



NEW WORLDS 3/6
and sf impulse

DAUGHTERS OF EARTH

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complete
in this issue
JUDITH MERRIL

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NEW WORLDS

SF

Volume 50

Number 172

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SKETCH FOR TWO PART INVENTION



THESE COMMENTS ARE from discussions on science fiction I have listened to this year:

"Science fiction is the only heroic fiction left. Mainstream fiction today is onanistic and defeatist. It posits that man cannot change. Science fiction posits that man can change."

"Mainstream fiction is like looking at a mirror. Science fiction is like looking through a door."

"Science fiction has liberated the content of fiction the way Proust and Joyce liberated language."

These statements contain much truth. The reader who has always examined science fiction intelligently can go directly to it; but the reader who does not already take science fiction seriously is bewildered, finds such statements pretentious. Writers, editors, and readers have recently been demanding a critical vocabulary for science/speculative fiction that would bring it the dignity accorded mainstream work. Yet no one has been able to define the relation between the fields of writing which will yield this vocabulary.

A symphonic composer has the variation in timbres, dynamics, and colour of the full orchestra. A composer of string quartets works only with two violins, a viola and 'cello. In amount and variation of sound, the string quartet is the more limited form. But the classical string quartet, like the symphony, is in four movements, lasts twenty to thirty minutes, and follows the symphony closely in structure. No musician could suggest that the quartet is a

less valid form, can not stand up to the same analysis, or is less abundant in musical and emotional material.

From the days of WEIRD TALES, people have realized that there was too much in science fiction to dismiss with "A fast-paced adventure story set in the near/far future." What in the last twenty years has demanded this finer criticism? There are the stories and novels of Bester and Sturgeon, with such polished surfaces and bravura effects that our first reaction is: why analyse them at all? They seem perfect. Later we discover the light from these tales is more than reflection from an effect carried off. It is internal, it lingers; we look back, look back again.

More recently there are the creations of Cordwainer Smith and J. G. Ballard. Often one finishes their books and stories moved or dazzled, but wondering what the intended effect is. We look back here: sometimes we find the technique is faulty. Sometimes we find the effect is ill-conceived. More often both the effect and the methods to gain it lie where no writer in any field has touched before. We, the readers, must learn.

Today there are writers like Disch and Zelazny. In whatever landscape they construct, they are concerned, respectively, with *evil* and *beauty*. Disch bludgeons the reader again and again with near-comic understated violences. Zelazny dazzles with a dozen voices that harmonize within the same work, paragraph, sentence. Both set their subjects ringing with overtones that define new octaves.

Yet very few people will write of these authors' structure, verbal texture, technical and thematic development. Is it embarrassing to deal so analytically with such a limited form?

String quartets began as light music. They were played while people ate, talked, wandered around the room, did everything but listen. They were turned out rapidly, and in huge amounts, but they provided a living for a competent musician. During this time most of the conventions developed that have stayed till today.

The ornamentation conventions (transportation, from

rockets to matter transmission; communication, from video phones to telepathy; psycho/physiological, from mutant to alien; socio/economic, from the totally invented word to the casual solar credit; and the miscellaneous time-machine, after-the-bomb, or wonderful-gadget story) as well as the more important convention, the attitude the science fiction writer takes to his material can be artistically productive and lead writer and reader to harmonies unplayable by other instruments, with sympathetic vibrations among the situations of everyday life that makes art meaningful. This attitude has nothing to do with "writing down" to the reader. It has to do with maintaining the clearest, most direct line between idea and dramatisation. The science fiction writer must use all he knows to be vivid, and concise; evocative when description must colour a story, moving when the heart must make the point, precise with technical examples: but the science fiction writer must use this to construct *one* effect, one idea at a time. Several effects may harmonize to produce a story, many to produce a novel. But in the best science fiction each is developed in turn, linearly. The technical conventions, used properly, must facilitate this linear development.

"Dismiss the rocketships!" say many of the people seriously concerned with science fiction. But a rocket ship is a short hand way of saying, "This character is travelling between two worlds which, in the cultural spectrum we know, cannot be bridged by bus, boat or plane." Roughly this is what all the transportation conventions signify. What will make the story significant is what the writer tells us about these cultural locations and the people who can move between them; what makes the story a good story is how clearly he tells us. The description of the rocket itself may inform us about the world that produced it and the world where it will arrive. It may even tell us about the people aboard. But only as it tells us about worlds and men is it important. As it facilitates telling us, it is useful. There is a frenzy among concerned critics to make science fiction resemble mainstream as much as possible in its conventions or lack of them. But this is to blur the excellences that made it a separate form. We must analyse what is there; then, demand changes.

The analytical method to the significance of any artistic statement is the same whether the statement is musical, graphic or literary. It is a dissection of form, a consideration of balance. The elements must be isolated. Then the pattern in which they combine must be defined. The vocabulary comes from the exigencies of the medium in which the statement is made.

The quartet and the symphony belong to the same medium. The vocabulary to discuss them, not surprisingly, is the same. But the composer, to write (and the critic to discuss) the quartet, must accept the limitations of the form and work skilfully within them. We have said the quartet is more limited than the symphony: the symphony can always turn off the majority of the orchestra and let a small concertante of instruments do the delicate things a quartet can do, for a few notes or a whole section. But a quartet composer cannot end a movement with three crashing chords. When even so notable a composer as Brahms attempts to do so, it sounds silly and pretentious.

The limits of science fiction are not emotional ones. They do not, themselves, restrict the humanity of any character or situations. Several critics have used the special term "The Wonderful Invention", trying to separate science fiction from mainstream. It is a useful one. But it leads people ill-disposed to the field to assume that science fiction is about "things" instead of "people". Now, to dismiss a story that takes place in a rocket *per se* because it must be about rocketships *instead* of people is as silly as dismissing a novel of Melville or Conrad because it takes place in a *boat*, and therefore it must be *about* boats.

Mainstream and science fiction both belong to the medium of fictional prose. The critical vocabulary of all fiction involves, characters, setting, style, psychological veracity, emotional and sensory immediacy. The critic amateur or professional, who blames science fiction for not being mainstream will miss the beauty of linear development that the more limited work can display.

Today the string quartet, and chamber piece in general,
continued on page 76

daughters of earth



judith merril

ONE

MARTHA BEGAT JOAN, and Joan begat Ariadne. Ariadne lived and died at home on Pluto, but her daughter, Emma, took the long trip out to a distant planet of an alien sun.

Emma begat Leah, and Leah begat Carla, who was the first to make her bridal voyage through sub-space, a long journey faster than the speed of light itself.

Six women in direct descent—some brave, some beautiful, some brilliant: smug or simple, wilful or compliant, all different, all daughters of Earth, though half of them never set foot on the Old Planet.

This story could have started anywhere. It began with unspoken prayer, before there were words, when an unnamed man and woman looked upward to a point of distant light, and wondered. Started again with a pointing pyramid; once more with the naming of a constellation; and once again with the casting of a horoscope.

One of its beginnings was in the squalid centuries of churchly darkness, when Brahe and Bruno, Kepler, Copernicus, and Galileo ripped off the veils of godly ignorance so men could see the stars again. Then in another age of madness, a scant two centuries ago, it began with the pioneer cranks, Goddard and Tsiolkovsky, and the compulsive evangelism of Ley and Gernsback and Clarke. It is beginning again now, here on Uller. But in this narrative, it starts with Martha:

Martha was born on Earth, in the worst of the black decades of the 20th century, in the year 1941. She lived out her time, and died of miserable old age at less than eighty years at home on Earth. Once in her life, she went to the Moon.

She had two children. Her son, Richard, was a good and dutiful young man, a loving son, and a sober husband when he married. He watched his mother age and weaken with worry and fear after the Pluto expedition left, and could never bring himself to hurt her again as his sister had done.

Joan was the one who got away.

TWO

*... centure easegone manlookttuthe stahzanprade eeee
maythem hizgozzenn izz gahahdenno thawthen izzgole ...*

"It's—beautiful!"

Martha nodded automatically, but she heard the catch in the boy's voice, the sudden sharp inhalation of awe and envy, and she shivered and reached for his hand.

Beautiful, yes: beautiful, brazen, deadly, and triumphant. Martha stared at the wickedly gleaming flanks of the great rocket resting majestically on its bed of steel, and hated it with all the stored and unspent venom of her life.

