, this is *swell!*"

They gave him his presents—mostly things they had made by hand, though some were things that people had possessed as their own and now gave him as his. John Sipich gave him a watch charm, hand-carved out of a piece of hickory wood. Dan's watch had broken down a year or so ago, and there was nobody in the village who knew how to fix it, but he still carried it around because it had been his grandfather's and was a fine old heavy thing of gold and silver. He attached the charm to the chain, while everybody laughed and said John had done a nice job of carving. Then Mary Sipich gave him a knitted necktie, which he put on, removing the one he'd worn.

The Reillys gave him a little box they had made, to keep things in. They didn't say what things, but Dan said he'd keep his personal jewelry in it. The Reillys had made it out of a cigar box, carefully peeled of its paper and lined on the inside with velvet. The outside had been polished, and carefully if not expertly carved by Pat—but his carving got complimented too. Dan Hollis received many other gifts—a pipe, a pair of

shoelaces, a tie pin, a knit pair of socks, some fudge, a pair of garters made from old suspenders.

He unwrapped each gift with vast pleasure, and wore as many of them as he could right there, even the garters. He lit up the pipe, and said he'd never had a better smoke; which wasn't quite true, because the pipe wasn't broken in yet. Pete Manners had had it lying around ever since he'd received it as a gift four years ago from an out-of-town relative who hadn't known he'd stopped smoking.

Dan put the tobacco into the bowl very carefully. Tobacco was precious. It was only pure luck that Pat Reilly had decided to try to grow some in his backyard just before what had happened to Peaksville had happened. It didn't grow very well, and then they had to cure it and shred it and all, and it was just precious stuff. Everybody in town used wooden holders old McIntyre had made, to save on butts.

Last of all, Thelma Dunn gave Dan Hollis the record she had found.

Dan's eyes misted even before he opened the package. He knew it was a record.

"Gosh," he said softly. "What one is it? I'm almost afraid to look..."

"You haven't got it, darling," Ethel Hollis smiled. "Don't you remember, I asked about *You Are My Sunshine*?"

"Oh, gosh," Dan said again. Carefully he removed the wrapping and stood there fondling the record, running his big hands over the worn grooves with their tiny, dulling crosswise scratches. He looked around the room, eyes shining, and they all smiled back, knowing how delighted he was.

"Happy birthday, darling!" Ethel said, throwing her arms around him and kissing him.

He clutched the record in both hands, holding it off to one side as she pressed against him. "Hey," he laughed, pulling back his head. "Be careful... I'm holding a priceless object!" He looked around again, over his wife's arms, which were still around his neck. His eyes were hungry. "Look... do you think we could play it? Lord, what I'd give to hear some new music... just the first part, the orchestra part, before Como sings?"

Faces sobered. After a minute, John Sipich said, "I don't think we'd better, Dan. After all, we don't know just where the singer comes in—it'd be taking too much of a chance. Better wait till you get home."

Dan Hollis reluctantly put the record on the buffet with all his other presents. "It's good," he said automatically, but disappointedly, "that I can't play it here."

"Oh, yes," said Sipich. "It's good." To compensate for Dan's disappointed tone, he repeated, "It's good."

They ate dinner, the candles lighting their smiling faces, and ate it all right down to the last delicious drop of gravy. They complimented Mom and Aunt Amy on the roast beef, and the peas and carrots, and the tender corn on the cob. The corn hadn't come from the Fremont's cornfield, naturally—everybody knew what was out there; and the field was going to weeds.

Then they polished off the dessert—homemade ice cream and cookies. And then they sat back, in the flickering light of the candles, and chatted, waiting for television.

There never was a lot of mumbling on television night—everybody came and had a good dinner at the Fremonts', and that was nice, and afterwards there was television, and nobody really thought much about that—it just had to be put up with. So it was a pleasant enough get-together, aside from your having to watch what you said just as carefully as you always did everywhere. If a dangerous thought came into your mind, you just started mumbling, even right in the middle of a sentence. When you did that, the others just ignored you until you felt happier again and stopped.

Anthony liked television night. He had done only two or three awful things on television night in the whole past year.

Mom had put a bottle of brandy on the table, and they each had a tiny glass of it. Liquor was even more precious than tobacco. The villagers could make wine, but the grapes weren't right, and certainly the techniques weren't, and it wasn't very good wine. There were only a few bottles of real liquor left in the village—four rye, three Scotch, three brandy, nine real wine and half a bottle of Drambuie belonging to old McIntyre (only for marriages)—and when those were gone, that was it.

Afterward, everybody wished that the brandy hadn't been brought out. Because Dan Hollis drank more of it than he should have, and mixed it with a lot of the homemade wine. Nobody thought anything about it at first, because he didn't show it much outside, and it was his birthday party and a happy party, and Anthony liked these get-togethers and shouldn't see any reason to do anything even if he was listening.

But Dan Hollis got high, and did a fool thing. If they'd seen it coming, they'd have taken him outside and walked him around.

The first thing they knew, Dan stopped laughing right in the middle of the story about how Thelma Dunn had found the Perry Como record and dropped it and it hadn't broken because she'd moved faster than she ever had before in her life and caught it. He was fondling the record

again, and looking longingly at the Fremonts' gramophone over in the corner, and suddenly he stopped laughing and his face got slack, and then it got ugly, and he said, "Oh, *Christ!*"

Immediately the room was still. So still they could hear the whining movement of the grandfather's clock out in the hall. Pat Reilly had been playing the piano, softly. He stopped, his hands poised over the yellowed keys.

The candles on the dining-room table flickered in a cool breeze that blew through the lace curtains over the bay window.

"Keep playing, Pat," Anthony's father said softly.

Pat started again. He played *Night and Day*, but his eyes were side-wise on Dan Hollis, and he missed notes.

Dan stood in the middle of the room, holding the record. In his other hand he held a glass of brandy so hard his hand shook. They were all looking at him.

"*Christ!*" he said again, and he made it sound like a dirty word.

Reverend Younger, who had been talking with Mom and Aunt Amy by the dining-room door, said "Christ" too—but he was using it in a prayer. His hands were clasped, and his eyes were closed.

John Sipich moved forward. "Now, Dan . . . it's *good* for you to talk that way. But you don't want to talk too much, you know."

Dan shook off the hand Sipich put on his arm.

"Can't even play my record," he said loudly. He looked down at the record, and then around at their faces. "Oh, my *God* . . ."

He threw the glassful of brandy against the wall. It splattered and ran down the wallpaper in streaks.

Some of the women gasped.

"Dan," Sipich said in a whisper. "Dan, cut it out—"

Pat Reilly was playing *Night and Day* louder, to cover up the sounds of the talk. It wouldn't do any good, though, if Anthony was listening. Dan Hollis went over to the piano and stood by Pat's shoulder, swaying a little.

"Pat," he said. "Don't play *that*. Play *this*." And he began to sing softly, hoarsely, miserably: "Happy birthday to me . . . Happy birthday to me . . ."

"*Dan!*" Ethel Hollis screamed. She tried to run across the room to him. Mary Sipich grabbed her arm and held her back. "Dan," Ethel screamed again. "Stop—"

"My God, be quiet!" hissed Mary Sipich, and pushed her toward one of the men, who put his hand over her mouth and held her still.

"—Happy birthday, dear Danny," Dan sang. "Happy birthday to me!" He stopped and looked down at Pat Reilly. "Play it, Pat. Play it,

so I can sing right . . . you know I can't carry a tune unless somebody plays it!"

Pat Reilly put his hands on the keys and began *Lover*—in a slow waltz tempo, the way Anthony liked it. Pat's face was white. His hands fumbled.

Dan Hollis stared over at the dining-room door. At Anthony's mother, and at Anthony's father who had gone to join her.

"*You* had him," he said. Tears gleamed on his cheeks as the candlelight caught them. "*You* had to go and *have* him . . ."

He closed his eyes, and the tears squeezed out. He sang loudly, "You are my sunshine . . . my only sunshine . . . you make me happy . . . when I am blue . . ."

Anthony came into the room.

Pat stopped playing. He froze. Everybody froze. The breeze rippled the curtains. Ethel Hollis couldn't even try to scream—she had fainted. "Please don't take my sunshine . . . away . . ." Dan's voice faltered into silence. His eyes widened. He put both hands out in front of him, the empty glass in one, the record in the other. He hiccupped, and said, "*No*—"

"Bad man," Anthony said, and thought Dan Hollis into something like nothing anyone would have believed possible, and then he thought the thing into a grave deep, deep in the cornfield.

The glass and record thumped on the rug. Neither broke.

Anthony's purple gaze went around the room.

Some of the people began mumbling. They all tried to smile. The sound of mumbling filled the room like a far-off approval. Out of the murmuring came one or two clear voices:

"Oh, it's a very *good* thing," said John Sipich.

"A good thing," said Anthony's father, smiling. He'd had more practice in smiling than most of them. "A wonderful thing."

"It's swell . . . just swell," said Pat Reilly, tears leaking from eyes and nose, and he began to play the piano again, softly, his trembling hands feeling for *Night and Day*.

Anthony climbed up on top of the piano, and Pat played for two hours.

Afterward, they watched television. They all went into the front room, and lit just a few candles, and pulled up chairs around the set. It was a small-screen set, and they couldn't all sit close enough to it to see, but that didn't matter. They didn't even turn the set on. It wouldn't have worked anyway, there being no electricity in Peaksville.

They just sat silently, and watched the twisting, writhing shapes on

the screen, and listened to the sounds that came out of the speaker, and none of them had any idea of what it was all about. They never did. It was always the same.

"It's real nice," Aunt Amy said once, her pale eyes on the meaningless flickers and shadows. "But I liked it a little better when there were cities outside and we could get real—"

"Why, Amy!" said Mom. "It's good for you to say such a thing. Very good. But how can you mean it? Why, this television is much better than anything we ever used to get!"

"Yes," chimed in John Sipich. "It's fine. It's the best show we've ever seen!"

He sat on the couch, with two other men, holding Ethel Hollis flat against the cushions, holding her arms and legs and putting their hands over her mouth, so she couldn't start screaming again.

"It's really good!" he said again.

Mom looked out of the front window, across the darkened road, across Henderson's darkened wheat field to the vast, endless, gray nothingness in which the little village of Peaksville floated like a soul—the huge nothingness that was most evident at night, when Anthony's brassy day had gone.

It did no good to wonder where they were . . . no good at all. Peaksville was just someplace. Someplace away from the world. It was wherever it had been since that day three years ago when Anthony had crept from her womb and old Doc Bates—God rest him—had screamed and dropped him and tried to kill him, and Anthony had whined and done the thing. Had taken the village someplace. Or had destroyed the world and left only the village, nobody knew which.

It did no good to wonder about it. Nothing at all did any good—except to live as they must live. Must always, always live, if Anthony would let them.

These thoughts were dangerous, she thought.

She began to mumble. The others started mumbling too. They had all been thinking, evidently.

The men on the couch whispered and whispered to Ethel Hollis, and when they took their hands away, she mumbled too.

While Anthony sat on top of the set and made television, they sat around and mumbled and watched the meaningless, flickering shapes far into the night.

Next day it snowed, and killed off half the crops—but it was a good day.

THE COLD EQUATIONS

by Tom Godwin

He was not alone.

There was nothing to indicate the fact but the white hand of the tiny gauge on the board before him. The control room was empty but for himself; there was no sound other than the murmur of the drives—but the white hand had moved. It had been on zero when the little ship was launched from the *Stardust*; now, an hour later, it had crept up. There was something in the supplies closet across the room, it was saying, some kind of a body that radiated heat.

It could be but one kind of a body—a living, human body.

He leaned back in the pilot's chair and drew a deep, slow breath, considering what he would have to do. He was an EDS pilot, inured to the sight of death, long since accustomed to it and to viewing the dying of another man with an objective lack of emotion, and he had no choice in what he must do. There could be no alternative—but it required a few moments of conditioning for even an EDS pilot to prepare himself to walk across the room and coldly, deliberately, take the life of a man he had yet to meet.

He would, of course, do it. It was the law, stated very bluntly and definitely in grim Paragraph L, Section 8, of Interstellar Regulations: *Any stowaway discovered in an EDS shall be jettisoned immediately following discovery.*

It was the law, and there could be no appeal.

It was a law not of men's choosing but made imperative by the circumstances of the space frontier. Galactic expansion had followed the

THEODORE STURGEON

A Saucer of Loneliness

Theodore Sturgeon's fiction abounds with ordinary characters undone by their all-too-human shortcomings or struggling in unsympathetic environments to find others who share their desires and feelings of loneliness. Sturgeon began publishing in 1939, and made his mark early in both fantasy and science fiction with stories that have since become classics. "Microcosmic God" concerns a scientist who plays God with unexpectedly amusing results when he repeatedly challenges a microscopic race he has created with threats to their survival. "If" focuses on the reactions of characters in a rural setting trying to contend with a rampaging inhuman monster. In "Yesterday Was Monday," a man discovers that each day's reality is a theatrical stage set built by diminutive laborers. "Killdozer" is a variation on the theme of Frankenstein in which a construction crew is trapped on an island where a bulldozer has become imbued with the electrical energy of an alien life form. Fiction Sturgeon wrote after World War II shows the gentle humor of his earlier work shading into pathos. "Memorial" and "Thunder and Roses" are cautionary tales about the abuses of use of nuclear weapons. "A Saucer of Loneliness" and "Maturity" both use traditional science fiction scenarios to explore feelings of alienation and inadequacy. Sturgeon's work at novel length is memorable for its portrayals of characters who rise above the isolation their failure to fit into normal society imposes. *More Than Human* tells of a group of psychologically dysfunctional individuals who pool their individual strengths to create a superhuman gestalt consciousness. In *The Dreaming Jewels*, a young boy discovers that his behavioral abnormalities are actually the symptoms of superhuman powers. Sturgeon is also renowned for his explorations of taboo sexuality and restrictive moralities in such stories as *Some of Your Blood*, "The World Well Lost," and "If All Men Were Brothers Would You Let One Marry Your Sister?". His short fiction has been collected in *Without Sorcery*, *E. Pluribus Unicorn*, *Caviar*, and *A Touch of Strange*. The compilations *The Ultimate Egoist*, *Thunder and Roses*, *A Saucer of Loneliness*, *The Perfect Host*, *Baby Is Three*, *The Microcosmic God*, and *Killdozer*, edited by Paul Williams, are the first seven volumes in a series that will eventually reprint all of Sturgeon's short fiction.

IF SHE'S DEAD, I thought, I'll never find her in this white flood of moonlight on the white sea, with the surf seething in and over the pale, pale sand like a great shampoo. Almost always, suicides who stab themselves or shoot themselves in the heart carefully bare their chests; the same strange impulse generally makes the sea-suicide go naked.

A little earlier, I thought, or later, and there would be shadows for the dunes and the breathing toss of the foam. Now the only real shadow was mine, a tiny thing just under me, but black enough to feed the blackness of the shadow of a blimp.

A little earlier, I thought, and I might have seen her plodding up the silver shore, seeking a place lonely enough to die in. A little later and my legs would rebel against this shuffling trot through sand, the maddening sand that could not hold and would not help a hurrying man.

My legs did give way then and I knelt suddenly, sobbing—not for her; not yet—just for air. There was such a rush about me: wind, and tangled spray, and colors upon colors and shades of colors that were not colors at all but shifts of white and silver. If light like that were sound, it would sound like the sea on sand, and if my ears were eyes, they would see such a light.

I crouched there, gasping in the swirl of it, and a flood struck me, shallow and swift, turning up and outward like flower petals where it touched my knees, then soaking me to the waist in its bubble and crash. I pressed my knuckles to my eyes so they would open again. The sea was on my lips with the taste of tears and the whole white night shouted and wept aloud.

And there she was.

Her white shoulders were a taller curve in the sloping foam. She must have sensed me—perhaps I yelled—for she turned and saw me kneeling there. She put her fists to her temples and her face twisted, and she uttered a piercing wail of despair and fury, and then plunged seaward and sank.

I kicked off my shoes and ran into the breakers, shouting, hunting, grasping at flashes of white that turned to sea-salt and coldness in my fingers. I plunged right past her, and her body struck my side as a wave whipped my face and tumbled both of us. I gasped in solid water, opened my eyes beneath the surface and saw a greenish-white distorted moon hurtle as I spun. Then there was sucking sand under my feet again and my left hand was tangled in her hair.

The receding wave towed her away and for a moment she streamed out from my hand like steam from a whistle. In that moment I was sure she was dead, but as she settled to the sand, she fought and scrambled to her feet.

She hit my ear, wet, hard, and a huge, pointed pain lanced into my head. She pulled, she lunged away from me, and all the while my hand was caught in her hair. I couldn't have freed her if I had wanted to. She spun to me with the next wave, battered and clawed at me, and we went into deeper water.

"Don't . . . don't . . . I can't swim!" I shouted, so she clawed me again.

"Leave me alone," she shrieked. "Oh, dear God, why can't you *leave*" (said her ngernails) "me . . ." (said her snapping teeth) "*alone!*" (said her small, hard fist).

So by her hair I pulled her head down tight to her white shoulder; and with the edge of my free hand I hit her neck twice. She floated again, and I brought her ashore.

I carried her to where a dune was between us and the sea's broad, noisy tongue, and the wind was above us somewhere. But the light was as bright. I rubbed her wrists and stroked her face and said, "it's all right," and, "There!" and some names I used to have for a dream I had long, long before I ever heard of her.

She lay still on her back with the breath hissing between her teeth, with her lips in a smile which her twisted-tight, wrinkle-sealed eyes made not a smile but a torture. She was well and conscious for many moments and still her breath hissed and her closed eyes twisted.

"Why couldn't you leave me alone?" she asked at last. She opened her eyes and looked at me. She had so much misery that there was no room for fear. She shut her eyes again and said, "You know who I am."

"I know," I said.

She began to cry.

I waited, and when she stopped crying, there were shadows among the dunes. A long time.

She said, "You don't know who I am. Nobody knows who I am."

I said, "It was in all the papers."

"That!" She opened her eyes slowly and her gaze traveled over my face, my shoulders, stopped at my mouth, touched my eyes for the briefest second. She curled her lips and turned away her head. "Nobody knows who I am."

I waited for her to move or speak, and finally I said, "Tell me."

"Who are you?" she asked, with her head still turned away.

"Someone who . . ."

"Well?"

"Not now," I said. "Later, maybe."

She sat up suddenly and tried to hide herself. "Where are my clothes?"

"I didn't see them."

"Oh," she said. "I remember. I put them down and kicked sand over them, just where a dune would come and smooth them over, hide them as if they never were . . . I hate sand. I wanted to drown in the sand, but it wouldn't let me . . . You mustn't look at me!" she shouted. "I hate to have you looking at me!" She threw her head from side to side, seeking. "I can't stay here like this! What can I do? Where can I go?"

"Here," I said.

She let me help her up and then snatched her hand away, half turned from me. "Don't touch me. Get away from me."

"Here," I said again, and walked down the dune where it curved in the moonlight, tipped back into the wind and down and became not dune but beach. "Here," I pointed behind the dune.

At last she followed me. She peered over the dune where it was chest-high, and again where it was knee-high. "Back there?"

She nodded.

"I didn't see them."

"So dark . . ." She stepped over the low dune and into the aching black of those moon-shadows. She moved away cautiously, feeling tenderly with her feet, back to where the dune was higher. She sank down into the blackness and disappeared there. I sat on the sand in the light. "Stay away from me," she spat.

I rose and stepped back. Invisible in the shadows, she breathed, "Don't go away." I waited, then saw her hand press out of the clean-cut shadows. "There," she said, "over there. In the dark. Just be a . . . Stay away from me now . . . Be a—voice."

I did as she asked, and sat in the shadows perhaps six feet from her.

She told me about it. Not the way it was in the papers.

She was perhaps seventeen when it happened. She was in Central Park, in New York. It was too warm for such an early spring day, and the hammered brown slopes had a dusting of green of precisely the consistency of that morning's hoarfrost on the rocks. But the frost was gone and the grass was brave and tempted some hundreds of pairs of feet from the asphalt and concrete to tread on it.

Hers were among them. The sprouting soil was a surprise to her feet, as the air was to her lungs. Her feet ceased to be shoes as she walked, her body was consciously more than clothes. It was the only kind of day which in itself can make a city-bred person raise his eyes. She did.

For a moment she felt separated from the life she lived, in which there was no fragrance, no silence, in which nothing ever quite fit nor was quite filled. In that moment the ordered disapproval of the buildings around the pallid park could not reach her; for two, three clean breaths it no longer mattered that the whole wide world really belonged to images projected on a screen; to gently groomed goddesses in these steel-and-glass towers; that it belonged, in short, always, always to someone else.

So she raised her eyes, and there above her was the saucer.

It was beautiful. It was golden, with a dusty finish like that of an unripe Concord grape. It made a faint sound, a chord composed of two tones and a blunted hiss like the wind in tall wheat. It was darting about like a swallow, soaring and dropping. It circled and dropped and hovered like a fish, shimmering. It was like all these living things, but with that beauty it had all the loveliness of things turned and burnished, measured, machined, and metrical.

At first she felt no astonishment, for this was so different from anything she had ever seen before that it had to be a trick of the eye, a false evaluation of size and speed

and distance that in a moment would resolve itself into a sun-flash on an airplane or the lingering glare of a welding arc.

She looked away from it and abruptly realized that many other people saw it—saw *something*—too. People all around her had stopped moving and speaking and were craning upward. Around her was a globe of silent astonishment, and outside it, she was aware of the life-noise of the city, the hard-breathing giant who never inhales. She looked up again, and at last began to realize how large and how far away the saucer was. No: rather, how small and how very near it was. It was just the size of the largest circle she might make with her two hands, and it floated not quite eighteen inches over her head.

Fear came then. She drew back and raised a forearm, but the saucer simply hung there. She bent far sideways, twisted away, leaped forward, looked back and upward to see if she had escaped it. At first she couldn't see it; then as she looked up and up, there it was, close and gleaming, quivering and crooning, right over her head. She bit her tongue.

From the corner of her eye, she saw a man cross himself. *He did that because he saw me standing here with a halo over my head*, she thought. And that was the greatest single thing that had ever happened to her. No one had ever looked at her and made a respectful gesture before, not once, not ever. Through terror, through panic and wonderment, the comfort of that thought nestled into her, to wait to be taken out and looked at again in lonely times.

The terror was uppermost now, however. She backed away, staring upward, stepping a ludicrous cakewalk. She should have collided with people. There were plenty of people there, gaping and craning, but she reached none. She spun around and discovered to her horror that she was the center of a pointing, pressing crowd. Its mosaic of eyes all bulged, and its inner circle braced its many legs to press back and away from her. The saucer's gentle note deepened. It tilted, dropped an inch or so. Someone screamed, and the crowd broke away from her in all directions, milled about, and settled again in a new dynamic balance, a much larger ring, as more and more peopleaced to thicken it against the efforts of the inner circle to escape.

The saucer hummed and tilted, tilted . . .

She opened her mouth to scream, fell to her knees, and the saucer struck. It dropped against her forehead and clung there. It seemed almost to lift her. She came erect on her knees, made one effort to raise her hands against it, and then her arms stiffened down and back, her hands not reaching the ground. For perhaps a second and a half the saucer held her rigid, and then it passed a single ecstatic quiver to her body and dropped it. She plumped to the ground, the backs of her thighs heavy and painful on her heels and ankles.

The saucer dropped beside her, rolled once in a small circle, once just around its edge, and lay still. It lay still and dull and metallic, different and dead.

Hazily, she lay and gazed at the gray-shrouded blue of the good spring sky, and hazily she heard whistles.

And some tardy screams.

And a great stupid voice bellowing, "Give her air!" which made everyone press closer.

Then there wasn't so much sky because of the blue-clad bulk with its metal buttons and its leatherette notebook. "Okay, okay, what's happened here stand back figods sake."

And the widening ripples of observation, interpretation and comment: "It knocked her down." "Some guy knocked her down." "He knocked her down." "Some guy knocked her down and—" "Right in broad daylight this guy. . . ." "The park's gettin to be. . ." onward and outward, the adulteration of fact until it was lost altogether because excitement is so much more important.

Somebody with a harder shoulder than the rest bulling close, a notebook here, too, a witnessing eye over it, ready to change ". . . a beautiful brunet. . ." to "an attractive brunet" for the afternoon editions, because "attractive" is as dowdy as any woman is allowed to get if she is a victim in the news.

The glittering shield and the florid face bending close: "You hurt bad, sister?" And the echoes, back and back through the crowd, "Hurt bad, hurt bad, badly injured, he beat the hell out of her, broad daylight. . . ."

And still another man, slim and purposeful, tan gaberdine, cleft chin and beard-shadow: "Flyin' saucer, hm? Okay, Officer, I'll take over here."

"And who the hell might you be, takin' over?"

The flash of a brown leather wallet, a face so close behind that its chin was pressed into the gaberdine shoulder. The face said, awed: "FBI" and that rippled outward, too. The policeman nodded—the entire policeman nodded in one single bobbing genuflection.

"Get some help and clear this area," said the gaberdine.

"Yes, sir!" said the policeman.

"FBI, FBI," the crowd murmured, and there was more sky to look at above her.

She sat up and there was a glory in her face. "The saucer talked to me," she sang.

"You shut up," said the gaberdine. "You'll have lots of chance to talk later."

"Yeah, sister," said the policeman. "My God, this mob could be full of Communists."

"You shut up, too," said the gaberdine.

Someone in the crowd told someone else a Communist beat up this girl, while someone else was saying she got beat up because she was a Communist.

She started to rise, but solicitous hands forced her down again. There were thirty police there by that time.

"I can walk," she said.

"Now, you just take it easy," they told her. They put a stretcher down beside her and lifted her onto it and covered her with big blanket.

"I can walk," she said as they carried her through the crowd.

A woman went white and turned away moaning. "Oh, my God, how awful!"

A small man with round eyes stared and stared at her and licked and licked his lips. The ambulance. They slid her in. The gaberdine was already there.

A white-coated man with very clean hands: "How did it happen, miss?"

"No questions," said the gaberdine. "Security."

The hospital.

She said, "I got to get back to work."

"Take your clothes off," they told her.

She had a bedroom to herself then for the first time in her life. Whenever the door opened, she could see a policeman outside. It opened very often to admit the kind of civilians who were very polite to military people, and the kind of military people who were even more polite to certain civilians. She did not know what they did nor what they wanted. Every single day they asked her four million five hundred thousand questions. Apparently they never talked to each other, because each of them asked her the same questions over and over.

"What is your name?"

"How old are you?"

"What year were you born?"

"What is your name?"

Sometimes they would push her down strange paths with their questions.

"Now, your uncle. Married a woman from Middle Europe, did he? Where in fiddle Europe?"

"What clubs or fraternal organizations did you belong to? Ah! Now, about that inkeydinks gang on Sixty-third Street. Who was *really* behind it?"

But over and over again, "What did you mean when you said the saucer talked to you?"

And she would say, "It talked to me."

And they would say, "And it said—"

And she would shake her head.

There would be a lot of shouting ones, and then a lot of kind ones. No one had ever been so kind to her before, but she soon learned that no one was being kind to her. They were just getting her to relax, to think of other things, so they could suddenly shoot that question at her. "What do you mean it talked to you?"

Pretty soon it was just like Mom's or school or anyplace, and she used to sit with her mouth closed and let them yell. Once they sat her on a hard chair for hours and hours with a light in her eyes and let her get thirsty. Home, there was a transom over

the bedroom door and Mom used to leave the kitchen light glaring through it all night, every night, so she wouldn't get the horrors. So the light didn't bother her at all.

They took her out of the hospital and put her in jail. Some ways it was good. The food. The bed was all right, too. Through the window she could see lots of women exercising in the yard. It was explained to her that they all had much harder beds.

"You are a very important young lady, you know."

That was nice at first, but as usual, it turned out they didn't mean her at all. They kept working on her. Once they brought the saucer in to her. It was inside a big wooden crate with a padlock, and a steel box inside that with a Yale lock. It only weighed a couple of pounds, the saucer, but by the time they got it packed, it took two men to carry it and four men with guns to watch them.

They made her act out the whole thing just the way it happened, with some soldiers holding the saucer over her head. It wasn't the same. They'd cut a lot of chips and pieces out of the saucer, and, besides, it was that dead gray color. They asked her if she knew anything about that, and for once, she told them.

"It's empty now," she said.

The only one she would ever talk to was a little man with a fat belly who said to her the first time he was alone with her, "Listen, I think the way they've been treating you stinks. Now, get this: I have a job to do. My job is to find out *why* you won't tell what the saucer said. I don't want to know what it said and I'll never ask you. I don't even want you to tell me. Let's just find out *why* you're keeping it a secret."

Finding out why turned out to be hours of just talking about having pneumonia and the flower pot she made in second grade that Mom threw down the fire escape and getting left back in school and the dream about holding a wineglass in both hands and peeping over it at some man.

And one day she told him why she wouldn't say about the saucer, just the way it came to her: "Because it was talking to *me*, and it's just nobody else's business."

She even told him about the man crossing himself that day. It was the only other thing she had of her own.

He was nice. He was the one who warned her about the trial. "I have no business saying this, but they're going to give you the full dress treatment. Judge and jury and all. You just say what you want to say, no less and no more, hear? And don't let 'em get your goat. You have a right to own something."

He got up and swore and left.

First a man came and talked to her for a long time about how maybe this Earth would be attacked from outer space by beings much stronger and cleverer than we are, and maybe she had the key to a defense. So she owed it to the whole world. And then even if Earth wasn't attacked, just think of what an advantage she might give this country over its enemies. Then he shook his finger in her face and said that what

she was doing amounted to working for the enemies of her country. And he turned out to be the man that was defending her at the trial.

The jury found her guilty of contempt of court, and the judge recited a long list of penalties he could give her. He gave her one of them and suspended it. They put her back in jail for a few more days, and one fine day they turned her loose.

That was wonderful at first. She got a job in a restaurant, and a furnished room. She had been in the papers so much that Mom didn't want her back home. Mom was drunk most of the time and sometimes used to tear up the whole neighborhood, but all the same she had very special ideas about being respectable, and being in the papers all the time for spying was not her idea of being decent. So she put her maiden name on the mailbox downstairs and told her daughter not to live there anymore.

At the restaurant she met a man who asked her for a date. The first time. She spent every cent she had on a red handbag to go with her red shoes. They weren't the same shade, but anyway, they were both red. They went to the movies, and afterward he didn't try to kiss her or anything; he just tried to find out what the flying saucer told her. She didn't say anything. She went home and cried all night.

Then some men sat in a booth talking and they shut up and glared at her every time she came past. They spoke to the boss, and he came and told her that they were electronics engineers working for the government and they were afraid to talk shop while she was around—wasn't she some sort of spy or something? So she got fired.

Once she saw her name on a jukebox. She put in a nickel and punched that number, and the record was all about "the flyin' saucer came down one day, and taught her a brand-new way to play, and what it was I will not say, but she took me out of this world." And while she was listening to it, someone in the juke joint recognized her and called her by name. Four of them followed her home and she had to block the door shut.

Sometimes she'd be all right for months on end, and then someone would ask for a date. Three times out of five, she and the date were followed. Once the man she was with arrested the man who was tailing them. Twice the man who was tailing them arrested the man she was with. Five times out of five, the date would try to find out about the saucer. Sometimes she would go out with someone and pretend that it was a real date, but she wasn't very good at it.

So she moved to the shore and got a job cleaning at night in offices and stores. There weren't many to clean, but that just meant there weren't many people to remember her face from the papers. Like clockwork, every eighteen months, some feature writer would drag it all out again in a magazine or a Sunday supplement; and every time anyone saw a headlight on a mountain or a light on a weather balloon, it had to be a flying saucer, and there had to be some tired quip about the saucer wanting to tell secrets. Then for two or three weeks she'd stay off the streets in the daytime.

Once she thought she had it whipped. People didn't want her, so she began

reading. The novels were all right for a while until she found out that most of them were like the movies—all about the pretty ones who really own the world. So she learned things—animals, trees. A lousy little chipmunk caught in a wire fence bit her. The animals didn't want her. The trees didn't care.

Then she hit on the idea of the bottles. She got all the bottles she could and wrote on papers which she corked into the bottles. She'd tramp miles up and down the beaches and throw the bottles out as far as she could. She knew that if the right person found one, it would give that person the only thing in the world that would help. Those bottles kept her going for three solid years. Everyone's got to have a secret little something he does.

And at last the time came when it was no use anymore. You can go on trying to help someone who *maybe* exists; but soon you can't pretend there's such a person anymore. And that's it. The end.

"Are you cold?" I asked when she was through telling me.

The surf was quieter and the shadows longer.

"No," she answered from the shadows. Suddenly she said, "Did you think I was mad at you because you saw me without my clothes?"

"Why shouldn't you be?"

"You know, I don't care? I wouldn't have wanted . . . wanted you to see me even in a ball gown or overalls. You can't cover up my carcass. It shows; it's there whatever. I just didn't want you to see me. At all."

"Me, or anyone?"

She hesitated. "You."

I got up and stretched and walked a little, thinking. "Didn't the FBI try to stop you throwing those bottles?"

"Oh, sure. They spent I don't know how much taxpayers' money gathering 'em up. They still make a spot check every once in a while. They're getting tired of it, though. All the writing in the bottles is the same." She laughed. I didn't know she could.

"What's funny?"

"All of 'em—judges, jailers, jukeboxes—people. Do you know it wouldn't have saved me a minute's trouble if I'd told 'em the whole thing at the very beginning?"

"No?"

"No. They wouldn't have believed me. What they wanted was a new weapon. Super-science from a super-race, to slap hell out of the super-race if they ever got a chance, or out of our own if they don't. All those brains," she breathed, with more wonder than scorn, "all that brass. They think 'super-race' and it comes out 'super-science.' Don't they ever imagine a super-race has super-feelings, too—super-laughter, maybe, or super-hunger?" She paused. "Isn't it time you asked me what the saucer said?"

"I'll tell you," I blurted.

*“There is in certain living souls
A quality of loneliness unspeakable,
So great it must be shared
As company is shared by lesser beings.
Such a loneliness is mine; so know by this
That in immensity
There is one lonelier than you.”*

“Dear Jesus,” she said devoutly, and began to weep. “And how is it addressed?”
“To the loneliest one . . .”

“How did you know?” she whispered.

“It’s what you put in the bottles, isn’t it?”

“Yes,” she said. “Whenever it gets to be too much, that no one cares, that no one ever did . . . you throw a bottle into the sea, and out goes a part of your own loneliness. You sit and think of someone somewhere finding it . . . learning for the first time that the worst there is can be understood.”

The moon was setting and the surf was hushed. We looked up and out to the stars. She said, “We don’t know what loneliness is like. People thought the saucer was a saucer, but it wasn’t. It was a bottle with a message inside. It had a bigger ocean to cross—all of space—and not much chance of finding anybody. Loneliness? We don’t know loneliness.”

When I could, I asked her why she had tried to kill herself.

“I’ve had it good,” she said, “with what the saucer told me. I wanted to . . . pay back. I was bad enough to be helped; I had to know I was good enough to help. No one wants me? Fine. But don’t tell me no one, anywhere, wants my help. I can’t stand that.”

I took a deep breath. “I found one of your bottles two years ago. I’ve been looking for you ever since. Tide charts, current tables, maps and . . . wandering. I heard some talk about you and the bottles hereabouts. Someone told me you’d quit doing it, you’d taken to wandering the dunes at night. I knew why. I ran all the way.”

I needed another breath now. “I got a club foot. I think right, but the words don’t come out of my mouth the way they’re inside my head. I have this nose. I never had a woman. Nobody ever wanted to hire me to work where they’d have to look at me. You’re beautiful,” I said. “You’re beautiful.”

She said nothing, but it was as if a light came from her, more light and far less shadow than ever the practiced moon could cast. Among the many things it meant was that even to loneliness there is an end, for those who are lonely enough, long enough.