She had not planned to come. She had produced a headache, claimed illness, ignored the amused understanding in her husband's eyes.

Even more, she dreaded having Richard go. But his father voiced one rarely-used impatient word, and she knew there was no arguing about the boy.

In the end she had to do it too: go and be witness at disaster for herself. The three of them took their places in the Moon rocket—suddenly safe-seeming and familiar—and now they stood together in the shadow of that rocket's monstrous spawn, under the clear plastic skin of Moondome.

*... rodwee havetrav uldsoslo lee beyewere eeyanway
stfulmene zzz ...*

The silvery span of runway that would send it off *today* stretched out of sight up the crater wall, the diminishing curve beyond the bloated belly already lost in the distance, it was made to rule. Cameras ground steadily; TV commentators, perched on platforms stilted high like life-guard chairs, filled in a chattering counterpoint against the drone from the loudspeakers of the well-worn words that had launched the first Moondome expedition, how long back?

Sixteen years? Impossible. Much longer. How many children had painfully memorized those tired words since? But here was George, listening as though he'd never heard a word of it before, and Richard between them, his face shimmering with reflections of some private glory, and the adolescent fervour of his voice—"It's *beautiful!*"

—drawing a baritone-to-tremolo screech across the hypnosoporific of the loudspeakers' drone.

She shivered. "Yes, dear, it is," and took his hand, held it too tightly and had to feel him pull away. A camera pointed at them and she tried to fix her face to look the way the commentator would be saying all these mothers here today were feeling.

She looked for the first time at the woman next to her and caught an echo of her own effort at transformation. All around her, she saw with gratitude and dismay, were the faint strained lines at lips and eyes, the same tensed fingers grasping for a hand, or just at air.

Back on Earth, perhaps, among the millions crowded around TV sets, there could be honest pride and pleasure at this spectacle. But here—?

The cameras stopped roaming, and a man stood up on the raised central dais.

"The President of United Earth," the speakers boomed sepulchraly.

An instant's hush, then:

"Today we are sending forth two hundred of our sons and daughters to the last outpost of the solar world—the far room from which we hope they may open an exit to the vistas of space itself. Before they go, it is proper that we pause . . ."

She stopped listening. The words were different, but it was still the same. No doubt the children would have to memorize this one too.

Did they feel this way?

It was a frightening, and then a cooling thought. There was no other way they could have felt, the other mothers who watched that first Moondome rocket leaving Earth. ". . . for their children's children, who will reach to the unknown stars." Silence. That was the end, then.

The silence was broken by the rolling syllables of the two hundred names, as each straight neat white uniform went up to take the hand of the President, and complete the ritual. Then it was over and Joan was standing before her: her daughter, a stranger behind a mask of glory. Seven months ago—seven short and stormy months—a schoolgirl still. Now—what did the President say?—an "emissary to the farthest new frontiers."

Martha reached out a hand, but George was before her, folding the slender girl in a wide embrace, laughing proudly into her eyes, chucking her inanely under the chin. Then Richard, still too young not to spurn sentimentality, shaking Joan's hand, suffering her kiss on his forehead, saying thickly: "You show 'em, sis!"

It was her turn now. Martha leaned forward, coolly kissed the smiling face above the white jacket, and felt the untamed tears press up behind her eyes.

"Joan," she cried wildly. "Joan, baby, aren't you afraid?"

What a *stupid* thing to say! She wiped hastily at her eyes, and saw that the shine in Joan's eyes was moisture, too.

Joan took her mother's hands and held them tight.

"I'm petrified," she said, slowly, gravely, and very low. No one else heard it. Then she turned with her brave smile to Alex, standing at her side.

"Pluto or bust!" she giggled.

Martha kissed Alex, and George shook his hand. Then the two of them went off, in their white uniforms, to join the other couples, all in line.

Martha felt proud.

(Parenthesis to Carla: i)

Josetown, Uller, 3/9/52

Dear Carla . . .

Forgive me my somewhat dramatic opening. Both the sections that preceded this were written years ago, at rather widely separated times and of course the one about Martha's farewell to Joan involved a good bit of imaginative assumption—though less of it than you may think at this point.

Frankly, I hesitated for some time before I decided it was proper to include such bits in what is primarily intended to be an informational account. But information is not to be confused with statistics, and when I found myself uncertain, later, whether it was all right to include these explanatory asides, I made up my mind that if I were to write the story at all, it would have to be done my

own way, with whatever idiosyncratic eccentricities, or god-like presumptions of comprehension might be involved.

As you already know if you are reading this, I am putting this together for you as a sort of goodbye present for your trip. There is little you will be able to take with you, and when you leave, there will be no way to foresee the likelihood of our ever meeting again: even if your trip is entirely successful and you return from it safely, we both know how uncertain the time-transformation equations are. You may be back, twenty years older, five minutes after you leave; more probably, it may be many years after my own death that you return—perhaps only a year or two older than you are now.

But however we learn to juggle our bodies through space *or* time, we live our lives on a subjective time scale. Thus, though I was born in 2026, and the *Newhope* landed on Uller in 2091, *I* was then, roughly, 27 years old—including two subjective years, overall, for the trip. And although the sixty-one years I have lived here would be counted as closer to sixty-seven on Earth, or on Pluto, I think that the body—and I *know* that the mind—pays more attention to the rhythm of planetary seasons, the alternations of heat and cold and radiation intensities, than to the ticking of some cosmic metronome counting off whatever Absolute Time might be. So I call myself 88 years old—and I digress, but not as far as it may seem.

I said, for instance, that Martha died “of miserable old age” at less than eighty, and this would seem to contradict my talk of seasons-and-subjectivity here. I am not exactly senile, and can look forward to another forty years, in all likelihood, of moderately useful life. We do learn something as we go along: a hundred years before Martha’s time (indeed, even at her time, on some parts of Earth) few people lived to see sixty. (You, at twenty-eight, would have been entering middle-age). Yet the essential *rhythms* of their lives were remarkably similar to our own. The advances of biophysics have enlarged our scope: we have more time for learning and living both; but we have correspondingly more to learn and live. We still progress through adolescence and education (which once ended at 14, then 18, 21, 25 . . .) to youth, marriage, procreation, maturity, middle age, senescence, and death.

And in a similar way, I think, there are certain rhythms of human history which recur in (widening, perhaps enriched, but increasingly discernible) moderately predictable patterns of motion and emotion both.

A recognition of this sort of rhythm is implicit, I think, in the joke that would not go away, which finally made the official name of the—ship?—in which you will depart *The Ark* (for *Archaic*?). In any case, this story is, on its most basic levels, an exposition of such rhythms: among them is the curious business of the generations, and their alternations: at least it was that thought (or rationale) that finally permitted me to indulge myself with my dramatic opening.

On an equally important, though more superficial, level, my purpose in putting this together is to provide you with—this is embarrassing—a “heritage”. I had something of this sort from Joan Thurman, and found it valuable; whether this will be equally so for you, I do not know. I do know I have only two months left in which to put this together and that is little enough for an inexperienced story-teller like myself. (And glory-be! there *is* something I am inexperienced at. Many things, actually—but the writing of this is the first reminder I have had in a while. It feels *good* to be doing something new and difficult).

My parenthesis seems to be full of parentheses. Well, I never was what you’d call a straight-line thinker: the side-trails are often more productive, anyhow . . .

And there I go again. What I set out to tell you here, Carla, is that this story was lived over many years, and written over a shorter period, but still a long one. There are the odd bits (like the one about Martha preceding this) which I did a long time ago, as a sort of “therapy-writing” and kept, till now, to myself. Other parts, like what follows here, are adapted from Joan Thurman’s papers. Some parts are new. And then there is this matter of rhythms again—

Some things in life remain vivid in minute detail till the day you die; others are of interest only as background. Some things are very personal and immediate, no matter how remote in time; others seem almost to be happening to another person, even as they occur. Thus, you will find this narrative full of sudden changes of

pace and style. I find, for instance, that it is almost impossible in some sections to write about myself as "Emma" in the third person; and other places equally difficult to say "I" and "me", but I do not think you will have too much trouble following.

THREE

I WAS BORN ON Pluto, in the Earth-year 2026, and I grew up there. I was twenty-two years old when we boarded the *Newhope* to come to Uller. But that was such a long time ago, and so much has happened since, that the words themselves have lost all personal meaning to me. They are statistics. I am Emma Tarbell now, and have been for many years. My home is on Uller. A little girl named Emma Malook grew up on Pluto. Her mother's name was Ariadne, and her father's name was Bob. Her grandmother, Joan Thurman, was a famous pioneer, one of the first-ship colonists.