ISAAC ASIMOV

Robot Dreams

Robots and the name of Isaac Asimov have been integrally linked since the 1940s, when a number of his stories on cybernetic beings yielded “The Three Laws of Robotics,” an informally distilled set of behavioral guidelines for artificial intelligences interacting with humanity that continues to influence writers today. These stories were eventually collected in *I, Robot* and *The Rest of the Robots*, the latter including his novels *The Caves of Steel* and *The Naked Sun*, hybrids of science fiction and mystery in which the robot and human detective team of R. Daneel Olivaw and Lije Baley solve crimes and ponder the nuances of the human condition. One of the best-known writers of science fiction’s Golden Age, Asimov is renowned for the rationalism of scientific extrapolations in his stories. His masterwork, the *Foundation* series, which spans six novels written over nearly half a century, projects a future galactic history patterned on the rise and fall of the Roman Empire. His signature short story, “Nightfall,” describes with penetrating insight the chaos that convulses an entire civilization on a planet where nightfall descends once every thousand years. Asimov’s short fiction has been collected in *Earth Is Room Enough*, *Nightfall and Other Stories*, *The Bicentennial Man and Other Stories*, and a score of other volumes. His novels include *Pebble in the Sky*, *The Currents of Space*, the Hugo and Nebula Award–winning *The Gods Themselves*, and the immensely popular novelization *Fantastic Voyage*, as well as two series of novels written for young readers, one featuring space ranger Lucky Starr (written under the Paul French byline) and the other Norby the Robot (coauthored with his wife, Jane). He was a five-time winner of the Hugo Award and twice won the Nebula Award. A doctor of chemistry, Asimov was a distinguished and prolific writer of popular science books and columns. His prodigious and varied oeuvre includes mystery novels and short stories, books of limericks, guides to Shakespeare and the Bible, collections of personal memoirs and letters, and two volumes of autobiography, *In Joy Still Felt* and *In Memory Yet Green*. At the time of his death in 1992 he had authored more than three hundred books.

“LAST NIGHT I dreamed,” said LVX-1, calmly.

Susan Calvin said nothing, but her lined face, old with wisdom and experience, seemed to undergo a microscopic twitch.

the screen, and listened to the sounds that came out of the speaker, and none of them had any idea of what it was all about. They never did. It was always the same.

"It's real nice," Aunt Amy said once, her pale eyes on the meaningless flickers and shadows. "But I liked it a little better when there were cities outside and we could get real—"

"Why, Amy!" said Mom. "It's good for you to say such a thing. Very good. But how can you mean it? Why, this television is *much* better than anything we ever used to get!"

"Yes," chimed in John Sipich. "It's fine. It's the best show we've ever seen!"

He sat on the couch, with two other men, holding Ethel Hollis flat against the cushions, holding her arms and legs and putting their hands over her mouth, so she couldn't start screaming again.

"It's really good!" he said again.

Mom looked out of the front window, across the darkened road, across Henderson's darkened wheat field to the vast, endless, gray nothingness in which the little village of Peaksville floated like a soul—the huge nothingness that was most evident at night, when Anthony's brassy day had gone.

It did no good to wonder where they were . . . no good at all. Peaksville was just someplace. Someplace away from the world. It was wherever it had been since that day three years ago when Anthony had crept from her womb and old Doc Bates—God rest him—had screamed and dropped him and tried to kill him, and Anthony had whined and done the thing. Had taken the village someplace. Or had destroyed the world and left only the village, nobody knew which.

It did no good to wonder about it. Nothing at all did any good—except to live as they must live. Must always, always live, if Anthony would let them.

These thoughts were dangerous, she thought.

She began to mumble. The others started mumbling too. They had all been thinking, evidently.

The men on the couch whispered and whispered to Ethel Hollis, and when they took their hands away, she mumbled too.

While Anthony sat on top of the set and made television, they sat around and mumbled and watched the meaningless, flickering shapes far into the night.

Next day it snowed, and killed off half the crops—but it was a good day.

THE COLD EQUATIONS

by Tom Godwin

He was not alone.

There was nothing to indicate the fact but the white hand of the tiny gauge on the board before him. The control room was empty but for himself; there was no sound other than the murmur of the drives—but the white hand had moved. It had been on zero when the little ship was launched from the *Stardust*; now, an hour later, it had crept up. There was something in the supplies closet across the room, it was saying, some kind of a body that radiated heat.

It could be but one kind of a body—a living, human body.

He leaned back in the pilot's chair and drew a deep, slow breath, considering what he would have to do. He was an EDS pilot, inured to the sight of death, long since accustomed to it and to viewing the dying of another man with an objective lack of emotion, and he had no choice in what he must do. There could be no alternative—but it required a few moments of conditioning for even an EDS pilot to prepare himself to walk across the room and coldly, deliberately, take the life of a man he had yet to meet.

He would, of course, do it. It was the law, stated very bluntly and definitely in grim Paragraph L, Section 8, of Interstellar Regulations: *Ary stowaway discovered in an EDS shall be jettisoned immediately following discovery.*

It was the law, and there could be no appeal.

It was a law not of men's choosing but made imperative by the circumstances of the space frontier. Galactic expansion had followed the

development of the hyperspace drive and as men scattered wide across the frontier there had come the problem of contact with the isolated first-colonies and exploration parties. The huge hyperspace cruisers were the product of the combined genius and effort of Earth and were long and expensive in the building. They were not available in such numbers that small colonies could possess them. The cruisers carried the colonists to their new worlds and made periodic visits, running on tight schedules, but they could not stop and turn aside to visit colonies scheduled to be visited at another time; such a delay would destroy their schedule and produce a confusion and uncertainty that would wreck the complex interdependence between old Earth and new worlds of the frontier.

Some method of delivering supplies or assistance when an emergency occurred on a world not scheduled for a visit had been needed and the Emergency Dispatch Ships had been the answer. Small and collapsible, they occupied little room in the hold of the cruiser; made of light metal and plastics, they were driven by a small rocket drive that consumed relatively little fuel. Each cruiser carried four EDS's and when a call for aid was received the nearest cruiser would drop into normal space long enough to launch an EDS with the needed supplies or personnel, then vanish again as it continued on its course.

The cruisers, powered by nuclear converters, did not use the liquid rocket fuel but nuclear converters were far too large and complex to permit their installation in the EDS's. The cruisers were forced by necessity to carry a limited amount of the bulky rocket fuel and the fuel was rationed with care; the cruiser's computers determining the exact amount of fuel each EDS would require for its mission. The computers considered the course coordinates, the mass of the EDS, the mass of pilot and cargo; they were very precise and accurate and omitted nothing from their calculations. They could not, however, foresee, and allow for, the added mass of a stowaway.

The *Stardust* had received the request from one of the exploration parties stationed on Woden; the six men of the party already being stricken with the fever carried by the green *kala* midges and their own supply of serum destroyed by the tornado that had torn through their camp. The *Stardust* had gone through the usual procedure; dropping into normal space to launch the EDS with the fever serum, then vanishing again in hyperspace. Now, an hour later, the gauge was saying there was something more than the small carton of serum in the supplies closet.

He let his eyes rest on the narrow white door of the closet. There, just inside, another man lived and breathed and was beginning to feel

assured that discovery of his presence would now be too late for the pilot to alter the situation. It was too late—for the man behind the door it was far later than he thought and in a way he would find terrible to believe.

There could be no alternative. Additional fuel would be used during the hours of deceleration to compensate for the added mass of the stowaway; infinitesimal increments of fuel that would not be missed until the ship had almost reached its destination. Then, at some distance above the ground that might be as near as a thousand feet or as far as tens of thousands of feet, depending upon the mass of ship and cargo and the preceding period of deceleration, the unmissed increments of fuel would make their absence known; the EDS would expend its last drops of fuel with a sputter and go into whistling free fall. Ship and pilot and stowaway would merge together upon impact as a wreckage of metal and plastic, flesh and blood, driven deep into the soil. The stowaway had signed his own death warrant when he concealed himself on the ship; he could not be permitted to take seven others with him.

He looked again at the telltale white hand, then rose to his feet. What he must do would be unpleasant for both of them; the sooner it was over, the better. He stepped across the control room, to stand by the white door.

"Come out!" His command was harsh and abrupt above the murmur of the drive.

It seemed he could hear the whisper of a furtive movement inside the closet, then nothing. He visualized the stowaway cowering closer into one corner, suddenly worried by the possible consequences of his act and his self-assurance evaporating.

"I said out!"

He heard the stowaway move to obey and he waited with his eyes alert on the door and his hand near the blaster at his side.

The door opened and the stowaway stepped through it, smiling. "All right—I give up. Now what?"

It was a girl.

He stared without speaking, his hand dropping away from the blaster and acceptance of what he saw coming like a heavy and unexpected physical blow. The stowaway was not a man—she was a girl in her teens, standing before him in little white gypsy sandals with the top of her brown, curly head hardly higher than his shoulder, with a faint, sweet scent of perfume coming from her and her smiling face tilted up so her eyes could look unknowing and unafraid into his as she waited for his answer.

Now what? Had it been asked in the deep, defiant voice of a man he would have answered it with action, quick and efficient. He would have taken the stowaway's identification disk and ordered him into the air lock. Had the stowaway refused to obey, he would have used the blaster. It would not have taken long; within a minute the body would have been ejected into space—had the stowaway been a man.

He returned to the pilot's chair and motioned her to seat herself on the boxlike bulk of the drive-control units that set against the wall beside him. She obeyed, his silence making the smile fade into the meek and guilty expression of a pup that has been caught in mischief and knows it must be punished.

"You still haven't told me," she said. "I'm guilty, so what happens to me now? Do I pay a fine, or what?"

"What are you doing here?" he asked. "Why did you stow away on this EDS?"

"I wanted to see my brother. He's with the government survey crew on Woden and I haven't seen him for ten years, not since he left Earth to go into government survey work."

"What was your destination on the *Stardust*?"

"Mimir. I have a position waiting for me there. My brother has been sending money home all the time to us—my father and mother and I—and he paid for a special course in linguistics I was taking. I graduated sooner than expected and I was offered this job on Mimir. I knew it would be almost a year before Gerry's job was done on Woden so he could come on to Mimir and that's why I hid in the closet, there. There was plenty of room for me and I was willing to pay the fine. There were only the two of us kids—Gerry and I—and I haven't seen him for so long, and I didn't want to wait another year when I could see him now, even though I knew I would be breaking some kind of a regulation when I did it."

I knew I would be breaking some kind of a regulation—In a way, she could not be blamed for her ignorance of the law; she was of Earth and had not realized that the laws of the space frontier must, of necessity, be as hard and relentless as the environment that gave them birth. Yet, to protect such as her from the results of their own ignorance of the frontier, there had been a sign over the door that led to the section of the *Stardust* that housed EDS's; a sign that was plain for all to see and heed:

UNAUTHORIZED PERSONNEL
KEEP OUT!

"Does your brother know that you took passage on the *Stardust* for Mimir?"

"Oh, yes. I sent him a spacegram telling him about my graduation and about going to Mimir on the *Stardust* a month before I left Earth. I already knew Mimir was where he would be stationed in a little over a year. He gets a promotion then, and he'll be based on Mimir and not have to stay out a year at a time on field trips, like he does now."

There were two different survey groups on Woden, and he asked, "What is his name?"

"Cross—Gerry Cross. He's in Group Two—that was the way his address read. Do you know him?"

Group One had requested the serum; Group Two was eight thousand miles away, across the Western Sea.

"No, I've never met him," he said, then turned to the control board and cut the deceleration to a fraction of a gravity; knowing as he did so that it could not avert the ultimate end, yet doing the only thing he could do to prolong that ultimate end. The sensation was like that of the ship suddenly dropping and the girl's involuntary movement of surprise half lifted her from the seat.

"We're going faster now, aren't we?" she asked. "Why are we doing that?"

He told her the truth. "To save fuel for a little while."

"You mean, we don't have very much?"

He delayed the answer he must give her so soon to ask: "How did you manage to stow away?"

"I just sort of walked in when no one was looking my way," she said. "I was practicing my Gelanese on the native girl who does the cleaning in the Ship's Supply office when someone came in with an order for supplies for the survey crew on Woden. I slipped into the closet there after the ship was ready to go and just before you came in. It was an impulse of the moment to stow away, so I could get to see Gerry—and from the way you keep looking at me so grim, I'm not sure it was a very wise impulse."

"But I'll be a model criminal—or do I mean prisoner?" She smiled at him again. "I intended to pay for my keep on top of paying the fine. I can cook and I can patch clothes for everyone and I know how to do all kinds of useful things, even a little bit about nursing."

There was one more question to ask:

"Did you know what the supplies were that the survey crew ordered?"

"Why, no. Equipment they needed in their work, I supposed."

Why couldn't she have been a man with some ulterior motive? A

fugitive from justice, hoping to lose himself on a raw new world; an opportunist, seeking transportation to the new colonies where he might find golden fleece for the taking; a crackpot, with a mission—

Perhaps once in his lifetime an EDS pilot would find such a stowaway on his ship; warped men, mean and selfish men, brutal and dangerous men—but never, before, a smiling, blue-eyed girl who was willing to pay her fine and work for her keep that she might see her brother.

He turned to the board and turned the switch that would signal the *Stardust*. The call would be futile but he could not, until he had exhausted that one vain hope, seize her and thrust her into the air lock as he would an animal—or a man. The delay, in the meantime, would not be dangerous with the EDS decelerating at fractional gravity.

A voice spoke from the communicator. "*Stardust*. Identify yourself and proceed."

"Barton, EDS 34G11. Emergency. Give me Commander Delhart." There was a faint confusion of noises as the request went through the proper channels. The girl was watching him, no longer smiling.

"Are you going to order them to come back after me?" she asked.

The communicator clicked and there was the sound of a distant voice saying, "Commander, the EDS requests—"

"Are they coming back after me?" she asked again. "Won't I get to see my brother, after all?"

"Barton?" The blunt, gruff voice of Commander Delhart came from the communicator. "What's this about an emergency?"

"A stowaway," he answered.

"A stowaway?" There was a slight surprise to the question. "That's rather unusual—but why the 'emergency' call? You discovered him in time so there should be no appreciable danger and I presume you've informed Ship's Records so his nearest relatives can be notified."

"That's why I had to call you, first. The stowaway is still aboard and the circumstances are so different—"

"Different?" the commander interrupted, impatience in his voice.

"How can they be different? You know you have a limited supply of fuel; you also know the law, as well as I do: 'Any stowaway discovered in an EDS shall be jettisoned immediately following discovery.'"

There was the sound of a sharply indrawn breath from the girl. "*What does he mean?*"

"The stowaway is a girl."

"*What?*"

"She wanted to see her brother. She's only a kid and she didn't know what she was really doing."

"I see." All the curtness was gone from the commander's voice. "So you called me in the hope I could do something?" Without waiting for an answer he went on. "I'm sorry—I can do nothing. This cruiser must maintain its schedule; the life of not one person but the lives of many depend on it. I know how you feel but I'm powerless to help you. You'll have to go through with it. I'll have you connected with Ship's Records."

The communicator faded to a faint rustle of sound and he turned back to the girl. She was leaning forward on the bench, almost rigid, her eyes fixed wide and frightened.

"What did he mean, to go through with it? To jettison me . . . to go through with it—what did he mean? Not the way it sounded . . . he couldn't have. What did he mean . . . what did he really mean?"

Her time was too short for the comfort of a lie to be more than a cruelly fleeting delusion.

"He meant it the way it sounded."

"*No!*" She recoiled from him as though he had struck her, one hand half upraised as though to fend him off and stark unwillingness to believe in her eyes.

"It will have to be."

"No! You're joking—you're insane! You can't mean it!"

"I'm sorry." He spoke slowly to her, gently. "I should have told you before—I should have, but I had to do what I could first; I had to call the *Stardust*. You heard what the commander said."

"But you can't—if you make me leave the ship, I'll die."

"I know."

She searched his face and the unwillingness to believe left her eyes, giving way slowly to a look of dazed terror.

"You—know?" She spoke the words far apart, numb and wonderingly.

"I know. It has to be like that."

"You mean it—you really mean it." She sagged back against the wall, small and limp like a little rag doll and all the protesting and disbelief gone.

"You're going to do it—you're going to make me die?"

"I'm sorry," he said again. "You'll never know how sorry I am. It has to be that way and no human in the universe can change it."

"You're going to make me die and I didn't do anything to die for—I didn't do anything—"

He sighed, deep and weary. "I know you didn't, child. I know you didn't—"

"EDS." The communicator rapped brisk and metallic. "This is Ship's Records. Give us all information on subject's identification disk."

He got out of his chair to stand over her. She clutched the edge of the seat, her upturned face white under the brown hair and the lipstick standing out like a blood-red cupid's bow.

"Now?"

"I want your identification disk," he said.

She released the edge of the seat and fumbled at the chain that suspended the plastic disk from her neck with fingers that were trembling and awkward. He reached down and unfastened the clasp for her, then returned with the disk to his chair.

"Here's your data, Records: Identification Number T837—"

"One moment," Records interrupted. "This is to be filed on the gray card, of course?"

"Yes."

"And the time of the execution?"

"I'll tell you later."

"Later? This is highly irregular; the time of the subject's death is required before—"

He kept the thickness out of his voice with an effort. "Then we'll do it in a highly irregular manner—you'll hear the disk read, first. The subject is a girl and she's listening to everything that's said. Are you capable of understanding that?"

There was a brief, almost shocked, silence, then Records said meekly: "Sorry. Go ahead."

He began to read the disk, reading it slowly to delay the inevitable for as long as possible, trying to help her by giving her what little time he could to recover from her first terror and let it resolve into the calm of acceptance and resignation.

"Number T8374 dash Y54. Name: Marilyn Lee Cross. Sex: Female. Born: July 7, 2160. She was *only* *eighteen*. Height: 5-3. Weight: 110. Such a *slight* weight, yet enough to add *fatally* to the mass of the *shell-thin bubble* that was an EDS. Hair: Brown. Eyes: Blue. Complexion: Light. Blood Type: O. *Irrelevant data*. Destination: Port City, Mimir. *Invalid data*—"

He finished and said, "I'll call you later," then turned once again to the girl. She was huddled back against the wall, watching him with a look of numb and wondering fascination.

"They're waiting for you to kill me, aren't they? They want me dead, don't they? You and everybody on the cruiser wants me dead, don't

you?" Then the numbness broke and her voice was that of a frightened and bewildered child. "Everybody wants me dead and I didn't *do* anything. I didn't hurt anyone—I only wanted to see my brother."

"It's not the way you think—it isn't that way, at all," he said. "Nobody wants it this way; nobody would ever let it be this way if it was humanly possible to change it."

"Then why is it! I don't understand. Why is it?"

"This ship is carrying *kala* fever serum to Group One on Woden. Their own supply was destroyed by a tornado. Group Two—the crew your brother is in—is eight thousand miles away across the Western Sea and their helicopters can't cross it to help Group One. The fever is invariably fatal unless the serum can be had in time, and the six men in Group One will die unless this ship reaches them on schedule. These little ships are always given barely enough fuel to reach their destination and if you stay aboard your added weight will cause it to use up all its fuel before it reaches the ground. It will crash, then, and you and I will die and so will the six men waiting for the fever serum."

It was a full minute before she spoke, and as she considered his words the expression of numbness left her eyes.

"Is that it?" she asked at last. "Just that the ship doesn't have enough fuel?"

"Yes."

"I can go alone or I can take seven others with me—is that the way it is?"

"That's the way it is."

"And nobody wants me to have to die?"

"Nobody."

"Then maybe—Are you sure nothing can be done about it? Wouldn't people help me if they could?"

"Everyone would like to help you but there is nothing anyone can do. I did the only thing I could do when I called the *Stardust*."

"And it won't come back—but there might be other cruisers, mightn't there? Isn't there any hope at all that there might be someone, somewhere, who could do something to help me?"

She was leaning forward a little in her eagerness as she waited for his answer.

"No."

The word was like the drop of a cold stone and she again leaned back against the wall, the hope and eagerness leaving her face. "You're sure—you *know* you're sure?"

"I'm sure. There are no other cruisers within forty light-years; there is nothing and no one to change things."

She dropped her gaze to her lap and began twisting a pleat of her skirt between her fingers, saying no more as her mind began to adapt itself to the grim knowledge.

It was better so; with the going of all hope would go the fear; with the going of all hope would come resignation. She needed time and she could have so little of it. How much?

The EDS's were not equipped with hull-cooling units; their speed had to be reduced to a moderate level before entering the atmosphere. They were decelerating at .10 gravity; approaching their destination at a far higher speed than the computers had calculated on. The *Stardust* had been quite near Woden when she launched the EDS; their present velocity was putting them nearer by the second. There would be a critical point, soon to be reached, when he would have to resume deceleration. When he did so the girl's weight would be multiplied by the gravities of deceleration, would become, suddenly, a factor of paramount importance; the factor the computers had been ignorant of when they determined the amount of fuel the EDS should have. She would have to go when deceleration began; it could be no other way. When would that be—how long could he let her stay?

"How long can I stay?"

He winced involuntarily from the words that were so like an echo of his own thoughts. How long? He didn't know; he would have to ask the ship's computers. Each EDS was given a meager surplus of fuel to compensate for unfavorable conditions within the atmosphere and relatively little fuel was being consumed for the time being. The memory banks of the computers would still contain all data pertaining to the course set for the EDS; such data would not be erased until the EDS reached its destination. He had only to give the computers the new data; the girl's weight and the exact time at which he had reduced the deceleration to .10.

"Barton." Commander Delhart's voice came abruptly from the communicator, as he opened his mouth to call the *Stardust*. "A check with Records shows me you haven't completed your report. Did you reduce the deceleration?"

So the commander knew what he was trying to do.

"I'm decelerating at point ten," he answered. "I cut the deceleration at seventeen fifty and the weight is a hundred and ten. I would like to stay at point ten as long as the computers say I can. Will you give them the question?"

It was contrary to regulations for an EDS pilot to make any changes in the course or degree of deceleration the computers had set for him

but the commander made no mention of the violation, neither did he ask the reason for it. It was not necessary for him to ask; he had not become commander of an interstellar cruiser without both intelligence and an understanding of human nature. He said only: "I'll have that given the computers."

The communicator fell silent and he and the girl waited, neither of them speaking. They would not have to wait long; the computers would give the answer within moments of the asking. The new factors would be fed into the steel maw of the first bank and the electrical impulses would go through the complex circuits. Here and there a relay might click, a tiny cog turn over, but it would be essentially the electrical impulses that found the answer; formless, mindless, invisible, determining with utter precision how long the pale girl beside him might live. Then five little segments of metal in the second bank would trip in rapid succession against an inked ribbon and a second steel maw would spit out the slip of paper that bore the answer.

The chronometer on the instrument board read 18:10 when the commander spoke again.

"You will resume deceleration at nineteen ten."

She looked toward the chronometer, then quickly away from it. "Is that when . . . when I go?" she asked. He nodded and she dropped her eyes to her lap again.

"I'll have the course corrections given you," the commander said. "Ordinarily I would never permit anything like this but I understand your position. There is nothing I can do, other than what I've just done, and you will not deviate from these new instructions. You will complete your report at nineteen ten. Now—here are the course corrections."

The voice of some unknown technician read them to him and he wrote them down on the pad clipped to the edge of the control board. There would, he saw, be periods of deceleration when he neared the atmosphere when the deceleration would be five gravities—and at five gravities, one hundred ten pounds would become five hundred fifty pounds.

The technician finished and he terminated the contact with a brief acknowledgment. Then, hesitating a moment, he reached out and shut off the communicator. It was 18:13 and he would have nothing to report until 19:10. In the meantime, it somehow seemed indecent to permit others to hear what she might say in her last hour.

He began to check the instrument readings, going over them with unnecessary slowness. She would have to accept the circumstances and

there was nothing he could do to help her into acceptance; words of sympathy would only delay it.

It was 18:20 when she stirred from her motionlessness and spoke. "So that's the way it has to be with me?"

He swung around to face her. "You understand now, don't you? No one would ever let it be like this if it could be changed."

"I understand," she said. Some of the color had returned to her face and the lipstick no longer stood out so vividly red. "There isn't enough fuel for me to stay; when I hid on this ship I got into something I didn't know anything about and now I have to pay for it."

She had violated a man-made law that said KEEP OUT but the penalty was not of men's making or desire and it was a penalty men could not revoke. A physical law had decreed: *h amount of fuel will power an EDS with a mass of m safely to its destination*; and a second physical law had decreed: *h amount of fuel will not power an EDS with a mass of m plus x safely to its destination*.

EDS's obeyed only physical laws and no amount of human sympathy for her could alter the second law.

"But I'm afraid. I don't want to die—not now. I want to live and nobody is doing anything to help me; everybody is letting me go ahead and acting just like nothing was going to happen to me. I'm going to die and nobody cares."

"We all do," he said. "I do and the commander does and the clerk in Ship's Records; we all care and each of us did what little he could to help you. It wasn't enough—it was almost nothing—but it was all we could do."

"Not enough fuel—I can understand that," she said, as though she had not heard his own words. "But to have to die for it. *Me*, alone—"

How hard it must be for her to accept the fact. She had never known danger of death; had never known the environments where the lives of men could be as fragile and fleeting as sea foam tossed against a rocky shore. She belonged on gentle Earth, in that secure and peaceful society where she could be young and gay and laughing with the others of her kind; where life was precious and well-guarded and there was always the assurance that tomorrow would come. She belonged in that world of soft winds and warm suns, music and moonlight and gracious manners and not on the hard, bleak frontier.

"How did it happen to me, so terribly quickly? An hour ago I was on the *Stardust*, going to Mimir. Now the *Stardust* is going on without me and I'm going to die and I'll never see Gerry and Mama and Daddy again—I'll never see anything again."

He hesitated, wondering how he could explain it to her so she would

really understand and not feel she had, somehow, been the victim of a reasonlessly cruel injustice. She did not know what the frontier was like; she thought in terms of safe-and-secure Earth. Pretty girls were not jetisoned on Earth; there was a law against it. On Earth her plight would have filled the newscasts and a fast black Patrol ship would have been racing to her rescue. Everyone, everywhere, would have known of Marilyn Lee Cross and no effort would have been spared to save her life. But this was not Earth and there were no Patrol ships; only the *Stardust*, leaving them behind at many times the speed of light. There was no one to help her, there would be no Marilyn Lee Cross smiling from the newscasts tomorrow. Marilyn Lee Cross would be but a poignant memory for an EDS pilot and a name on a gray card in Ship's Records.

"It's different here; it's not like back on Earth," he said. "It isn't that no one cares; it's that no one can do anything to help. The frontier is big and here along its rim the colonies and exploration parties are scattered so thin and far between. On Woden, for example, there are only sixteen men—sixteen men on an entire world. The exploration parties, the survey crews, the little first-colonies—they're all fighting alien environments, trying to make a way for those who will follow after. The environments fight back and those who go first usually make mistakes only once. There is no margin of safety along the rim of the frontier; there can't be until the way is made for the others who will come later, until the new worlds are tamed and settled. Until then men will have to pay the penalty for making mistakes with no one to help them because there is no one to help them."

"I was going to Mimir," she said. "I didn't know about the frontier; I was only going to Mimir and *it's safe*."

"Mimir is safe but you left the cruiser that was taking you there." She was silent for a little while. "It was all so wonderful at first; there was plenty of room for me on this ship and I would be seeing Gerry so soon . . . I didn't know about the fuel, didn't know what would happen to me—"

Her words trailed away and he turned his attention to the viewscreen, not wanting to stare at her as she fought her way through the black horror of fear toward the calm gray of acceptance.

Woden was a ball, enshrouded in the blue haze of its atmosphere, swimming in space against the background of star-sprinkled dead blackness. The great mass of Manning's Continent sprawled like a gigantic hourglass in the Eastern Sea with the western half of the Eastern Continent still visible. There was a thin line of shadow along the right-hand edge of the globe and the Eastern Continent was disappearing into it as

the planet turned on its axis. An hour before the entire continent had been in view, now a thousand miles of it had gone into the thin edge of shadow and around to the night that lay on the other side of the world. The dark blue spot that was Lotus Lake was approaching the shadow. It was somewhere near the southern edge of the lake that Group Two had their camp. It would be night there, soon, and quick behind the coming of night the rotation of Woden on its axis would put Group Two beyond the reach of the ship's radio.

He would have to tell her before it was too late for her to talk to her brother. In a way, it would be better for both of them should they not do so but it was not for him to decide. To each of them the last words would be something to hold and cherish, something that would cut like the blade of a knife yet would be infinitely precious to remember, she for her own brief moments to live and he for the rest of his life.

He held down the button that would flash the grid lines on the view-screen and used the known diameter of the planet to estimate the distance the southern tip of Lotus Lake had yet to go until it passed beyond radio range. It was approximately five hundred miles. Five hundred miles; thirty minutes—and the chronometer read 18:30. Allowing for error in estimating, it could not be later than 19:05 that the turning of Woden would cut off her brother's voice.

The first border of the Western Continent was already in sight along the left side of the world. Four thousand miles across it lay the shore of the Western Sea and the Camp of Group One. It had been in the Western Sea that the tornado had originated, to strike with such fury at the camp and destroy half their prefabricated buildings, including the one that housed the medical supplies. Two days before the tornado had not existed; it had been no more than great gentle masses of air out over the calm Western Sea. Group One had gone about their routine survey work, unaware of the meeting of the air masses out at sea, unaware of the force the union was spawning. It had struck their camp without warning; a thundering, roaring destruction that sought to annihilate all that lay before it. It had passed on, leaving the wreckage in its wake. It had destroyed the labor of months and had doomed six men to die and then, as though its task was accomplished, it once more began to resolve into gentle masses of air. But for all its deadliness, it had destroyed with neither malice nor intent. It had been a blind and mindless force, obeying the laws of nature, and it would have followed the same course with the same fury had men never existed.

Existence required Order and there was order; the laws of nature, irrevocable and immutable. Men could learn to use them but men could not change them. The circumference of a circle was always pi times the

diameter and no science of Man would ever make it otherwise. The combination of chemical A with chemical B under condition C invariably produced reaction D. The law of gravitation was a rigid equation and it made no distinction between the fall of a leaf and the ponderous circling of a binary star system. The nuclear conversion process powered the cruisers that carried men to the stars; the same process in the form of a nova would destroy a world with equal efficiency. The laws *were*, and the universe moved in obedience to them. Along the frontier were arrayed all the forces of nature and sometimes they destroyed those who were fighting their way outward from Earth. The men of the frontier had long ago learned the bitter futility of cursing the forces that would destroy them for the forces were blind and deaf; the futility of looking to the heavens for mercy, for the stars of the galaxy swung in their long, long sweep of two hundred million years, as inexorably controlled as they by the laws that knew neither hatred nor compassion.

The men of the frontier knew—but how was a girl from Earth to fully understand? *Her amount of fuel will not power an EDS with a mass of m plus x safely to its destination.* To himself and her brother and parents she was a sweet-faced girl in her teens; to the laws of nature she was x , the unwanted factor in a cold equation.

She stirred again on the seat. "Could I write a letter? I want to write to Mama and Daddy and I'd like to talk to Gerry. Could you let me talk to him over your radio there?"

"I'll try to get him," he said.

He switched on the normal-space transmitter and pressed the signal button. Someone answered the buzzer almost immediately.

"Hello. How's it going with you fellows now—is the EDS on its way?"

"This isn't Group One; this is the EDS," he said. "Is Gerry Cross there?"

"Gerry? He and two others went out in the helicopter this morning and aren't back yet. It's almost sundown, though, and he ought to be back right away—in less than an hour at the most."

"Can you connect me through to the radio in his 'copter?"

"Huh-uh. It's been out of commission for two months—some printed circuits went haywire and we can't get any more until the next cruiser stops by. Is it something important—bad news for him, or something?"

"Yes—it's very important. When he comes in get him to the transmitter as soon as you possibly can."

"I'll do that; I'll have one of the boys waiting at the field with a truck. Is there anything else I can do?"

"No, I guess that's all. Get him there as soon as you can and signal me."

He turned the volume to an inaudible minimum, an act that would not affect the functioning of the signal buzzer, and unclipped the pad of paper from the control board. He tore off the sheet containing his flight instructions and handed the pad to her, together with pencil.

"I'd better write to Gerry, too," she said as she took them. "He might not get back to camp in time."

She began to write, her fingers still clumsy and uncertain in the way they handled the pencil and the top of it trembling a little as she poised it between words. He turned back to the viewscreen, to stare at it without seeing it.

She was a lonely little child, trying to say her last good-by, and she would lay out her heart to them. She would tell them how much she loved them and she would tell them to not feel badly about it, that it was only something that must happen eventually to everyone and she was not afraid. The last would be a lie and it would be there to read between the sprawling, uneven lines; a valiant little lie that would make the hurt all the greater for them.

Her brother was of the frontier and he would understand. He would not hate the EDS pilot for doing nothing to prevent her going; he would know there had been nothing the pilot could do. He would understand, though the understanding would not soften the shock and pain when he learned his sister was gone. But the others, her father and mother—they would not understand. They were of Earth and they would think in the manner of those who had never lived where the safety margin of life was a thin, thin line—and sometimes not at all. What would they think of the faceless, unknown pilot who had sent her to her death?

They would hate him with cold and terrible intensity but it really didn't matter. He would never see them, never know them. He would have only the memories to remind him; only the nights to fear, when a blue-eyed girl in gypsy sandals would come in his dreams to die again—

He scowled at the viewscreen and tried to force his thoughts into less emotional channels. There was nothing he could do to help her. She had unknowingly subjected herself to the penalty of a law that recognized neither innocence nor youth nor beauty, that was incapable of sympathy or leniency. Regret was illogical—and yet, could knowing it to be illogical ever keep it away?

She stopped occasionally, as though trying to find the right words to tell them what she wanted them to know, then the pencil would resume

its whispering to the paper. It was 18:37 when she folded the letter in a square and wrote a name on it. She began writing another, twice looking up at the chronometer as though she feared the black hand might reach its rendezvous before she had finished. It was 18:45 when she folded it as she had done the first letter and wrote a name and address on it.

She held the letters out to him. "Will you take care of these and see that they're enveloped and mailed?"

"Of course." He took them from her hand and placed them in a pocket of his gray uniform shirt.

"These can't be sent off until the next cruiser stops by and the *Star-dust* will have long since told them about me, won't it?" she asked. He nodded and she went on, "That makes the letters not important in one way but in another way they're very important—to me, and to them."

"I know. I understand, and I'll take care of them." She glanced at the chronometer, then back to him. "It seems to move faster all the time, doesn't it?"

He said nothing, unable to think of anything to say, and she asked, "Do you think Gerry will come back to camp in time?"

"I think so. They said he should be in right away."

She began to roll the pencil back and forth between her palms. "I hope he does. I feel sick and scared and I want to hear his voice again and maybe I won't feel so alone. I'm a coward and I can't help it."

"No," he said, "you're not a coward. You're afraid, but you're not a coward."

"Is there a difference?"

He nodded. "A lot of difference."

"I feel so alone. I never did feel like this before; like I was all by

myself and there was nobody to care what happened to me. Always, before, there was Mama and Daddy there and my friends around me. I had lots of friends, and they had a going-away party for me the night before I left."

Friends and music and laughter for her to remember—and on the viewscreen Lotus Lake was going into the shadow.

"Is it the same with Gerry?" she asked. "I mean, if he should make a mistake, would he have to die for it, all alone and with no one to help him?"

"It's the same with all along the frontier; it will always be like that so long as there is a frontier."

"Gerry didn't tell us. He said the pay was good and he sent money home all the time because Daddy's little shop just brought in a bare living but he didn't tell us it was like this."

"He didn't tell you his work was dangerous?"

"Well—yes. He mentioned that, but we didn't understand. I always thought danger along the frontier was something that was a lot of fun; an exciting adventure, like in the three-D shows." A wan smile touched her face for a moment. "Only it's not, is it? It's not the same at all, because when it's real you can't go home after the show is over."

"No," he said. "No, you can't."

Her glance flicked from the chronometer to the door of the air lock then down to the pad and pencil she still held. She shifted her position slightly to lay them on the bench beside, moving one foot out a little. For the first time he saw that she was not wearing Vegan gypsy sandals but only cheap imitations; the expensive Vegan leather was some kind of grained plastic, the silver buckle was gilded iron, the jewels were colored glass. *Daddy's little shop just brought in a bare living*—She must have left college in her second year, to take the course in linguistics that would enable her to make her own way and help her brother provide for her parents, earning what she could by part-time work after classes were over. Her personal possessions on the *Stardust* would be taken back to her parents—they would neither be of much value nor occupy much storage space on the return voyage.

"Isn't it—" She stopped, and he looked at her questioningly. "Isn't it cold in here?" she asked, almost apologetically. "Doesn't it seem cold to you?"

"Why, yes," he said. He saw by the main temperature gauge that the room was at precisely normal temperature. "Yes, it's colder than it should be."

"I wish Gerry would get back before it's too late. Do you really think he will, and you didn't just say so to make me feel better?"