In the normal course of events, Joan would have taken her degree that spring, and gone to work as a biophysicist until she found a husband. The prospect appalled her. Nineteen months earlier she'd started the accelerated studies, without mentioning it at home; her mother thought she was busy with the usual run of extra-curricular self-expression at school. She'd had a year of avid learning before she passed the prelims, and was ready for advanced special training. That meant a different school, and the beginning of the psych conferences and background inquiries. She had to tell her family then.

The school was too near home for her to live in the already crowded dorms. She had to stick it out at home for six months of battle and persuasion, sleepless nights and stormy mornings. And all the time studying to be done.

She wasn't the only one. Even the dorm residents got it; letters and telegrams and phone calls, and frantic unannounced visitations. Two thousand of them entered final training together; less than seven hundred lasted the full

six months, and most of those who left did so of their own accord.

Joan stuck it out, and she met Alex, and added to her fears and doubts: if one of them was chosen, and not the other . . . ?

Cautiously, they held back from commitments till the end. And then, in spite of any heaven or earth Martha could move, the decision was made. Joan had her one last month on Earth of joy and triumph: graduation, marriage, four weeks of honeymoon and fame; the planning, the packing, the round of farewells.

Now with her hand in Alex's, she followed the others, all in their gleaming white uniforms, up the ramp to the airlock, and into the third of a waiting line of moon-buggies. Ten buggies, ten passengers to each, two trips apiece, and the gaping hole in the side of the giant rocket had swallowed them all.

The rocket was not really large, not from the inside. So much fuel, so much freight, so many passengers; the proportions were flexible only within narrow limits. Each couple passed through the airlock hand in hand, and edged along the corridor, crabwise, to their own cubicle.

Inside, they stripped off the white showy uniforms, folded them neatly, and piled them in the doorway for collection. Stripped to the skin, they checked their equipment for the last time, and settled themselves side by side, in the grooves and contours carefully moulded to their bodies.

In perfect drilled co-ordination, almost ritualistically, they closed down the compartmented upper sections, starting at the feet, and leaned across each other to latch the complex fastenings. When they were enclosed up to the armpits, they laid their heads into the fitted hollows, facing each other at one-quarter-view, and strapped down the forehead bands and chin pads. Alex pushed the button that brought down the glassine air-dome over their upper bodies, and both of them set to work testing the supplier tubes and nozzles inside, making certain for one last extra time, that everything reached as far as it should. Then, in perfect unison, as if this too were part of the ritual they had learned, each one extended a hand for a last touch; grasped and held tight, and let loose in haste.

Someone came down the hall—they could still see through the open doorway—collecting the uniforms to be dumped before take-off.

They wriggled their arms down into the cushioned spaces along their sides; later, the arms could be freed again, to manipulate the supplier tubes, but during acceleration, every part of the body was enwombed, protected from shock and pressure, cold and heat, nauseous fear and killing radiations.

A gong went off inside the head-dome; that meant they were sealed in now. The loudspeaker began to tick off seconds. Frantically, foolishly, Joan tried to move her hips, suddenly certain that a necessary opening in the nest had been misplaced. She never remembered to feel glorious. There was a rending blast of soundless vibration, and a pushing, squeezing pain within the flesh, and brief relief about the placing of the opening, before the blackout came.

FOUR

PLUTO, PLANET OF MYSTERY

“... frozen dark wastes, forever uninhabitable to man? Or will our pioneering sons and daughters find a new world to live upon? No one can foretell what they will find. Our best astronomers are in dispute. Our largest and most piercing telescopes give us daily—or nightly—new information, which only contradicts the hypotheses of the night before . . .

“We literally do not know, even today—and it is now three quarters of a century since Clyde Tombaugh confirmed the existence of the planet—what the size, the mass, or the true temperature of Pluto are . . . whether it has a frozen atmosphere or none . . . what composes its dark surface . . . or whether it is a native of our solar system at all!”

The newspapers and broadcasters of the time speculated loudly on the likelihood that the bright remote planet was a visitor from the stars, a wandering planet caught at the very fringe of the sun's gravitation, or even a watchful outpost of some alien race, a conscious visitant, swing-

ing in distant orbit around this star against the day when men propelled themselves beyond the boundaries of their own system.

They even mentioned, but less often, the great likelihood that the confusing data on the planet merely meant it was composed entirely of very heavy metals. Uranium, for instance . . .

But for the far-sighted, for the world planners, the politicians and promoters who had made the trip possible, the near-certainty of heavy metals was second only to one other goal: a starship.

The basic design of the *Newhope* was even then under government lock and key, a full forty years before the first step was taken in its construction. The fuel was in development. Astronomers, sociologists, metallurgists, psychologists, thousands of technicians and researchers on Earth and Mars and the Moon were tackling the thousand and one problems of development. And the entire line of work hinged on one combination: there had to be a source of heavy metals near the building site: and the building site had to be at the outer edges of the System.

But Pluto was on the way *out*: a step to the stars.

They lived in the rocket at first; it was specially designed for that. The fuel tanks had been built for conversion to living quarters, because nobody knew for sure when they set out whether they'd ever be able to live on the surface. So they swung the ship into a steady orbit around the planet, and got to work on conversion. The designs were good; it was only a short time before the living quarters were set up, and they could turn their attention to their new world.

What they found is by now so obvious and so familiar it is hard to conceive of the excitement of the discovery to *them*. But the simple discoveries of that first month could never have been made from Earth, or from Mars. For years, astronomers had puzzled over the discrepancy between Pluto's reflective powers and its otherwise extrapolated size and mass. There had never been a valid planetary theory to account for its unique inclination to the ecliptic or the eccentricities of its orbit. Two years of observation by the Ganymede Expedition had added

barely enough to what was already known to weigh the balance in favour the completion of Project Pluto.

But from the vantage point of an orbit around the planet itself, the facts became self-evident. A whole new theory of planetary formation came into being almost overnight—and with it the final justification for the construction of the *Newhope*. There was no longer any doubt that other planetary systems existed; and in a surprisingly short time, the techniques for determining the nature of such planets were worked out as well.

Three months after arrival, the Pluto colonists began ferrying down the material for construction of a dome. Altogether, they lived in the rocket for thirteen Earth-months, before their surface settlement was habitable. But long before that, every one of them had at one time or another been down to the planet, and mining operations had begun.

Message rockets carried the progress reports back to Earth, and financial gears shifted everywhere. The government of the world poured all its power into the energizing of space-travel industries. A new ship was built in a tenth the time the first had taken, and a crew of three piloted urgently-needed supplies to the colonists.

Still, it was a one-way trip. Still, and for years to come, the supply rockets were designed for dismantling on arrival. Every part of a rocket-ship, after all, has an equivalent use on the ground; by building the ships themselves out of needed materials, the effective cargo space could be quadrupled.

From the beginning, every plan was made with one objective in view: the starhop. Nobody knew at first where the ship would go; no one understood *why* it had to go. But go it must, and Pluto was a waystation.

Joan Thurman died young; she was barely sixty-seven when the accumulated strains of the early Pluto years wore her out: at that, she outlasted all but three of her fellow-passengers on that first Pluto rocket; and she outlived her husband, Alex, by 28 years.

Alex Thurman died in '06 in the Dome Collapse at what was to have been Threetown. Joan had been working before that on the theory for open-air cities; but it was

after the crash that she turned her whole being to a concentrated effort. The result was TAP: the Thurman Atmosphere Process. Or that was *one* of the results.

When Alex died, Joan had three small children: Ariadne was ten years old, one of the very first Pluto babies; just exactly old enough to be able to take on most of the care of Thomas and John who were four and three respectively.

Adne was born into pioneer hardship and pioneer cheerfulness. Then, at the age of ten, the cheerfulness abruptly departed. Her father's seemingly indestructible strength betrayed her; her mother's watchful care was turned elsewhere. From the premature beginnings of her adolescence through its duration, she was effectively mother and housekeeper and wielder of authority to two growing vigorous boys.

When she was nineteen the first "passenger ships" were established between Pluto and Earth—round-trip transports—and a new kind of colonist began to arrive. The Malooks, who landed in '17, were typical and Robert, their son-and-heir, was Ariadne's romantic ideal. When she was twenty they were married, despite everything that was done in either family to avert the expected disaster. For her, it was paradise . . . for a while. She read Bob's Earth-microfilms, and learned to imitate his Earth-accent. She never had to do a day's hard work from that time on, and still she had the handling of a charming irresponsible boy-child—as well as his money—until he grew up.

Bob was a year younger, you see . . . and till he did grow up, he loved having Adne's sweetly feminine domination exerted on his behalf. She showed him how to spend his money, how to live comfortably under dome conditions, how to adapt his Earth-education to Pluto's circumstances.

The disaster Joan and the Malooks had anticipated did not occur. Adne and Bob simply drifted apart, eventually after a few assertive acts on his part and several unpleasant quarrels. My birth may have precipitated things somewhat: they had managed well enough for ten years before colonial social pressures pushed Ariadne into pregnancy. Perhaps, once I was born, she found an infant daughter more interesting than a full-grown son. I don't know. I knew surprisingly little about either of them at

the time ; it is only in retrospect—in parallel perhaps I should say—that I understand Ariadne at all. (If there had been any relatives on hand when Leah was growing up, I expect they'd have said she "took after" her grandmother).

As for Bob, I hardly knew him at all until after they separated, when I was five or six ; after that, he took me out on holidays and excursions, and he was beyond a doubt the most charming, exciting, fascinating man who ever lived—until I got old enough to be awkward for him. I never knew for sure, but I think he was some sort of professional gambler, or high-class con man, later on.

One way and another, I can see why Joe Prell looked good to Ariadne after Bob. I was nine, then.

FIVE

JOE PRELL was a brash newcomer, as social standing went on Pluto: a passenger, not a pioneer. But he was energetic and smart. Two years after he landed, he and Ariadne were married.

It made very little difference to Em at first. If anything she was happier after the divorce, because when she saw Bob, she had him all to herself. Anyhow, Joan was still alive then ; her death, a year later, was a more serious matter.

By that time, though, Emma had begun to find a life of her own. She already knew that she wanted to be a doctor. She had learned chemistry and biology from her grandmother as easily and inevitably as she'd learned to eat with a spoon or later, to do a picture puzzle. She was still too young to start specializing in school, but she had Joan's library to work with. Joan's personal effects came to Emma, too, but the box of papers and letter-tapes didn't begin to interest her till much later. She spent most of her time, the next few years, bent over a micro-reader unrolling reel after reel of fascinating fact and speculation, absorbing all of it, and understanding little ; just letting it accumulate in her mind for later use.

Adne disapproved. She thought Emma should play more, and spend more time with other children. But Adne

was too busy to disapprove very forcibly. Joe Prell was not a tyrannical man; he was a demanding one. And somewhere in there the twins came along: two baby sisters called Teenie and Tess. Emma was briefly interested in the phenomena of birth and baby-care, but her "cold-blooded" and "unnatural" experimental attitudes succeeded in horrifying Ariadne so thoroughly that she returned without much regret, and no further restraint, to the library.

By that time, too, Pluto was becoming a pleasant place to live. The first open-air city, built on the TAP principles, was completed when Emma was fourteen. Of course, only the richest people could afford it. The Prells could. Joe was a man who knew how to make the most out of a growing planet.

His financial operations were typical of his personality: he had a finger in real estate, and a finger in transport, but of course the big thing on Pluto was mining, and he had the other eight fingers firmly clamped into that.

Until they started building the *Newhope*. Or really, when they started talking seriously about it. Prell wised up fast. He let the real estate go and cut down on mining, and wound up with Pluto Transport neatly tied up in a bundle just right for his left hand. From that time on, Prell's right hand sold his left everything that was needed to build the starship Prell was publicly promoting.

It was a really big deal to him. To Emma it was a dream, a goal, the meaning of everything. Joe didn't understand any part of the significance of that ship . . . but with his uncanny feel for such things, he was right in the middle of all the important projects. He was in on the actual construction job; he knew about the new designs, and the fuel specs . . . knew at least as much as Emma did, or most of the others actually in the expedition. But he and Emma had very different notions of what that fuel meant, and they argued about it right up to the last minute.

Or, rather, she argued. Joe Prell never argued with anybody. If he couldn't find a basis for agreement, he just turned the discussion into a joke.

Nothing could have been better calculated to infuri-

ate Emma. She was twenty-four then, and very intense. Life was exciting, but more than that, life was terribly *important*. (As indeed it is, Carla; though I think you now see—or feel—the importance more clearly than I). Prell wouldn't—couldn't—understand that; he never understood why anyone was willing to make the trip at all . . . to take a dangerous voyage to a distant unknown star!

Oh, he *could* see part of it: the challenge, the adventure. These are common enough stimuli, and the response to them not so different in nature from his own kind of adventurousness. It wasn't just wealth and power Joe was after; it was the getting of them, and he played the game as an artist. Patiently, over and over again (quite clearly feeling his responsibility *in loco*) he explained to Emma, and later to Ken, how little chance there was that the ship would ever reach Uller . . . how the voyagers were almost certainly doomed from the start . . . and how many other ways there were for restless, bright young people to satisfy their craving for excitement.

Emma sputtered and stammered trying to make him understand, but she succeeded only in making herself ludicrous. Actually, she didn't believe any more than he did that the ship had much chance of getting here. There were so *many* hazards, so many unknown factors; it was almost certain that somewhere in the plans some vital defence, some basic need, had been overlooked.

But the Project itself was important, whatever happened to those who were engaged in it. Just *building* the star-ship was what mattered: new problems to conquer, new knowledge to gain, new skills to acquire. And beyond that, the dream itself: "Centuries gone, man looked to the stars and prayed . . . He made them his gods, then his garden of thought, then his goals . . ."

Emma quoted the speech of a long-dead man, and thought Joe Prell would understand. She even brought him, hesitantly, Joan Thurman's diary to read; that, if anything, should have made him understand.

Prell was amazed, but unconvinced. He expressed at some length, and with considerable wit, his astonishment that the girl who wrote that diary could later have done

the painstaking practical work that developed TAP. He couldn't see that all of it was part of the same dream.

He listened a little more respectfully when Ken tried to explain. Curiously enough, the two men got along. Prell liked Tarbell, and Ken at least could understand the other men. (I think, too, Joe was much impressed by Ken's audacity in marrying me; it had been firmly concluded at home some time before that I was doomed to single bliss. Too direct, too determined, too intellectual, too *strong*; no man would feel up to it, said Ariadne, and her husband agreed. Ken spoke more calmly than Emma had, with fewer words, and much less argument, but what he said amounted to the same thing, and Joe Prell couldn't see it. He was too busy making money.

And he made it. He made enough, among other things, to fulfil Ariadne's greatest dream: before she died, she had her trip to Earth; she saw the sights and institutions and museums, made all the tourist stops, brought home souvenirs enough to keep her content for her remaining years.

But before that, she saw her daughter Emma off for Uller.

Ariadne was present when the tender took off from Pluto Port to deliver the lambs to the slaughter, carry them off to the starship that had hovered for months like a giant moon around the planet.

"It's . . . beautiful," someone standing beside her said, looking up, and Ariadne nodded automatically. It *was* beautiful; the most beautiful, most dangerous, most triumphant enemy she'd ever known, and she hated it with all the stored-up passion of her life.

"Emma!" she cried involuntarily in her farewell, "Emmy, aren't you *afraid*?"

I tried to look at her, to let her look *into* me, but there was an unexpected veil of moisture on my eyes.

"I'm scared stiff," I said, and it was true, and then I smiled to let her know it didn't matter.

Then Ken had come up from somewhere, and was right beside me. He hadn't heard; at least I hoped he hadn't. I flashed the same smile up at him, and looked away quickly, blinking the tear-mist out of my eyes, and trying to send

a wordless warning to my mother. If she said anything now . . .

She didn't have a chance. .

"Come on, kid," Ken said. "They're waiting." He took my hand in one of his while he was still shaking hands with Joe Prell, and I blew a last kiss each to Tess and Teenie; then we turned and ran to the tender. I can remember being very conscious of our importance at the moment, how we must look to all the people there: two tall slim citizens of the universe, shining symbols of glamour and excitement.

Then we were in the tender, the whole bunch of us on our way up to the giant ship. All the familiar faces looked just a bit more formal and self-conscious than usual, in spite of being jammed into the inadequate space, and doubled up on the seats.