"I think he will—they said he would be in pretty soon." On the viewscreen Lotus Lake had gone into the shadow but for the thin blue line of its western edge and it was apparent he had overestimated the time she would have in which to talk to her brother. Reluctantly, he said to her, "His camp will be out of radio range in a few minutes; he's on that part of Woden that's in the shadow"—he indicated the viewscreen—"and the turning of Woden will put him beyond contact. There may not be much time left when he comes in—not much time to talk to him before he fades out. I wish I could do something about it—I would call him right now if I could."

"Not even as much time as I will have to stay?"

"I'm afraid not."

"Then—" She straightened and looked toward the air lock with pale

resolution. "Then I'll go when Gerry passes beyond range. I won't wait any longer after that—I won't have anything to wait for."

Again there was nothing he could say.

"Maybe I shouldn't wait at all. Maybe I'm selfish—maybe it would be better for Gerry if you just told him about it afterward."

There was an unconscious pleading for denial in the way she spoke and he said, "He wouldn't want you to do that, to not wait for him."

"It's already coming dark where he is, isn't it? There will be all the long night before him, and Mama and Daddy don't know yet that I won't ever be coming back like I promised them I would. I've caused everyone I love to be hurt, haven't I? I didn't want to—I didn't intend to."

"It wasn't your fault," he said. "It wasn't your fault at all. They'll know that. They'll understand."

"At first I was so afraid to die that I was a coward and thought only of myself. Now, I see how selfish I was. The terrible thing about dying like this is not that I'll be gone but that I'll never see them again; never be able to tell them that I didn't take them for granted; never be able to tell them I knew of the sacrifices they made to make my life happier, that I knew all the things they did for me and that I loved them so much more than I ever told them. I've never told them any of those things. You don't tell them such things when you're young and your life is all before you—you're afraid of sounding sentimental and silly."

"But it's so different when you have to die—you wish you had told them while you could and you wish you could tell them you're sorry for all the little mean things you ever did or said to them. You wish you could tell them that you didn't really mean to ever hurt their feelings and for them to only remember that you always loved them far more than you ever let them know."

"You don't have to tell them that," he said. "They will know—they've always known it."

"Are you sure?" she asked. "How can you be sure? My people are strangers to you."

"Wherever you go, human nature and human hearts are the same."

"And they will know what I want them to know—that I love them?"

"They've always known it, in a way far better than you could ever put in words for them."

"I keep remembering the things they did for me, and it's the little things they did that seem to be the most important to me, now. Like Gerry—he sent me a bracelet of fire-rubies on my sixteenth birthday. It was beautiful—it must have cost him a month's pay. Yet, I remember him more for what he did the night my kitten got run over in the street. I was only six years old and he held me in his arms and wiped away

my tears and told me not to cry, that Flossy was gone for just a little while, for just long enough to get herself a new fur coat and she would be on the foot of my bed the very next morning. I believed him and quit crying and went to sleep dreaming about my kitten coming back. When I woke up the next morning, there was Flossy on the foot of my bed in a brand-new white fur coat, just like he had said she would be.

"It wasn't until a long time later that Mama told me Gerry had got the pet-shop owner out of bed at four in the morning and, when the man got mad about it, Gerry told him he was either going to go down and sell him the white kitten right then or he'd break his neck."

"It's always the little things you remember people by; all the little things they did because they wanted to do them for you. You've done the same for Gerry and your father and mother; all kinds of things that you've forgotten about but that they will never forget."

"I hope I have. I would like for them to remember me like that."

"They will."

"I wish—" She swallowed. "The way I'll die—I wish they wouldn't ever think of that. I've read how people look who die in space—their insides all ruptured and exploded and their lungs out between their teeth and then, a few seconds later, they're all dry and shapeless and horribly ugly. I don't want them to ever think of me as something dead and horrible, like that."

"You're their own, their child and their sister. They could never think of you other than the way you would want them to; the way you looked the last time they saw you."

"I'm still afraid," she said. "I can't help it, but I don't want Gerry to know it. If he gets back in time, I'm going to act like I'm not afraid at all and—"

The signal buzzer interrupted her, quick and imperative.

"Gerry!" She came to her feet. "It's Gerry, now!"

He spun the volume control knob and asked: "Gerry Cross?"

"Yes," her brother answered, an undertone of tenseness to his reply. "The bad news—what is it?"

She answered for him, standing close behind him and leaning down a little toward the communicator, her hand resting small and cold on his shoulder.

"Hello, Gerry." There was only a faint quaver to betray the carefree casualness of her voice. "I wanted to see you—"

"Marilyn!" There was sudden and terrible apprehension in the way he spoke her name. "What are you doing on that EDS?"

"I wanted to see you," she said again. "I wanted to see you, so I hid on this ship—"

"You hid on it?"

"I'm a stowaway... I didn't know what it would mean—"

"Marilyn!" It was the cry of a man who calls hopeless and desperate to someone already and forever gone from him. "What have you done?"

"I... it's not—" Then her own composure broke and the cold little hand gripped his shoulder convulsively. "Don't, Gerry—I only wanted to see you; I didn't intend to hurt you. Please, Gerry, don't feel like that—"

Something warm and wet splashed on his wrist and he slid out of the chair, to help her into it and swing the microphone down to her own level.

"Don't feel like that—Don't let me go knowing you feel like that—" The sob she had tried to hold back choked in her throat and her brother spoke to her. "Don't cry, Marilyn." His voice was suddenly deep and infinitely gentle, with all the pain held out of it. "Don't cry, Sis—you mustn't do that. It's all right, Honey—everything is all right."

"I—" Her lower lip quivered and she bit into it. "I didn't want you to feel that way—I just wanted us to say good-bye because I have to go in a minute."

"Sure—sure. That's the way it will be, Sis. I didn't mean to sound the way I did." Then his voice changed to a tone of quick and urgent demand. "EDS—have you called the *Stardust*? Did you check with the computers?"

"I called the *Stardust* almost an hour ago. It can't turn back, there are no other cruisers within forty light-years, and there isn't enough fuel."

"Are you sure that the computers had the correct data—sure of everything?"

"Yes—do you think I could ever let it happen if I wasn't sure? I did everything I could do. If there was anything at all I could do now, I would do it."

"He tried to help me, Gerry." Her lower lip was no longer trembling and the short sleeves of her blouse were wet where she had dried her tears. "No one can help me and I'm not going to cry any more and everything will be all right with you and Daddy and Mama, won't it?"

"Sure—sure it will. We'll make out fine."

Her brother's words were beginning to come in more faintly and he turned the volume control to maximum. "He's going out of range," he said to her. "He'll be gone within another minute."

"You're fading out, Gerry," she said. "You're going out of range. I wanted to tell you—but I can't, now. We must say good-bye so soon—but maybe I'll see you again. Maybe I'll come to you in your dreams with my hair in braids and crying because the kitten in my arms is dead; maybe I'll be the touch of a breeze that whispers to you as it goes by; maybe I'll be one of those gold-winged larks you told me about, singing my silly head off to you; maybe, at times, I'll be nothing you can see but you will know I'm there beside you. Think of me like that, Gerry; always like that and not—the other way."

Dimmed to a whisper by the turning of Woden, the answer came back:

"Always like that, Marilyn—always like that and never any other way."

"Our time is up, Gerry—I have to go, now. Good—" Her voice broke in mid-word and her mouth tried to twist into crying. She pressed her hand hard against it and when she spoke again the words came clear and true:

"Good-bye, Gerry."

Faint and ineffably poignant and tender, the last words came from the cold metal of the communicator:

"Good-bye, little sister—"

She sat motionless in the hush that followed, as though listening to the shadow-echoes of the words as they died away, then she turned away from the communicator, toward the air lock, and he pulled the black lever beside him. The inner door of the air lock slid swiftly open, to reveal the bare little cell that was waiting for her, and she walked to it.

She walked with her head up and the brown curls brushing her shoulders, with the white sandals stepping as sure and steady as the fractional gravity would permit and the gilded buckles twinkling with little lights of blue and red and crystal. He let her walk alone and made no move to help her, knowing she would not want it that way. She stepped into the air lock and turned to face him, only the pulse in her throat to betray the wild beating of her heart.

"I'm ready," she said.

He pushed the lever up and the door slid its quick barrier between them, inclosing her in black and utter darkness for her last moments of life. It clicked as it locked in place and he jerked down the red lever. There was a slight waver to the ship as the air gushed from the lock, a vibration to the wall as though something had bumped the outer door in passing, then there was nothing and the ship was dropping true and

steady again. He shoved the red lever back to close the door on the empty air lock and turned away, to walk to the pilot's chair with the slow steps of a man old and weary.

Back in the pilot's chair he pressed the signal button of the normal-space transmitter. There was no response; he had expected none. Her brother would have to wait through the night until the turning of Woden permitted contact through Group One.

It was not yet time to resume deceleration and he waited while the ship dropped endlessly downward with him and the drives purred softly. He saw that the white hand of the supplies closet temperature gauge was on zero. A cold equation had been balanced and he was alone on the ship. Something shapeless and ugly was hurrying ahead of him, going to Woden where its brother was waiting through the night, but the empty ship still lived for a little while with the presence of the girl who had not known about the forces that killed with neither hatred nor malice. It seemed, almost, that she still sat small and bewildered and frightened on the metal box beside him, her words echoing hauntingly clear in the void she had left behind her:

I didn't do anything to die for—I didn't do anything—

FONDLY FAHRENHEIT

by Alfred Bester

He doesn't know which of us I am these days, but they know one truth. You must own nothing but yourself. You must make your own life, live your own life and die your own death . . . or else you will die another's. The rice fields on Paragon III stretch for hundreds of miles like checkerboard tundras, a blue and brown mosaic under a burning sky of orange. In the evening, clouds whip like smoke, and the paddies rustle and murmur.

A long line of men marched across the paddies the evening we escaped from Paragon III. They were silent, armed, intent; a long rank of silhouetted statues looming against the smoking sky. Each man carried a gun. Each man wore a walkie-talkie belt pack, the speaker button in his ear, the microphone bug clipped to his throat, the glowing view-screen strapped to his wrist like a green-eyed watch. The multitude of screens showed nothing but a multitude of individual paths through the paddies. The announciators uttered no sound but the rustle and splash of steps. The men spoke infrequently, in heavy grunts, all speaking to all.

"Nothing here."

"Where's here?"

"Jenson's fields."

"You're drifting too far west."

"Close in the line there."

"Anybody covered the Grimson paddy?"

"Yeah. Nothing."

"She couldn't have walked this far."

"Could have been carried."

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"Think she's alive?"

"Why should she be dead?"

The slow refrain swept up and down the long line of beaters advancing towards the smoky sunset. The line of beaters wavered like a writhing snake, but never ceased its remorseless advance. One hundred men spaced fifty feet apart. Five thousand feet of ominous search. One mile of angry determination stretching from east to west across a compass of heat. Evening fell. Each man lit his search lamp. The writhing snake was transformed into a necklace of wavering diamonds.

"Clear here. Nothing."

"Nothing here."

"Nothing."

"What about the Allen paddies?"

"Covering them now."

"Think we missed her?"

"Maybe."

"We'll beat back and check."

"This'll be an all night job."

"Allen paddies clear."

"God damn! We've got to find her!"

"We'll find her."

"Here she is. Sector seven. Tune in."

The line stopped. The diamonds froze in the heat. There was silence. Each man gazed into the glowing screen on his wrist, tuning to sector seven. All tuned to one. All showed a small nude figure awash in the muddy water of a paddy. Alongside the figure an owner's stake of bronze read: VANDALEUR. The end of the line converged towards the Vandaleur field. The necklace turned into a cluster of stars. One hundred men gathered around a small nude body, a child dead in a rice paddy. There was no water in her mouth. There were fingermarks on her throat. Her innocent face was battered. Her body was torn. Clotted blood on her skin was crusted and hard.

"Dead three-four hours at least."

"Her mouth is dry."

"She wasn't drowned. Beaten to death."

In the dark evening heat the men swore softly. They picked up the body. One stopped the others and pointed to the child's fingernails. She had fought her murderer. Under the nails were particles of flesh and bright drops of scarlet blood, still liquid, still uncoagulated.

"That blood ought to be clotted too."

"Funny."

"Not so funny. What kind of blood don't clot?"

"Android."

"Looks like she was killed by one."

"Vandaleur owns an android."

"She couldn't be killed by an android."

"That's android blood under her nails."

"The police better check."

"The police'll prove I'm right."

"But androids can't kill."

"That's android blood, ain't it?"

"Androids can't kill. They're made that way."

"Looks like one android was made wrong."

"Jesus!"

And the thermometer that day registered 91.9° gloriously Fahrenheit.

So there we were aboard the Paragon Queen en route for Megaster V, James Vandaleur and his android. James Vandaleur counted his money and wept. In the second class cabin with him was his android, a magnificent synthetic creature with classic features and wide blue eyes. Raised on its forehead in a cameo of flesh were the letters MA, indicating that this was one of the rare multiple aptitude androids, worth \$57,000 on the current exchange. There we were, weeping and counting and calmly watching.

"Twelve, fourteen, sixteen. Sixteen hundred dollars," Vandaleur wept. "That's all. Sixteen hundred dollars. My house was worth ten thousand. The land was worth five. There was furniture, cars, my paintings, etchings, my plane, my—And nothing to show for everything but sixteen hundred dollars. Christ!"

I leaped up from the table and turned on the android. I pulled a strap from one of the leather bags and beat the android. It didn't move.

"I must remind you," the android said, "that I am worth fifty-seven thousand dollars on the current exchange. I must warn you that you are endangering valuable property."

"You damned crazy machine," Vandaleur shouted.

"I am not a machine," the android answered. "The robot is a machine. The android is a chemical creation of synthetic tissue."

"What got into you?" Vandaleur cried. "Why did you do it? Damn you!" He beat the android savagely.

"I must remind you that I cannot be punished," I said. "The pleasure-pain syndrome is not incorporated in the android synthesis."

"Then why did you kill her?" Vandaleur shouted. "If it wasn't for kicks, why did you—"

"I must remind you," the android said, "that the second class cabins in these ships are not soundproofed."

Vandaleur dropped the strap and stood panting, staring at the creature he owned.

"Why did you do it? Why did you kill her?" I asked.

"I don't know," I answered.

"First it was malicious mischief. Small things. Petty destruction. I should have known there was something wrong with you then. Androids can't destroy. They can't harm. They—"

"There is no pleasure-pain syndrome incorporated in the android synthesis."

"Then it got to arson. Then serious destruction. Then assault . . . that engineer on Rigel. Each time worse. Each time we had to get out faster. Now it's murder. Christ! What's the matter with you? What's happened?"

"There are no self-check relays incorporated in the android brain."

"Each time we had to get out it was a step downhill. Look at me. In a second class cabin. Me. James Paleologue Vandaleur. There was a time when my father was the wealthiest—Now, sixteen hundred dollars in the world. That's all I've got. And you. Christ damn you!"

Vandaleur raised the strap to beat the android again, then dropped it and collapsed on a berth, sobbing. At last he pulled himself together.

"Instructions," he said.

The multiple aptitude android responded at once. It arose and awaited orders.

"My name is now Valentine. James Valentine. I stopped off on Paragon III for only one day to transfer to this ship for Megaster V. My occupation: Agent for one privately owned MA android which is for hire. Purpose of visit: To settle on Megaster V. Fix the papers."

The android removed Vandaleur's passport and papers from a bag, got pen and ink and sat down at the table. With an accurate, flawless hand—an accomplished hand that could draw, write, paint, carve, engrave, etch, photograph, design, create and build—it meticulously forged new credentials for Vandaleur. Its owner watched me miserably.

"Create and build," I muttered. "And now destroy. Oh God! What am I going to do? Christ! If I could only get rid of you. If I didn't have to live off you. God! If only I'd inherited some guts instead of you."

Dallas Brady was Megaster's leading jewellery designer. She was short, stocky, amoral and a nymphomaniac. She hired Vandaleur's multiple aptitude android and put me to work in her shop. She seduced

Vandaleur. In her bed one night, she asked abruptly: "Your name's Vandaleur, isn't it?"

"Yes," I murmured. Then: "No! No! It's Valentine. James Valentine."

"What happened on Paragon?" Dallas Brady asked. "I thought androids couldn't kill or destroy property. Prime Directives and Inhibitions set up for them when they're synthesized. Every company guarantees they can't."

"Valentine!" Vandaleur insisted.

"Oh, come off it," Dallas Brady said. "I've known for a week. I haven't hollered copper, have I?"

"The name is Valentine."

"You want to prove it? You want I should call the cops?" Dallas reached out and picked up the phone.

"For God's sake, Dallas!" Vandaleur leaped up and struggled to take the phone from her. She fended him off, laughing at him until he collapsed and wept in shame and helplessness.

"How did you find out?" he asked at last.

"The papers are full of it. And Valentine was a little too close to Vandaleur. That wasn't smart, was it?"

"I guess not. I'm not very smart."

"Your android's got quite a record, hasn't it? Assault. Arson. Destruction. What happened on Paragon?"

"It kidnapped a child. Took her out into the rice fields and murdered her."

"Raped her?"

"I don't know."

"They're going to catch up with you."

"Don't I know it? Christ! We've been running for two years now. Seven planets in two years. I must have abandoned fifty thousand dollars worth of property in two years."

"You better find out what's wrong with it."

"How can I? Can I walk into a repair clinic and ask for an overhaul? What am I going to say? 'My android's just turned killer. Fix it.' They'd call the police right off." I began to shake. "They'd have that android dismantled inside one day. I'd probably be booked as accessory to murder."

"Why didn't you have it repaired before it got to murder?"

"I couldn't take the chance," Vandaleur explained angrily. "If they started fooling around with lobotomies and body chemistry and endocrine surgery, they might have destroyed its aptitudes. What would I have left to hire out? How would I live?"

"You could work yourself. People do."

"Work at what? You know I'm good for nothing. How could I compete with specialist androids and robots? Who can, unless he's got a terrific talent for a particular job?"

"Yeah. That's true."

"I lived off my old man all my life. Damn him! He had to go bust just before he died. Left me the android and that's all. The only way I can get along is living off what it earns."

"You better sell it before the cops catch up with you. You can live off fifty grand. Invest it."

"At 3 per cent? Fifteen hundred a year? When the android returns 15 per cent on its value? Eight thousand a year. That's what it earns. No, Dallas. I've got to go along with it."

"What are you going to do about its violence kick?"

"I can't do anything . . . except watch it and pray. What are you going to do about it?"

"Nothing. It's none of my business. Only one thing . . . I ought to get something for keeping my mouth shut."

"What?"

"The android works for me for free. Let somebody else pay you, but I get it for free."

The multiple aptitude android worked. Vandaleur collected its fees. His expenses were taken care of. His savings began to mount. As the warm spring of Megaster V turned to hot summer, I began investigating farms and properties. It would be possible, within a year or two, for us to settle down permanently, provided Dallas Brady's demands did not become rapacious.

On the first hot day of summer, the android began singing in Dallas Brady's workshop. It hovered over the electric furnace which, along with the weather, was broiling the shop, and sang an ancient tune that had been popular half a century before.

Oh, it's no feat to beat the heat.

All reet! All reet!

So jeet your seat

Be fleet be fleet

Cool and discreet

Honey . . .

It sang in a strange, halting voice, and its accomplished fingers were clasped behind its back, writhing in a strange rumba all their own. Dallas Brady was surprised.

"You happy or something?" she asked.

"I must remind you that the pleasure-pain syndrome is not incorporated in the android synthesis," I answered. "All reet! All reet! Be fleet be fleet, cool and discreet, honey..."

Its fingers stopped their writhing and picked up a heavy pair of iron tongs. The android poked them into the glowing heart of the furnace, leaning far forward to peer into the lovely heat.

"Be careful, you damned fool!" Dallas Brady exclaimed. "You want to fall in?"

"I must remind you that I am worth fifty-seven thousand dollars on the current exchange," I said. "It is forbidden to endanger valuable property. All reet! All reet! Honey..."

It withdrew a crucible of glowing gold from the electric furnace, turned, capered hideously, sang crazily, and splashed a sluggish goblet of molten gold over Dallas Brady's head. She screamed and collapsed, her hair and clothes flaming, her skin crackling. The android poured again while it capered and sang.

"Be fleet be fleet, cool and discreet, honey..." It sang and slowly poured and poured the molten gold. Then I left the workshop and rejoined James Vandaleur in his hotel suite. The android's charred clothes and squirming fingers warned its owner that something was very much wrong.

Vandaleur rushed to Dallas Brady's workshop, stared once, vomited and fled. I had enough time to pack one bag and raise nine hundred dollars on portable assets. He took a third class cabin on the Megaster Queen which left that morning for Lyra Alpha. He took me with him. He wept and counted his money and I beat the android again.

And the thermometer in Dallas Brady's workshop registered 98.1° beautifully Fahrenheit.

On Lyra Alpha we holed up in a small hotel near the university. There, Vandaleur carefully bruised my forehead until the letters MA were obliterated by the swelling and the discoloration. The letters would reappear again, but not for several months, and in the meantime Vandaleur hoped the hue and cry for an MA android would be forgotten. The android was hired out as a common laborer in the university power plant. Vandaleur, as James Venice, eked out life on the android's small earnings.

I wasn't too unhappy. Most of the other residents in the hotel were university students, equally hard-up, but delightfully young and enthusiastic. There was one charming girl with sharp eyes and a quick mind. Her name was Wanda, and she and her beau, Jed Stark, took a tremen-

dous interest in the killing android which was being mentioned in every paper in the galaxy.

"We've been studying the case," she and Jed said at one of the casual student parties which happened to be held this night in Vandaleur's room. "We think we know what's causing it. We're going to do a paper." They were in a high state of excitement.

"Causing what?" somebody wanted to know.

"The android rampage."

"Obviously out of adjustment, isn't it? Body chemistry gone haywire. Maybe a kind of synthetic cancer, yes?"

"No." Wanda gave Jed a look of suppressed triumph.

"Well, what is it?"

"Something specific."

"What?"

"That would be telling."

"Oh, come on."

"Nothing doing."

"Won't you tell us?" I asked intently. "I... We're very much interested in what could go wrong with an android."

"No, Mr. Venice," Wanda said. "It's a unique idea and we've got to protect it. One thesis like this and we'll be set up for life. We can't take the chance of somebody stealing it."

"Can't you give us a hint?"

"No. Not a hint. Don't say a word, Jed. But I'll tell you this much, Mr. Venice. I'd hate to be the man who owns that android."

"You mean the police?" I asked.

"I mean projection, Mr. Venice. Projection! That's the danger... and I won't say any more. I've said too much as it is."

I heard steps outside, and a hoarse voice singing softly: "Be fleet be fleet, cool and discreet, honey..." My android entered the room, home from its tour of duty at the university power plant. It was not introduced. I motioned to it and I immediately responded to the command and went to the beer keg and took over Vandaleur's job of serving the guests. Its accomplished fingers writhed in a private rumba of their own. Gradually they stopped their squirming, and the strange humming ended.

Androids were not unusual at the university. The wealthier students owned them along with cars and planes. Vandaleur's android provoked no comment, but young Wanda was sharp-eyed and quick-witted. She noted my bruised forehead and she was intent on the history-making thesis she and Jed Stark were going to write. After the party broke up, she consulted with Jed walking upstairs to her room.

"Jed, why'd that android have a bruised forehead?"

"Probably hurt itself, Wanda. It's working in the power plant. They firing a lot of heavy stuff around."

"That's all?"

"What else?"

"It could be a convenient bruise."

"Convenient for what?"

"Hiding what's stamped on its forehead."

"No point to that, Wanda. You don't have to see marks on a forehead to recognise an android. You don't have to see a trademark on a car to know it's a car."

"I don't mean it's trying to pass as a human. I mean it's trying to pass as a lower grade android."

"Why?"

"Suppose it had MA on its forehead."

"Multiple aptitude? Then why in hell would Venice waste it stoking furnaces if it could earn more—Oh. Oh! You mean it's—?"

Wanda nodded.

"Jesus!" Stark pursed his lips. "What do we do? Call the police?"

"No. We don't know if it's an MA for a fact. If it turns out to be an MA and the killing android, our paper comes first anyway. This is our big chance, Jed. If it's *that* android we can run a series of controlled tests and—"

"How do we find out for sure?"

"Easy. Infrared film. That'll show what's under the bruise. Borrow a camera. Buy some film. We'll sneak down to the power plant tomorrow afternoon and take some pictures. Then we'll know."

They stole down into the university power plant the following afternoon. It was a vast cellar, deep under the earth. It was dark, shadowy, luminous with burning light from the furnace doors. Above the roar of the fires they could hear a strange voice shouting and chanting the echoing vault: "All reet! All reet! So jeet your seat. Be fleet be fleet, cool and discreet honey..." And they could see a capering figure dancing a lumatic rumba in time to the music it shouted. The legs twisted. The arms waved. The fingers writhed.

Jed Stark raised the camera and began shooting his spool of infrared film, aiming the camera sights at that bobbing head. Then Wanda shrieked, for I saw them and came charging down on them, brandishing a polished steel shovel. It smashed the camera. It felled the girl and then the boy. Jed fought me for a desperate hissing moment before he was bludgeoned into helplessness. Then the android dragged them to the furnace and fed them to the flames, slowly, hideously. It capered and sang. Then it returned to my hotel.

The thermometer in the power plant registered 100.9° murderously Fahrenheit. All reet! All reet!

We bought steerage on the Lyra Queen and Vandaleur and the android did odd jobs for their meals. During the night watches, Vandaleur would sit alone in the steerage head with a cardboard portfolio on his lap, puzzling over its contents. That portfolio was all he had managed to bring with him from Lyra Alpha. He had stolen it from Wanda's room. It was labelled ANDROID. It contained the secret of my sickness. And it contained nothing but newspapers. Scores of newspapers from all over the galaxy, printed, microfilmed, engraved, etched, offset, photostated... Rigel *Star-Banner*... Paragon *Picayune*... Megaster *Times-Leader*... Lalande *Herald*... Lacaille *Journal*... Indi *Intelligencer*... Eridani *Telegram-News*. All reet! All reet!

Nothing but newspapers. Each paper contained an account of one crime in the android's ghastly career. Each paper also contained news, domestic and foreign, sports, society, weather, shipping news, stock exchange quotations, human interest stories, features, contents, puzzles. Somewhere in that mass of uncollated facts was the secret Wanda and Jed Stark had discovered. Vandaleur pored over the papers helplessly. It was beyond him. So jeet your seat!

"I'll sell you," I told the android. "Damn you. When we land on Terra, I'll sell you. I'll settle for 3 per cent on whatever you're worth."

"I am worth fifty-seven thousand dollars on the current exchange," I told him.

"If I can't sell you, I'll turn you in to the police," I said.

"I am valuable property," I answered. "It is forbidden to endanger valuable property. You won't have me destroyed."

"Christ damn you!" Vandaleur cried. "What? Are you arrogant? Do you know you can trust me to protect you? Is that the secret?"

The multiple aptitude android regarded him with calm accomplished eyes. "Sometimes," it said, "it is a good thing to be property."

It was 3 below zero when the Lyra Queen dropped at Croydon Field. A mixture of ice and snow swept across the field, fizzing and exploding into steam under the Queen's tail jets. The passengers trotted numbly across the blackened concrete to customs inspection, and thence to the airport bus that was to take them to London. Vandaleur and the android were broke. They walked.

By midnight they reached Piccadilly Circus. The December ice storm had not slackened and the stamie of Eros was encrusted with ice. They turned right, walked down to Trafalgar Square and then along the Strand

towards Soho, shaking with cold and wet. Just above Fleet Street, Vandaleur saw a solitary figure coming from the direction of St. Paul's. He drew the android into an alley.

"We've got to have money," he whispered. He pointed at the approaching figure. "He has money. Take it from him."

"The order cannot be obeyed," the android said.

"Take it from him," Vandaleur repeated. "By force. Do you understand? We're desperate."

"It is contrary to my prime directive," I said. "I cannot endanger life or property. The order cannot be obeyed."

"For God's sake!" Vandaleur burst out. "You've attacked, destroyed, murdered. Don't gibber about prime directives. You haven't any left. Get his money. Kill him if you have to. I tell you, we're desperate!"

"It is contrary to my prime directive," the android repeated. "The order cannot be obeyed."

I trust the android back and leaped out at the stranger. He was tall, austere, competent. He had an air of hope curdled by cynicism. He carried a cane. I saw he was blind.

"Yes?" he said. "I hear you near me. What is it?"

"Sir..." Vandaleur hesitated. "I'm desperate."

"We are all desperate," the stranger replied. "Quietly desperate."

"Sir... I've got to have some money."

"Are you begging or stealing?" The sightless eyes passed over Vandaleur and the android.

"I'm prepared for either."

"Ah. So are we all. It is the history of our race." The stranger motioned over his shoulder. "I have been begging at St. Paul's, my friend. What I desire cannot be stolen. What is it you desire that you are lucky enough to be able to steal?"

"Money," Vandaleur said.

"Money for what? Come, my friend, let us exchange confidences. I will tell you why I beg, if you will tell me why you steal. My name is Blenheim."

"My name is... Vole."

"I was not begging for sight at St. Paul's, Mr. Vole. I was begging for a number."

"A number?"

"Ah, yes. Numbers rational, number irrational. Numbers imaginary. Positive integers. Negative integers. Fractions, positive and negative. Eh? You have never heard of Blenheim's immortal treatise on Twenty Zeros, or The Differences in Absence of Quantity?" Blenheim smiled bitterly.

"I am a wizard of the Theory of Number, Mr. Vole, and I have exhausted the charm of number for myself. After fifty years of wizardry, senility approaches and the appetite vanishes. I have been praying in St. Paul's for inspiration. Dear God, I prayed, if You exist, send me a number."

Vandaleur slowly lifted the cardboard portfolio and touched Blenheim's hand with it. "In here," he said, "is a number. A hidden number. A secret number. The number of a crime. Shall we exchange, Mr. Blenheim? Shelter for a number?"

"Neither begging nor stealing, eh?" Blenheim said. "But a bargain. So all life reduces itself to the banal." The sightless eyes again passed over Vandaleur and the android. "Perhaps the All-Mighty is not God but a merchant. Come home with me."

On the top floor of Blenheim's house we shared a room—two beds, two closets, two washstands, one bathroom. Vandaleur bruised my forehead again and sent me out to find work, and while the android worked, I consulted with Blenheim and read him the papers from the portfolio, one by one. All reet! All reet!

Vandaleur told him so much and no more. He was a student, I said, attempting a thesis on the murdering android. In these papers which he had collected were the facts that would explain the crimes of which Blenheim had heard nothing. There must be a correlation, a number, a statistic, something which would account for my derangement, I explained, and Blenheim was piqued by the mystery, the detective story, the human interest of number.

We examined the papers. As I read them aloud, he listed them and their contents in his blind, meticulous writing. And then I read his notes to him. He listed the papers by type, by type-face, by fact, by fancy, by article, spelling, words, theme, advertising, pictures, subject, politics, prejudices. He analyzed. He studied. He meditated. And we lived together in that top floor, always a little cold, always a little terrified, always a little closer... brought together by our fear of it, our hatred between us. Like a wedge driven into a living tree and splitting the trunk, only to be forever incorporated into the scar tissue, we grew together. Vandaleur and the android. Be fleet be fleet!

And one afternoon Blenheim called Vandaleur into his study and displayed his notes. "I think I've found it," he said, "but I can't understand it."

Vandaleur's heart leaped.

"Here are the correlations," Blenheim continued. "In fifty papers there are accounts of the criminal android. What is there, outside the depredations, that is also in fifty papers?"

"I don't know, Mr. Blenheim."

"It was a rhetorical question. Here is the answer. The weather."

"What?"

"The weather." Blenheim nodded. "Each crime was committed on a day when the temperature was above ninety degrees Fahrenheit."

"But that's impossible," Vandaleur exclaimed. "It was cool on Lyra Alpha."

"We have no record of any crime committed on Lyra Alpha. There is no paper."

"No. That's right. I—" Vandaleur was confused. Suddenly he exclaimed. "No. You're right. The furnace room. It was hot there. Hot! Of course. My God, yes! That's the answer. Dallas Brady's electric furnace . . . The rice deltas on Paragon. So jeet your seat. Yes. But why? Why? My God, why?"

I came into the house at that moment, and passing the study, saw Vandaleur and Blenheim. I entered, awaiting commands, my multiple aptitudes devoted to service.

"That's the android, eh?" Blenheim said after a long moment.

"Yes," Vandaleur answered, still confused by the discovery. "And that explains why it refused to attack you that night on the Strand. It wasn't hot enough to break the prime directive. Only in the heat . . . The heat, all reet!" He looked at the android. A lunatic command passed from man to android. I refused. It is forbidden to endanger life. Vandaleur gestured furiously, then seized Blenheim's shoulders and yanked him back out of his desk chair to the floor. Blenheim shouted once. Vandaleur leaped on him like a tiger, pinning him to the floor and sealing his mouth with one hand.

"Find a weapon," he called to the android.

"It is forbidden to endanger life."

"This is a fight for self-preservation. Bring me a weapon!" He held the squirming mathematician with all his weight. I went at once to a cupboard where I knew a revolver was kept. I checked it. It was loaded with five cartridges. I handed it to Vandaleur. I took it, rammed the barrel against Blenheim's head and pulled the trigger. He shuddered once.

We had three hours before the cook returned from her day off. We looted the house. We took Blenheim's money and jewels. We packed a bag with clothes. We took Blenheim's notes, destroyed the newspapers; and we left, carefully locking the door behind us. In Blenheim's study we left a pile of crumpled papers under a half inch of burning candle. And we soaked the rug around it with kerosene. No, I did all that. The android refused. I am forbidden to endanger life or property.

All reet!

They took the tubes to Leicester Square, changed trains and rode to the British Museum. There they got off and went to a small Georgian house just off Russell Square. A shingle in the window read: NAN WEBB, PSYCHOMETRIC CONSULTANT. Vandaleur had made a note of the address some weeks earlier. They went into the house. The android waited in the foyer with the bag. Vandaleur entered Nan Webb's office.

She was a tall woman with grey shingled hair, very fine English complexion and very bad English legs. Her features were blunt, her expression acute. She nodded to Vandaleur, finished a letter, sealed it and looked up.

"My name," I said, "is Vanderbilt. James Vanderbilt."

"Quite."

"I'm an exchange student at London University."

"Quite."

"I've been researching on the killing android, and I think I've discovered something very interesting. I'd like your advice on it. What is your fee?"

"What is your college at the University?"

"Why?"

"There is a discount for students."

"Merton College."

"That will be two pounds, please."

Vandaleur placed two pounds on the desk and added to the fee Blenheim's notes. "There is a correlation," he said, "between the crimes of the android and the weather. You will note that each crime was committed when the temperature rose above ninety degrees Fahrenheit. Is there a psychometric answer for this?"

Nan Webb nodded, studied the notes for a moment, put down the sheets of paper and said: "Synesthesia, obviously."

"What?"

"Synesthesia," she repeated. "When a sensation, Mr. Vanderbilt is interpreted immediately in terms of a sensation from a different sense organ from the one stimulated, it is called synesthesia. For example: A sound stimulus gives rise to a simultaneous sensation of definite color. Or color gives rise to a sensation of taste. Or a light stimulus gives rise to a sensation of sound. There can be confusion or short circuiting of any sensation of taste, smell, pain, pressure, temperature and so on. Do you understand?"

"I think so."

"Your research has uncovered the fact that the android most probably reacts to temperature stimulus above the ninety degree level synesthet-

ically. Most probably there is an endocrine response. Probably a temperature linkage with the android adrenal surrogate. High temperature brings about a response of fear, anger, excitement and violent physical activity . . . all within the province of the adrenal gland."

"Yes. I see. Then if the android were to be kept in cold climates . . .
 "There would be neither stimulus nor response. There would be no crimes. Quite."

"I see. What is projection?"

"How do you mean?"

"Is there any danger of projection with regard to the owner of the android?"

"Very interesting. Projection is a throwing forward. It is the process of throwing out upon another the ideas or impulses that belong to oneself. The paranoid, for example, projects upon others his conflicts and disturbances in order to externalize them. He accuses, directly or by implication, other men of having the very sicknesses with which he is struggling himself."

"And the danger of projection?"

"It is the danger of believing what is implied. If you live with a psychotic who projects his sickness upon you, there is a danger of falling into his psychotic pattern and becoming virtually psychotic yourself. As, no doubt, is happening to you, Mr. Vandaleur."