Somewhere in a corner, a group started singing, but no one else took it up, and it faded out. There wasn't much talk. We just sat there two by two . . . men and women, boys and girls really—and tried to visualize what lay ahead.

Somewhere out there, beyond the spatial comprehension of a system-bound being, was a star. They called it Beta Hydri; and a group of strange men in a learned university said it had a planet. They called the planet Uller, and credited it with mass and gravity and atmosphere tolerable to humans.

They could be wrong, of course. In thirty years of star-searching from the Pluto Observatory, it was the only one so credited. The professors weren't sure, but . . .

But someone had to go find out, and we were lucky. Out of the thousands upon thousands who applied for the privilege, we had been chosen. And even before we knew we were both to go, we'd found and chosen each other. We weren't cautious and careful the way Joan and Alex had been . . . the way most of the others in training were. The first time we met, we knew how it *had* to be for us. And though we worried, sometimes, that one of us would be picked, and the other left behind, it never seemed very likely; it just wouldn't *happen* that way.

But now we had chosen and been chosen in turn, and we had come to the end of the choosing.

When we left the tender, we knew what to do. We'd all done it dozens of times before in practice drill. We filed behind the couple in front to the ice trays, and took our places, lying down. We got our shots. When the crane lowered us into the hold, we still had our hands firmly intertwined. I know I shivered once, and thought I felt a tremor in Ken's hand and . . .

SIX

AND WOKE UP slowly, still shivering, tingling in her toes and fingertips and nose and ears, as her body warmed. Her hand was still in Ken's, and he was grinning at her.

"We made it, kid."

"So far," she said.

Somebody handed her a bowl of soup. That seemed outlandish, for some reason, and then she realized why. They weren't back on Pluto now; they were in space . . . far out . . . how far? Her hand shook, and the spoon with it, spilling hot soup on her leg, and there was no reason after all why they shouldn't have soup on a spaceship. *How far?*

She managed to get a spoonful to her mouth, and became curious. Somebody had given it to her; who? She looked up.

Thad Levine was leaning over her, slipping a tray under the bowl for balance. He looked anxious. Em remembered him, and now consciously remembered everything.

"Where's Sally?" she asked, and found her voice sounded normal.

"Instrument check," Thad said. The phrase was meaningful within seconds after she heard it, and then, as if a key had been turned in her mind, a whole set of meaning and concepts fell into place, and she was oriented.

Thad was looking down at her, smiling. "Feels funny, doesn't it?" he said. "Coming out, I mean." Of course; he'd been through it all already.

"A lot better than it felt going down!" Ken said explosively.

Em nodded. "Only I didn't really feel anything then," she said. "Did you? I was just . . ."

"Scared!" Ken picked up promptly on her hesitation. "You and me, and all the rest of 'em too, baby."

"The freeze is too fast for you to feel..." Thad started mechanically, and grinned and let it drop. They'd all heard it over and over, said it to each other again and again, during the months of training. They'd had their practice-freeze periods, and come out to reassure each other once more. "It's too fast to feel anything." The phrase was drummed into all of them before they went aboard for the last time. They all knew it.

But *cold* was not the only way it might make you feel; they all knew that by now. *Scared* was a feeling, too.

In training, you went into a room, and lay down in the tray, and you came to again in the same room, with the same people standing around, just a few hours, or even minutes, later. This time . . .

This time, they'd all gone under *not knowing*; not knowing whether they'd ever come out of it alive . . . whether their bodies could withstand year after year of frozen suspension, instead of the brief testing period . . . whether they'd wake up in the ship, or wind up as floating particles in space, or smashed on the surface of some unknown planet.

The Tarbells, Em and Ken, were just about half-way down the list, their shift of duty was timed for the twenty-fourth year of the voyage. And no one knew for sure that day they left whether the ship would really still be on its way in a quarter of a century.

Sally came in, bustling a little, as always. She was so familiar, she made Em realize for the first time how long it was. *On Pluto we'd be past forty now!*

"Em!" Sally rushed over to kiss her, and Ken must have realized at the same time Emma did that they'd hardly touched each other.

"Hey, she's *mine*," he said. And with his arms around her, everything was perfectly normal again.

(Parenthesis to Carla: ii)

27/9/52

It is a curious phenomenon of the human mind—or at least of mine—that past pain is painless in recall, but

pleasure past and lost is excruciating to remember. I have found that for the purposes of telling this story I can readily undergo Recall Process for almost any desired period. The "Pluto Planet of Mystery" article came up intact from a batch of Joan Thurman's papers that I looked at more than a hundred years ago. And I went back to remember what Joe Prell looked like, and how he laughed at me. That didn't hurt in memory: it made me angry, both at his stupidity and at his unkindness, but it didn't hurt.

Carla, I tried to do Recall on the eighteen months I spent in space with Ken, and with the four other couples who at one time or other were shift-partners. I know it was the *happiest* time I ever spent, but the one little part I remembered in detail, the section you have already read, was so packed with poignant pleasure that it almost stopped this work entirely.

I shall not attempt again to recall my days and nights with Ken. As much as I remember, through a rosy blur, is all I feel competent to talk of. It took years after his death to adjust to the loss. I do not know that I could make that adjustment again, and will not subject myself to it.

As for the details of the trip . . . they are interesting, but I'm afraid they're all laid over with the sentimental mist that emanates from my happiness. It must have been vastly uncomfortable in the tiny cubicle we had as home. Certainly, we fought claustrophobia every minute of the time. We worked very hard, I know, and we were never quite without fear.

The starship *Newhope* had accommodations for five hundred passengers in the deep freeze, but only six in the living quarters. Three tiny cubicles surrounded three beds, and the walls were lined with overarm storage space.

The ship had been carefully designed to be run in routine circumstances by a crew of six, and a cautious and foresighted psychologist had arranged for overlapping shifts. When we woke up, the Levines were ending their shift: it was their last night out. We shared the first six months with Ray and Veda Toglio, and the Gorevitches.

Six months later, another couple replaced the Toglios and six months after that it rotated again. Shift-change nights were big events. Later, the new couple would read the Log, and catch up on everything, but that first night everything would come out in a jumble of incident and anecdote, gossip and laughter: the no-doubt grossly exaggerated story of the error Jommy Bacon made three shifts back, before the Levines came out . . . a joke written into the log by Tom Kielty, fourteen years ago, but still fresh and funny . . . the harrowing account of a meeting with a comet in the third year out.

It is difficult to picture the situation. Next month you are going to a planet infinitely farther away than Uller was from Earth, and yet you know with great exactness what you will find there. We had no such instruments in our day as now exist. All we knew when we set out was that this star appeared to have planets composed of terrestrial elements in quantities and proportions similar to those of the habitable solar planets.

We did not know whether we would find a place with breathable atmosphere, or bearable gravity, or water, or . . . or whether we'd find a planet at all. When our shift ended, and we went back into the freeze, it would be with almost as much uncertainty as the first time.

There was nothing to be certain of except the difficulties we had yet to face: if everything else worked out, if we completed the trip, and found a suitable planet, we would still be presented with almost insuperable obstacles. It was atomic fuel, after all, that made the starhop possible; it also made unthinkable any such doubling in space as had been designed for the Pluto ship. Our fuel tanks would be too hot for human habitation twenty years after we landed.

We weren't going to be able to live in an orbit; we were going to have to land and establish ourselves—wherever we were going—as quickly as we could.

SEVEN

I DIDN'T GET out of ship at all in the first thirty-six hours. There were twelve of us medics specially trained for the

job of defrosting, and we had equipment to do only three couples at a time. Three medics to a unit, we worked over the humming machinery and the still bodies, testing, checking, adjusting, and checking again. You don't save seconds when the use of a limb or the functioning of an organ is involved.

Every delicate part of the human beings we worked over had to receive the same minute attentions: quick-thaw, circulator, oiler, hydrator . . . and then, when they began to come out of it, some familiar face to watch over them, to say the right things, to bring food at the right time.

But that part wasn't our job. Jose Cabrini was in charge in the awakening room. They came into our section frozen and motionless; they went out thawed, still motionless. It was weird and unreal and disheartening. We kept doing it because it was the thing to do, six hours on, three hours off to catnap in one of the cubicles, and back again to the waxen-stiff shapes of human bodies.