Vandaleur leaped to his feet.

"You are an ass," Nan Webb went on crisply. She waved the sheets of notes. "This is no exchange student's writing. It's the unique cursive of the famous Blenheim. Every scholar in England knows this blind writing. There is no Merton College at London University. That was a miserable guess. Merton is one of the Oxford Colleges. And you, Mr. Vandaleur, are so obviously infected by association with your deranged android . . . by projection, if you will . . . that I hesitate between calling the Metropolitan Police and the Hospital for the Criminally Insane."

I took out the gun and shot her.

Reet!

"Antares II, Alpha Aurigae, Acrux IV, Pollux IX, Rigel Centaurus," Vandaleur said. "They're all cold. Cold as a witch's kiss. Mean temperatures of 40° Fahrenheit. Never get hotter than 70. We're in business again. Watch that curve."

The multiple aptitude android swung the wheel with its accomplished hands. The car took the curve sweetly and sped on through the northern marshes, the reeds stretching for miles, brown and dry, under the cold English sky. The sun was sinking swiftly. Overhead, a lone flight of

bustards flapped clumsily eastward. High above the flight, a lone helicopter drifted towards home and warmth.

"No more warmth for us," I said. "No more heat. We're safe when we're cold. We'll hole up in Scotland, make a little money, get across to Norway, build a bankroll and then ship out. We'll settle on Pollux. We're safe. We've licked it. We can live again."

There was a startling *bleep* from overhead, and then a ragged roar: "ATTENTION JAMES VANDALEUR AND ANDROID. ATTENTION JAMES VANDALEUR AND ANDROID!"

Vandaleur started and looked up. The lone helicopter was floating above them. From its belly came amplified commands: "YOU ARE SURROUNDED. THE ROAD IS BLOCKED. YOU ARE TO STOP YOUR CAR AT ONCE AND SUBMIT TO ARREST. STOP AT ONCE!"

I looked at Vandaleur for orders.

"Keep driving," Vandaleur snapped.

The helicopter dropped lower: "ATTENTION ANDROID. YOU ARE IN CONTROL OF THE VEHICLE. YOU ARE TO STOP AT ONCE. THIS IS A STATE DIRECTIVE SUPERSEDING ALL PRIVATE COMMANDS."

"What the hell are you doing?" I shouted.

"A state directive supersedes all private commands," the android answered. "I must point out to you that—"

"Get the hell away from the wheel," Vandaleur ordered. I clubbed the android, yanked him sideways and squirmed over him to the wheel. The car veered off the road in that moment and went churning through the frozen mud and dry reeds. Vandaleur regained control and continued westward through the marshes towards a parallel highway five miles distant.

"We'll beat their God damned block," he grunted.

The car pounded and surged. The helicopter dropped even lower. A searchlight blazed from the belly of the plane.

"ATTENTION JAMES VANDALEUR AND ANDROID. SUBMIT TO ARREST. THIS IS A STATE DIRECTIVE SUPERSEDING ALL PRIVATE COMMANDS."

"He can't submit," Vandaleur shouted wildly. "There's no one to submit to. He can't and I won't."

"Christ!" I muttered. "We'll beat them yet. We'll beat the block. We'll beat the heat. We'll—"

"I must point out to you," I said, "that I am required by my prime directive to obey state directives which supersede all private commands. I must submit to arrest."

"Who says it's a state directive?" Vandaleur said. "Them? Up in that plane? They've got to show credentials. They've got to prove it's

state authority before you submit. How d'you know they're not crooks trying to trick us?"

Holding the wheel with one arm, he reached into his side pocket to make sure the gun was still in place. The car skidded. The tires squealed on frost and reeds. The wheel was wrenched from his grasp and the car yawed up a small hillock and overturned. The motor roared and the wheels screamed. Vandaleur crawled out and dragged the android with him. For the moment we were outside the circle of light boring down from the helicopter. We blundered off into the marsh, into the blackness, into concealment . . . Vandaleur running with a pounding heart, hauling the android along.

The helicopter circled and soared over the wrecked car, searchlight peering, loudspeaker braying. On the highway we had left, lights appeared as the pursuing and blocking parties gathered and followed radio directions from the plane. Vandaleur and the android continued deeper and deeper into the marsh, working their way towards the parallel road and safety. It was night by now. The sky was a black matte. Not a star showed. The temperature was dropping. A southeast night wind knifed us to the bone.

Far behind there was a dull concussion. Vandaleur turned, gasping. The car's fuel had exploded. A geyser of flame shot up like a lurid fountain. It subsided into a low crater of burning reeds. Whipped by the wind, the distant hem of flame fanned up into a wall, ten feet high. The wall began marching down on us, crackling fiercely. Above it, a pall of oily smoke surged forward. Behind it, Vandaleur could make out the figures of men . . . a mass of beaters searching the marsh.

"Christ!" I cried and searched desperately for safety. He ran, dragging me with him, until their feet crunched through the surface ice of a pool. He trampled the ice furiously, then flung himself down in the numbing water, pulling the android with us.

The wall of flame approached. I could hear the crackle and feel the heat. He could see the searchers clearly. Vandaleur reached into his side pocket for the gun. The pocket was torn. The gun was gone. He groaned and shook with cold and terror. The light from the marsh fire was blinding. Overhead, the helicopter floated helplessly to one side, unable to fly through the smoke and flames and aid the searchers who were beating far to the right of us.

"They'll miss us," Vandaleur whispered. "Keep quiet. That's an order. They'll miss us. We'll beat them. We'll beat the fire. We'll—"

Three distinct shots sounded less than a hundred feet from the fugitives. *Blam! Blam! Blam!* They came from the last three cartridges in my gun as the marsh fire reached it where it had dropped, and exploded the shells.

The searchers turned towards the sound and began working directly toward us. Vandaleur cursed hysterically and tried to submerge even deeper to escape the intolerable heat of the fire. The android began to twitch.

The wall of flame surged up to them. Vandaleur took a deep breath and prepared to submerge until the flame passed over them. The android shuddered and burst into an earsplitting scream.

"All reet! All reet!" it shouted. "Be fleet be fleet!"

"Damn you!" I shouted. I tried to drown it.

"Damn you!" I cursed him. I smashed his face.

The android battered Vandaleur, who fought it off until it exploded out of the mud and staggered upright. Before I could return to the attack, the live flames captured it hypnotically. It danced and capered in a lunatic rhumba before the wall of fire. Its legs twisted. Its arms waved. The fingers writhed in a private rhumba of their own. It shrieked and sang and ran in a crooked waltz before the embrace of the heat, a muddied monster silhouetted against the brilliant sparking flare.

The searchers shouted. There were shots. The android spun around twice and then continued its horrid dance before the face of the flames. There was a rising gust of wind. The fire swept around the capering figure and enveloped it for a roaring moment. Then the fire swept on, leaving behind it a sobbing mass of synthetic flesh oozing scarlet blood that would never coagulate.

The thermometer would have registered 1200° wondrously Fahrenheit.

Vandaleur didn't die. I got away. They missed him while they watched the android caper and die. But I don't know which of us he is these days. Projection, Wanda warned me. Projection, Nan Webb told him. If you live with a crazy man or a crazy machine long enough, I become crazy too. Reet!

But we know one truth. We know they were wrong. The new robot and Vandaleur know that because the new robot's started twitching too. Reet! Here on cold Pollux, the robot is twitching and singing. No heat, but my fingers writhe. No heat, but it's taken the little Talley girl off for a solitary walk. A cheap labor robot. A servo-mechanism . . . all I could afford . . . but it's twitching and humming and walking alone with the child somewhere and I can't find them. Christ! Vandaleur can't find me before it's too late. Cool and discreet, honey, in the dancing frost while the thermometer registers 10° fondly Fahrenheit.

reassignment. There were other tasks to accomplish before their contracts were done.

But Manue Nanti still sat on the ground, his head sunk low, desperately trying to gasp a little of the wind he had made, the wind out of the ground, the wind of the future. But lungs were clogged, and he could not drink of the racing wind. His big calloused hand clutched slowly at the ground, and he choked a brief sound like a sob.

A shadow fell over him. It was Kinley, come to offer his thanks for the quelling of Handell. But he said nothing for a moment as he watched Manue's desperate Gethsemane.

'Some sow, others reap,' he said.

'Why?' the Peruvian choked.

The supervisor shrugged. 'What's the difference? But if you can't be both, which would you rather be?'

Nanti looked up into the wind. He imagined a city to the south, a city built on tear-soaked ground, filled with people who had no ends beyond their culture, no goal but within their own society. It was a good sensible question: Which would he rather be—sower or reaper?

Pride brought him slowly to his feet, and he eyed Kinley questioningly. The supervisor touched his shoulder.

'Go on to the trucks.'

Nanti nodded and shuffled away. He had wanted something to work for, hadn't he? Something more than the reasons Donnell had given. Well, he could smell a reason, even if he couldn't breathe it.

Eight hundred years was a long time, but then—long time, big reason. The air smelled good, even with its clouds of boiling dust.

He knew now what Mars was—not a ten-thousand-a-year job, not a garbage can for surplus production. But an eight-century passion of human faith in the destiny of the race of Man. He paused short of the truck. He had wanted to travel, to see the sights of Earth, the handiwork of Nature and of history, the glorious places of his planet.

He stooped, and scooped up a handful of the red-brown soil, letting it sift slowly between his fingers. Here was Mars—his planet now. No more of Earth, not for Manue Nanti. He adjusted his acerator more comfortably and climbed into the waiting truck.

THE TUNNEL UNDER THE WORLD

FREDERIK POHL

On the morning of June 15th, Guy Burckhardt woke up screaming out of a dream.

It was more real than any dream he had ever had in his life. He could still hear and feel the sharp, ripping-metal explosion, the violent heave that had tossed him furiously out of bed, the searing wave of heat.

He sat up convulsively and stared, not believing what he saw, at the quiet room and the bright sunlight coming in the window.

He croaked, 'Mary?'

His wife was not in the bed next to him. The covers were tumbled and awry, as though she had just left it, and the memory of the dream was so strong that instinctively he found himself searching the floor to see if the dream explosion had thrown her down.

But she wasn't there. Of course she wasn't, he told himself, looking at the familiar vanity and slipper chair, the uncracked window, the unbuckled wall. It had only been a dream.

'Guy?' His wife was calling him querulously from the foot of the stairs. 'Guy, dear, are you all right?'

He called weakly, 'Sure.'

There was a pause. Then Mary said doubtfully, 'Breakfast is ready. Are you sure you're all right? I thought I heard you yelling—'

Burckhardt said more confidently, 'I had a bad dream, honey. Be right down.'

In the shower, punching the lukewarm-and-cologne he favoured, he told himself that it had been a beaut of a dream. Still, bad dreams weren't unusual, especially bad dreams about explosions. In the past thirty years of H-bomb jitters, who had not dreamed of explosions?

Even Mary had dreamed of them, it turned out, for he started to tell her about the dream, but she cut him off. 'You did? Her voice was astonished. 'Why, dear, I dreamed the same thing! Well, almost the same thing. I didn't actually *hear* anything. I dreamed that something woke me up, and then there was a sort of quick bang, and then something hit me on the head. And that was all. Was yours like that?'

Burckhardt coughed. 'Well, no,' he said. Mary was not one of these strong-as-a-man, brave-as-a-tiger women. It was not necessary, he thought, to tell her all the little details of the dream that made it seem so real. No need to mention the splintered ribs, and the salt bubble in his throat, and the agonized knowledge that this was death. He said, 'Maybe there really was some kind of explosion downtown. Maybe we heard it and it started us dreaming.'

Mary reached over and patted his hand absently. 'Maybe,' she agreed. 'It's almost half-past eight, dear. Shouldn't you hurry? You don't want to be late to the office.'

He gulped his food, kissed her and rushed out—not so much to be on time as to see if his guess had been right.

But downtown Tylerton looked as it always had. Coming in on the bus, Burckhardt watched critically out the window, seeking evidence of an explosion. There wasn't any. If anything, Tylerton looked better than it ever had before: it was a beautiful crisp day, the sky was cloudless, the buildings were clean and inviting. They had, he observed, steam-blasted the Power & Light Building, the town's only skyscraper—that was the penalty of having Contro Chemical's main plant on the outskirts of town; the fumes from the cascade stills left their mark on stone buildings.

None of the usual crowd were on the bus, so there wasn't any one Burckhardt could ask about the explosion. And by the time he got out at the corner of Fifth and Lehigh and the bus rolled away with a muted diesel moan, he had pretty well convinced himself that it was all imagination.

He stopped at the cigar stand in the lobby of his office building, but Ralph wasn't behind the counter. The man who sold him his pack of cigarettes was a stranger.

'Where's Mr Stebbins?' Burckhardt asked.

The man said politely, 'Sick, sir. He'll be in tomorrow. A pack of Marlins today?'

'Chesterfields,' Burckhardt corrected.

'Certainly, sir,' the man said. But what he took from the rack and slid across the counter was an unfamiliar green-and-yellow pack.

'Do try these, sir,' he suggested. 'They contain an anti-cough factor. Ever notice how ordinary cigarettes make you choke every once in a while?'

Burckhardt said suspiciously, 'I never heard of this brand.'

'Of course not. They're something new.' Burckhardt hesitated, and the man said persuasively, 'Look, try them out at my risk. If you don't like them, bring back the empty pack and I'll refund your money. Fair enough?'

Burckhardt shrugged. 'How can I lose? But give me a pack of Chesterfields, too, will you?'

He opened the pack and lit one while he waited for the elevator. They weren't bad, he decided, though he was suspicious of cigarettes that had the tobacco chemically treated in any way. But he didn't think much of Ralph's stand-in; it would raise hell with the trade at the cigar stand if the man tried to give every customer the same high-pressure sales talk.

The elevator door opened with a low-pitched sound of music. Burckhardt and two or three others got in and he nodded to them as the door closed. The thread of music switched off and the speaker in the ceiling of the cab began its usual commercials.

No, not the *usual* commercials, Burckhardt realized. He had been exposed to the captive-audience commercials so long that they hardly registered on the outer ear any more, but what was coming from the recorded programme in the basement of the building caught his attention. It wasn't merely that the brands were mostly unfamiliar; it was a difference in pattern.

There were jingles with an insistent, bouncy rhythm, about soft drinks he had never tasted. There was a rapid patter dialogue between what sounded like two ten-year-old boys about a candy bar, followed by an authoritative bass rumble: 'Go right out and get a DELICIOUS Choco-Bite and eat your TANGY Choco-Bite *all up*. That's Choco-Bite!' There was a sobbing female whine: 'I wish I had a Feckle Freezer! I'd do *anything* for a Feckle Freezer!' Burckhardt reached his floor and left the elevator in the middle of the last one. It left him a little uneasy. The commercials were not for familiar brands; there was no feeling of use and custom to them.

But the office was happily normal—except that Mr Barth wasn't in. Miss Mitkin, yawning at the reception desk, didn't know exactly why. 'His home phoned, that's all. He'll be in tomorrow.' 'Maybe he went to the plant. It's right near his house.' She looked indifferent. 'Yeah.'

A thought struck Burckhardt. 'But today is June 15th! It's quarterly tax return day—he has to sign the return!'

Miss Mitkin shrugged to indicate that that was Burckhardt's problem, not hers. She returned to her nails.

Thoroughly exasperated, Burckhardt went to his desk. It wasn't that he couldn't sign the tax returns as well as Barth, he thought resentfully. It simply wasn't his job, that was all; it was a responsibility that Barth, as office manager for Contro Chemicals' downtown office, should have taken.

He thought briefly of calling Barth at his home or trying to reach him at the factory, but he gave up the idea quickly enough. He didn't really care much for the people at the factory and the less contact he had with them, the better. He had been to the factory once, with Barth. It had been a confusing and, in a way, a frightening experience. Barring a handful of executives and engineers, there wasn't a soul in the factory—that is, Burckhardt corrected himself, remembering what Barth had told him, not a *living* soul—just the machines.

According to Barth, each machine was controlled by a sort of computer which reproduced, in its electronic snarl, the actual memory and mind of a human being. It was an unpleasant thought. Barth, laughing, had assured him that there was no Frankenstein business of robbing graveyards and implanting brains in machines. It was only a matter, he said, of transferring a man's habit patterns from brain cells to vacuum-tube cells. It didn't hurt the man and it didn't make the machine into a monster.

But they made Burckhardt uncomfortable all the same. He put Barth and the factory and all his other little irritations out of his mind and tackled the tax returns. It took him until noon to verify the figures—which Barth could have done out of his memory and his private ledger in ten minutes. Burckhardt fully reminded himself.

He sealed them in an envelope and walked out to Miss Mitkin. 'Since Mr Barth isn't here, we'd better go to lunch in shifts,' he said. 'You can go first.'

'Thanks.' Miss Mitkin languidly took her bag out of the desk drawer and began to apply make-up.

Burckhardt offered her the envelope. 'Drop this in the mail for me, will you? Uh—wait a minute. I wonder if I ought to phone Mr Barth to make sure. Did his wife say whether he was able to take phone calls?'

'Didn't say.' Miss Mitkin blotted her lips carefully with a Kleenex. 'Wasn't his wife, anyway. It was his daughter who called and left the message.'

'The kid?' Burckhardt frowned. 'I thought she was away at school.'

'She called, that's all I know.'

Burckhardt went back to his own office and stared distastefully at the unopened mail on his desk. He didn't like nightmares; they spoiled his whole day. He should have stayed in bed, like Barth.

A funny thing happened on his way home. There was a disturbance at the corner where he usually caught his bus—someone was screaming something about a new kind of deep-freeze—so he walked an extra block. He saw the bus coming and started to trot. But behind him, someone was calling his name. He looked over his shoulder; a small harried-looking man was hurrying towards him.

Burckhardt hesitated, and then recognized him. It was a casual acquaintance named Swanson. Burckhardt sourly observed that he had already missed the bus.

He said, 'Hello'.

Swanson's face was desperately eager. 'Burckhardt?' he asked enquiringly, with an odd intensity. And then he just stood there silently, watching Burckhardt's face, with a burning eagerness that dwindled to a faint hope and died to a regret. He was searching for something, waiting for something, Burckhardt thought. But whatever it was he wanted, Burckhardt didn't know how to supply it.

Burckhardt coughed and said again, 'Hello, Swanson'. Swanson didn't even acknowledge the greeting. He merely sighed a very deep sigh.

'Nothing doing,' he mumbled, apparently to himself. He nodded abstractedly to Burckhardt and turned away.

Burckhardt watched the slumped shoulders disappear in the crowd. It was an *odd* sort of day, he thought, and one he didn't much like. Things weren't going right.

Riding home on the next bus, he brooded about it. It wasn't anything terrible or disastrous; it was something out of his experience entirely. You live your life, like any man, and you form a network of impressions and reactions. You *expect* things. When you open your medicine chest, your razor is expected to be on the second shelf; when you lock your front door, you expect to have to give it a slight extra tug to make it latch.

It isn't the things that are right and perfect in your life that make it familiar. It is the things that are just a little bit wrong—the sticking latch, the light switch at the head of the stairs that needs an extra push because the spring is old and weak, the rug that unfailingly skids underfoot.

It wasn't just that things were wrong with the pattern of Burckhardt's life; it was that the *wrong* things were wrong. For instance, Barth hadn't come into the office, yet Barth *always* came in.

Burckhardt brooded about it through dinner. He brooded about it, despite his wife's attempt to interest him in a game of bridge with the neighbours, all through the evening. The neighbours were people he liked—Anne and Farley Dennerman. He had known them all their lives. But they were odd and brooding, too, this night and he barely listened to Dennerman's complaints about not being able to get good phone service or his wife's comments on the disgusting variety of television commercials they had these days.

Burckhardt was well on the way to setting an all-time record for continuous abstraction when, around midnight, with a suddenness that surprised him—he was strangely *aware* of it happening—he turned over in his bed and, quickly and completely, fell asleep.

II

On the morning of June 15th, Burckhardt woke up screaming.

It was more real than any dream he had ever had in his life. He could still hear the explosion, feel the blast that crushed him against a wall. It did not seem right that he should be sitting bolt upright in bed in an undisturbed room.

His wife came pattering up the stairs. 'Darling!' she cried. 'What's the matter?'

He mumbled, 'Nothing. Bad dream.'

She relaxed, hand on heart. In an angry tone, she started to say: 'You gave me such a shock—'

But a noise from outside interrupted her. There was a wail of sirens and a clang of bells; it was loud and shocking.

The Burckhardts stared at each other for a heartbeat, then hurried fearfully to the window.

There were no rumbling fire engines in the street, only a small panel truck, cruising slowly along. Flaring loudspeaker horns crowned its top. From them issued the screaming sound of sirens, growing in intensity, mixed with the rumble of heavy-duty engines and the sound of bells. It was a perfect record of fire engines arriving at a four-alarm blaze.

Burckhardt said in amazement, 'Mary, that's against the law! Do you know what they're doing? They're playing records of a fire. What are they up to?'

'Maybe it's a practical joke,' his wife offered.

'Joke? Waking up the whole neighbourhood at six o'clock in the morning?' He shook his head. 'The police will be here in ten minutes,' he predicted. 'Wait and see.'

But the police weren't—not in ten minutes, or at all. Whoever the pranksters in the car were, they apparently had a police permit for their games.

The car took a position in the middle of the block and stood silent for a few minutes. Then there was a crackle from the speaker, and a giant voice chanted:

Feckle Freezers!

Feckle Freezers!

Gotta have a

Feckle Freezer!

Feckle, Feckle, Feckle

Feckle, Feckle, Feckle—

It went on and on. Every house on the block had faces staring out of windows by then. The voice was not merely loud; it was nearly deafening.

Burckhardt shouted to his wife, over the uproar, 'What the hell is a Feckle Freezer?'

'Some kind of a freezer, I guess, dear,' she shrieked back unhelpfully.

Abruptly the noise stopped and the truck stood silent. It was still

misty morning: the sun's rays came horizontally across the rooftops. It was impossible to believe that, a moment ago, the silent block had been bellowing the name of a freezer.

'A crazy advertising trick,' Burckhardt said bitterly. He yawned and turned away from the window. 'Might as well get dressed. I guess that's the end of—'

The bellow caught him from behind; it was almost like a hard slap on the ears. A harsh, sneering voice, louder than the archangel's trumpet, howled:

'Have you got a freezer? *It stinks!* If it isn't a Feckle Freezer, *it stinks!* If it's a last year's Feckle Freezer, *it stinks!* Only this year's Feckle Freezer is any good at all! You know who owns an Ajax Freezer? Fairies own Ajax Freezers! You know who owns a Triplecold Freezer? Commies own Triplecold Freezers! Every freezer but a brand-new Feckle Freezer *stinks!*'

The voice screamed inarticulately with rage. 'I'm warning you! Get out and buy a Feckle Freezer right away! Hurry up! Hurry for Feckle! Hurry for Feckle! Hurry, hurry, hurry, Feckle, Feckle, Feckle, Feckle, Feckle, Feckle...' It stopped eventually. Burckhardt licked his lips. He started to say to his wife, 'Maybe we ought to call the police about—' when the speakers erupted again. It caught him off guard; it was intended to catch him off guard. It screamed:

'Feckle, Feckle, Feckle, Feckle, Feckle, Feckle, Feckle, Feckle. Cheap freezers ruin your food. You'll get sick and throw up. You'll get sick and die. Buy a Feckle, Feckle, Feckle, Feckle! Ever take a piece of meat out of the freezer you've got and see how rotten and mouldy it is? Buy a Feckle, Feckle, Feckle, Feckle, Feckle. Do you want to eat rotten, stinking food? Or do you want to wise up and buy a Feckle, Feckle, Feckle—'

That did it. With fingers that kept stabbing the wrong holes, Burckhardt finally managed to dial the local police station. He got a busy signal—it was apparent that he was not the only one with the same idea—and while he was shakingly dialling again, the noise outside stopped.

He looked out the window. The truck was gone.

Burckhardt loosened his tie and ordered another Frosty-Flip from the waiter. If only they wouldn't keep the Crystal Cafe so *hot!* The new paint job—searing reds and blinding yellows—was bad

enough, but someone seemed to have the delusion that this was January instead of June; the place was a good ten degrees warmer than outside.

He swallowed the Frosty-Flip in two gulps. It had a kind of peculiar flavour, he thought, but not bad. It certainly cooled you off, just as the waiter had promised. He reminded himself to pick up a carton of them on the way home; Mary might like them. She was always interested in something new.

He stood up awkwardly as the girl came across the restaurant toward him. She was the most beautiful thing he had ever seen in Tylerton. Chin-height, honey-blonde hair and a figure that—well, it was all hers. There was no doubt in the world that the dress that clung to her was the only thing she wore. He felt as if he were blushing as she greeted him.

'Mr Burckhardt.' The voice was like distant tom-toms. 'It's wonderful of you to let me see you, after this morning.'

He cleared his throat. 'Not at all. Won't you sit down, Miss—' 'April Horn,' she murmured, sitting down—beside him, not where he had pointed on the other side of the table. 'Call me April, won't you?'

She was wearing some kind of perfume. Burckhardt noted with what little of his mind was functioning at all. It didn't seem fair that she should be using perfume as well as everything else. He came to with a start and realized that the waiter was leaving with an order for *filets mignon* for two.

'Hey!' he objected.

'Please, Mr Burckhardt.' Her shoulder was against his, her face was turned to him, her breath was warm, her expression was tender and solicitous. 'This is all on the Feckle Corporation. Please let them—it's the *least* they can do.'

He felt her hand burrowing into his pocket.

'I put the price of the meal into your pocket,' she whispered conspiratorially. 'Please do that for me, won't you? I mean I'd appreciate it if you'd pay the waiter—I'm old-fashioned about things like that.'

She smiled meltingly, then became mock-businesslike. 'But you must take the money,' she insisted. 'Why, you're letting Feckle off lightly if you do! You could sue them for every nickel they've got, disturbing your sleep like that.'

With a dizzy feeling, as though he had just seen someone make a

rabbit disappear into a top hat, he said, 'Why, it really wasn't so bad, uh, April. A little noisy, maybe, but—'

'Oh, Mr Burckhardt?' The blue eyes were wide and admiring. 'I *knew* you'd understand. It's just that—well, it's such a *wonderful* freezer that some of the outside men get carried away, so to speak. As soon as the main office found out about what happened, they sent representatives around to every house on the block to apologize. Your wife told us where we could phone you—and I'm so very pleased that you were willing to let me have lunch with you, so that I could apologize, too. Because truly, Mr Burckhardt, it is a *fine* freezer.'

'I shouldn't tell you this, but—' the blue eyes were shyly lowered—'I'd do almost anything for Feckle Freezers. It's more than a job to me.' She looked up. She was enchanting. 'I bet you think I'm silly, don't you?'

Burckhardt coughed. 'Well, I—'

'Oh, you don't want to be unkind!' She shook her head. 'No, don't pretend. You think it's silly. But really, Mr Burckhardt, you wouldn't think so if you knew more about the Feckle. Let me show you this little booklet—'

Burckhardt got back from lunch a full hour later. It wasn't only the girl who delayed him. There had been a curious interview with a little man named Swanson, whom he barely knew, who had stopped him with desperate urgency on the street—and then left him cold.

But it didn't matter much. Mr Barth, for the first time since Burckhardt had worked there, was out for the day—leaving Burckhardt stuck with the quarterly tax returns.

What did matter, though, was that somehow he had signed a purchase order for a twelve-cubic-foot Feckle Freezer, upright model, self-defrosting, list price \$625, with a ten per cent 'courtesy' discount—'Because of that *horrid* affair this morning, Mr Burckhardt,' she had said.

And he wasn't sure how he could explain it to his wife.

He needn't have worried. As he walked in the front door, his wife said almost immediately, 'I wonder if we can't afford a new freezer, dear. There was a man here to apologize about that noise and—well, we got to talking and—'

She had signed a purchase order, too.

It had been the damndest day, Burckhardt thought later, on his way up to bed. But the day wasn't done with him yet. At the head of the stairs, the weakened spring in the electric light switch refused to click at all. He snapped it back and forth angrily and, of course, succeeded in jarring the tumbler out of its pins. The wires shorted and every light in the house went out.

'Damn!' said Guy Burckhardt.

'Fuse?' His wife shrugged sleepily: 'Let it go till the morning, dear.'

Burckhardt shook his head. 'You go back to bed. I'll be right along.'

It wasn't so much that he cared about fixing the fuse, but he was too restless for sleep. He disconnected the bad switch with a screwdriver, stumbled down into the black kitchen, found the flashlight and climbed gingerly down the cellar stairs. He located a spare fuse, pushed an empty trunk over to the fuse box to stand on and twisted out the old fuse.

When the new one was in, he heard the starting click and steady drone of the refrigerator in the kitchen overhead.

He headed back to the steps, and stopped.

Where the old trunk had been, the cellar floor gleamed oddly bright. He inspected it in the flashlight beam. It was metal!

'Son of a gun,' said Guy Burckhardt. He shook his head unbelievably. He peered closer, rubbed the edges of the metallic patch with his thumb and acquired an annoying cut—the edges were *sharp*.

The stained cement floor of the cellar was a thin shell. He found a hammer and cracked it off in a dozen spots—everywhere was metal.

The whole cellar was a copper box. Even the cement-brick walls were false fronts over a metal sheath!

Baffled, he attacked one of the foundation beams. That, at least, was real wood. The glass in the cellar windows was real glass.

He sucked his bleeding thumb and tried the base of the cellar stairs. Real wood. He chipped at the bricks under the oil burner. Real bricks. The retaining walls, the floor—they were faked.

It was as though someone had shored up the house with a frame of metal and then laboriously concealed the evidence.

The biggest surprise was the upside-down boat hull that blocked the rear half of the cellar, relic of a brief home workshop period

that Burckhardt had gone through a couple of years before. From above, it looked perfectly normal. Inside, though, where there should have been thwarts and seats and lockers, there was a mere tangle of braces, rough and unfinished.

'But I built that!' Burckhardt exclaimed, forgetting his thumb. He leaned against the hull dizzily, trying to think this thing through. For reasons beyond his comprehension, someone had taken his boat and his cellar away, maybe his whole house, and replaced them with a clever mock-up of the real thing.

'That's crazy,' he said to the empty cellar. He stared around in the light of the flash. He whispered, 'What in the name of Heaven would anybody do that for?'

Reason refused an answer; there wasn't any reasonable answer. For long minutes, Burckhardt contemplated the uncertain picture of his own sanity.

He peered under the boat again, hoping to reassure himself that it was a mistake, just his imagination. But the sloppy, unfinished bracing was unchanged. He crawled under for a better look, feeling the rough wood incredulously. Utterly impossible!

He switched off the flashlight and started to wriggle out. But he didn't make it. In the moment between the command to his legs to move and the crawling out, he felt a sudden draining weariness flooding through him.

Consciousness went—not easily, but as though it were being taken away, and Guy Burckhardt was asleep.

III

On the morning of June 16th, Guy Burckhardt woke up in a cramped position huddled under the hull of the boat in his basement—and raced upstairs to find it was June 15th.

The first thing he had done was to make a frantic, hasty inspection on the boat hull, the faked cellar floor, the imitation stone. They were all as he had remembered them—all completely unbelievable.

The kitchen was its placid, unexciting self. The electric clock was purring soberly around the dial. Almost six o'clock, it said. His wife would be waking at any moment.

Burckhardt flung open the front door and started out into the

quiet street. The morning paper was tossed carelessly against the steps—and as he retrieved it, he noticed that this was the 15th day of June.

But that was impossible. *Yesterday* was the 15th of June. It was not a date one would forget—it was quarterly tax-return day.

He went back into the hall and picked up the telephone; he dialled for Weather Information, and got a well-modulated chant: '—and cooler, some showers. Barometric pressure thirty point zero four, rising . . . United States Weather Bureau forecast for June 15th. Warm and sunny, with high around—'

He hung the phone up. June 15th.

'Holy heaven!' Burckhardt said prayerfully. Things were very odd indeed. He heard the ring of his wife's alarm and bounded up the stairs.

Mary Burckhardt was sitting upright in bed with the terrified, uncomprehending stare of someone just waking out of a nightmare.

'Oh!' she gasped, as her husband came in the room. 'Darling, I just had the most *terrible* dream! It was like an explosion and—'

'Again?' Burckhardt asked, not very sympathetically. 'Mary, something's funny! I *knew* there was something wrong all day yesterday and—'

He went on to tell her about the copper box that was the cellar, and the odd mock-up someone had made of his boat. Mary looked astonished, then alarmed, then placatory and uneasy.

She said, 'Dear, are you *sure*? Because I was cleaning that old trunk out just last week and I didn't notice anything.'

'Positive!' said Guy Burckhardt. 'I dragged it over to the wall to step on it to put a new fuse in after we blew the lights out and—'

'After we what?' Mary was looking more than merely alarmed.

'After we blew the lights out. You know, when the switch at the head of the stairs stuck. I went down to the cellar and—'

Mary sat up in bed. 'Guy, the switch didn't stick. I turned out the lights myself last night.'

Burckhardt glared at his wife. 'Now I *know* you didn't! Come here and take a look!'

He stalked out to the landing and dramatically pointed to the bad switch, the one that he had unscrewed and left hanging the night before . . .

Only it wasn't. It was as it had always been. Unbelieving, Burckhardt pressed it and the lights sprang up in both halls.

Mary, looking pale and worried, left him to go down to the kitchen and start breakfast. Burckhardt stood staring at the switch for a long time. His mental processes were gone beyond the point of disbelief and shock; they simply were not functioning.

He shaved and dressed and ate his breakfast in a state of numb introspection. Mary didn't disturb him; she was apprehensive and soothing. She kissed him goodbye as he hurried out to the bus without another word.

Miss Mirkin, at the reception desk, greeted him with a yawn. 'Morning,' she said drowsily. 'Mr Barth won't be in today.'

Burckhardt started to say something, but checked himself. She would not know that Barth hadn't been in yesterday, either, because she was tearing a June 14th pad off her calendar to make way for the 'new' June 15th sheet.

He staggered to his own desk and stared unseeingly at the morning's mail. It had not even been opened yet, but he knew that the Factory Distributors envelope contained an order for twenty thousand feet of the new acoustic tile, and the one from Finebeck & Sons was a complaint.

After a long while, he forced himself to open them. They were.

By lunchtime, driven by a desperate sense of urgency, Burckhardt made Miss Mirkin take her lunch hour first—the June-fifteenth-that-was-yesterday *he* had gone first. She went, looking vaguely worried about his strained insistence, but it made no difference to Burckhardt's mood.

The phone rang and Burckhardt picked it up abstractedly. 'Contro Chemicals Downtown, Burckhardt speaking.'

The voice said, 'This is Swanson,' and stopped.

Burckhardt waited expectantly, but that was all. He said, 'Hello?' Again the pause. Then Swanson asked in sad resignation, 'Still nothing, eh?'

'Nothing what? Swanson, is there something you want? You came up to me yesterday and went through this routine. You—'

The voice crackled: 'Burckhardt! Oh, my good heavens, you remember! Stay right there—I'll be down in half an hour!'

'What's this all about?'

'Never mind,' the little man said exultantly. 'Tell you about it when I see you. Don't say any more over the phone—somebody may be listening. Just wait there. Say, hold on a minute. Will you be alone in the office?'

'Well, no. Miss Mirkin will probably—'

'Hell. Look, Burckhardt, where do you eat lunch? Is it good and noisy?'

'Why, I suppose so. The Crystal Cafe. It's just about a block—'

'I know where it is. Meet you in half an hour!' And the receiver clicked.

The Crystal Cafe was no longer painted red, but the temperature was still up. And they had added piped-in music interspersed with commercials. The advertisements were for Frosty-Flip, Marlin Cigarettes—'They're sanitized,' the announcer purred—and something called Choco-Bite candy bars that Burckhardt couldn't remember ever having heard of before. But he heard more about them quickly enough.

While he was waiting for Swanson to show up, a girl in the cellophane skirt of a nightclub cigarette vendor came through the restaurant with a tray of tiny scarlet-wrapped candies.

'Choco-Bites are *tangy*,' she was murmuring as she came close to his table. 'Choco-Bites are *tangier* than tangy!'

Burckhardt, intent on watching for the strange little man who had phoned him, paid little attention. But as she scattered a handful of the confections over the table next to his, smiling at the occupant, he caught a glimpse of her and turned to stare.

'Why, Miss Horn!' he said.

The girl dropped her tray of candies.

Burckhardt rose, concerned over the girl. 'Is something wrong? But she fled.

The manager of the restaurant was staring suspiciously at Burckhardt, who sank back in his seat and tried to look inconspicuous. He hadn't insulted the girl! Maybe she was just a very strictly reared young lady, he thought—in spite of the long bare legs under the cellophane skirt—and when he addressed her, she thought he was a masher.

Ridiculous idea. Burckhardt scowled uneasily and picked up his menu.

'Burckhardt! It was a shrill whisper.

Burckhardt looked up over the top of his menu, startled. In the seat across from him, the little man named Swanson was sitting, tensely poised.

'Burckhardt!' the little man whispered again. 'Let's go out of

here! They're on to you now. If you want to stay alive, come on!' There was no arguing with the man. Burckhardt gave the hovering manager a sick, apologetic smile and followed Swanson out. The little man seemed to know where he was going. In the street, he clutched Burckhardt by the elbow and hurried him off down the block.

'Did you see her?' he demanded. 'That Horn woman, in the phone booth? She'll have them here in five minutes, believe me, so hurry it up!'

Although the street was full of people and cars, nobody was paying any attention to Burckhardt and Swanson. The air had a nip in it—more like October than June, Burckhardt thought, in spite of the weather bureau. And he felt like a fool, following this mad little man down the street, running away from some 'them' towards—towards what? The little man might be crazy, but he was afraid. And the fear was infectious.

'In here!' panted the little man.

It was another restaurant—more of a bar, really, and a sort of second-rate place that Burckhardt never had patronized.

'Right straight through,' Swanson whispered; and Burckhardt, like a biddable boy, side-stepped through the mass of tables to the far end of the restaurant.

It was 'L'-shaped, with a front on two streets at right angles to each other. They came out on the side street, Swanson staring coldly back at the question-looking cashier, and crossed to the opposite sidewalk.

They were under the marquee of a movie theatre. Swanson's expression began to relax.

'Lost them!' he crowed softly. 'We're almost there.'

He stepped up to the window and bought two tickets. Burckhardt trailed him in to the theatre. It was a weekday matinee and the place was almost empty. From the screen came sounds of gunfire and horse's hoofs. A solitary usher, leaning against a bright brass rail, looked briefly at them and went back to staring boredly at the picture as Swanson led Burckhardt down a flight of carpeted marble steps.

They were in the lounge and it was empty. There was a door for men and one for ladies; and there was a third door, marked 'MANAGER' in gold letters. Swanson listened at the door, and gently opened it and peered inside.

'Okay,' he said, gesturing.

Burckhardt followed him through an empty office, to another door—a closet, probably, because it was unmarked.

But it was no closet. Swanson opened it warily, looked inside, then motioned Burckhardt to follow.

It was a tunnel, metal-walled, brightly lit. Empty. It stretched vacantly away in both directions from them.

Burckhardt looked wondering around. One thing he knew and knew full well:

No such tunnel belonged under Tylerlerton.

There was a room off the tunnel with chairs and a desk and what looked like television screens. Swanson slumped in a chair, panting. 'We're all right for a while here,' he wheezed. 'They don't come here much any more. If they do, we'll hear them and we can hide.'

'Who?' demanded Burckhardt.

The little man said, 'Martians!' His voice cracked on the word and the life seemed to go out of him. In morose tones, he went on: 'Well, I think they're Martians. Although you could be right, you know; I've had plenty of time to think it over these last few weeks, after they got you, and it's possible they're Russians after all. Still—'

'Start from the beginning. Who got me when?'

Swanson sighed. 'So we have to go through the whole thing again. All right. It was about two months ago that you banged on my door, late at night. You were all beat up—scared silly. You begged me to help you—'

'I did?'

'Naturally you don't remember any of this. Listen and you'll understand. You were talking a blue streak about being captured and threatened and your wife being dead and coming back to life, and all kinds of mixed-up nonsense. I thought you were crazy. But—well, I've always had a lot of respect for you. And you begged me to hide you and I have this darkroom, you know. It locks from the inside only. I put the lock on myself. So we went in there—just to humour you—and along about midnight, which was only fifteen or twenty minutes after, we passed out.'

'Passed out?'

Swanson nodded. 'Both of us. It was like being hit with a sand-bag. Look, didn't that happen to you again last night?'

'I guess it did,' Burckhardt shook his head uncertainly.

'Sure. And then all of a sudden we were awake again, and you said you were going to show me something funny, and we went out and bought a paper. And the date on it was June 15th.'

'June 15th? But that's today! I mean—'

'You got it, friend. It's *always* today!'

It took time to penetrate.

Burckhardt said wonderingly. 'You've hidden out in that darkroom for how many weeks?'

'How can I tell? Four or five, maybe. I lost count. And every day the same—always the 15th of June, always my landlady, Mrs Keefer, is sweeping the front steps, always the same headline in the papers at the corner. It gets monotonous, friend.'

IV

It was Burckhardt's idea and Swanson despised it, but he went along. He was the type who always went along.

'It's dangerous,' he grumbled worriedly. 'Suppose somebody comes by? They'll spot us and—'

'What have we got to lose?'

Swanson shrugged. 'It's dangerous,' he said again. But he went along.

Burckhardt's idea was very simple. He was sure of only one thing—the tunnel went somewhere. Martians or Russians, fantastic plot or crazy hallucination, whatever was wrong with Tylerlton had an explanation, and the place to look for it was at the end of the tunnel.

They jogged along. It was more than a mile before they began to see an end. They were in luck—at least no one came through the tunnel to spot them. But Swanson had said that it was only at certain hours that the tunnel seemed to be in use.

Always the fifteenth of June. Why? Burckhardt asked himself. Never mind the how. *Why?*

And falling asleep, completely involuntarily—everyone at the same time, it seemed. And not remembering, never remembering anything—Swanson had said how eagerly he saw Burckhardt again, the morning after Burckhardt had incautiously waited five minutes too many before retreating into the darkroom. When Swanson had come to, Burckhardt was gone. Swanson had seen

him in the street that afternoon, but Burckhardt had remembered nothing.

And Swanson had lived his mouse's existence for weeks, hiding in the woodwork at night, stealing out by day to search for Burckhardt in pitiful hope, scurrying around the fringe of life, trying to keep from the deadly eyes of *them*.

Them. One of 'them' was the girl named April Horn. It was by seeing her walk carelessly into a telephone booth and never come out that Swanson had found the tunnel. Another was the man at the cigar stand in Burckhardt's office building. There were more, at least a dozen that Swanson knew of or suspected.

They were easy enough to spot, once you knew where to look—for they, alone in Tylerlton, changed their roles from day to day. Burckhardt was on that 8:51 bus, every morning of every day—that-was-June-15th, never different by a hair or a moment. But April Horn was sometimes gaudy in the cellophane skirt, giving away candy or cigarettes; sometimes plainly dressed; sometimes not seen by Swanson at all.

Russians? Martians? Whatever they were, what could they be hoping to gain from this mad masquerade?

Burckhardt didn't know the answer—but perhaps it lay beyond the door at the end of the tunnel. They listened carefully and heard distant sounds that could not quite be made out, but nothing that seemed dangerous. They slipped through.

And, through a wide chamber and up a flight of steps, they found they were in what Burckhardt recognized as the Contro Chemicals plant.

Nobody was in sight. By itself, that was not so very odd—the automatized factory had never had very many persons in it. But Burckhardt remembered, from his single visit, the endless, ceaseless busyness of the plant, the valves that opened and closed, the vats that emptied themselves and filled themselves and stirred and cooked and chemically tasted the bubbling liquids they held inside themselves. The plant was never populated, but it was never still.

Only—now it was still. Except for the distant sounds, there was no breath of life in it. The captive electronic minds were sending out no commands; the coils and relays were at rest.

Burckhardt said, 'Come on.' Swanson reluctantly followed him through the tangled aisles of stainless steel columns and tanks.

They walked as though they were in the presence of the dead. In

a way, they were, for what were the automatons that once had run the factory, if not corpses? The machines were controlled by computers that were really not computers at all, but the electronic analogues of living brains. And if they were turned off, were they not dead? For each had once been a human mind.

Take a master petroleum chemist, infinitely skilled in the separation of crude oil into its fractions. Strap him down, probe into his brain with searching electronic needles. The machine scans the patterns of the mind, translates what it sees into charts and sine waves. Impress these same waves on a robot computer and you have your chemist. Or a thousand copies of your chemist, if you wish, with all of his knowledge and skill, and no human limitations at all.

Put a dozen copies of him into a plant and they will run it all, twenty-four hours a day, seven days of every week, never tiring, never overlooking anything, never forgetting . . .

Swanson stepped up closer to Burckhardt. 'I'm scared,' he said.

They were across the room now and the sounds were louder. They were not machine sounds, but voices; Burckhardt moved cautiously up to a door and dared to peer around it.

It was a smaller room, lined with television screens, each one—dozen or more, at least—with a man or woman sitting before it, staring into the screen and dictating notes into a recorder. The viewers dialled from scene to scene; no two screens ever showed the same picture.

The pictures seemed to have little in common. One was a store, where a girl dressed like April Horn was demonstrating home freezers. One was a series of shots of kitchens. Burckhardt caught a glimpse of what looked like the cigar stand in his office building.

It was baffling and Burckhardt would have loved to stand there and puzzle it out, but it was too busy a place. There was the chance that someone would look their way or walk out and find them.

They found another room. This one was empty. It was an office, large and sumptuous. It had a desk, littered with papers. Burckhardt stared at them, briefly at first—then, as the words on one of them caught his attention, with incredulous fascination.

He snatched up the topmost sheet, scanned it, and another, while Swanson was frenziedly searching through the drawers. Burckhardt swore unbelievably and dropped the papers to the desk.

Swanson, hardly noticing, yelped with delight: 'Look! He dragged a gun from the desk. 'And it's loaded, too!'

Burckhardt stared at him blankly, trying to assimilate what he had read. Then, as he realized what Swanson had said, Burckhardt's eyes sparked. 'Good man!' he cried. 'We'll take it. We're getting out of here with that gun, Swanson. And we're going to the police! Not the cops in Tylerton, but the FBI, maybe. Take a look at this!'

The sheaf he handed Swanson was headed: 'Test Area Progress Report. Subject: Marlin Cigarettes Campaign.' It was mostly tabulated figures that made little sense to Burckhardt and Swanson, but at the end was a summary that said:

Although Test 47-K3 pulled nearly double the number of new users of any of the other tests conducted, it probably cannot be used in the field because of local sound-truck control ordinances.

The tests in the 47-K12 group were second best and our recommendation is that retests be conducted in this appeal, testing each of the three best campaigns with and without the addition of sampling techniques.

An alternative suggestion might be to proceed directly with the top appeal in the K12 series, if the client is unwilling to go to the expense of additional tests.

All of these forecast expectations have an 80 per cent probability of being within one-half of 1 per cent of results forecast, and more than 99 per cent probability of coming within 5 per cent.

Swanson looked up from the paper into Burckhardt's eyes. 'I don't get it,' he complained. Burckhardt said, 'I do not blame you. It's crazy, but it fits the facts. Swanson, it fits the facts. They aren't Russians and they aren't Martians. These people are advertising men! Somehow—heaven knows how they did it—they've taken Tylerton over. They've got us, all of us, you and me and twenty or thirty thousand other people, right under their thumbs.

'Maybe they hypnotize us and maybe it's something else; but however they do it, what happens is that they let us live a day at a time. They pour advertising into us the whole damned day long. And at the end of the day, they see what happened—and then they wash the day out of our minds and start again the next day with different advertising.'

Swanson's jaw was hanging. He managed to close it and swallow. 'Nuts!' he said flatly.

Burckhardt shook his head. 'Sure, it sounds crazy—but this

whole thing is crazy. How else would you explain it? You can't deny that most of Tylerton lives the same day over and over again. You've seen it. And that's the crazy part and we have to admit that that's true—unless we are the crazy ones. And once you admit that somebody, somehow, knows how to accomplish that, the rest of it makes all kinds of sense.

'Think of it, Swanson! They test every last detail before they spend a nickel on advertising! Do you have any idea what that means? Lord knows how much money is involved, but I know for a fact that some companies spend twenty or thirty million dollars a year on advertising. Multiply it, say, by a hundred companies. Say that every one of them learns how to cut its advertising cost by only ten per cent. And that's peanuts, believe me!

'If they know in advance what is going to work, they can cut their costs in half—maybe to less than half, I don't know. But that is saving two or three hundred million dollars a year—and if they pay only ten or twenty per cent of that for the use of Tylerton, it's still dirt cheap for them and a fortune for whoever took over Tylerton.'

Swanson licked his lips. 'You mean,' he offered hesitantly, 'that we're a—well, a kind of captive audience?'

Burckhardt frowned. 'Not exactly.' He thought for a minute. 'You know how a doctor tests something like penicillin? He sets up a series of little colonies of germs on gelatine discs and he tries the stuff on one after another, changing it a little each time. Well, that's us—we're the germs, Swanson. Only it's even more efficient than that. They don't have to test more than one colony, because they can use it over and over again.'

It was too hard for Swanson to take in. He only said: 'What do we do about it?'

'We go to the police. They can't use human beings for guinea pigs!'

'How do we get to the police?'

Burckhardt hesitated. 'I think—' he began slowly. 'Sure. This place is the office of somebody important. We've got a gun. We will stay right here until he comes along. And he'll get us out of here.'

Simple and direct. Swanson subsided and found a place to sit, against the wall, out of sight of the door. Burckhardt took up a position behind the door itself—
And waited.

The wait was not as long as it might have been. Half an hour, perhaps. Then Burckhardt heard approaching voices and had time for a swift whisper to Swanson before he flattened himself against the wall.

It was a man's voice, and a girl's. The man was saying, '—reason why you couldn't report on the phone? You're ruining your whole day's test! What the devil's the matter with you, Janet?'

'I'm sorry, Mr Dorchin,' she said in a sweet, clear tone. 'I thought it was important.'

The man grumbled, 'Important! One lousy unit out of twenty—one thousand.'

'But it's the Burckhardt one, Mr Dorchin. Again. And the way he got out of sight, he must have had some help.'

'All right, all right. It doesn't matter, Janet; the Choco-Bite programme is ahead of schedule anyhow. As long as you're this far, come on in the office and make out your worksheet. And don't worry about the Burckhardt business. He's probably just wandering around. We'll pick him up tonight and—'

They were inside the door. Burckhardt kicked it shut and pointed the gun.

'That's what you think,' he said triumphantly.

It was worth the terrified hours, the bewildered sense of insanity, the confusion and fear. It was the most satisfying sensation Burckhardt had ever had in his life. The expression on the man's face was one he had read about but never actually seen: Dorchin's mouth fell open and his eyes went wide, and though he managed to make a sound that might have been a question, it was not in words.

The girl was almost as surprised. And Burckhardt, looking at her, knew why her voice had been so familiar. The girl was the one who had introduced herself to him as April Horn.

Dorchin recovered himself quickly. 'Is this the one?' he asked sharply.

The girl said, 'Yes.'

Dorchin nodded. 'I take it back. You were right. Uh, you— Burckhardt. What do you want?'

Swanson piped up. 'Watch him! He might have another gun.'

'Search him then,' Burckhardt said. 'I'll tell you what we want, Dorchin. We want you to come along with us to the FBI and explain to them how you can get away with kidnapping twenty thousand people.'

'Kidnapping?' Dorchin snorted. 'That's ridiculous, man! Put that gun away—you can't get away with this!'

Burckhardt hefted the gun grimly. 'I think I can.'

Dorchin looked furious and sick—but, oddly, not afraid. 'Damn it—' he started to bellow, then closed his mouth and swallowed. 'Listen,' he said persuasively, 'you're making a big mistake. I haven't kidnapped anybody, believe me!'

'I don't believe you,' said Burckhardt bluntly. 'Why should I?'

'But it's true! Take my word for it!'

Burckhardt shook his head. 'The FBI can take your word if they like. We'll find out. Now how do we get out of here?'

Dorchin opened his mouth to argue.

Burckhardt blazed: 'Don't get in my way! I'm willing to kill you if I have to. Don't you understand that? I've gone through two days of hell and every second of it I blame on you. Kill you? It would be a pleasure and I don't have a thing in the world to lose! Get us out of here!'

Dorchin's face went suddenly opaque. He seemed about to move; but the blonde girl he had called Janet slipped between him and the gun.

'Please!' she begged Burckhardt. 'You don't understand. You mustn't shoot!'

'Get out of my way!'

'But, Mr Burckhardt—'

She never finished. Dorchin, his face unreadable, headed for the door. Burckhardt had been pushed one degree too far. He swung the gun, bellowing. The girl called out sharply. He pulled the trigger. Closing on him with pity and pleading in her eyes, she came again between the gun and the man.

Burckhardt aimed low instinctively, to cripple, not to kill. But his aim was not good.

The pistol bullet caught her in the pit of the stomach.

Dorchin was out and away, the door slamming behind him, his footsteps racing into the distance.

Burckhardt hurled the gun across the room and jumped to the girl.

Swanson was moaning. 'That finishes us, Burckhardt. Oh, why did you do it? We could have got away. We should have gone to the police. We were practically out of here! We—'

Burckhardt wasn't listening. He was kneeling beside the girl. She

lay flat on her back, arms helter-skelter. There was no blood, hardly any sign of the wound; but the position in which she lay was one that no living human being could have held.

Yet she wasn't dead.

She wasn't dead—and Burckhardt, frozen beside her, thought: *She isn't alive, either.*

There was no pulse, but there was a rhythmic ticking of the outstretched fingers of one hand.

There was no sound of breathing, but there was a hissing, sizzling noise.

The eyes were open and they were looking at Burckhardt. There was neither fear nor pain in them, only a pity deeper than the Pit.

She said, through lips that writhed erratically, 'Don't—worry, Mr Burckhardt. I'm—all right.'

Burckhardt rocked back on his haunches, staring. Where there should have been blood, there was a clean break of a substance that was not flesh; and a curl of thin golden-copper wire.

Burckhardt moistened his lips.

'You're a robot,' he said.

The girl tried to nod. The twitching lips said, 'I am. And so are you.'

V

Swanson, after a single inarticulate sound, walked over to the desk and sat staring at the wall. Burckhardt rocked back and forth beside the shattered puppet on the floor. He had no words.

The girl managed to say, 'I'm—sorry all this happened.' The lovely lips twisted into a rictus sneer, frightening on that smooth young face, until she got them under control. 'Sorry,' she said again. 'The—nerve centre was right about where the bullet hit. Makes it difficult to—control this body.'

Burckhardt nodded automatically, accepting the apology. Robots. It was obvious, now that he knew it. In hindsight, it was inevitable. He thought of his mystic notions of hypnosis or Martians or something stranger still—idiotic, for the simple fact of created robots fitted the facts better and more economically.

All the evidence had been before him. The automatized factory,

with its transplanted minds—why not transplant a mind into a humanoid robot, give it its original owner's features and form? Could it know that it was a robot?

'All of us,' Burckhardt said, hardly aware that he spoke out loud. 'My wife and my secretary and you and the neighbours. All of us the same.'

'No.' The voice was stronger. 'Not exactly the same, all of us. I chose it, you see. I—' this time the convulsed lips were not a random contortion of the nerves—I was an ugly woman, Mr Burckhardt, and nearly sixty years old. Life had passed me. And when Mr Dorchin offered me the chance to live again as a beautiful girl, I jumped at the opportunity. Believe me, I *jumped*, in spite of its disadvantages. My flesh body is still alive—it is sleeping, while I am here. I could go back to it. But I never do.'

'And the rest of us?'

'Different, Mr Burckhardt. I work here. I'm carrying out Mr Dorchin's orders, mapping the results of the advertising tests, watching you and the others live as he makes you live. I do it by choice, but you have no choice. Because, you see, you are dead.'

'Dead?' cried Burckhardt: it was almost a scream.

The blue eyes looked at him unblinkingly and he knew that it was no lie. He swallowed, marvelling at the intricate mechanisms that let him swallow, and sweat, and eat.

He said: 'Oh. The explosion in my dream.'

'It was no dream. You are right—the explosion. That was real and this plant was the cause of it. The storage tanks let go and what the blast didn't get, the fumes killed a little later. But almost everyone died in the blast, twenty-one thousand persons. You died with them and that was Dorchin's chance.'

'The damned ghoul!' said Burckhardt.

The twisted shoulders shrugged with an odd grace. 'Why? You were gone. And you and all the others were what Dorchin wanted—a whole town, a perfect slice of America. It's as easy to transfer a pattern from a dead brain as a living one. Easier—the dead can't say no. Oh, it took work and money—the town was a wreck—but it was possible to rebuild it entirely, especially because it wasn't necessary to have all the details exact.'

'There were the homes where even the brains had been utterly destroyed, and those are empty inside, and the cellars that needn't be too perfect, and the streets that hardly matter. And anyway, it

only has to last for one day. The same day—June 15th—over and over again; and if someone finds something a little wrong, somehow, the discovery won't have time to snowball, wreck the validity of the tests, because, all errors are cancelled out at midnight.'

The face tried to smile. 'That's the dream, Mr Burckhardt, that day of June 15th, because you never really lived it. It's a present from Mr Dorchin, a dream that he gives you and then takes back at the end of the day, when he has all his figures on how many of you responded to what variation of which appeal, and the maintenance crews go down the tunnel to go through the whole city, washing out the new dream with their little electronic drains, and then the dream starts all over again. On June 15th.

'Always June 15th, because June 14th is the last day any of you can remember alive. Sometimes the crews miss someone—as they missed you, because you were under your boat. But it doesn't matter. The ones who are missed give themselves away if they show it—and if they don't, it doesn't affect the test. But they don't drain us, the ones of us who work for Dorchin. We sleep when the power is turned off, just as you do. When we wake up, though, we remember.' The face contorted wildly. 'If I could only forget!'

Burckhardt said unbelievably, 'All this to sell merchandise! It must have cost millions!'

The robot called April Horn said, 'It did. But it has made millions for Dorchin, too. And that's not the end of it. Once he finds the master words that make people act, do you suppose he will stop with that? Do you suppose—'

The door opened, interrupting her. Burckhardt whirled. Belatedly remembering Dorchin's flight, he raised the gun.

'Don't shoot,' ordered the voice calmly. It was not Dorchin; it was another robot, this one not disguised with the clever plastics and cosmetics, but shining plain. It said metallically: 'Forget it, Burckhardt. You're not accomplishing anything. Give me that gun before you do any more damage. Give it to me *now*.'

Burckhardt bellowed angrily. The gleam on this robot torso was steel; Burckhardt was not at all sure that his bullets would pierce it, or do much harm if they did. He would have put it on the test—

But from behind him came a whimpering, scurrying whirlwind; its name was Swanson, hysterical with fear. He catapulted into Burckhardt and sent him sprawling, the gun flying free.

'Please!' begged Swanson incoherently, prostrate before the steel

robot. 'He would have shot you—please don't hurt me! Let me work for you, like that girl. I'll do anything, anything you tell me—'

The robot voice said. 'We don't need your help.' It took two precise steps and stood over the gun—and spurned it, left it lying on the floor.

The wrecked blonde robot said, without emotion, 'I doubt that I can hold out much longer, Mr Dorchin.'

'Disconnect if you have to,' replied the steel robot.

Burckhardt blinked. 'But you're not Dorchin!'

The steel robot turned deep eyes on him. 'I am,' it said. 'Not in the flesh—but this is the body I am using at the moment. I doubt that you can damage this one with the gun. The other robot body was more vulnerable. Now will you stop this nonsense? I don't want to have to damage you; you're too expensive for that. Will you just sit down and let the maintenance crews adjust you?'

Swanson grovelled. 'You—you won't punish us?'

The steel robot had no expression, but its voice was almost surprised. 'Punish you?' it repeated on a rising tone. 'How?'

Swanson quivered as though the word had been a whip; but Burckhardt flared: 'Adjust *him*, if he'll let you—but not me! You're going to have to do me a lot of damage, Dorchin. I don't care what I cost or how much trouble it's going to be to put me back together again. But I'm going out of that door! If you want to stop me, you'll have to kill me. You won't stop me any other way!'

The steel robot took a half-step towards him, and Burckhardt involuntarily checked his stride. He stood poised and shaking, ready for death, ready for attack, ready for anything that might happen.

Ready for anything except what did happen. For Dorchin's steel body merely stepped aside, between Burckhardt and the gun, but leaving the door free.

'Go ahead,' invited the steel robot. 'Nobody's stopping you.'

Outside the door, Burckhardt brought up sharp. It was insane of Dorchin to let him go! Robot or flesh, victim or beneficiary, there was nothing to stop him from going to the FBI or whatever law he could find away from Dorchin's synthetic empire, and telling his story. Surely the corporation who paid Dorchin for test results had no notion of the ghoul's technique he used; Dorchin would have to

keep it from them, for the breath of publicity would put a stop to it. Walking out meant death, perhaps—but at that moment in his pseudo-life, death was no terror for Burckhardt.

There was no one in the corridor. He found a window and stared out of it. There was Tylerton—an ersatz city, but looking so real and familiar that Burckhardt almost imagined the whole episode a dream. It was no dream, though. He was certain of that in his heart and equally certain that nothing in Tylerton could help him now.

It had to be the other direction.

It took him a quarter of an hour to find a way, but he found it—skulking through the corridors, dodging the suspicion of footsteps, knowing for certain that his hiding was in vain, for Dorchin was undoubtedly aware of every move he made. But no one stopped him, and he found another door.

It was a simple enough door from the inside. But when he opened it and stepped out, it was like nothing he had ever seen.

First there was light—brilliant, incredible, blinding light. Burckhardt blinked upward, unbelieving and afraid.

He was standing on a ledge of smooth, finished metal. Not a dozen yards from his feet, the ledge dropped sharply away; he hardly dared approach the brink, but even from where he stood he could see no bottom to the chasm before him. And the gulf extended out of sight into the glare on either side of him.

No wonder Dorchin could so easily give him his freedom! From the factory, there was nowhere to go—but how incredible this fantastic gulf, how impossible the hundred white and blinding suns that hung above!

A voice by his side said enquiringly, 'Burckhardt?' And thunder rolled the name, mutteringly soft, back and forth in the abyss before him.

Burckhardt wet his lips. 'Y-yes?' he croaked.

'This is Dorchin. Not a robot this time, but Dorchin in the flesh, talking to you on a hand mike. Now you have seen, Burckhardt. Now will you be reasonable and let the maintenance crews take over?'

Burckhardt stood paralysed. One of the moving mountains in the blinding glare came towards him.

It towered hundreds of feet over his head; he stared up at its top, squinting helplessly into the light.

It looked like—
Impossible!

The voice in the loudspeaker at the door said, 'Burckhardt?' But he was unable to answer.

A heavy rumbling sigh. 'I see,' said the voice. 'You finally understand. There's no place to go. You know it now. I could have told you, but you might not have believed me, so it was better for you to see it yourself. And after all, Burckhardt, why would I reconstruct a city just the way it was before? I'm a businessman; I count costs. If a thing has to be full-scale, I build it that way. But there wasn't any need to in this case.'

From the mountain before him, Burckhardt helplessly saw a lesser cliff descend carefully towards him. It was long and dark, and at the end of it was whiteness, five-fingered whiteness . . .

'Poor little Burckhardt,' crooned the loudspeaker, while the echoes rumbled through the enormous chasm that was only a workshop. 'It must have been quite a shock for you to find out you were living in a town built on a table top.'

VI

It was the morning of June 15th, and Guy Burckhardt woke up screaming out of a dream.

It had been a monstrous and incomprehensible dream, of explosions and shadowy figures that were not men and terror beyond words.

He shuddered and opened his eyes.

Outside his bedroom window, a hugely amplified voice was howling.

Burckhardt stumbled over to the window and stared outside. There was an out-of-season chill to the air, more like October than June; but the scene was normal enough—except for the sound-truck that squatted at curbside halfway down the block. Its speaker horns blared:

'Are you a coward? Are you a fool? Are you going to let crooked politicians steal the country from you? NO! Are you going to put up with four more years of graft and crime? NO! Are you going to vote

straight Federal Party all up and down the ballot? yes! You just bet you are!

Sometimes he screams, sometimes he wheedles, threatens, begs, cajoles . . . but his voice goes on and on through one June 15th after another.

THE COUNTRY OF THE KIND

by Damon Knight

dark-haired, one blonde. They were evenly matched, and both couples played well together; they were enjoying themselves.

I watched for a minute. But by then the nearest two were beginning to sense I was there, anyhow. I walked down onto the court, just as the blonde was about to serve. She looked at me frozen across the net, poised on tiptoe. The others stood.

"Off," I told them. "Game's over."

I watched the blonde. She was not especially pretty, as they go, but compactly and gracefully put together. She came down slowly, flat-footed without awkwardness, and tucked the racket under her arm; then the surprise was over and she was trotting off the court after the other three.

I followed their voices around the curve of the path, between towering masses of lilacs, inhaling the sweetness, until I came to what looked like a little sunning spot. There was a sundial, and a birdbath, and towels lying around on the grass. One couple, the dark-haired pair, was still in sight farther down the path, heads bobbing along. The other couple had disappeared.

I found the handle in the grass without any trouble. The mechanism responded, and an oblong section of turf rose up. It was the stair I had, not the elevator, but that was all right. I ran down the steps and into the first door I saw, and was in the top-floor lounge, an oval room lit with diffused simulated sunlight from above. The furniture was all comfortably bloated, sprawling and ugly; the carpet was deep, and there was a fresh flower scent in the air.

The blonde was over at the near end with her back to me, studying the autochef keyboard. She was half out of her playsuit. She pushed it the rest of the way down and stepped out of it, then turned and saw me.

She was surprised again; she hadn't thought I might follow her down. I got up close before it occurred to her to move; then it was too late. She knew she couldn't get away from me; she closed her eyes and leaned back against the paneling, turning a little pale. Her lips and her golden brows went up in the middle.

I looked her over and told her a few uncomplimentary things about herself. She trembled, but didn't answer. On an impulse, I leaned over and dialed the autochef to hot cheese sauce. I cut the safety out of circuit and put the quantity dial all the way up. I dialed *soup tureen* and then *punch bowl*.

The stuff began to come out in about a minute, steaming hot. I took the tureens and splashed them up and down the wall on either side of her. Then when the first punch bowl came out I used the empty bowls

The attendant at the car lot was daydreaming when I pulled up—a big, lazy-looking man in black satin chequered down the front. I was wearing scarlet, myself; it suited my mood. I got out, almost on his toes.

"Park or storage?" he asked automatically, turning around. Then he realized who I was, and ducked his head away.

"Neither," I told him.

There was a hand torch on a shelf in the repair shed right behind him. I got it and came back. I knelt down to where I could reach behind the front wheel, and ignited the torch. I turned it on the axle and suspension. They glowed cherry red, then white, and fused together. Then I got up and turned the flame on both tires until the rubberoid stank and sizzled and melted down to the pavement. The attendant didn't say anything.

I left him there, looking at the mess on his nice clean concrete.

It had been a nice car, too; but I could get another any time. And I felt like walking. I went down the winding road, sleepy in the afternoon sunlight, dappled with shade and smelling of cool leaves. You couldn't see the houses; they were all sunken or hidden by shrubbery, or a little of both. That was the fad I'd heard about; it was what I'd come here to see. Not that anything the dulls did would be worth looking at.

I turned off at random and crossed a rolling lawn, went through a second hedge of hawthorn in blossom, and came out next to a big sunken games court.

The tennis net was up, and two couples were going at it, just working up a little sweat—young, about half my age, all four of them. Three

as scoops. I clotted the carpet with the stuff; I made streamers of it all along the walls, and dumped puddles into what furniture I could reach. Where it cooled it would harden, and where it hardened it would cling.

I wanted to splash it across her body, but it would've hurt, and we couldn't have that. The punch bowls of hot sauce were still coming out of the autochef, crowding each other around the vent. I punched *cancel*, and then *sauterne* (*swt., Calif.*)

It came out well chilled in open bottles. I took the first one and had my arm back just about to throw a nice line of the stuff right across her midriff, when a voice said behind me:

"Watch out for cold wine."

My arm twitched and a little stream of the wine splashed across her thighs. She was ready for it; her eyes had opened at the voice, and she barely jumped.

I whirled around, fighting mad. The man was standing there where he had come out of the stair well. He was thinner in the face than most, bronzed, wide-chested, with alert blue eyes. If it hadn't been for him, I knew it would have worked—the blonde would have mistaken the chill splash for a scalding one.

I could hear the scream in my mind, and I wanted it.

I took a step toward him, and my foot slipped. I went down clumsily, wrenching one knee. I got up shaking and tight all over. I wasn't in control of myself. I screamed, "You—you—" I turned and got one of the punch bowls and lifted it in both hands, heedless of how the hot sauce was slopping over onto my wrists, and I had it almost in the air toward him when the sickness took me—that damned buzzing in my head, louder, louder, drowning everything out.

When I came to, they were both gone. I got up off the floor, weak as death, and staggered over to the nearest chair. My clothes were slimed and sticky. I wanted to die. I wanted to drop into that dark furry hole that was yawning for me and never come up; but I made myself stay awake and get out of the chair.

Going down in the elevator, I almost blacked out again. The blonde and the thin man weren't in any of the second-floor bedrooms. I made sure of that, and then I emptied the closets and bureau drawers onto the floor, dragged the whole mess into one of the bathrooms and stuffed the tub with it, then turned on the water.

I tried the third floor: maintenance and storage. It was empty. I turned the furnace on and set the thermostat up as high as it would go. I disconnected all the safety circuits and alarms. I opened the freezer doors and dialed them to defrost. I propped the stair well door open and went back up in the elevator.

On the second floor I stopped long enough to open the stairway door there—the water was halfway toward it, creeping across the floor—and then searched the top floor. No one was there. I opened book reels and threw them unwinding across the room; I would have done more, but I could hardly stand. I got up to the surface and collapsed on the lawn: that furry pit swallowed me up, dead and drowned.

While I slept, water poured down the open stair well and filled the third level. Thawing food packages floated out into the rooms. Water seeped into wall panels and machine housings; circuits shorted and fuses blew. The air conditioning stopped, but the pile kept heating. The water rose.

Spoiled food, floating supplies, grimy water surged up the stair well. The second and first levels were bigger and would take longer to fill, but they'd fill. Rugs, furnishings, clothing, all the things in the house would be waterlogged and ruined. Probably the weight of so much water would shift the house, rupture water pipes and other fluid intakes. It would take a repair crew more than a day just to clean up the mess. The house itself was done for, not repairable. The blonde and the thin man would never live in it again.

Serve them right.

The dulls could build another house; they built like beavers. There was only one of me in the world.

The earliest memory I have is of some woman, probably the crash-mother, staring at me with an expression of shock and horror. Just that. I've tried to remember what happened directly before or after, but I can't. Before, there's nothing but the dark formless shaft of no-memory that runs back to birth. Afterward, the big calm.

From my fifth year, it must have been, to my fifteenth, everything I can remember floats in a pleasant dim sea. Nothing was terribly important. I was languid and soft; I drifted. Waking merged into sleep.

In my fifteenth year it was the fashion in love-play for the young people to pair off for months or longer. "Loving steady," we called it. I remember how the older people protested that it was unhealthy; but we were all normal juniors, and nearly as free as adults under the law. All but me.

The first steady girl I had was named Elen. She had blonde hair, almost white, worn long; her lashes were dark and her eyes pale green. Startling eyes: they didn't look as if they were looking at you. They looked blind.

Several times she gave me strange startled glances, something be-

tween fright and anger. Once it was because I held her too tightly, and hurt her; other times, it seemed to be for nothing at all.

In our group, a pairing that broke up sooner than four weeks was a little suspect—there must be something wrong with one partner or both, or the pairing would have lasted longer.

Four weeks and a day after Elen and I made our pairing, she told me she was breaking it.

I'd thought I was ready. But I felt the room spin half around me till the wall came against my palm and stopped.

The room had been in use as a hobby chamber; there was a rack of plasticraft knives under my hand. I took one without thinking, and when I saw it I thought, *I'll frighten her.*

And I saw the startled, half-angry look in her pale eyes as I went toward her; but this is curious: she wasn't looking at the knife. She was looking at my face.

The elders found me later with the blood on me, and put me into a locked room. Then it was my turn to be frightened, because I realized for the first time that it was possible for a human being to do what I had done.

And if I could do it to Elen, I thought, surely they could do it to me. But they couldn't. They set me free: they had to.