Ken was outside all that time. He was in the first batch of defrosts: a construction expert, he was also a third-generation Marsman. He was born in Taptown on Mars—the first TAP settlement—and had grown up under primitive open-air frontier conditions: a big-chested hawk-nosed man, wiry-muscled, steel-boned and almost literally leather-skinned. All the Marsmen we had were sent out in the first groups.

There were fifteen men altogether in his construction gang. In haste and near-total silence, still orienting to consciousness, they ate their bowls of fortified soup, drew their tools from Supply, and filed into the air space between the flimsy backwall of the tanks and the alomalloy sheets of the inner hull.

There was just space enough to stand and work while they pried the first plates loose. After that, they had more space: another twelve inches to the mid-plates.

Here they could begin to see space damage, the dents and warps of imploding matter from outside—even an occasional rent in the metal fabric.

Five of the big plates to make a shelter. Each one went

a little more quickly. In twenty minutes they were ready to go Outside.

They knew it was safe. Other people were Out there already. But each of them had lived through eighteen months of that voyage, consciously: eighteen months of smooth plates underfoot and glowing indirect lighting, of cramped quarters enclosed by walls, and cutting corners to save space—eighteen months closed in *from* Space...

They stood in the lock, and hesitated. Eyes met, and looked away.

Then somebody said:

"What the hell are we waiting for?"

"Sure, let's go out and take a walk."

"Come on out, the air is fine," someone else said shrilly.

Ken was Mars-born, and tough; he couldn't remember ever feeling this way before. He noticed it was an Earther who finally laid hand on the lever to open the door.

They left the plates in the lock while they got their footing on the terrain, and blinked back the light of the sun.

Some of the others were cold, but Ken had chased sand devils on Mars at 10 below. He let the strange sun hit his head, drew the strange breath into his lungs, and exultation exploded inside him.

He wanted to shout; he wanted to run; he wanted to kiss the ground beneath his feet, embrace the man next to him. He wanted to get Emma and pull her out of the ship. He turned to the others.

"Come on!" he shouted. "Let's go!"

They dragged the heavy plates over the ground to a spot already marked out, and started building.

It was almost too easy.

Everything went according to schedule. The plans for re-use of the inner plates turned out to be sound. The temporary shelters were up and ready for use before the sun went down, and by the next day they were even moderately comfortable inside. Every bit of material that had gone into the construction of the starship, save the fuel areas and the outer hull, had been designed to serve a double purpose, and almost every design was satisfactory and practicable.

Oh, it wasn't easy in terms of work. Every man and

woman of the five hundred worked till they dropped, those first two days. It wasn't just construction and renovation. There was an infinite amount of testing and retesting to be done, checking and rechecking. Round-the-clock shifts were stationed in the labs and at the instruments, for the accumulation of data about the new planet, its star and system, its chemistry and geology and biology.

And through all the furious activity, data continued to accumulate. Almost-continuous broadcasts over the loud-speaker system relayed information to workers in and out of ship.

We heard the story of the landing: how the crew had tested the planets, one by one, with routine spectroscopy and boomer-rocket samplers: the tenth at a distance vastly greater than Pluto's from the sun; the eighth, fifth, fourth (the missing ones were on the other side of the sun); and each time found rock-ribbed wastes, without air, without warmth, without hope of hospitality.

The third could have been made habitable, if necessary. To create an atmosphere is possible, when you have a base from which to work. But to have moved out of our ship into domes would have been difficult. We didn't have to. The second planet was Uller.

To those of us who were still in ship, the reports were probably more impressive than to those outside. If you could *see* the earth and feel it underfoot, if you were actually *breathing* the air, and lifting and carrying against the pull of gravity, the facts and figures wouldn't mean so much.

To me, each new item of information was overwhelming.

Atmosphere almost Earth-normal (closer than Mars'; as good as the best open-air city on Pluto).

Gravity almost Earth-normal (closer than any other *solar* planet).

Temperature outside, 8 degrees C. at the equator, where we'd landed. (Warmer than Mars; infinitely warmer than Pluto. *Liveable!*)

First chemical analyses showed a scarcity of calcium, a scarcity of chlorine, an abundance of silicon.

Water: *drinkable!*

That floored me completely. To travel across the void,

to an unknown planet, and find good drinking water! Well, not really *good*; the water here is actually a dilute solution of what we used to call "water glass" back on Pluto. It didn't *taste* right, but it wasn't harmful. (And in the early days in Josetown I got used to the taste, too. We didn't take the trouble to Precipitate it half the time).

Uller was simply, unbelievably, Earth-like. With the single exception of the silicon-carbon change in chemistry, it might almost have been Earth.

These things are easy to remember and record. Speeches and announcements, and the impact of thoughts and words . . . but I find it almost impossible to visualize again the way Uller looked to me when I first saw it. It all seems natural and familiar now; I know how strange and beautiful and frightening it was then, but I cannot quite place what was strange, or what was terrifying, or what seemed so lovely. What was a foreign place has become home.

And if I could remember clearly, how could I describe it to people who have grown here?

I can only describe it as it looked to Emma, who grew up on Pluto, when it was her turn at last to stand with a group of medics in the airlock, and hesitate.

Sound, sight, smell, sensation . . . a whole new world, a strange world, a fairyland fantasy world of gem-encrusted trees and opalescent plants, of granular smooth ground laid out in shimmering changeable striae of colour . . .

And all of it the stranger for the incredibly Earth-like sunset. She'd seen that sunset thirty times on Earth, and marvelled every time. Here it was again, the same in every way, except for the sparkling reflections it struck from the impossible tree-trunks and flowers.

Around it all the smell of growing things, subtly familiar, tangy, hard to identify, but undeniably the scent of life.

The double row of alu-malloy structures looked dull and ugly in this stage-setting of iridescence.

And it was cool . . . cold even, but that didn't matter.

Where's Ken?

For thirty-six hours she had been awake, and she had not yet touched him or talked with him.

She stood there, feeling the gritty granular *earth* beneath her feet, through her boots, not really looking at things not trying to see or hear or taste or smell, but letting everything impinge on her, soak in as it would, while her eyes moved urgently, seeking one person in the weaving patterns around the street of houses, listening for just one voice in the murmuring welter of sound. Thirty-six hours one way, but literally *years*, in another sense . . .

"Em!"

He charged across the open space, big and bony and beautiful, grimy, unshaven, hollow-eyed, his coveralls flapping around his legs, his arms reaching out for her long before he got there.

"Em!"

His arms went around her, pulling her against him, lifting her clear off the ground. The bristly hair on his face scratched her cheek and the dirt of the new planet rubbed off his coveralls onto her spotless white jacket, and she smiled and opened her lips to his.

"You're cold," he said, after a while.

"Cold?" They found each other again, with hands, with eyes, with lips, and they stood close in a warmth of their own while the wind went around them.

Cold?

She laughed against his shoulder, opened her eyes sideways to a flash of brilliant colour, and backed off to look at *him* instead.

"Break it u-u-p!"

Someone was shouting at them, teasing, and someone else took her arm, and there was a whole crowd of people talking at once; she never remembered who they were, but friends, all of them, familiar faces. Hands to shake and cheeks to kiss, and excited words and gestures. And then more work to do.

Ten couples to a household; that was the plan for the temporary settlement. The outer walls and roofs were finished, but inside partitioning was still going on. Everyone helped; they all wanted their own rooms finished for the night.

Someone came around distributing mattress sacks, and Ken went off with Thad Levine to find an air pump. There was wild hilarity and a strange admixture of hysteria with

relief, as one couple after another finished off their partitions, and joined the others in the central hall.

Ken and Em stood a little part from the others, watching, very much aware of the special and extraordinary quality of their own happiness.

Out of a picked group of five hundred healthy eager young men and women, it is not difficult to select two hundred and fifty well-matched couples. Yet, when it is *necessary* to couple off, and all five hundred know it, a true marriage is the exception. Ken and Em were lucky, and they knew it. Em, watching the others, with Ken's arm around her, wanted somehow to share with all of them the flood of emotion in which she herself was caught up. They were all so impoverished by comparison . . .

The one unbearable thought ran fleeting across her mind, and left with it a chill track of envy for those other poor ones:

If anything happens to him . . .

Her hand tightened on his, and he looked down to her, not smiling, knowing what she felt. Together, they moved away from the group. They went into their empty room, and closed the new-hung door behind them.

A body is a solitary thing. You live with it, live in it, use its parts as best you can. But always it is alone, a thing apart, your own unique and individual portion of space.