And it was then I understood that I was the king of the world. . . . The sky was turning clear violet when I woke up, and shadow was spilling out from the hedges. I went down the hill until I saw the ghostly blue of photon tubes glowing in a big oblong, just outside the commerce area. I went that way, by habit.

Other people were lining up at the entrance to show their books and be admitted. I brushed by them, seeing the shocked faces and feeling their bodies flinch away, and went on into the robing chamber.

Straps, aqualungs, masks and flippers were all for the taking. I stripped, dropping the clothes where I stood, and put the underwater equipment on. I strode out to the poolside, monstrous, like a being from another world. I adjusted the lung and the flippers, and slipped into the water.

Underneath, it was all crystal blue, with the forms of swimmers sliding through it like pale angels. Schools of small fish scattered as I went down. My heart was beating with a painful joy.

Down, far down, I saw a girl slowly undulating through the motions of sinuous underwater dance, writhing around and around a ribbed column of imitation coral. She had a suction-tipped fish lance in her hand, but she was not using it; she was only dancing, all by herself, down at the bottom of the water.

I swam after her. She was young and delicately made, and when she saw the deliberately clumsy motions I made in imitation of hers, her eyes glistened with amusement behind her mask. She bowed to me in mockery, and slowly glided off with simple, exaggerated movements, like a child's ballet.

I followed. Around her and around I swam, stiff-legged, first more child-like and awkward than she, then subtly parodying her motions; then improving on them until I was dancing an intricate, mocking dance around her.

I saw her eyes widen. She matched her rhythm to mine, then, and together, apart, together again we coiled the wake of our dancing. At last, exhausted, we clung together where a bridge of plastic coral arched over us. Her cool body was in the bend of my arm; behind two thicknesses of vitrin—a world away!—her eyes were friendly and kind.

There was a moment when, two strangers yet one flesh, we felt our souls speak to one another across that abyss of matter. It was a truncated embrace—we could not kiss, we could not speak—but her hands lay confidently on my shoulders, and her eyes looked into mine.

That moment had to end. She gestured toward the surface, and left me. I followed her up. I was feeling drowsy and almost at peace, after my sickness. I thought. . . . I don't know what I thought.

We rose together at the side of the pool. She turned to me, removing her mask: and her smile stopped, and melted away. She stared at me with a horrified disgust, wrinkling her nose.

"*Pyah!*" she said, and turned, awkward in her flippers. Watching her, I saw her fall into the arms of a white-haired man, and heard her hysterical voice tumbling over itself.

"But don't you remember?" the man's voice rumbled. "You should know it by heart." He turned. "Hal, is there a copy of it in the clubhouse?"

A murmur answered him, and in a few moments a young man came out holding a slender brown pamphlet.

I knew that pamphlet. I could even have told you what page the white-haired man opened it to; what sentences the girl was reading as I watched.

I waited. I don't know why.

I heard her voice rising: "To think that I let him *touch* me!" And the white-haired man reassured her, the words rumbling, too low to hear. I saw her back straighten. She looked across at me. . . . only a few yards in that scented, blue-lit air; a world away. . . . and folded up the pamphlet into a hard wad, threw it, and turned on her heel.

The pamphlet landed almost at my feet. I touched it with my toe, and it opened to the page I had been thinking of:

... sedation until his 15th year, when for sexual reasons it became no longer practicable. While the advisors and medical staff hesitated, he killed a girl of the group by violence. And farther down:

The solution finally adopted was three-fold.

1. A *sanction*—the only sanction possible to our humane, permissive society. Excommunication: not to speak to him, touch him willingly, or acknowledge his existence.
2. A *precaution*. Taking advantage of a mild predisposition to epilepsy, a variant of the so-called Kusko analog technique was employed, to prevent by an epileptic seizure any future act of violence.
3. A *warning*. A careful alternation of his body chemistry was affected to make his exhaled and exuded wastes emit a strongly pungent and offensive odor. In mercy, he himself was rendered unable to detect this smell.

Fortunately, the genetic and environmental accidents which combined to produce this atavism have been fully explained and can never again . . .

The words stopped meaning anything, as they always did at that point. I didn't want to read any farther; it was all nonsense, anyway. I was the king of the world.

I got up and went away, out into the night, blind to the dulls who thronged the rooms I passed.

Two squares away was the commerce area. I found a clothing outlet and went in. All the free clothes in the display cases were drab: those were for worthless floaters, not for me. I went past them to the specials, and found a combination I could stand—silver and blue, with a severe black piping down the tunic. A dull would have said it was "nice." I punched for it. The automatic looked me over with its dull glassy eye, and croaked, "Your contribution book, please."

I could have had a contribution book, for the trouble of stepping out into the street and taking it away from the first passer-by; but I didn't have the patience. I picked up the one-legged table from the refreshment nook, hefted it, and swung it at the cabinet door. The metal shrieked and dented, opposite the catch. I swung once more to the same place,

and the door sprang open. I pulled out clothing in handfuls till I got a set that would fit me.

I bathed and changed, and then went prowling in the big multi-outlet down the avenue. All those places are arranged pretty much alike, no matter what the local managers do to them. I went straight to the knives, and picked out three in graduated sizes, down to the size of my finger-nail. Then I had to take my chances. I tried the furniture department, where I had had good luck once in a while, but this year all they were using was metal. I had to have seasoned wood.

I knew where there was a big cache of cherry wood, in good-sized blocks, in a forgotten warehouse up north at a place called Kootenay. I could have carried some around with me—enough for years—but what for, when the world belonged to me?

It didn't take me long. Down in the workshop section, of all places, I found some antiques—tables and benches, all with wooden tops. While the dulls collected down at the other end of the room, pretending not to notice, I sawed off a good oblong chunk of the smallest bench, and made a base for it out of another.

As long as I was there, it was a good place to work, and I could eat and sleep upstairs, so I stayed.

I knew what I wanted to do. It was going to be a man, sitting, with his legs crossed and his forearms resting down along his calves. His head was going to be tilted back, and his eyes closed, as if he were turning his face up to the sun.

In three days it was finished. The trunk and limbs had a shape that was not man and not wood, but something in between: something that hadn't existed before I made it.

Beauty. That was the old word.

I had carved one of the figure's hands hanging loosely, and the other one curled shut. There had to be a time to stop and say it was finished. I took the smallest knife, the one I had been using to scrape the wood smooth, and cut away the handle and ground down what was left of the shaft to a thin spike. Then I drilled a hole into the wood of the figure's hand, in the hollow between thumb and curled finger. I fitted the knife blade in there; in the small hand it was a sword.

I cemented it in place. Then I took the sharp blade and stabbed my thumb, and smeared the blade.

I hunted most of that day, and finally found the right place—a niche in an outcropping of striated brown rock, in a little triangular half-wild patch that had been left where two roads forked. Nothing was permanent, of course, in a community like this one that might change its

houses every five years or so, to follow the fashion; but this spot had been left to itself for a long time. It was the best I could do.

I had the paper ready: it was one of a batch I had printed up a year ago. The paper was treated, and I knew it would stay legible a long time. I hid a little photo capsule in the back of the niche, and ran the control wire to a staple in the base of the figurine. I put the figurine down on top of the paper, and anchored it lightly to the rock with two spots of all-cement. I had done it so often that it came naturally; I knew just how much cement would hold the figurine steady against a casual hand, but yield to one that really wanted to pull it down.

Then I stepped back to look: and the power and the pity of it made my breath come short, and tears start to my eyes.

Reflected light gleamed fitfully on the dark-stained blade that hung from his hand. He was sitting alone in that niche that closed him in like a coffin. His eyes were shut, and his head tilted back, as if he were turning his face up to the sun.

But only rock was over his head. There was no sun for him.

Hunched on the cool bare ground under a pepper tree, I was looking down across the road at the shadowed niche where my figurine sat.

I was all finished here. There was nothing more to keep me, and yet I couldn't leave.

People walked past now and then—not often. The community seemed half deserted, as if most of the people had flocked off to a surf party somewhere, or a contribution meeting, or to watch a new house being dug to replace the one I had wrecked. . . . There was a little wind blowing toward me, cool and lonesome in the leaves.

Up the other side of the hollow there was a terrace, and on that terrace, half an hour ago, I had seen a brief flash of color—a boy's head, with a red cap on it, moving past and out of sight.

That was why I had to stay. I was thinking how that boy might come down from his terrace and into my road, and passing the little wild triangle of land, see my figurine. I was thinking he might not pass by indifferently, but stop: and go closer to look: and pick up the wooden man: and read what was written on the paper underneath.

I believed that sometime it had to happen. I wanted it so hard that I ached.

My carvings were all over the world, wherever I had wandered. There was one in Congo City, carved of ebony, dusty-black; one on Cyprus, of bone; one in New Bombay, of shell; one in Chang-teh, of jade.

They were like signs printed in red and green, in a color-blind world.

Only the one I was looking for would ever pick one of them up, and read the message I knew by heart.

TO YOU WHO CAN SEE, the first sentence said, I OFFER YOU A WORLD. . . .

There was a flash of color up on the terrace. I stiffened. A minute later, here it came again, from a different direction: it was the boy, clambering down the slope, brilliant against the green, with his red sharp-billed cap like a woodpecker's head.

I held my breath.

He came toward me through the fluttering leaves, ticked off by pencils of sunlight as he passed. He was a brown boy, I could see at this distance, with a serious thin face. His ears stuck out, flickering pink with the sun behind them, and his elbow and knee pads made him look knobby.

He reached the fork in the road, and chose the path on my side. I huddled into myself as he came nearer. *Let him see it, let him not see me, I thought fiercely.*

My fingers closed around a stone.

He was nearer, walking jerkily with his hands in his pockets, watching his feet mostly.

When he was almost opposite me, I threw the stone.

It rustled through the leaves below the niche in the rock. The boy's head turned. He stopped, staring. I think he saw the figurine then. I'm sure he saw it.

He took one step.

"Risha!" came floating down from the terrace.

And he looked up. "Here," he piped.

I saw the woman's head, tiny at the top of the terrace. She called something I didn't hear; I was standing up, tight with anger.

Then the wind shifted. It blew from me to the boy. He whirled around, his eyes big, and clapped a hand to his nose.

"Oh, what a stench!" he said.

He turned to shout, "Coming!" and then he was gone, hurrying back up the road, into the unstable blur of green.

My own chance, ruined. He would have been the image, I knew, if it hadn't been for that damned woman, and the wind shifting. . . . They were all against me, people, wind and all.

And the figurine still sat, blind eyes turned up to the rocky sky.

There was something inside me that told me to take my disappointment and go away from there, and not come back.

I knew I would be sorry. I did it anyway: took the image out of the

niche, and the paper with it, and climbed the slope. At the top I heard his clear voice laughing.

There was a thing that might have been an ornamental mound, or the camouflaged top of a buried house. I went around it, tripping over my own feet, and came upon the boy kneeling on the turf. He was playing with a brown and white puppy.

He looked up with the laughter going out of his face. There was no wind, and he could smell me. I knew it was bad. No wind, and the puppy to distract him—everything about it was wrong. But I went to him blindly anyhow, and fell on one knee, and shoved the figurine at his face.

“Look—” I said.

He went over backwards in his hurry: he couldn't even have seen the image, except as a brown blur coming at him. He scrambled up, with the puppy whining and yapping around his heels, and ran for the mound.

I was up after him, clawing up moist earth and grass as I rose. In the other hand I still had the image clutched, and the paper with it.

A door popped open and swallowed him and popped shut again in my face. With the flat of my hand I beat the vines around it until I hit the doorplate by accident and the door opened. I dived in, shouting, “Wait,” and was in a spiral passage, lit pearl-gray, winding downward. Down I went headlong, and came out at the wrong door—an underground conservatory, humid and hot under the yellow lights, with dripping rank leaves in long rows. I went down the aisle raging, overturning the tanks, until I came to a vestibule and an elevator.

Down I went again to the third level and a labyrinth of guest rooms, all echoing, all empty. At last I found a ramp leading upward, past the conservatory, and at the end of it voices.

The door was clear vitrin, and I paused on the near side of it looking and listening. There was the boy, and a woman old enough to be his mother, just—sister or cousin, more likely—and an elderly woman in a hard chair holding the puppy. The room was comfortable and tasteless, like other rooms.

I saw the shock grow on their faces as I burst in: it was always the same, they knew I would like to kill them, but they never expected that I would come uninvited into a house. It was not done.

There was that boy, so close I could touch him, but the shock of all of them was quivering in the air, smothering, like a blanket that would deaden my voice. I felt I had to shout.

“Everything they tell you is lies!” I said. “See here—here, this is the truth!” I had the figurine in front of his eyes, but he didn't see.

“Risha, go below,” said the young woman quietly. He turned to

obey, quick as a ferret. I got in front of him again. “Stay,” I said, breathing hard. “Look—”

“Remember, Risha, don't speak,” said the woman.

I couldn't stand any more. Where the boy went I don't know; I ceased to see him. With the image in one hand and the paper with it, I leaped at the woman. I was almost quick enough; I almost reached her; but the buzzing took me in the middle of a step, louder, louder, like the end of the world.

It was the second time that week. When I came to, I was sick and too faint to move for a long time.

The house was silent. They had gone, of course . . . the house had been defiled, having me in it. They wouldn't live here again, but would build elsewhere.

My eyes blurred. After a while I stood up and looked around at the room. The walls were hung with a gray close-woven cloth that looked as if it would tear, and I thought of ripping it down in strips, breaking furniture, stuffing carpets and bedding into the oubliette. . . . But I didn't have the heart for it. I was too tired. Thirty years. . . . They had given me all the kingdoms of the world, and the glory thereof, thirty years ago. It was more than one man alone could bear, for thirty years.

At last I stooped and picked up the figurine, and the paper that was supposed to go under it—crumpled now, with the forlorn look of a message that someone has thrown away unread.

I sighed bitterly.

I smoothed it out and read the last part.

YOU CAN SHARE THE WORLD WITH ME. THEY CAN'T STOP YOU. STRIKE NOW—PICK UP A SHARP THING AND STAB, OR A HEAVY THING AND CRUSH. THAT'S ALL. THAT WILL MAKE YOU FREE. ANYONE CAN DO IT.

Anyone. Someone. Anyone.

JAMES BLISH

A Work of Art

James Blish is respected as a writer who brought intellectual complexity to familiar science fiction themes. A member of the Futurians, the famed science fiction organization, Blish began publishing science fiction in 1940. Shortly after, he published his short story "Sunken Universe" (one of several he would eventually pull together as his novel *The Seedling Stars*); it is an early exploration of the ramifications and consequences of genetic engineering, in which humanity seeds the stars with biological versions of itself tailored to fit alien environments and inevitably must come to terms with the psychological, sociological, and biological standards by which humanity is defined. *Cities in Flight* comprises four separate novels—*They Shall Have Stars*, *Life for the Stars*, *Earthman Come Home*, and *The Triumph of Time*—all of which project a future where entire cities of people migrate across the galaxy in search of more favorable opportunities, but find mostly instead the ineluctable and repelling problems of history. Blish's best-known single work is undoubtedly the Hugo Award-winning novel, *A Case of Conscience*, a landmark exercise in eschatology about a missionary to another planet who discovers an alien species free of original sin and thus a challenge to the tenets of his Earth-based religion. Blish's stories, which regularly wrestled with such weighty themes as godhood, aesthetics, special relativity, and the nature of human consciousness, have been collected in *Galactic Cluster*, *So Close to Home*, and *Anywhen*. His work as a novelist includes the historical novel *Doctor Mirabilis* and *Black Easter* and its sequel *The Day of Judgment*, pointed studies of biblical good and evil in a dark fantasy context. Among his most important contributions to science fiction are the critical studies and reviews of science fiction published under his William Atheling byline and collected in the volumes *The Issue at Hand*, *More Issues at Hand*, and *The Tale That Wags the God*.

INSTANTLY, HE REMEMBERED dying. He remembered it, however, as if at two removes—as though he were remembering a memory, rather than an actual event; as though he himself had not really been there when he died.

Yet the memory was all from his own point of view, not that of some detached and disembodied observer which might have been his soul. He had been most con-

scious of the rasping, unevenly drawn movements of the air in his chest. Blurring rapidly, the doctor's face had bent over him, loomed, come closer, and then had vanished as the doctor's head passed below his cone of vision, turned sideways to listen to his lungs.

It had become rapidly darker, and then, only then, had he realized that these were to be his last minutes. He had tried dutifully to say Pauline's name, but his memory contained no record of the sound—only of the rattling breath and of the film of sootiness thickening in the air, blotting out everything for an instant.

Only an instant, and then the memory was over. The room was bright again, and the ceiling, he noticed with wonder, had turned a soft green. The doctor's head lifted again and looked down at him.

It was a different doctor. This one was a far younger man, with an ascetic face and gleaming, almost fey eyes. There was no doubt about it. One of the last conscious thoughts he had had was that of gratitude that the attending physician, there at the end, had not been the one who secretly hated him for his one-time associations with the Nazi hierarchy. The attending doctor, instead, had worn an expression amusingly proper for that of a Swiss expert called to the deathbed of an eminent man: a mixture of worry at the prospect of losing so eminent a patient, and complacency at the thought that, at the old man's age, nobody could blame this doctor if he died. At eighty-five, pneumonia is a serious matter, with or without penicillin.

"You're all right now," the new doctor said, freeing his patient's head of a whole series of little silver rods which had been clinging to it by a sort of network cap. "Rest a minute and try to be calm. Do you know your name?"

He drew a cautious breath. There seemed to be nothing at all the matter with his lungs now; indeed, he felt positively healthy. "Certainly," he said, a little nettled. "Do you know yours?"

The doctor smiled crookedly. "You're in character, it appears," he said. "My name is Barkun Kris; I am a mind sculptor. Yours?"

"Richard Strauss."

"Very good," Dr. Kris said, and turned away. Strauss, however, had already been diverted by a new singularity. *Strauss* is a word as well as a name in German; it has many meanings—an ostrich, a bouquet; von Wolzogen had had a high old time working all the possible puns into the libretto of *Feuersnot*. And it happened to be the first German word to be spoken either by himself or by Dr. Kris since that twice-removed moment of death. The language was not French or Italian, either. It was most like English, but not the English Strauss knew; nevertheless, he was having no trouble speaking it and even thinking in it.

Well, he thought, *I'll be able to conduct The Love of Danae, after all. It isn't every composer who can premiere his own opera posthumously*. Still, there was something queer about all this—the queerest part of all being that conviction, which would not

go away, that he had actually been dead for just a short time. Of course, medicine was making great strides, but . . .

"Explain all this," he said, lifting himself to one elbow. The bed was different, too, and not nearly as comfortable as the one in which he had died. As for the room it looked more like a dynamo shed than a sickroom. Had modern medicine taken to reviving its corpses on the floor of the Siemens-Schuckert plant?

"In a moment," Dr. Kris said. He finished rolling some machine back into what Strauss impatiently supposed to be its place, and crossed to the pallet. "Now. There are many things you'll have to take for granted without attempting to understand them, Dr. Strauss. Not everything in the world today is explicable in terms of your assumptions. Please bear that in mind."

"Very well. Proceed."

"The date," Dr. Kris said, "is 2161 by your calendar—or, in other words, it is now two hundred and twelve years after your death. Naturally, you'll realize that by this time nothing remains of your body but the bones. The body you have now was volunteered for your use. Before you look into a mirror to see what it's like, remember that its physical difference from the one you were used to is all in your favor. It's in perfect health, not unpleasant for other people to look at, and its physiological age is about fifty."

A miracle? No, not in this new age, surely. It is simply a work of science. But what a science! This was Nietzsche's eternal recurrence and the immortality of the superman combined into one.

"And where is this?" the composer said.

"In Port York, part of the State of Manhattan, in the United States. You will find the country less changed in some respects than I imagine you anticipate. Other changes, of course, will seem radical to you, but it's hard for me to predict which ones will strike you that way. A certain resilience on your part will bear cultivating."

"I understand," Strauss said, sitting up. "One question, please; is it still possible for a composer to make a living in this century?"

"Indeed it is," Dr. Kris said, smiling. "As we expect you to do. It is one of the purposes for which we've—brought you back."

"I gather, then," Strauss said somewhat dryly, "that there is still a demand for my music. The critics in the old days—"

"That's not quite how it is," Dr. Kris said. "I understand some of your work is still played, but frankly I know very little about your current status. My interest is rather—"

A door opened somewhere, and another man came in. He was older and more ponderous than Kris and had a certain air of academicism, but he, too, was wearing the oddly tailored surgeon's gown and looked upon Kris's patient with the glowing eyes of an artist.

"A success, Kris?" he said. "Congratulations."

"They're not in order yet," Dr. Kris said. "The final proof is what counts. Dr. Strauss, if you feel strong enough, Dr. Seirds and I would like to ask you some questions. We'd like to make sure your memory is clear."

"Certainly. Go ahead."

"According to our records," Kris said, "you once knew a man whose initials were R. K. L.; this was while you were conducting at the Vienna *Staatsoper*." He made the double "a" at least twice too long, as though German were a dead language he was striving to pronounce in some "classical" accent. "What was his name, and who was he?"

"That would be Kurt List—his first name was Richard, but he didn't use it. He was assistant stage manager."

The two doctors looked at each other. "Why did you offer to write a new overture to *The Woman Without a Shadow* and give the manuscript to the city of Vienna?"

"So I wouldn't have to pay the garbage removal tax on the Maria Theresa villa they had given me."

"In the backyard of your house at Garmischi-Partenkirchen there was a tombstone. What was written on it?"

Strauss frowned. That was a question he would be happy to be unable to answer. If one is to play childish jokes upon oneself, it's best not to carve them in stone and put the carving where you can't help seeing it every time you go out to tinker with the Mercedes. "It says," he replied wearily, "Sacred to the memory of Guntram, Minnesinger, slain in a horrible way by his father's own symphony orchestra."

"When was *Guntram* premiered?"

"In—let me see—1894, I believe."

"Where?"

"In Weimar."

"Who was the leading lady?"

"Pauline de Ahna."

"What happened to her afterwards?"

"I married her. Is she . . ." Strauss began anxiously.

"No," Dr. Kris said. "I'm sorry, but we lack the data to reconstruct more or less ordinary people."

The composer sighed. He did not know whether to be worried or not. He had loved Pauline, to be sure; on the other hand, it would be pleasant to be able to live the new life without being forced to take off one's shoes every time one entered the house, so as not to scratch the polished hardwood floors. And also pleasant, perhaps, to have two o'clock in the afternoon come by without hearing Pauline's everlasting "Richard—*jetzt komponiert!*"

"Next question," he said.

FOR REASONS WHICH Strauss did not understand, but was content to take for granted, he was separated from Drs. Kris and Seirds as soon as both were satisfied that the composer's memory was reliable and his health stable. His estate, he was given to understand, had long since been broken up—a sorry end for what had been one of the principal fortunes of Europe—but he was given sufficient money to set up lodgings and resume an active life. He was provided, too, with introductions which proved valuable.

It took longer than he had expected to adjust to the changes that had taken place in music alone. Music was, he quickly began to suspect, a dying art, which would soon have a status not much above that held by flower arranging back in what he thought of as his own century. Certainly it couldn't be denied that the trend toward fragmentation, already visible back in his own time, had proceeded almost to completion in 2161.

He paid no more attention to American popular tunes than he had bothered to pay in his previous life. Yet it was evident that their assembly-line production methods—all the ballad composers openly used a slide-rule-like device called a Hit Machine—now had their counterparts almost throughout serious music.

The conservatives these days, for instance, were the twelve-tone composers—always, in Strauss's opinion, dryly mechanical but never more so than now. Their gods—Berg, Schoenberg, Webern—were looked upon by the concert-going public as great masters, on the abstruse side perhaps, but as worthy of reverence as any of the Three B's.

There was one wing of the conservatives, however, that had gone the twelve-tone procedure one better. These men composed what was called "stochastic music," put together by choosing each individual note by consultation with tables of random numbers. Their bible, their basic text, was a volume called *Operational Aesthetics*, which in turn derived from a discipline called information theory, and not one word of it seemed to touch upon any of the techniques and customs of composition which Strauss knew. The ideal of this group was to produce music which would be "universal"—that is, wholly devoid of any trace of the composer's individuality, wholly a musical expression of the universal Laws of Chance. The Laws of Chance seemed to have a style of their own, all right, but to Strauss it seemed the style of an idiot child being taught to hammer a flat piano, to keep him from getting into trouble.

By far the largest body of work being produced, however, fell into a category misleadingly called science-music. The term reflected nothing but the titles of the works, which dealt with space flight, time travel, and other subjects of a romantic or an unlikely nature. There was nothing in the least scientific about the music, which consisted of a mélange of clichés and imitations of natural sounds, in which Strauss was horrified to see his own time-distorted and diluted image.

The most popular form of science-music was a nine-minute composition called a concerto, though it bore no resemblance at all to the classical concerto form; it was instead a sort of free rhapsody after Rachmaninoff—long after. A typical one—"Song of Deep Space," it was called, by somebody named H. Valerion Krafft—began with a loud assault on the tam-tam, after which all the strings rushed up the scale in unison, followed at a respectful distance by the harp and one clarinet in parallel 6/4's. At the top of the scale cymbals were bashed together, *forte possibile*, and the whole orchestra launched itself into a major-minor wailing sort of melody; the whole orchestra, that is, except for the French horns, which were plodding back down the scale again in what was evidently supposed to be a counter melody. The second phrase of the theme was picked up by a solo trumpet with a suggestion of tremolo, the orchestra died back to its roots to await the next cloudburst, and at this point—as any four-year-old could have predicted—the piano entered with the second theme.

Behind the orchestra stood a group of thirty women, ready to come in with a wordless chorus intended to suggest the eeriness of Deep Space—but at this point, too, Strauss had already learned to get up and leave. After a few such experiences he could also count upon meeting in the lobby Sindi Nomiss, the agent to whom Dr. Kris had introduced him and who was handling the reborn composer's output—what there was of it thus far. Sindi had come to expect these walkouts on the part of his client and patiently awaited them, standing beneath a bust of Gian-Carlo Menotti, but he liked them less and less, and lately had been greeting them by turning alternately red and white, like a totipotent barber pole.

"You shouldn't have done it," he burst out after the Krafft incident. "You can't just walk out on a new Krafft composition. The man's the president of the Interplanetary Society for Contemporary Music. How am I ever going to persuade them that you're a contemporary if you keep snubbing them?"

"What does it matter?" Strauss said. "They don't know me by sight."

"You're wrong; they know you very well, and they're watching every move you make. You're the first major composer the mind sculptors ever tackled, and the ISCM would be glad to turn you back with a rejection slip."

"Why?"

"Oh," said Sindi, "there are lots of reasons. The sculptors are snobs; so are the ISCM boys. Each of them wanted to prove to the other that their own art is the king of them all. And then there's the competition; it would be easier to flunk you than to let you into the market. I really think you'd better go back in. I could make up some excuse—"

"No," Strauss said shortly. "I have work to do."

"But that's just the point, Richard. How are we going to get an opera produced without the ISCM? It isn't as though you wrote theremin solos, or something that didn't cost so—"

"I have work to do," he said, and left.

And he did, work which absorbed him as had no other project during the last thirty years of his former life. He had scarcely touched pen to music paper—both had been astonishingly hard to find—when he realized that nothing in his long career had provided him with touchstones by which to judge what music he should write now.

The old tricks came swarming back by the thousands, to be sure: the sudden, unexpected key changes at the crest of a melody, the interval stretching, the piling of divided strings, playing in the high harmonics, upon the already tottering top of a climax, the scurry and bustle as phrases were passed like lightning from one choir of the orchestra to another, the flashing runs in the brass, the chuckling in the clarinets, the snarling mixtures of colors to emphasize dramatic tension—all of them.

But none of them satisfied him now. He had been content with them for most of a lifetime and had made them do an astonishing amount of work. But now it was time to strike out afresh. Some of the tricks, indeed, actively repelled him: Where had he gotten the notion, clung to for decades, that violins screaming out in unison somewhere in the stratosphere were a sound interesting enough to be worth repeating inside a single composition, let alone in all of them?

And nobody, he reflected contentedly, ever approached such a new beginning better equipped. In addition to the past lying available in his memory, he had always had a technical armamentarium second to none; even the hostile critics had granted him that. Now that he was, in a sense, composing his first opera—his first after fifteen of them!—he had every opportunity to make it a masterpiece.

And every such intention.

There were, of course, many minor distractions. One of them was that search for old-fashioned score paper, and a pen and ink with which to write on it. Very few of the modern composers, it developed, wrote their music at all. A large bloc of them used tape, patching together snippets of tone and sound snipped from other tapes, superimposing one tape on another, and varying the results by twirling an elaborate array of knobs this way or that. Almost all the composers of 3-V scores, on the other hand, wrote on the sound track itself, rapidly scribbling jagged wiggly lines which, when passed through a photocell-audio circuit, produced a noise reasonably like an orchestra playing music, overtones and all.

The last-ditch conservatives who still wrote notes on paper did so with the aid of a musical typewriter. The device, Strauss had to admit, seemed perfected at last; it had manuals and stops like an organ, but it was not much more than twice as large as a standard letter-writing typewriter and produced a neat page. But he was satisfied with his own spidery, highly legible manuscript and refused to abandon it, badly though the one pen nib he had been able to buy coarsened it. It helped to tie him to his past.

Joining the ISCM had also caused him some bad moments, even after Sindi had worked him around the political roadblocks. The Society man who examined his qualifications as a member had run through the questions with no more interest than might have been shown by a veterinarian examining his four-thousandth sick calf.

"Had anything published?"

"Yes, nine tone poems, about three hundred songs, an—"

"Not when you were alive," the examiner said, somewhat disquietingly. "I mean since the sculptors turned you out again."

"Since the sculptors—ah, I understand. Yes, a string quartet, two song cycles, a—"

"Good. Alfe, write down, 'Songs.' Play an instrument?"

"Piano."

"Hmmm." The examiner studied his fingernails. "Oh, well. Do you read music? Or do you use a Scriber, or tape clips? Or a Machine?"

"I read."

"Here." The examiner sat Strauss down in front of a viewing lectern, over the lit surface of which an endless belt of translucent paper was traveling. On the paper was an immensely magnified sound track. "Whistle me the tune of that, and name the instruments it sounds like."

"I don't read that *Musiksticheln*," Strauss said frostily, "or write it, either. I use standard notation, on music paper."

"Alfe, write down, 'Reads notes only.'" He laid a sheet of grayly printed music on the lectern above the ground glass. "Whistle me that."

"That" proved to be a popular tune called "Vangs, Snifters, and Store-Credit Snooky," which had been written on a Hit Machine in 2159 by a guitar-faking politician who sang it at campaign rallies. (In some respects, Strauss reflected, the United States had indeed not changed very much.) It had become so popular that anybody could have whistled it from the title alone, whether he could read the music or not. Strauss whistled it and, to prove his bona fides, added, "It's in the key of B flat."

The examiner went over to the green-painted upright piano and hit one greasy black key. The instrument was horribly out of tune—the note was much nearer to the standard 440/cps A than it was to B flat—but the examiner said, "So it is. Alfe, write down, 'Also reads flats.' All right, son, you're a member. Nice to have you with us; not many people can read that old-style notation anymore. A lot of them think they're too good for it."

"Thank you," Strauss said.

"My feeling is, if it was good enough for the old masters, it's good enough for us. We don't have people like them with us these days, it seems to me. Except for Dr. Krafft, of course. They were *great* back in the old days—men like Shilkrit, Steiner, Tiomkin, and Pearl . . . and Wilder and Janssen. Real goffin."

"*Doch gewiss*," Strauss said politely.

BUT THE WORK went forward. He was making a little income now, from small works. People seemed to feel a special interest in a composer who had come out of the *mini* sculptors' laboratories, and in addition the material itself, Strauss was quite certain, had merits of its own to help sell it.

It was the opera that counted, however. That grew and grew under his pen, as fresh and new as his new life, as founded in knowledge and ripeness as his long, full memory. Finding a libretto had been troublesome at first. While it was possible that something existed that might have served among the current scripts for 3-V—though he doubted it—he found himself unable to tell the good from the bad through the fog cast over both by incomprehensibly technical production directions. Eventually, and for only the third time in his whole career, he had fallen back upon a play written in a language other than his own, and—for the first time—decided to set it in that language.

The play was Christopher Fry's *Venus Observed*, in all ways a perfect Strauss opera libretto, as he came gradually to realize. Though nominally a comedy, with a complex farcical plot, it was a verse play with considerable depth to it, and a number of characters who cried out to be brought by music into three dimensions, plus a strong undercurrent of autumnal tragedy, of leaf-fall and apple-fall—precisely the kind of contradictory dramatic mixture which von Hofmannsthal had supplied him with in *The Knight of the Rose*, in *Ariadne at Naxos*, and in *Arabella*.

Alas for von Hofmannsthal, but here was another long-dead playwright who seemed nearly as gifted, and the musical opportunities were immense. There was, for instance, the fire which ended Act II; what a gift for a composer to whom orchestration and counterpoint were as important as air and water! Or take the moment where Perpetua shoots the apple from the Duke's hand; in that one moment a single passing reference could add Rossini's marmoreal *William Tell* to the musical texture as nothing but an ironic footnote! And the Duke's great curtain speech, beginning:

Shall I be sorry for myself In Mortality's name.

I'll be sorry for myself. Branches and boughs,

Brown hills, the valleys faint with brume,

A burnish on the lake. . . .

There was a speech for a great tragic comedian in the spirit of Falstaff: the final union of laughter and tears, punctuated by the sleepy comments of Reedbeck, to whose sonorous snore (trombones, no less than five of them, *con sordini*?) the opera would gently end. . . .

What could be better? And yet he had come upon the play only by the unlikelyst series of accidents. At first he had planned to do a straight knockabout farce, in the

idiom of *The Silent Woman*, just to warm himself up. Remembering that Zweig had adapted that libretto for him, in the old days, from a play by Ben Jonson, Strauss had begun to search out English plays of the period just after Jonson's, and had promptly run aground on an awful specimen in heroic couplets called *Venice Preserv'd*, by one Thomas Otway. The Fry play had directly followed the Otway in the card catalogue, and he had looked at it out of curiosity; why should a twentieth-century playwright be punning on a title from the eighteenth?

After two pages of the Fry play, the minor puzzle of the pun disappeared entirely from his concern. His luck was running again; he had an opera.

SINDI WORKED MIRACLES in arranging for the performance. The date of the premiere was set even before the score was finished, reminding Strauss pleasantly of those heady days when Fuestner had been snatching the conclusion of *Elektra* off his worktable a page at a time, before the ink was even dry, to rush it to the engraver before publication deadline. The situation now, however, was even more complicated, for some of the score had to be scribed, some of it taped, some of it engraved in the old way, to meet the new techniques of performance; there were moments when Sindi seemed to be turning quite gray.

But *Venus Observed* was, as usual, forthcoming complete from Strauss's pen in plenty of time. Writing the music in first draft had been hellishly hard work, much more like being reborn than had been that confused awakening in Barkun Kris's laboratory, with its overtones of being dead instead, but Strauss found that he still retained all of his old ability to score from the draft almost effortlessly, as undisturbed by Sindi's half-audible worrying in the room with him as he was by the terrifying supersonic bangs of the rockets that bulleted invisibly over the city.

When he was finished, he had two days still to spare before the beginning of rehearsals. With those, furthermore, he would have nothing to do. The techniques of performance in this age were so completely bound up with the electronic arts as to reduce his own experience—he, the master *Kapellmeister* of them all—to the hopelessly primitive.

He did not mind. The music, as written, would speak for itself. In the meantime he found it grateful to forget the months-long preoccupation with the stage for a while. He went back to the library and browsed lazily through old poems, vaguely seeking texts for a song or two. He knew better than to bother with recent poets; they could not speak to him, and he knew it. The Americans of his own age, he thought, might give him a clue to understanding this America of 2161, and if some such poem gave birth to a song, so much the better.

The search was relaxing, and he gave himself up to enjoying it. Finally he struck a tape that he liked; a tape read in a cracked old voice that twanged of Idaho as that

voice had twanged in 1910, in Strauss's own ancient youth. The poet's name was Pound; he said, on the tape:

*... the souls of all men great
At times pass through us,
And we are melted into them, and are not
Save reflexions of their souls.
Thus I am Dante for a space and am
One François Villon, ballad-lord and thief,
Or am such holy ones I may not write,
Lest Blasphemy be writ against my name;
This for an instant and the flame is gone.
'Tis as in midmost us there glows a sphere
Translucent, molten gold, that is the "I"
And into this some form projects itself:
Christus, or John, or eke the Florentine;
And as the clear space is not if a form's
Imposed thereon,
So cease we from all being for the time,
And these, the masters of the Soul, live on.*

He smiled. That lesson had been written again and again, from Plato onward. Yet the poem was a history of his own case, a sort of theory for the metempsychosis he had undergone, and in its formal way it was moving. It would be fitting to make a little hymn of it, in honor of his own rebirth, and of the poet's insight.

A series of solemn, breathless chords framed themselves in his inner ear against which the words might be intoned in a high, gently bending hush at the beginning . . . and then a dramatic passage in which the great names of Dante and Villon would enter ringing like challenges to Time. . . . He wrote for a while in his notebook before he returned the spool to its shelf.

These, he thought, are good auspices.

And so the night of the premiere arrived, the audience pouring into the hall, the 3-V cameras riding on no visible supports through the air, and Sindi calculating his share of his client's earnings by a complicated game he played on his fingers, the basic law of which seemed to be that one plus one equals ten. The hall filled to the roof with people from every class, as though what was to come would be a circus rather than an opera.

There were, surprisingly, nearly fifty of the aloof and aristocratic mind sculptors, clad in formal clothes which were exaggerated black versions of their surgeons' gowns. They had bought a block of seats near the front of the auditorium, where

the gigantic 3-V figures which would shortly fill the "stage" before them (the real singers would perform on a small stage in the basement) could not but seem monstrously out of proportion, but Strauss supposed that they had taken this into account and dismissed it.

There was a tide of whispering in the audience as the sculptors began to trickle in, and with it an undercurrent of excitement, the meaning of which was unknown to Strauss. He did not attempt to fathom it, however; he was coping with his own mounting tide of opening-night tension, which, despite all the years, he had never quite been able to shake.

The sourceless, gentle light in the auditorium dimmed, and Strauss mounted the podium. There was a score before him, but he doubted that he would need it. Directly before him, poking up from among the musicians, were the inevitable 3-V snouts, waiting to carry his image to the singers in the basement.

The audience was quiet now. This was the moment. His baton swept up and then decisively down, and the prelude came surging up out of the pit.

FOR A LITTLE while he was deeply immersed in the always tricky business of keeping the enormous orchestra together and sensitive to the flexing of the musical web beneath his hand. As his control firmed and became secure, however, the task became slightly less demanding, and he was able to pay more attention to what the whole sounded like.

There was something decidedly wrong with it. Of course there were the occasional surprises as some bit of orchestral color emerged with a different *Klang* than he had expected; that happened to every composer, even after a lifetime of experience. And there were moments when the singers, entering upon a phrase more difficult to handle than he had calculated, sounded like someone about to fall off a tightrope (although none of them actually fluffed once; they were as fine a troupe of voices as he had ever had to work with).

But these were details. It was the overall impression that was wrong. He was losing not only the excitement of the premiere—after all, that couldn't last at the same pitch all evening—but also his very interest in what was coming from the stage and the pit. He was gradually tiring, his baton arm becoming heavier; as the second act mounted to what should have been an impassioned outpouring of shining tone, he was so bored as to wish he could go back to his desk to work on that song.

Then the act was over; only one more to go. He scarcely heard the applause. The twenty minutes' rest in his dressing room was just barely enough to give him the necessary strength.

AND SUDDENLY, IN the middle of the last act, he understood.

There was nothing new about the music. It was the old Strauss all over again—

but weaker, more dilute than ever. Compared with the output of composers like Krafft, it doubtless sounded like a masterpiece to this audience. But he knew.

The resolutions, the determination to abandon the old clichés and mannerisms, the decision to say something new—they had all come to nothing against the force of habit. Being brought to life again meant bringing to life as well all those deeply graven reflexes of his style. He had only to pick up his pen and they overpowered him with easy automatism, no more under his control than the jerk of a finger away from a flame.

His eyes filled; his body was young, but he was an old man, an old man. Another thirty-five years of this? Never. He had said all this before, centuries before. Nearly a half century condemned to saying it all over again, in a weaker and still weaker voice, aware that even this debased century would come to recognize in him only the bum's husk of greatness?—no, never, never.

He was aware, dully, that the opera was over. The audience was screaming its joy. He knew the sound. They had screamed that way when *Day of Peace* had been premiered, but they had been cheering the man he had been, not the man that *Day of Peace* showed with cruel clarity he had become. Here the sound was even more meaningless: cheers of ignorance, and that was all.

He turned slowly. With surprise, and with a surprising sense of relief, he saw that the cheers were not, after all, for him.

They were for Dr. Barkun Kris.

KRIS WAS STANDING in the middle of the bloc of mind sculptors, bowing to the audience. The sculptors nearest him were shaking his hand one after the other. More grasped at it as he made his way to the aisle and walked forward to the podium. When he mounted the rostrum and took the composer's limp hand, the cheering became delirious.

Kris lifted his arm. The cheering died instantly to an intent hush.

"Thank you," he said clearly. "Ladies and gentlemen, before we take leave of Dr. Strauss, let us again tell him what a privilege it has been for us to hear this fresh example of his mastery. I am sure no farewell could be more fitting."

The ovation lasted five minutes and would have gone another five if Kris had not cut it off.

"Dr. Strauss," he said, "in a moment, when I speak a certain formulation to you, you will realize that your name is Jerom Bosch, born in our century and with a life in it all your own. The superimposed memories which have made you assume the mask, the *persona*, of a great composer will be gone. I tell you this so that you may understand why these people here share your applause with me."

A wave of asserting sound.

"The art of mind sculpture—the creation of artificial personalities for aesthetic

enjoyment—may never reach such a pinnacle again. For you should understand that as Jerom Bosch you had no talent for music at all; indeed, we searched a long time to find a man who was utterly unable to carry even the simplest tune. Yet we were able to impose upon such unpromising material not only the personality, but the genius, of a great composer. That genius belongs entirely to you—to the *persona* that thinks of itself as Richard Strauss. None of the credit goes to the man who volunteered for the sculpture. That is your triumph, and we salute you for it."

Now the ovation could no longer be contained. Strauss, with a crooked smile, watched Dr. Kris bow. This mind sculpturing was a suitably sophisticated kind of cruelty for this age, but the impulse, of course, had always existed. It was the same impulse that had made Rembrandt and Leonardo turn cadavers into art works.

It deserved a suitably sophisticated payment under the *lex talionis*: an eye for an eye, a tooth for a tooth—and a failure for a failure.

No, he need not tell Dr. Kris that the "Strauss" he had created was as empty of genius as a hollow gourd. The joke would always be on the sculptor, who was incapable of hearing the hollowness of the music now preserved on the 3-V tapes.

But for an instant a surge of revolt poured through his bloodstream. *I am I*, he thought. *I am Richard Strauss until I die, and will never be Jerom Bosch, who was utterly unable to carry even the simplest tune.* His hand, still holding the baton, came sharply up, though whether to deliver or to ward off a blow he could not tell.

He let it fall again, and instead, at last, bowed—not to the audience, but to Dr. Kris. He was sorry for nothing, as Kris turned to him to say the word that would plunge him back into oblivion, except that he would now have no chance to set that poem to music.

POUL ANDERSON

Call Me Joe

A multiple winner of the Hugo and Nebula Awards, Poul Anderson has written more than fifty novels and hundreds of short stories since his science fiction debut in 1947. His first novel, *Brain Wave*, is a classic example of the techniques of traditional science fiction, extrapolating the impact that an abrupt universal rise in intelligence has on the totality of human civilization in the twentieth century. Anderson is highly regarded for the detail of his stories. His vast Technic History saga, a multibook chronicle of interstellar exploration and empire building, covers fifty centuries of future history spread out over the rise and fall of three empires of a galactic federation. The vast scope of the series has given Anderson the opportunity to develop colorful, well-developed characters and to explore the long-term impact of certain ideas and attitudes—free enterprise, militarism, imperialism, individual styles of governing—on the society and political structure of a created world. Two characters, distinct products of their different times and civilizations, dominate the series' most notable episodes: Falstaffian rogue merchant Nicholas van Rijn, hero of *The Man Who Counts*, *Satan's World*, and *Mirkheim*, and Ensign Dominic Flandry, whose adventures include *We Claim These Stars*, *A Knight of Ghosts and Shadows*, and *Earthman, Go Home!* Anderson has tackled many of science fiction's classic themes, including near-light-speed travel in *Tau Zero*, time travel in the series of Time Patrol stories collected as *Guardians of Time*, and accelerated evolution in *Fire Time*. He is known for his interweaving of science fiction and history, notably in his novel *The High Crusade*, a superior first-contact tale in which a medieval army captures an alien spaceship. Much of Anderson's fantasy is rich with undercurrents of mythology, notably his heroic fantasy *Three Hearts and Three Lions*, and *The Broken Sword*, an alternate history drawn from the background of *A Midsummer Night's Dream*. Anderson received the Tolkien Memorial Award in 1978. With his wife, Karen, he has written the King of Ys Celtic fantasy quartet, and with Gordon Dickson the amusing *Hoka* series. His short fiction has been collected in numerous volumes, including *The Queen of Air and Darkness and Other Stories*, *All One Universe*, *Strangers from Earth*, and *Seven Conquests*.

THE WIND CAME whooping out of eastern darkness, driving a lash of ammonia dust before it. In minutes, Edward Anglesey was blinded.

He clawed all four feet into the broken shards which were soil, hunched down, and groped for his little smelter. The wind was an idiot bassoon in his skull. Something whipped across his back, drawing blood, a tree yanked up by the roots and spat a hundred miles. Lightning cracked, immensely far overhead where clouds boiled with night.

As if to reply, thunder toned in the ice mountains and a red gout of flame jumped and a hillside came booming down, spilling itself across the valley. The earth shivered.

Sodium explosion, thought Anglesey in the drumbeat noise. The fire and the lightning gave him enough illumination to find his apparatus. He picked up tools in muscular hands, his tail gripped the trough, and he battered his way to the tunnel and thus to his dugout.

It had walls and roof of water, frozen by sun-remoteness and compressed by tons of atmosphere jammed onto every square inch. Ventilated by a tiny smokehole, a lamp of tree oil burning in hydrogen made a dull light for the single room.

Anglesey sprawled his slate-blue form on the floor, panting. It was no use to swear at the storm. These ammonia gales often came at sunset, and there was nothing to do but wait them out. He was tired anyway.

It would be morning in five hours or so. He had hoped to cast an axehead, his first, this evening, but maybe it was better to do the job by daylight.

He pulled a decapod body off a shelf and ate the meat raw, pausing for long gulps of liquid methane from a jug. Things would improve once he had proper tools; so far, everything had been painfully grubbed and hacked to shape with teeth, claws, chance icicles, and what detestably weak and crumbling fragments remained of the spaceship. Give him a few years and he'd be living as a man should.

He sighed, stretched, and lay down to sleep.

Somewhat more than one hundred and twelve thousand miles away, Edward Anglesey took off his helmet.

HE LOOKED AROUND, blinking. After the Jovian surface, it was always a little unreal to find himself here again, in the clean quiet orderliness of the control room.

His muscles ached. They shouldn't. He had not really been fighting a gale of several hundred miles an hour, under three gravities and a temperature of 140 Ab-solute. He had been here, in the almost nonexistent pull of Jupiter V, breathing oxynitrogen. It was Joe who lived down there and filled his lungs with hydrogen and helium at a pressure which could still only be estimated because it broke aneroids and deranged piezoelectrics.

Nevertheless, his body felt worn and beaten. Tension, no doubt—psychosomat-

ics—after all, for a good many hours now he had, in a sense, been Joe, and Joe had been working hard.

With the helmet off, Anglesey held only a thread of identification. The esprojector was still tuned to Joe's brain but no longer focused on his own. Somewhere in the back of his mind, he knew an indescribable feeling of sleep. Now and then, vague forms or colors drifted in the soft black—dreams? Not impossible, that Joe's brain should dream a little when Anglesey's mind wasn't using it.

A light flickered red on the esprojector panel, and a bell whined electronic fear. Anglesey cursed. Thin fingers danced over the controls of his chair, he slued around and shot across to the bank of dials. Yes—there—K-tube oscillating again! The circuit blew out. He wrenched the faceplate off with one hand and fumbled in a drawer with the other.

Inside his mind he could feel the contact with Joe fading. If he once lost it entirely, he wasn't sure he could regain it. And Joe was an investment of several million dollars and quite a few highly skilled man-years.

Anglesey pulled the offending K-tube from its socket and threw it on the floor. Glass exploded. It eased his temper a bit, just enough so he could find a replacement, plug it in, switch on the current again—as the machine warmed up, once again amplifying, the Joeness in the back alleys of his brain strengthened.

Slowly, then, the man in the electric wheelchair rolled out of the room, into the hall. Let somebody else sweep up the broken tube. To hell with it. To hell with everybody.

JAN CORNELIUS HAD never been farther from Earth than some comfortable Lunar resort. He felt much put upon that the Psionics Corporation should tap him for a thirteen-month exile. The fact that he knew as much about esprojectors and their cranky innards as any other man alive was no excuse. Why send anyone at all? Who cared?

Obviously the Federation Science Authority did. It had seemingly given those bearded hermits a blank check on the taxpayer's account.

Thus did Cornelius grumble to himself, all the long hyperbolic path to Jupiter. Then the shifting accelerations of approach to its tiny inner satellite left him too wretched for further complaint.

And when he finally, just prior to disembarkation, went up to the greenhouse for a look at Jupiter, he said not a word. Nobody does, the first time.

Arne Viken waited patiently while Cornelius stared. *It still gets me, too*, he remembered. *By the throat. Sometimes I'm afraid to look.*

At length Cornelius turned around. He had a faintly Jovian appearance himself, being a large man with an imposing girth. "I had no idea," he whispered. "I never thought . . . I had seen pictures, but—"

Viken nodded. "Sure, Dr. Cornelius. Pictures don't convey it."

Where they stood, they could see the dark broken rock of the satellite, jumbled for a short way beyond the landing slip and then chopped off sheer. This moon was scarcely even a platform, it seemed, and cold constellations went streaming past it, around it. Jupiter lay across a fifth of that sky, softly ambrous, banded with colors, spotted with the shadows of planet-sized moons and with whirlwinds as broad as Earth. If there had been any gravity to speak of, Cornelius would have thought, instinctively, that the great planet was falling on him. As it was, he felt as if sucked upward; his hands were still sore where he had grabbed a rail to hold on.

"You live here . . . all alone . . . with this?" He spoke feebly.

"Oh, well, there are some fifty of us all told, pretty congenial," said Viken. "It's not so bad. You sign up for four-cycle hitches—four ship arrivals—and believe it or not, Dr. Cornelius, this is my third enlistment."

The newcomer forbore to inquire more deeply. There was something not quite understandable about the men on Jupiter V. They were mostly bearded, though otherwise careful to remain neat; their low-gravity movements were somehow dreamlike to watch; they hoarded their conversation, as if to stretch it through the year and month between ships. Their monkish existence had changed them—or did they take what amounted to vows of poverty, chastity, and obedience, because they had never felt quite at home on green Earth?

Thirteen months! Cornelius shuddered. It was going to be a long cold wait, and the pay and bonuses accumulating for him were scant comfort now, four hundred and eighty million miles from the sun.

"Wonderful place to do research," continued Viken. "All the facilities, hand-picked colleagues, no distractions . . . and of course—" He jerked his thumb at the planet and turned to leave.

Cornelius followed, wallowing awkwardly. "It is very interesting, no doubt," he puffed. "Fascinating. But really, Dr. Viken, to drag me way out here and make me spend a year plus waiting for the next ship . . . to do a job which may take me a few weeks—"

"Are you sure it's that simple?" asked Viken gently. His face swiveled around, and there was something in his eyes that silenced Cornelius. "After all my time here, I've yet to see any problem, however complicated, which when you looked at it the right way didn't become still more complicated."

They went through the ship's air lock and the tube joining it to the station entrance. Nearly everything was underground. Rooms, laboratories, even halls had a degree of luxuriousness—why, there was a fireplace with a real fire in the common room! God alone knew what *that* cost!

Thinking of the huge chill emptiness where the king planet laired, and of his own

year's sentence, Cornelius decided that such luxuries were, in truth, biological necessities.

Viken showed him to a pleasantly furnished chamber which would be his own. "We'll fetch your luggage soon and unload your psionic stuff. Right now, everybody's either talking to the ship's crew or reading his mail."

Cornelius nodded absently and sat down. The chair, like all low-gee furniture, was a mere spidery skeleton, but it held his bulk comfortably enough. He felt in his tunic hoping to bribe the other man into keeping him company for a while. "Cigar? I brought some from Amsterdam."

"Thanks." Viken accepted with disappointing casualness, crossed long thin legs, and blew grayish clouds.

"Ah . . . are you in charge here?"

"Not exactly. No one is. We do have one administrator, the cook, to handle what little work of that type may come up. Don't forget, this is a research station, first, last, and always."

"What is your field, then?"

Viken frowned. "Don't question anyone else so bluntly, Dr. Cornelius," he warned. "They'd rather spin the gossip out as long as possible with each newcomer. It's a rare treat to have someone whose every last conceivable reaction hasn't been—No, no apologies to me. 'S all right. I'm a physicist, specializing in the solid state at ultrahigh pressures." He nodded at the wall. "Plenty of it to be observed—there!"

"I see." Cornelius smoked quietly for a while. Then: "I'm supposed to be the psionics expert, but frankly, at present, I've no idea why your machine should misbehave as reported."

"You mean those, uh, K-tubes have a stable output on Earth?"

"And on Luna, Mars, Venus . . . everywhere, apparently, but here." Cornelius shrugged. "Of course, psibeamers are always pernickety, and sometimes you get an unwanted feedback when— No. I'll get the facts before I theorize. Who are your psimen?"

"Just Anglesey, who's not a formally trained esman at all. But he took it up after he was crippled, and showed such a natural aptitude that he was shipped out here when he volunteered. It's so hard to get anyone for Jupiter V that we aren't fussy about degrees. At that, Ed seems to be operating Joe as well as a Ps.D. could."

"Ah, yes. Your pseudojovian. I'll have to examine that angle pretty carefully too," said Cornelius. In spite of himself, he was getting interested. "Maybe the trouble comes from something in Joe's biochemistry. Who knows? I'll let you into a carefully guarded little secret, Dr. Viken: psionics is not an exact science."

"Neither is physics," grinned the other man. After a moment, he added more soberly: "Not my brand of physics, anyway. I hope to make it exact. That's why I'm here, you know. It's the reason we're all here."

* * *
EDWARD ANGLESEY WAS a bit of a shock, the first time. He was a head, a pair of arms, and a disconcertingly intense blue stare. The rest of him was mere detail, enclosed in a wheeled machine.

"Biophysicist originally," Viken had told Cornelius. "Studying atmospheric spores at Earth Station when he was still a young man—accident crushed him up, nothing below his chest will ever work again. Snappish type, you have to go slow with him." Seated on a wisp of stool in the esprojector control room, Cornelius realized that Viken had been soft-pedaling the truth.

Anglesey ate as he talked, gracefully, letting the chair's tentacles wipe up after him. "Got to," he explained. "This stupid place is officially on Earth time, GMT. Jupiter isn't. I've got to be here whenever Joe wakes, ready to take him over."

"Couldn't you have someone spell you?" asked Cornelius.

"Bah!" Anglesey stabbed a piece of prot and waggled it at the other man. Since it was native to him, he could spit out English, the common language of the station, with unmeasured ferocity. "Look here. You ever done therapeutic esping? Not just listening in, or even communication, but actual pedagogic control?"

"No, not I. It requires a certain natural talent, like yours." Cornelius smiled. His ingratiating little phrase was swallowed without being noticed by the scored face opposite him. "I take it you mean cases like, oh, reeducating the nervous system of a palsied child?"

"Yes, yes. Good enough example. Has anyone ever tried to suppress the child's personality, take him over in the most literal sense?"

"Good God, no!"

"Even as a scientific experiment?" Anglesey grinned. "Has any esprojector operative ever poured on the juice and swamped the child's brain with his own thoughts? Come on, Cornelius, I won't snitch on you."

"Well . . . it's out of my line, you understand." The psionicist looked carefully away, found a bland meter face, and screwed his eyes to that. "I have, uh, heard something about . . . well, yes, there were attempts made in some pathological cases to, uh, bull through . . . break down the patient's delusions by sheer force—"

"And it didn't work," said Anglesey. He laughed. "It *can't* work, not even on a child, let alone an adult with a fully developed personality. Why, it took a decade of refinement, didn't it, before the machine was debugged to the point where a psychiatrist could even 'listen in' without the normal variation between his pattern of thought and the patient's . . . without that variation setting up an interference scrambling the very thing he wanted to study. The machine has to make automatic compensations for the differences between individuals. We still can't bridge the differences between species.

"If someone else is willing to cooperate, you can very gently guide his thinking.

And that's all. If you try to seize control of another brain, a brain with its own background of experience, its own ego—you risk your very sanity. The other brain will fight back, instinctively. A fully developed, matured, hardened human personality is just too complex for outside control. It has too many resources, too much hell the subconscious can call to its defense if its integrity is threatened. Blazes, man, we can't even master our own minds, let alone anyone else's!"

Anglesey's cracked-voice tirade broke off. He sat brooding at the instrument panel, tapping the console of his mechanical mother.

"WELL?" SAID CORNELIUS after a while.

He should not, perhaps, have spoken. But he found it hard to remain mute. There was too much silence—half a billion miles of it, from here to the sun. If you closed your mouth five minutes at a time, the silence began creeping in like a fog.

"Well," gibed Anglesey. "So our pseudojovian, Joe, has a physically adult brain. The only reason I can control him is that his brain has never been given a chance to develop its own ego. I *am* Joe. From the moment he was 'born' into consciousness, I have been there. The psibeam sends me all his sense data and sends him back my motor-nerve impulses. But nevertheless, he has that excellent brain, and its cells are recording every trace of experience, even as yours and mine; his synapses have assumed the topography which is my 'personality pattern.'

"Anyone else, taking him over from me, would find it was like an attempt to oust me myself from my own brain. It couldn't be done. To be sure, he doubtless has only a rudimentary set of Anglesey memories—I do not, for instance, repeat trigonometric theorems while controlling him—but he has enough to be, potentially, a distinct personality.

"As a matter of fact, whenever he wakes up from sleep—there's usually a lag of a few minutes, while I sense the change through my normal psi faculties and get the amplifying helmet adjusted—I have a bit of a struggle. I feel almost a . . . a resistance . . . until I've brought his mental currents completely into phase with mine. Merely dreaming has been enough of a different experience to—"

Anglesey didn't bother to finish the sentence.

"I see," murmured Cornelius. "Yes, it's clear enough. In fact, it's astonishing that you can have such total contact with a being of such alien metabolism."

"I won't for much longer," said the esman sarcastically, "unless you can correct whatever is burning out those K-tubes. I don't have an unlimited supply of spares."

"I have some working hypotheses," said Cornelius, "but there's so little known about psibeam transmission—is the velocity infinite or merely very great, is the beam strength actually independent of distance? How about the possible effects of transmission . . . oh, through the degenerate matter in the Jovian core? Good Lord, a planet where water is a heavy mineral and hydrogen is a metal? What do we know?"

"We're supposed to find out," snapped Anglesey. "That's what this whole project is for. Knowledge. Bull!" Almost, he spat on the floor. "Apparently what little we have learned doesn't even get through to people. Hydrogen is still a gas where Joe lives. He'd have to dig down a few miles to reach the solid phase. And I'm expected to make a scientific analysis of Jovian conditions!"

Cornelius waited it out, letting Anglesey storm on while he himself turned over the problem on K-tube oscillation.

"They don't understand back on Earth. Even here they don't. Sometimes I think they refuse to understand. Joe's down there without much more than his bare hands. He, I, we started with no more knowledge than that he could probably eat the local life. He has to spend nearly all his time hunting for food. It's a miracle he's come as far as he has in these few weeks—made a shelter, grown familiar with the immediate region, begun on metallurgy, hydruurgy, whatever you want to call it. What more do they want me to do, for crying in the beer?"

"Yes, yes—" mumbled Cornelius. "Yes, I—"

Anglesey raised his white bony face. Something filmed over in his eyes.

"What—?" began Cornelius.

"Shut up!" Anglesey whipped the chair around, groped for the helmet, slapped it down over his skull. "Joe's waking. Get out of here."

"But if you'll only let me work while he sleeps, how can I—"

Anglesey snarled and threw a wrench at him. It was a feeble toss, even in low-gee. Cornelius backed toward the door. Anglesey was tuning in the esprojector. Suddenly he jerked.

"Cornelius!"

"Whatisit?" The psionicist tried to run back, overdid it, and skidded in a heap to end up against the panel.

"K-tube again." Anglesey yanked off the helmet. It must have hurt like blazes, having a mental squeal build up uncontrolled and amplified in your own brain, but he said merely: "Change it for me. Fast. And then get out and leave me alone. Joe didn't wake up of himself. Something crawled into the dugout with me—I'm in trouble down there!"

IT HAD BEEN a hard day's work, and Joe slept heavily. He did not wake until the hands closed on his throat.

For a moment, then, he knew only a crazy smothering wave of panic. He thought he was back on Earth Station, floating in null-gee at the end of a cable while a thousand frosty stars haloed the planet before him. He thought the great I-beam had broken from its moorings and started toward him, slowly, but with all the inertia of its cold tons, spinning and shimmering in the Earth light, and the only sound himself screaming and screaming in his helmet trying to break from the cable the beam nudged him

ever so gently but it kept on moving he moved with it he was crushed against the station wall nuzzled into it his mangled suit frothed as it tried to seal its wounded self there was blood mingled with the foam his blood *Joe roared.*

His convulsive reaction tore the hands off his neck and sent a black shape spinning across the dugout. It struck the wall, thunderously, and the lamp fell to the floor and went out.

Joe stood in darkness, breathing hard, aware in a vague fashion that the wind had died from a shriek to a low snarling while he slept.

The thing he had tossed away mumbled in pain and crawled along the wall. Joe felt through lightlessness after his club.

Something else scabbled. The tunnel! They were coming through the tunnel! Joe groped blindly to meet them. His heart drummed thickly and his nose drank an alien stench.

The thing that emerged, as Joe's hands closed on it, was only about half his size, but it had six monstrously taloned feet and a pair of three-fingered hands that reached after his eyes. Joe cursed, lifted it while it writhed, and dashed it to the floor. It screamed, and he heard bones splinter.

"Come on, then!" Joe arched his back and spat at them, like a tiger menaced by giant caterpillars.

They flowed through his tunnel and into the room; a dozen of them entered while he wrestled one that had curled around his shoulders and anchored its sinuous body with claws. They pulled at his legs, trying to crawl up on his back. He struck out with claws of his own, with his tail, rolled over and went down beneath a heap of them and stood up with the heap still clinging to him.

They swayed in darkness. The legged seething of them struck the dugout wall. It shivered, a rafter cracked, the roof came down. Anglesey stood in a pit, among broken ice plates, under the wan light of a sinking Ganymede.

He could see, now, that the monsters were black in color and that they had heads big enough to accommodate some brains, less than human but probably more than apes. There were a score of them or so; they struggled from beneath the wreckage and flowed at him with the same shrieking malice.

Why?

Baboon reaction, thought Anglesey somewhere in the back of himself. See the stranger, fear the stranger, hate the stranger, kill the stranger. His chest heaved, pumping air through a raw throat. He yanked a whole rafter to him, snapped it in half, and twirled the iron-hard wood.

The nearest creature got its head bashed in. The next had its back broken. The third was hurled with shattered ribs into a fourth; they went down together. Joe began to laugh. It was getting to be fun.

"Yeee-ow! Ti-i-i-iger!" He ran across the icy ground, toward the pack. They scattered, howling. He hunted them until the last one had vanished into the forest.

Panting, Joe looked at the dead. He himself was bleeding, he ached, he was cold and hungry, and his shelter had been wrecked . . . but, he'd whipped them! He had a sudden impulse to beat his chest and howl. For a moment, he hesitated—why not? Anglesey threw back his head and bayed victory at the dim shield of Ganymede.

Thereafter he went to work. First build a fire, in the lee of the spaceship—which was little more by now than a hill of corrosion. The monster pack cried in darkness and the broken ground; they had not given up on him, they would return.

He tore a haunch off one of the slain and took a bite. Pretty good. Better yet if properly cooked. Heh! They'd made a big mistake in calling his attention to their existence! He finished breakfast while Ganymede slipped under the western ice mountains. It would be morning soon. The air was almost still, and a flock of pancake-shaped skyskimmers, as Anglesey called them, went overhead, burnished copper color in the first pale dawn-streaks.

Joe rummaged in the ruins of his hut until he had recovered the water-smelting equipment. It wasn't harmed. That was the first order of business, melt some ice and cast it in the molds of axe, knife, saw, hammer he had painfully prepared. Under Jovian conditions, methane was a liquid that you drank and water was a dense hard mineral. It would make good tools. Later on he would try alloying it with other materials.

Next—yes. To hell with the dugout; he could sleep in the open again for a while. Make a bow, set traps, be ready to massacre the black caterpillars when they attacked him again. There was a chasm not far from here, going down a long way toward the bitter cold of the metallic-hydrogen strata: a natural icebox, a place to store the several weeks' worth of meat his enemies would supply. This would give him leisure to—Oh, a hell of a lot!

Joe laughed, exultantly, and lay down to watch the sunrise.

It struck him afresh how lovely a place this was. See how the small brilliant spark of the sun swam up out of eastern fogbanks colored dusky purple and veined with rose and gold; see how the light strengthened until the great hollow arch of the sky became one shout of radiance; see how the light spilled warm and living over a broad fair land, the million square miles of rustling low forests and wave-blinking lakes and feather-plumed hydrogen geysers; and see, see, see how the ice mountains of the west flashed like blued steel!

Anglesey drew the wild morning wind deep into his lungs and shouted with a boy's joy.

"I'M NOT A biologist myself," said Viken carefully. "But maybe for that reason I can better give you the general picture. Then Lopez or Matsumoto can answer any questions of detail."

"Excellent," nodded Cornelius. "Why don't you assume I am totally ignorant of this project? I very nearly am, you know."

"If you wish," laughed Viken.

They stood in an outer office of the xenobiology section. No one else was around for the station's clocks said 1730 GMT and there was only one shift. No point in having more, until Anglesey's half of the enterprise had actually begun gathering quantitative data.

The physicist bent over and took a paperweight off a desk. "One of the boys made this for fun," he said, "but it's a pretty good model of Joe. He stands about five feet tall at the head."

Cornelius turned the plastic image over in his hands. If you could imagine such a thing as a feline centaur with a thick prehensile tail—The torso was squat, long-armed, immensely muscular; the hairless head was round, wide-nosed, with big deep-set eyes and heavy jaws, but it was really quite a human face. The overall color was bluish gray.

"Male, I see," he remarked.

"Of course. Perhaps you don't understand. Joe is the complete pseudojovian: as far as we can tell, the final model, with all the bugs worked out. He's the answer to a research question that took fifty years to ask." Viken looked sideways at Cornelius. "So you realize the importance of your job, don't you?"

"I'll do my best," said the psionicist. "But if . . . well, let's say that tube failure or something causes you to lose Joe before I've solved the oscillation problem. You do have other pseudos in reserve, don't you?"

"Oh, yes," said Viken moodily. "But the cost—We're not on an unlimited budget. We do go through a lot of money, because it's expensive to stand up and sneeze this far from Earth. But for that same reason our margin is slim."

He jammed hands in pockets and slouched toward the inner door, the laboratories, head down and talking in a low, hurried voice:

"Perhaps you don't realize what a nightmare planet Jupiter is. Not just the surface gravity—a shade under three gees, what's that? But the gravitational potential, ten times Earth's. The temperature. The pressure . . . above all, the atmosphere, and the storms, and the darkness!

"When a spaceship goes down to the Jovian surface, it's a radio-controlled job; it leaks like a sieve, to equalize pressure, but otherwise it's the sturdiest, most utterly powerful model ever designed; it's loaded with every instrument, every servomechanism, every safety device the human mind has yet thought up to protect a million-dollar hunk of precision equipment.

"And what happens? Half the ships never reach the surface at all. A storm snatches them and throws them away, or they collide with a floating chunk of Ice VII—small

version of the Red Spot—or, so help me, what passes for a flock of *birds* rams one and stoves it in!

“As for the fifty percent which do land, it’s a one-way trip. We don’t even try to bring them back. If the stresses coming down haven’t sprung something, the corrosion has doomed them anyway. Hydrogen at Jovian pressure does funny things to metals.

“It cost a total of—about five million dollars—to set Joe, one pseudo, down there. Each pseudo to follow will cost, if we’re lucky, a couple of million more.”

Viken kicked open the door and led the way through. Beyond was a big room, low-ceilinged, coldly lit, and murmurous with ventilators. It reminded Cornelius of a nucleonics lab; for a moment he wasn’t sure why, then recognized the intricacies of remote control, remote observation, walls enclosing forces which could destroy the entire moon.

“These are required by the pressure, of course,” said Viken, pointing to a row of shields. “And the cold. And the hydrogen itself, as a minor hazard. We have units here duplicating conditions in the Jovian, uh, stratosphere. This is where the whole project really began.”

“I’ve heard something about that,” nodded Cornelius. “Didn’t you scoop up airborne spores?”

“Not I.” Viken chuckled. “Totti’s crew did, about fifty years ago. Proved there was life on Jupiter. A life using liquid methane as its basic solvent, solid ammonia as a starting point for nitrate synthesis—the plants use solar energy to build unsaturated carbon compounds, releasing hydrogen; the animals eat the plants and reduce those compounds again to the saturated form. There is even an equivalent of combustion. The reactions involve complex enzymes and . . . well, it’s out of my line.”

“Jovian biochemistry is pretty well understood, then.”

“Oh, yes. Even in Totti’s day, they had a highly developed biotic technology: Earth bacteria had already been synthesized and most gene structures pretty well mapped. The only reason it took so long to diagram Jovian life processes was the technical difficulty, high pressure and so on.”

“When did you actually get a look at Jupiter’s surface?”

“Gray managed that, about thirty years ago. Set a television ship down, a ship that lasted long enough to flash him quite a series of pictures. Since then, the technique has improved. We know that Jupiter is crawling with its own weird kind of life, probably more fertile than Earth. Extrapolating from the airborne microorganisms, our team made trial syntheses of metazoans and—”

Viken sighed. “Damn it, if only there were intelligent native life! Think what they could tell us, Cornelius, the data, the— Just think back how far we’ve gone since Lavoisier, with the low-pressure chemistry of Earth. Here’s a chance to learn a high-pressure chemistry and physics at least as rich with possibilities!”

After a moment, Cornelius murmured stily: “Are you certain there *aren’t* any Jovians?”

“Oh, sure, there could be several billion of them,” shrugged Viken. “Cities, empires, anything you like. Jupiter has the surface area of a hundred Earths, and we’ve only seen maybe a dozen small regions. But we do know there aren’t any Jovians using radio. Considering their atmosphere, it’s unlikely they ever would invent it for themselves—imagine how thick a vacuum tube has to be, how strong a pump you need! So it was finally decided we’d better make our own Jovians.”

Cornelius followed him through the lab, into another room. This was less cluttered, it had a more finished appearance: the experimenter’s haywire rig had yielded to the assured precision of an engineer.

Viken went over to one of the panels which lined the walls and looked at its gauges. “Beyond this lies another pseudo,” he said. “Female, in this instance. She’s at a pressure of two hundred atmospheres and a temperature of 194 Absolute. There’s a . . . an umbilical arrangement, I guess you’d call it, to keep her alive. She was grown to adulthood in this, uh, fetal stage—we patterned our Jovians after the terrestrial mammal. She’s never been conscious, she won’t ever be till she’s ‘born.’ We have a total of twenty males and sixty females waiting here. We can count on about half reaching the surface. More can be created as required.

“It isn’t the pseudos that are so expensive, it’s their transportation. So Joe is down there alone till we’re sure that his kind *can* survive.”

“I take it you experimented with lower forms first,” said Cornelius.

“Of course. It took twenty years, even with forced-catalysis techniques, to work from an artificial airborne spore to Joe. We’ve used the psibeam to control everything from pseudoinsects on up. Interspecies control is possible, you know, if your puppet’s nervous system is deliberately designed for it, and isn’t given a chance to grow into a pattern different from the esman’s.”