It stands alone while the mind flicks out to make contact with the surrounding world; while the brain receives images from the eyes, the nose, the ears; while the mouth tastes and the fingers touch: and even while food is swallowed and ingested. All this time the body, as a whole, is lonely.

At points in time, infinitely far apart from the viewpoint of the cell-components of this body, two people may find unity, complete and perfect, with each other. In the act of procreation confluence occurs—or more often in the mimicry of the act.

Many bodies never know anything but solitude. The motions of procreation are gone through again and yet again, without awareness. But Kenneth and Emma Tarbell were fortunate in their bodies. Loneliness called to des-

perate isolation, and they came together from the first with ease and understanding.

They kissed. That was all, for the time being: mouth to mouth, sealed together, while the breath sweetened between them, his hand on her shoulder, hers against his back, merged to a single entity. They kissed, endlessly, and without reserve.

Then they lay back on the floor together, close and content, relaxed and knowledgeable in their unity with each other.

After a while Ken moved. He lifted himself on an elbow, looked down on her peaceful face, and traced her smile with a fingertip. Her eyes opened, welcoming his touch, and she stretched luxuriously, with great contentment, then turned to meet his hunger with her own.

When Sally came banging on the door, yelling about dinner, they realized they were both starved. They went out and sat in a circle with the others, in the central hall, eating the landing meal of roast beef and corn and fruit that had left with them, and travelled with them in the freezer across the years. And with it they drank, most ceremoniously, coffee made from Uller-water. The vinegar-precipitation gave it an odd taste, but from that day on the taste of vinegar was good to all of them.

Little by little, the realization was sinking in. They were, thus, easily, and without obstacles, established on a planet twenty-one light years from home!

None of them stayed long after dinner. Two by two, they went off to their small separate cubicles, dragging their mattresses with them.

Leah Tarbell was not the only baby conceived that night.

EIGHT

THEY WOKE UP to brilliant sunlight, chill still air, and a hubbub of human activity. The big project now was exploration. The observations made by the landing crew indicated that the near-equatorial spot where they had landed was probably the most favourable location for a settlement. But we wanted closer ground observation be-

fore any further effort was made to establish the colony on a permanent basis.

Conditions over the surface of the planet varied widely—or *wildly* would be a better word, from the point of view of a solar meteorologist. This was the first human contact with a planet whose axis of rotation lay in the plane of its orbit of revolution. All the solar planets have axes more or less perpendicular to their orbits. On Earth, for instance, there is a short winter-night and corresponding summer-day at either pole: but only at the poles. It took a good deal of readjustment in thinking habits to calculate Uller conditions with any degree of realistic accuracy.

The most obvious activity that day was the beginning of the construction of light aircraft for exploratory trips. Ken, of course, stayed on construction work, salvaging parts from the bowels of the big ship to build the smaller ones.

Meantime, scouting parties were being briefed and trained for their work, absorbing new information about what they were likely to find just as fast as it came out of the labs, still operating in ship around the clock. And everyone not directly concerned with the big project, or working in the labs, was assigned to one of the local scouting groups or specimen-collecting squads. Em found herself safety-monitoring a batch of wide-eyed collectors under the direction of a botanist, Eric Karga.

There were seven of them in the party, the others loaded down with sample cases and preservatives, Emma with a battery of micro-instruments strapped about her waist, a radiphone suspended in front of her face; and a kit of testing tongs and chemical reactors flapping against her leg. Nothing was to be touched bare-handed, smelled, or sampled, until the monitor's instruments had analysed it, and a verbal report on procedure had been made to the ship. With these provisions, it became evident almost as soon as they entered the forest that there were too many collectors, and not enough instruments. Karga himself would have thrown all discretion to the winds . . . if there had been any wind, that is.

That was the first thing Emma became aware of, when they were out of range of the bustling activity of the settlement: the literally unearthly silence. Emma had

grown up in this kind of background-silence, under domes. Later, she'd lived in a TAP open-air city filled with "natural" noises: leaves rustling in a made-breeze; birds singing; small animals squeaking and creeping; an uninterrupted and infinitely inventive symphony of sound. behind and around the machines and voices and activities of men.

Here, in a *natural* open-air world, there was nothing to hear but the excited busy-ness of the small group of people: Karga rushing recklessly from horny-tipped plants to opalescent trees; the monitor-instruments clicking off their messages; the steady murmur of my own voice into the radiophone; and the awed exclamation of the collectors as novelty after unexpected novelty was uncovered in the fairyland fantasy of a forest.

The first two-hour period went by almost before they realized it. None of them wanted to go back, and the pre-arranged return for a complete checkup in medicentre seemed foolish even to Ëm, considering how careful on-the-spot precautions had been. But they really needed another monitor, or at least, another phone. And even more to the point: the rule had been established; therefore it must be obeyed. Regularity and conformity are the materials of which caution is formed, and caution was the order of the day.

Five hundred people seemed like a lot when they were all crowded into the tender that took them up to the *New-hope* orbit around Pluto; or when they were being processed through defrost, the first two days on Uller; or when shelter had to be provided, and fast, for all of them. Now, looking outward from a double row of thin metal-walled huts at an unknown planet, five hundred humans seemed very few indeed. One death would leave a hole that could not be filled.

They griped about unnecessary precautions all the way back but back they went, and through the careful psychophysical that Jose Cabrini and Basil Dooley had worked out together.

Over a quick cup of coffee, they picked up some fresh data on the morning's discoveries. Evidence so far showed no signs of a dominant civilized, or even intelligent, natural species. Some small carapaced insect-like creatures

had been found, one or two varieties in abundance. And the river from which they had drawn and purified their water was teeming with microscopic life. But nothing larger than a healthy Earth-type cockroach had turned up yet, and nothing any more dangerous either.

The small fauna, like the plant life, appeared to be almost entirely constructed along the lines of the silicate exoskeleton, carbon metabolism variety. Some of the smallest amoebae lacked the skeleton, but everything larger had it, and it seemed doubtful, therefore, that any larger form of mobile life would exist. The beautiful brittle tree-trunks had rigidity against the weather, but little flexibility. The arrangement would hardly be suitable for a large-size animal of any kind. Jose still seemed to be determinedly hopeful of finding intelligent life—but in the total absence of any such indications emphasis was being placed temporarily on the investigation of plant life.

When they came back from the second shift, they found tables and benches set up in the street between the huts, with a defrosting selector at one end. Emma hurried through her checkup, and went out to look for Ken. He wasn't at any of the tables, or anywhere in sight. Finally she picked out a lunch, and walked down the row of tables to where a group of medics were gathered. Most of them had been out on monitor duty that morning; all of them were engaged in eager debate; and Cabrini and Dooley seemed to be the opposing centres.

Jose was talking as she sat down. "Lab says all the fauna so far are vulnerable to vibration. Those quartz shells are brittle," he expounded earnestly. "So suppose there *was* an intelligent species? Wouldn't it stay the hell away from a spot where a rocket came down?"

"And then all the building and tramping around," someone else put in thoughtfully.

It fitted with the silence of the forest. "It's hard to imagine a civilization without any noise," she put in. "I know it could happen, but it just doesn't fit *my* conditioning about what constitutes intelligence." She grinned, and waved an arm pointedly around the table. "What good is it if you can't have three people talking at once?"

"They're too small, anyhow," Basil Dooley insisted.

"They'd shake themselves to pieces if they got big enough to *do* anything."

"You can have intelligence without artifacts," Jo said stubbornly, "and without noise, too. Even without vocal noise." He gulped at some coffee, and went on before anyone else could get fairly started: "Or suppose they're so small we just haven't noticed? Why do they have to be *big*? Maybe something we think is a plant is really a termite-tower, like the ones on Earth? Or a hill out there somewhere is full of things the size of ants that are just smart enough not to want to show their faces? On a planet this size, a *small* species could have a completely material civilization, if that's what you're looking for—they could even make noise, by their own standards—and we'd have a hell of a time finding out about it."

"Well, they'd have some kind of effect on the ecology of the planet, wouldn't they?"

"We wouldn't know that yet, either," Emma said slowly. She was excited now, turning over the possibilities Jo was suggesting, but she knew better than to display her excitement in the discussion. People always seemed to mistrust enthusiasm. "TAP is honest ecology," she pointed out. "An alien coming to Pluto would have a rough time finding out that the open-air cities are all artificial."