“And Joe is the first specimen who’s given trouble?”

“Yes.”

“Scratch one hypothesis.” Cornelius sat down on a workbench, dangling thick legs and running a hand through thin sandy hair. “I thought maybe some physical effort of Jupiter was responsible. Now it looks as if the difficulty is with Joe himself.”

“We’ve all suspected that much,” said Viken. He struck a cigarette and sucked in his cheeks around the smoke. His eyes were gloomy. “Hard to see how. The biotics engineers tell me *Pseudocentaurus sapiens* has been more carefully designed than any product of natural evolution.”

“Even the brain?”

“Yes. It’s patterned directly on the human, to make psibeam control possible, but there are improvements—greater stability.”

“There are still the psychological aspects, though,” said Cornelius. “In spite of all

our amplifiers and other fancy gadgets, psi is essentially a branch of psychology, even today . . . or maybe it's the other way around. Let's consider traumatic experiences. I take it the . . . the adult Jovian's fetus has a rough trip going down?"

"The ship does," said Viken. "Not the pseudo itself, which is wrapped up in fluid just like you were before birth."

"Nevertheless," said Cornelius, "the two hundred atmospheres pressure here is not the same as whatever unthinkable pressure exists down on Jupiter. Could the change be injurious?"

Viken gave him a look of respect. "Not likely," he answered. "I told you the J-ships are designed leaky. External pressure is transmitted to the, uh, uterine mechanism through a series of diaphragms, in a gradual fashion. It takes hours to make the descent, you realize."

"Well, what happens next?" went on Cornelius. "The ship lands, the uterine mechanism opens, the umbilical connection disengages, and Joe is, shall we say, born. But he has an adult brain. He is not protected by the only half-developed infant brain from the shock of sudden awareness."

"We thought of that," said Viken. "Anglesey was on the psi-beam, in phase with Joe, when the ship left this moon. So it wasn't really Joe who emerged, who perceived. Joe has never been much more than a biological waldo. He can only suffer mental shock to the extent that Ed does, because it is Ed down there!"

"As you will," said Cornelius. "Still, you didn't plan for a race of puppets, did you?"

"Oh, heavens, no," said Viken. "Out of the question. Once we know Joe is well established, we'll import a few more esmen and get him some assistance in the form of other pseudos. Eventually females will be sent down, and uncontrolled males, to be educated by the puppets. A new generation will be born normally—Well, anyhow, the ultimate aim is a small civilization of Jovians. There will be hunters, miners, artisans, farmers, housewives, the works. They will support a few key members, a kind of priesthood. And that priesthood will be esp-controlled, as Joe is. It will exist solely to make instruments, take readings, perform experiments, and tell us what we want to know!"

Cornelius nodded. In a general way, this was the Jovian project as he had understood it. He could appreciate the importance of his own assignment.

Only, he still had no clue to the cause of that positive feedback in the K-tubes. And what could he do about it?

HIS HANDS WERE still bruised. *Oh, God*, he thought with a groan, for the hundredth time, *does it affect me that much? While Joe was fighting down there, did I really hammer my fists on metal up here?*

His eyes smoldered across the room, to the bench where Cornelius worked. He

didn't like Cornelius, fat cigar-sucking slob, interminably talking and talking. He had about given up trying to be civil to the Earthworm.

The psionist laid down a screwdriver and flexed cramped fingers. "Whuff!" He smiled. "I'm going to take a break."

The half-assembled esprojector made a gaunt backdrop for his wide soft body, where it squatted toad-fashion on the bench. Anglesey detested the whole idea of anyone sharing this room, even for a few hours a day. Of late he had been demanding his meals brought here, left outside the door of his adjoining bedroom-bath. He had not gone beyond for quite some time now.

And why should I?

"Couldn't you hurry it up a little?" snapped Anglesey.

Cornelius flushed. "If you'd had an assembled spare machine, instead of loose parts—" he began. Shrugging, he took out a cigar stub and relit it carefully; his supply had to last a long time.

Anglesey wondered if those stinking clouds were blown from his mouth on malicious purpose. *I don't like you, Mr. Earthman Cornelius, and it is doubtless quite mutual.*

"There was no obvious need for one, until the other esmen arrive," said Anglesey in a sullen voice. "And the testing instruments report this one in perfectly good order."

"Nevertheless," said Cornelius, "at irregular intervals it goes into wild oscillations which burn out the K-tube. The problem is why. I'll have you try out this new machine as soon as it is ready, but, frankly, I don't believe the trouble lies in electronic failure at all—or even in unsuspected physical effects."

"Where, then?" Anglesey felt more at ease as the discussion grew purely technical.

"Well, look. What exactly is the K-tube? It's the heart of the esprojector. It amplifies your natural psionic pulses, uses them to modulate the carrier wave, and shoots the whole beam down at Joe. It also picks up Joe's resonating impulses and amplifies them for your benefit. Everything else is auxiliary to the K-tube."

"Spare me the lecture," snarled Anglesey.

"I was only rehearsing the obvious," said Cornelius, "because every now and then it is the obvious answer which is hardest to see. Maybe it isn't the K-tube which is misbehaving. Maybe it is you."

"What?" The white face gaped at him. A dawning rage crept red across its thin bones.

"Nothing personal intended," said Cornelius hastily. "But you know what a tricky beast the subconscious is. Suppose, just as a working hypothesis, that way down underneath you don't *want* to be on Jupiter. I imagine it is a rather terrifying environment. Or there may be some obscure Freudian element involved. Or, quite simply and naturally, your subconscious may fail to understand that Joe's death does not entail your own."

"Um-m-m—" *Mirabile dictu*. Anglesey remained calm. He rubbed his chin with one skeletal hand. "Can you be more explicit?"

"Only in a rough way," replied Cornelius. "Your conscious mind sends a motor impulse along the psibeam to Joe. Simultaneously, your subconscious mind, being scared of the whole business, emits the glandular-vascular-cardiac-visceral impulses associated with fear. These react on Joe, whose tension is transmitted back along the beam. Feeling Joe's somatic fear symptoms, your subconscious gets still more worried, thereby increasing the symptoms—Get it? It's exactly similar to ordinary neurasthenia, with this exception: that since there is a powerful amplifier, the K-tube, involved, the oscillations can build up uncontrollably within a second or two. You should be thankful the tube does burn out—otherwise your brain might do so!"

For a moment Anglesey was quiet. Then he laughed. It was a hard, barbaric laughter. Cornelius started as it struck his eardrums.

"Nice idea," said the esman. "But I'm afraid it won't fit all the data. You see, I like it down there. I like being Joe."

He paused for a while, then continued in a dry impersonal tone: "Don't judge the environment from my notes. They're just idiotic things like estimates of wind velocity, temperature variations, mineral properties—insignificant. What I can't put in is how Jupiter looks through a Jovian's infrared-seeing eyes."

"Different, I should think," ventured Cornelius after a minute's clumsy silence.

"Yes and no. It's hard to put into language. Some of it I can't, because man hasn't got the concepts. But . . . oh, I can't describe it. Shakespeare himself couldn't. Just remember that everything about Jupiter which is cold and poisonous and gloomy to us is *right* for Joe."

Anglesey's tone grew remote, as if he spoke to himself:

"Imagine walking under a glowing violet sky, where great flashing clouds sweep the earth with shadow and rain strides beneath them. Imagine walking on the slopes of a mountain like polished metal, with a clean red flame exploding above you and thunder laughing in the ground. Imagine a cool wild stream, and low trees with dark coppery flowers, and a waterfall, methane-fall . . . whatever you like, leaping off a cliff, and the strong live wind shakes its mane full of rainbows! Imagine a whole forest, dark and breathing, and here and there you glimpse a pale-red wavering will-o'-the-wisp, which is the life radiation of some fleet shy animal, and . . . and—"

Anglesey croaked into silence. He stared down at his clenched fists, then he closed his eyes tight and tears ran out between the lids.

"Imagine being *strong*!"

Suddenly he snatched up the helmet, crammed it on his head, and twirled the control knobs. Joe had been sleeping, down in the night, but Joe was about to wake up and—roar under the four great moons till all the forest feared him!

Cornelius slipped quietly out of the room.

IN THE LONG brazen sunset light, beneath dusky cloud banks brooding storm, he strode up the hillslope with a sense of the day's work done. Across his back, two woven baskets balanced each other, one laden with the pungent black fruit of the thorn-tree and one with cable-thick creepers to be used as rope. The axe on his shoulder caught the waning sunlight and tossed it blindingly back.

It had not been hard labor, but weariness dragged at his mind and he did not relish the household chores yet to be performed, cooking and cleaning and all the rest. Why couldn't they hurry up and get him some helpers?

His eyes sought the sky, resentfully. The moon Five was hidden—down here, at the bottom of the air ocean, you saw nothing but the sun and the four Galilean satellites. He wasn't even sure where Five was just now, in relation to himself . . . wait a minute, it's sunset here, but if I went out to the viewdome I'd see Jupiter in the last quarter, or would I? Oh, hell, it only takes us half an Earth-day to swing around the planet anyhow—

Joe shook his head. After all this time, it was still damnably hard, now and then, to keep his thoughts straight. *I, the essential I, am up in heaven, riding Jupiter V between coldstars. Remember that. Open your eyes, if you will, and see the dead control room superimposed on a living hillside.*

He didn't though. Instead, he regarded the boulders strewn wind-blasted gray over the tough mossy vegetation of the slope. They were not much like Earth rocks, nor was the soil beneath his feet like terrestrial humus.

For a moment Anglesey speculated on the origin of the silicates, aluminates, and other stony compounds. Theoretically, all such materials should be inaccessibly locked in the Jovian core, down where the pressure got vast enough for atoms to buckle and collapse. Above the core should lie thousands of miles of allotropic ice, and then the metallic hydrogen layer. There should not be complex minerals this far up, but there were.

Well, possibly Jupiter had formed according to theory, but had thereafter sucked enough cosmic dust, meteors, gases, and vapors down its great throat of gravitation to form a crust several miles thick. Or more likely the theory was altogether wrong. What did they know, what *would* they know, the soft pale worms of Earth?

Anglesey stuck his—Joe's—fingers in his mouth and whistled. A baying sounded in the brush, and two midnight forms leaped toward him. He grinned and stroked their heads; training was progressing faster than he'd hoped with these pups of the black caterpillar beasts he had taken. They would make guardians for him, herders, servants.

On the crest of the hill, Joe was building himself a home. He had logged off an acre of ground and erected a stockade. Within the grounds there now stood a lean-

to for himself and his stores, a methane well, and the beginnings of a large comfortable cabin.

But there was too much work for one being. Even with the half-intelligent caterpillars to help, and with cold storage for meat, most of his time would still go to hunting. The game wouldn't last forever, either; he had to start agriculture within the next year or so—Jupiter-year, twelve Earth-years, thought Anglesey. There was the cabin to finish and furnish; he wanted to put a waterwheel, no, methane wheel in the river to turn any of a dozen machines he had in mind, he wanted to experiment with alloyed ice and—

And, quite apart from his need of help, why should he remain alone, the single thinking creature on an entire planet? He was a male in this body, with male instincts—in the long run, his health was bound to suffer if he remained a hermit, and right now the whole project depended on Joe's health.

It wasn't right!

But I am not alone. There are fifty men on the satellite with me. I can talk to any of them, any time I wish. It's only that I seldom wish it, these days. I would rather be Joe.

Nevertheless . . . I, cripple, feel all the tiredness, anger, hurt, frustration, of that wonderful biological machine called Joe. The others don't understand. When the ammonia gale flays open his skin, it is I who bleed.

Joe lay down on the ground, sighing. Fangs flashed in the mouth of the black beast which humped over to lick his face. His belly growled with hunger, but he was too tired to fix a meal. Once he had the dogs trained—

Another pseudo would be so much more rewarding to educate.

He could almost see it, in the weary darkening of his brain. Down there, in the valley below the hill, fire and thunder as the ship came to rest. And the steel egg would crack open, the steel arms—already crumbling, puny work of worms!—lift out the shape within and lay it on the earth.

She would stir, shrieking in her first lungful of air, looking about with blank mindless eyes. And Joe would come carry her home. And he would feed her, care for her, show her how to walk—it wouldn't take long, an adult body would learn those things very fast. In a few weeks she would even be talking, be an individual, a soul.

Did you ever think, Edward Anglesey, in the days when you also walked, that your wife would be a gray, four-legged monster?

Never mind that. The important thing was to get others of his kind down here; female and male. The station's niggling little plan would have him wait two more Earth-years, and then send him only another dummy like himself, a contemptible human mind looking through eyes which belonged rightfully to a Jovian. It was not to be tolerated!

If he weren't so tired—

Joe sat up. Sleep drained from him as the realization entered. *He wasn't tired, not to speak of. Anglesey was. Anglesey, the human side of him, who for months had only slept in catnaps, whose rest had lately been interrupted by Cornelius—it was the human body which drooped, gave up, and sent wave after soft wave of sleep down the psibeam to Joe.*

Somatic tension traveled skyward; Anglesey jerked awake.

He swore. As he sat there beneath the helmet, the vividness of Jupiter faded with his scattering concentration, as if it grew transparent; the steel prison which was his laboratory strengthened behind it. He was losing contact—Rapidly, with the skill of experience, he willed himself back into phase with the neutral current of the other brain. He willed sleepiness on Joe, exactly as a man wills it on himself.

And, like any other insomniac, he failed. The Joe-body was too hungry. It got up and walked across the compound toward its shack.

The K-tube went wild and blew itself out.

THE NIGHT BEFORE the ships left, Viken and Cornelius sat up late.

It was not truly a night, of course. In twelve hours the tiny moon was hurled clear around Jupiter, from darkness back to darkness, and there might well be a pallid little sun over its crags when the clocks said witches were abroad in Greenwich. But most of the personnel were asleep at this hour.

Viken scowled. "I don't like it," he said. "Too sudden a change of plans. Too big a gamble."

"You are only risking—how many?—three male and a dozen female pseudos," Cornelius replied.

"And fifteen J-ships. All we have. If Anglesey's notion doesn't work, it will be months, a year or more, till we can have others built and resume aerial survey."

"But if it does work," said Cornelius, "you won't need any J-ships, except to carry down more pseudos. You will be too busy evaluating data from the surface to piddle around in the upper atmosphere."

"Of course. But we never expected it so soon. We were going to bring more esmen out here, to operate some more pseudos—"

"But they aren't needed," said Cornelius. He struck a cigar to life and took a long pull on it, while his mind sought carefully for words. "Not for a while, anyhow. Joe has reached a point where, given help, he can leap several thousand years of history—he may even have a radio of sorts operating in the fairly near future, which would eliminate the necessity of much of your esping. But without help, he'll just have to mark time. And it's stupid to make a highly trained human esman perform manual labor, which is all that the other pseudos are needed for at this moment. Once the Jovian settlement is well established, certainly, then you can send down more pups."

"The question is, though," persisted Viken, "can Anglesey himself educate all those pseudos at once? They'll be helpless as infants for days. It will be weeks before they really start thinking and acting for themselves. Can Joe take care of them meanwhile?"

"He has food and fuel stored for months ahead," said Cornelius. "As for what Joe's capabilities are, well, hm-m-m . . . we just have to take Anglesey's judgment. He has the only inside information."

"And once those Jovians do become personalities," worried Viken, "are they necessarily going to string along with Joe? Don't forget, the pseudos are not carbon copies of each other. The uncertainty principle assures each one a unique set of genes. If there is only one human mind on Jupiter, among all those aliens—"

"One *human* mind?" It was barely audible. Viken opened his mouth inquiringly. The other man hurried on.

"Oh, I'm sure Anglesey can continue to dominate them," said Cornelius. "His own personality is rather—tremendous."

Viken looked startled. "You really think so?"

The psionicist nodded. "Yes. I've seen more of him in the past weeks than anyone else. And my profession naturally orients me more toward a man's psychology than his body or his habits. You see a waspish cripple. I see a mind which has reacted to its physical handicaps by developing such a hellish energy, such an inhuman power of concentration, that it almost frightens me. Give that mind a sound body for its use and nothing is impossible to it."

"You may be right, at that," murmured Viken after a pause. "Not that it matters. The decision is taken, the rockets go down tomorrow. I hope it all works out."

He waited for another while. The whirring of ventilators in his little room seemed unnaturally loud, the colors of a girlie picture on the wall shockingly garish. Then he said, slowly:

"You've been rather close-mouthed yourself, Jan. When do you expect to finish your own esprojector and start making the tests?"

Cornelius looked around. The door stood open to an empty hallway, but he reached out and closed it before he answered with a slight grin: "It's been ready for the past few days. But don't tell anyone."

"How's that?" Viken started. The movement, in low-gee, took him out of his chair and halfway across the table between the men. He shoved himself back and waited.

"I have been making meaningless tinkering motions," said Cornelius, "but what I waited for was a highly emotional moment, a time when I can be sure Anglesey's entire attention will be focused on Joe. This business tomorrow is exactly what I need."

"Why?"

"You see, I have pretty well convinced myself that the trouble in the machine is psychological, not physical. I think that for some reason, buried in his subconscious, Anglesey doesn't want to experience Jupiter. A conflict of that type might well set a psionic amplifier circuit oscillating."

"Hm-m-m." Viken rubbed his chin. "Could be. Lately Ed has been changing more and more. When he first came here, he was peppery enough, and he would at least play an occasional game of poker. Now he's pulled so far into his shell you can't even see him. I never thought of it before, but . . . yes, by God, Jupiter must be having some effect on him."

"Hm-m-m," nodded Cornelius. He did not elaborate: did not, for instance, mention that one altogether uncharacteristic episode when Anglesey had tried to describe what it was like to be a Jovian.

"Of course," said Viken thoughtfully, "the previous men were not affected especially. Nor was Ed at first, while he was still controlling lower-type pseudos. It's only since Joe went down to the surface that he's become so different."

"Yes, yes," said Cornelius hastily. "I've learned that much. But enough shop talk—"

"No. Wait a minute." Viken spoke in a low, hurried tone, looking past him. "For the first time, I'm starting to think clearly about this . . . never really stopped to analyze it before, just accepted a bad situation. There is something peculiar about Joe. It can't very well involve his physical structure, or the environment, because lower forms didn't give this trouble. Could it be the fact that—Joe is the first puppet in all history with a potentially human intelligence?"

"We speculate in a vacuum," said Cornelius. "Tomorrow, maybe, I can tell you. Now I know nothing."

Viken sat up straight. His pale eyes focused on the other man and stayed there, unblinking. "One minute," he said.

"Yes?" Cornelius shifted, half rising. "Quickly, please. It is past my bedtime."

"You know a good deal more than you've admitted," said Viken. "Don't you?"

"What makes you think that?"

"You aren't the most gifted liar in the universe. And then—you argued very strongly for Anglesey's scheme, this sending down the other pseudos. More strongly than a newcomer should."

"I told you, I want his attention focused elsewhere when—"

"Do you want it that badly?" snapped Viken.

Cornelius was still for a minute. Then he sighed and leaned back.

"All right," he said. "I shall have to trust your discretion. I wasn't sure, you see, how any of you old-time station personnel would react. So I didn't want to blabber out my speculations, which may be wrong. The confirmed facts, yes, I will tell them; but I don't wish to attack a man's religion with a mere theory."

Viken scowled. "What the devil do you mean?"

Cornelius puffed hard on his cigar; its tip waxed and waned like a miniature red demon star. "This Jupiter V is more than a research station," he said gently. "It is a way of life, is it not? No one would come here for even one hitch unless the work was important to him. Those who reenlist, they must find something in the work, something which Earth with all her riches cannot offer them. No?"

"Yes," answered Viken. It was almost a whisper. "I didn't think you would understand so well. But what of it?"

"Well, I don't want to tell you, unless I can prove it, that maybe this has all gone for nothing. Maybe you have wasted your lives and a lot of money and will have to pack up and go home."

Viken's long face did not flicker a muscle. It seemed to have congealed. But he said calmly enough: "Why?"

"Consider Joe," said Cornelius. "His brain has as much capacity as any adult human's. It has been recording every sense datum that came to it, from the moment of 'birth'—making a record in itself, in its own cells, not merely in Anglesey's physical memory bank up here. Also, you know, a thought is a sense datum too. And thoughts are not separated into neat little railway tracks; they form a continuous field. Every time Anglesey is in rapport with Joe, and thinks, the thought goes through Joe's synapses as well as his own—and every thought carries its own associations, and every associated memory is recorded. Like if Joe is building a hut, the shape of the logs might remind Anglesey of some geometric figure, which in turn would remind him of the Pythagorean theorem—"

"I get the idea," said Viken in a cautious way. "Given time, Joe's brain will have stored everything that ever was in Ed's."

"Correct. Now a functioning nervous system with an engrammatic pattern of experience—in this case, a *nonhuman* nervous system—isn't that a pretty good definition of a personality?"

"I suppose so—Good Lord!" Viken jumped. "You mean Joe is—taking over?"

"In a way. A subtle, automatic, unconscious way." Cornelius drew a deep breath and plunged into it. "The pseudojovian is so nearly perfect a life form: your biologists engineered into it all the experiences gained from nature's mistakes in designing *us*. At first, Joe was only a remote-controlled biological machine. Then Anglesey and Joe became two facets of a single personality. Then, oh, very slowly, the stronger, healthier body . . . more amplitude to its thoughts . . . do you see? Joe is becoming the dominant side. Like this business of sending down the other pseudos—Anglesey only thinks he has logical reasons for wanting it done. Actually, his 'reasons' are mere rationalizations for the instinctive desires of the Joe-facet.

"Anglesey's subconscious must comprehend the situation, in a dim reactive way; it must feel his human ego gradually being submerged by the steamroller force of

Joe's instincts and Joe's wishes. It tries to defend its own identity, and is swatted down by the superior force of Joe's own nascent subconscious.

"I put it crudely," he finished in an apologetic tone, "but it will account for that oscillation in the K-tubes."

Viken nodded slowly, like an old man. "Yes, I see it," he answered. "The alien environment down there . . . the different brain structure . . . good God! Ed's being swallowed up in Joe! The puppet master is becoming the puppet!" He looked ill.

"Only speculation on my part," said Cornelius. All at once, he felt very tired. It was not pleasant to do this to Viken, whom he liked. "But you see the dilemma, no? If I am right, then any esman will gradually become a Jovian—a monster with two bodies, of which the human body is the unimportant auxiliary one. This means no esman will ever agree to control a pseudo—therefore the end of your project."

He stood up. "I'm sorry, Arne. You made me tell you what I think, and now you will lie awake worrying, and I am quite wrong and you worry for nothing."

"It's all right," mumbled Viken. "Maybe you're not wrong."

"I don't know." Cornelius drifted toward the door. "I am going to try to find some answers tomorrow. Good night."

THE MOON-SHAKING THUNDER of the rockets, crash, crash, leaping from their cradles, was long past. Now the fleet glided on metal wings, with straining secondary ramjets, through the rage of the Jovian sky.

As Cornelius opened the control-room door, he looked at his telltale board. Elsewhere a voice tolled the word to all the stations, *one ship wrecked, two ships wrecked*, but Anglesey would let no sound enter his presence when he wore the helmet. An obliging technician had haywired a panel of fifteen red and fifteen blue lights above Cornelius' esprojector, to keep him informed, too. Ostensibly, of course, they were only there for Anglesey's benefit, though the esman had insisted he wouldn't be looking at them.

Four of the red bulbs were dark and thus four blue ones would not shine for a safe landing. A whirlwind, a thunderbolt, a floating ice meteor, a flock of mantalike birds with flesh as dense and hard as iron—there could be a hundred things which had crumpled four ships and tossed them tattered across the poison forests.

Four ships, hell! Think of four living creatures, with an excellence of brain to rival your own, damned first to years in unconscious night and then, never awakening save for one uncomprehending instant, dashed in bloody splinters against an ice mountain. The wasteful callousness of it was a cold knot in Cornelius' belly. It had to be done, no doubt, if there was to be any thinking life on Jupiter at all; but then let it be done quickly and minimally, he thought, so the next generation could be begotten by love and not by machines!

He closed the door behind him and waited for a breathless moment. Anglesey

was a wheelchair and a coppery curve of helmet, facing the opposite wall. No movement, no awareness whatsoever. Good!

It would be awkward, perhaps ruinous, if Anglesey learned of this most intimate peering. But he needn't, ever. He was blindfolded and ear-plugged by his own concentration.

Nevertheless, the psionist moved his bulky form with care, across the room to the new esprojector. He did not much like his snooper's role; he would not have assumed it at all if he had seen any other hope. But neither did it make him feel especially guilty. If what he suspected was true, then Anglesey was all unawares being twisted into something not human; to spy on him might be to save him.

Gently, Cornelius activated the meters and started his tubes warming up. The oscilloscope built into Anglesey's machine gave him the other man's exact alpha rhythm, his basic biological clock. First you adjusted to that, then you discovered the subtler elements by feel, and when your set was fully in phase you could probe undetected and—

Find out what was wrong. Read Anglesey's tortured subconscious and see what there was on Jupiter that both drew and terrified him.

Five ships wrecked.

But it must be very nearly time for them to land. Maybe only five would be lost in all. Maybe ten would get through. Ten comrades for—Joe?

Cornelius sighed. He looked at the cripple, seated blind and deaf to the human world which had crippled him, and felt a pity and an anger. It wasn't fair, none of it was.

Not even to Joe. Joe wasn't any kind of soul-eating devil. He did not even realize, as yet, that he *was* Joe, that Anglesey was becoming a mere appendage. He hadn't asked to be created, and to withdraw his human counterpart from him would be very likely to destroy him.

Somehow, there were always penalties for everybody, when men exceeded the decent limits.

Cornelius swore at him, voicelessly. Work to do. He sat down and fitted the helmet on his own head. The carrier wave made a faint pulse, inaudible, the trembling of neurones low in his awareness. You couldn't describe it.

Reaching up, he turned to Anglesey's alpha. His own had a somewhat lower frequency. It was necessary to carry the signals through a heterodyning process. Still no reception . . . well, of course, he had to find the exact wave form, timbre was as basic to thought as to music. He adjusted the dials, slowly, with enormous care.

Something flashed through his consciousness, a vision of clouds rolled in a violet-red sky, a wind that galloped across horizonless immensity—he lost it. His fingers shook as he turned back.

The psibeam between Joe and Anglesey broadened. It took Cornelius into the

circuit. He looked through Joe's eyes, he stood on a hill and stared into the sky above the ice mountains, straining for sign of the first rocket; and simultaneously, he was still Jan Cornelius, blurrily seeing the meters, probing about for emotions, symbols, any key to the locked terror in Anglesey's soul.

The terror rose up and struck him in the face.

PSIONIC DETECTION IS not a matter of passive listening in. Much as a radio receiver is necessarily also a weak transmitter, the nervous system in resonance with a source of psionic-spectrum energy is itself emitting. Normally, of course, this effect is unimportant; but when you pass the impulses, either way, through a set of heterodyning and amplifying units, with a high negative feedback—

In the early days, psionic psychotherapy vitiated itself because the amplified thoughts of one man, entering the brain of another, would combine with the latter's own neural cycles according to the ordinary vector laws. The result was that both men felt the new beat frequencies as a nightmarish fluttering of their very thoughts. An analyst, trained into self-control, could ignore it; his patient could not, and reacted violently.

But eventually the basic human wave-timbres were measured, and psionic therapy resumed. The modern esprojector analyzed an incoming signal and shifted its characteristics over to the "listener's" pattern. The *really* different pulses of the transmitting brain, those which could not possibly be mapped onto the pattern of the receiving neurones—as an exponential signal cannot very practicably be mapped onto a sinusoid—those were filtered out.

Thus compensated, the other thought could be apprehended as comfortably as one's own. If the patient were on a psibeam circuit, a skilled operator could tune in without the patient being necessarily aware of it. The operator could neither probe the other man's thoughts or implant thoughts of his own.

Cornelius' plan, an obvious one to any psionist, had depended on this. He would receive from an unwitting Anglesey-Joe. If his theory were right, and the esman's personality was being distorted into that of a monster—his thinking would be too alien to come through the filters. Cornelius would receive spottily or not at all. If his theory was wrong, and Anglesey was still Anglesey, he would receive only a normal human stream-of-consciousness, and could probe for other trouble-making factors.

His brain roared!

What's happening to me?

For a moment, the interference which turned his thoughts to saw-toothed gibberish struck him down with panic. He gulped for breath, there in the Jovian wind, and his dreadful dogs sensed the alienness in him and whined.

Then, recognition, remembrance, and a blaze of anger so great that it left no

room for fear. Joe filled his lungs and shouted it aloud, the hillside boomed with echoes:

"Get out of my mind!"

He felt Cornelius spiral down toward unconsciousness. The overwhelming force of his own mental blow had been too much. He laughed, it was more like a snarl, and eased the pressure.

Above him, between thunderous clouds, winked the first thin descending rocket flare.

Cornelius' mind groped back toward the light. It broke a watery surface, the man's mouth snapped after air, and his hands reached for the dials, to turn his machine off and escape.

"Not so fast, you." Grimly, Joe drove home a command that locked Cornelius' muscles rigid. "I want to know the meaning of this. Hold still and let me look!" He smashed home an impulse which could be rendered, perhaps, as an incandescent question mark. Remembrance exploded in shards through the psionics' forebrain.

"So. That's all there is? You thought I was afraid to come down here and be Joe, and wanted to know why? But I told you I wasn't!"

*I should have believed—*whispered Cornelius.

"Well, get out of the circuit, then." Joe continued growling it vocally. "And don't ever come back in the control room, understand? K-tubes or no, I don't want to see you again. And I may be a cripple, but I can still take you apart cell by cell. Now—sign off—leave me alone. The first ship will be landing in minutes."

You a cripple . . . you, Joe-Anglesey?

"What?" The great gray being on the hill lifted his barbaric head as if to sudden trumpets. "What do you mean?"

Don't you understand? said the weak, dragging thought. You know how the esprojector works. You know I could have probed Anglesey's mind in Anglesey's brain without making enough interference to be noticed. And I could not have probed a wholly non-human mind at all, nor could it have been aware of me. The filters would not have passed such a signal. Yet you felt me in the first fractional second. It can only mean a human mind in a nonhuman brain.

You are not the half-corps on Jupiter V any longer. You're Joe—Joe-Anglesey.

"Well, I'll be damned," said Joe. "You're right."

He turned Anglesey off, kicked Cornelius out of his mind with a single brutal impulse, and ran down the hill to meet the spaceship.

Cornelius woke up minutes afterwards. His skull felt ready to split apart. He groped for the main switch before him, clashed it down, ripped the helmet off his head and threw it clanging on the floor. But it took a little while to gather the strength to do the same for Anglesey. The other man was not able to do anything for himself.

* * *

THEY SAT OUTSIDE sickbay and waited. It was a harshly lit barrenness of metal and plastic, smelling of antiseptics: down near the heart of the satellite, with miles of rock to hide the terrible face of Jupiter.

Only Viken and Cornelius were in that cramped little room. The rest of the station went about its business mechanically, filling in the time till it could learn what had happened. Beyond the door, three biotechnicians, who were also the station's medical staff, fought with death's angel for the thing which had been Edward Anglesey.

"Nine ships got down," said Viken dully. "Two males, seven females. It's enough to start a colony."

"It would be genetically desirable to have more," pointed out Cornelius. He kept his own voice low, in spite of its underlying cheerfulness. There was a certain awesome quality to all this.

"I still don't understand," said Viken.

"Oh; it's clear enough—now. I should have guessed it before, maybe. We had all the facts, it was only that we couldn't make the simple, obvious interpretation of them. No, we had to conjure up Frankenstein's monster."

"Well," Viken's words grated, "we have played Frankenstein, haven't we? Ed is dying in there."

"It depends on how you define death." Cornelius drew hard on his cigar, needing anything that might steady him. His tone grew purposely dry of emotion:

"Look here. Consider the data. Joe, now: a creature with a brain of human capacity, but without a mind—a perfect Lockean *tabula rasa*, for Anglesey's psibeam to write on. We deduced, correctly enough—if very belatedly—that when enough had been written, there would be a personality. But the question was: whose? Because, I suppose, of normal human fear of the unknown, we assumed that any personality in so alien a body had to be monstrous. Therefore it must be hostile to Anglesey, must be swamping him—"

The door opened. Both men jerked to their feet.

The chief surgeon shook his head. "No use. Typical deep-shock traumata, close to terminus now. If we had better facilities, maybe—"

"No," said Cornelius. "You cannot save a man who has decided not to live any more."

"I know." The doctor removed his mask. "I need a cigarette. Who's got one?" His hands shook a little as he accepted it from Viken.

"But how could he—decide—anything?" choked the physicist. "He's been unconscious ever since Jan pulled him away from that . . . that thing."

"It was decided before then," said Cornelius. "As a matter of fact, that hulk in there on the operating table no longer has a mind. I know. I was there." He shuddered a little. A stiff shot of tranquilizer was all that held nightmare away from him. Later he would have to have that memory exorcised.

The doctor took a long drag of smoke, held it in his lungs a moment, and exhaled gustily. "I guess this winds up the project," he said. "We'll never get another esman." "I'll say we won't." Viken's tone sounded rusty. "I'm going to smash that devil's engine myself."

"Hold on a minute," exclaimed Cornelius. "Don't you understand? This isn't the end. It's the beginning!"

"I'd better get back," said the doctor. He stubbed out his cigarette and went through the door. It closed behind him with a deathlike quietness.

"What do you mean?" Viken said it as if erecting a barrier.

"*Won't* you understand?" roared Cornelius. "Joe has all Anglesey's habits, thoughts, memories, prejudices, interests . . . oh, yes, the different body and the different environment, they do cause some changes—but no more than any man might undergo on Earth. If you were suddenly cured of a wasting disease, wouldn't you maybe get a little boisterous and rough? There is nothing abnormal in it. Nor is it abnormal to want to stay healthy—no? Do you see?"

Viken sat down. He spent a while without speaking.

Then, enormously slow and careful: "Do you mean Joe is Ed?"

"Or Ed is Joe. Whatever you like. He calls himself Joe now, I think—as a symbol of freedom—but he is still himself. What is the ego but continuity of existence?"

"He himself did not fully understand this. He only knew—he told me, and I should have believed him—that on Jupiter he was strong and happy. Why did the K-tube oscillate? An hysterical symptom? Anglesey's subconscious was not afraid to stay on Jupiter—it was afraid to come back!"

"And then, today, I listened in. By now, his whole self was focused on Joe. That is, the primary source of libido was Joe's virile body, not Anglesey's sick one. This meant a different pattern of impulses—not too alien to pass the filters, but alien enough to set up interference. So he felt my presence. And he saw the truth, just as I did—

"Do you know the last emotion I felt, as Joe threw me out of his mind? Not anger anymore. He plays rough, him, but all he had room to feel was joy.

"I *knew* how strong a personality Anglesey has! Whatever made me think an overgrown child-brain like Joe's could override it? In there, the doctors—bah! They're trying to salvage a hulk which has been shed because it is useless!"

Cornelius stopped. His throat was quite raw from talking. He paced the floor, rolled cigar smoke around his mouth but did not draw it any farther in.

When a few minutes had passed, Viken said cautiously: "All right. You should know—as you said, you were there. But what do we do now? How do we get in touch with Ed? Will he even be interested in contacting us?"

"Oh, yes, of course," said Cornelius. "He is still himself, remember. Now that he

has none of the cripple's frustrations, he should be more amiable. When the novelty of his new friends wears off, he will want someone who can talk to him as an equal."

"And precisely who will operate another pseudo?" asked Viken sarcastically. "I'm quite happy with this skinny frame of mine, thank you!"

"Was Anglesey the only hopeless cripple on Earth?" asked Cornelius quietly. Viken gaped at him.

"And there are aging men, too," went on the psionist, half to himself. "Someday, my friend, when you and I feel the years close in, and so much we would like to learn—maybe we, too, would enjoy an extra lifetime in a Jovian body." He nodded at his cigar. "A hard, lusty, stormy kind of life, granted—dangerous, brawling, violent—but life as no human, perhaps, has lived it since the days of Elizabeth the First. Oh, yes, there will be small trouble finding Jovians."

He turned his head as the surgeon came out again.

"Well!" croaked Viken.

The doctor sat down. "It's finished," he said.

They waited for a moment, awkwardly.

"Odd," said the doctor. He groped after a cigarette he didn't have. Silently, Viken offered him one. "Odd. I've seen these cases before. People who simply resign from life. This is the first one I ever saw that went out smiling—smiling all the time."