Intelligent life! Non-human, non-solar intelligent life! And it was possible! This world had every prerequisite for it.

"Well, if they're that small, you're going to have some trouble talking to them."

"Might *never* find out," someone else suggested, "if they didn't find some way to communicate with humans. That's your real problem, Jo. Suppose you find these critters? How are you going to talk to them? And turn it around: if they live in what looks like natural circumstances to us, how will we know which ones to try and talk to?"

"Which sums up neatly," Jo answered him, "the problems to which I shall probably devote the rest of my life."

There was an intensity in his tone that silenced the table for a moment.

"Then whatever they are, let's hope you don't find 'em. We can't afford to lose your services, Jo." It was

Ken. He slid his long legs over the bench next to Emma, and squeezed her hand. "What goes on?"

Everybody began talking at once again; everyone except Emma, who was surprised at the irritation she felt. He had no business stepping on Jo that way, she thought; and she didn't want to talk about it any more.

"Aren't you eating?" she asked.

"Ate before; they said you were getting a checkup, so I had lunch and left my coffee to have with you."

He smiled at her, and reached for her hand again, and the irritation vanished. Even when the argument resumed, and she found that the two of them were tending to opposite extremes of attitude, she wasn't annoyed any more. They didn't have to agree about everything, after all. They had disagreed before. But this was such an *important* thing—the way you'd feel about an alien creature.

Still, she could understand it better in Ken than in Basil. Ken was a constructions man. His work was in materials; in parts and pieces to fit together. He didn't think in terms of the living organism, or the subtle and marvellous interplay of functions between organs, organism, individuals, species. Basil was a medic, and a good one; he should have understood.

Karga was at her shoulder, politely restraining himself from urging her, but too anxious to keep himself from a silent display of impatience. She stood up, and threw off the whole foolish mood. Ken would understand when they had more time to talk. And there would be plenty of time later . . .

NINE

IT MIGHT HAVE been a segment of petrified log. But it had legs, and the tapered bulbous end was a head. It might have been a cross between a pig and a dachshund, painted in streaky silver, and speckled with sequins. But it had six legs, and the head was too shapeless; there was no visible mouth and there were no ears at all.

And when you looked more closely, it wasn't actually walking. It was skating; six-legged tandem skating, with

the sharp-runnerd feet never lifting out of the ground, leaving an even double row of lines incised in the granular ground behind it. And the squat barrel body glided forward with unexpected grace.

It moved into the street of huts, its head set rigidly right in front of its body, while the bulging dull black eyes darted and danced in all directions.

The first man who saw it shouted, and it froze in mid-glide. Then the man's comrade silenced him, and the creature started forward again. A crowd began to gather and after the manner of a crowd, a murmuring noise grew from it. The creature froze once more, and veered off in another direction.

Someone in the crowd had a gun. He raised it, and took careful aim, but someone else reached out to lower the barrel before the fool could shoot.

"It hasn't hurt anything!"

"Why wait till it does?"

"How do you know . . .?"

"Here's Jose."

"Hey, Jo, here's your native. Look smart to you?"

Laughter. Comments and wonder and more and more uncontrollable laughter, while the creature skated directly away from the crowd and edged up against an alomalloy hut.

"Think we can catch it?"

"The projector . . . are they getting it?"

Jose sent a whisper running back, and it only increased the volume of the sound. Better one noise than the hubbub, he thought, and spoke sharply above the crowd.

"Quiet!" Then in the momentary silence spoke more softly. "I don't think it likes noise."

After that, he left the group, and stepped forward steadily, slowly, toward the shadow of the hut where the creature stood.

He tried to curb his own eagerness, and make his advance without hurry and without menace. He tried, too, to ignore the slowly swelling hum of the crowd behind him. All his thoughts were on the animal, all his attention focused.

If it had intelligence, there had to be a way, *some* way, to make contact with it.

He was close enough now to touch it if he would, but he held back. It was looking at him, and from that moment on, he never once doubted that the animal was rational, impressionable, capable of communication. It was there in the eyes, in the way the eyes studied him, in something he *felt* in his own mind, hazily and without comprehension, examination-and-greeting was exchanged between them.

The creature turned to the hut, and there was a questioning feeling in Jose's mind. He did not want to speak aloud. Telepathy? Something of the sort. He thought the idea of a dwelling place, a shelter; all animals understood the concept. He thought it hard as he could, and knew he had failed, because the animal's next act was one of deliberate destruction.

Jose was the only one close enough to see exactly what was happening, but by that time they had cameras running from three different angles. Everybody saw the details, blown up, later: the people in the crowd, and those who, like Ken, were in ship, or like Em, out of the settlement.

It glided forward smoothly once again, edging toward the house, and gradually its body tilted sideways at an angle to the ground, without bending except at a concealed joint between the barrel-trunk and the right-hand set of legs.

The left-hand set described a perfect clean curve up the side of the building and down to the ground again. Then it reversed, and moving backwards, once more standing upright, edged the left-hand front runner slightly sideways and sheared a neat chord out of the wall.

The crowd saw the piece of metal fall away, and gasped, in unison, and then, for the first time, fell completely silent. What had just happened was virtually impossible. Alum-alloy was *tough*. An oxy torch would cut it . . . in a matter of hours. This creature had sliced it like a piece of meat.

The man with the gun took aim again, and nobody stopped him, but he couldn't fire. Jose was too close to the beast.

"Jo!" he called, and then a woman's voice said loudly, "Shhh!" as the animal froze again. Jose looked around and smiled and waved another silencing motion at them.

He looked back just in time to see the tuskongs coming out. Two parallel needle-edged blades, curved like a set of parentheses, they descended slowly from underneath the head, and went through the metal like tongues of fire through straw. The creature glided forward, and a long thin strip was sliced from the centre of the chord. The blades were hinged, somehow, and they seemed to be sticky inside. The needle edges met under the strip of metal, and the strip was carried up inside the tusks—or tongs—as they retracted slowly into whatever opening (a mouth?) they came from.

“Jo, get outa there! I’m gonna shoot!”

There was no doubting that tone of voice. Jose held up a pleading hand, and stepping softly, walked backwards toward the crowd. Until he turned around, he knew, the man would hold fire. He waited till he was too close for his turned back to matter any more, then asked quietly, with all the command he could put into a low tone. “Wait.”

“Why?” The man whispered in reply; then he would wait to shoot.

“We might as well see what it’s going to do.”

“Ruined a wall already. Why wait for more?”

The words were passed back through the crowd, and the murmuring swelled again. The creature seemed to have adjusted to the noise. Calmly, it sliced another strip of the virtually impregnable alloy, and drew the metal into its interior.

Then, while they watched, it turned again to the wall, and, folding its front legs under it, slanted forward to edge its snub-ended snout inside.

The gun came up once more, and Jose knew he couldn’t stop it: the beast had poked its head inside a sacrosanct human habitation. But: “Higher!” he whispered piercingly. “Over its head!” The barrel jerked upward imperceptibly just as the gun fired.

It couldn’t have hit; Jose was sure of that. But a sunburst of cracks appeared on the surface of the animal’s hide, for all the world like the impact of a projectile on bullet-proof glass. And at the same instant a jagged lightning-streak arced from the centre of the “wound” to the side of the hut.

The gunner drew his breath in sharply. "It's a goddam walkin' dynamo!"

And the crowd-talk started up once more.

"Quartz . . . crystals . . . piezo-electric . . . *generates!*"

It's scared, Jose thought—but now the animal had shown what power it had, so was the man. The gun came up again.

"*Stop!*" Jose shouted. "Can't you see, it's scared?"

It worked: not on the man, but as Jose had hoped, on the beast, and the man hesitated. The creature backed away from the wall, and started forward past the hut, away from the crowd and the street. It was leaning to one side, the good side, and lurching a little, going very slowly. Now its trail was a deep indentation on one side, and a barely marked line on the other, and in between a greyish ooze of something that didn't seem to be coming from the injured side. Perhaps from the "mouth" or whatever those tusks went into? It was hard to tell.

The gunner still stood with his weapon half-raised.

"The field projector," Jose whispered to him, and the man handed his gun to his neighbour, and ran for the rocket.

The Ullern animal had progressed perhaps fifty metres when he came out of the airlock again, a dozen others tumbling after him, with bulky pieces of equipment that took rapid shape on the ground.

There was grim speed in the way they worked. Jose, watching them, understood their fear, and could not share it; felt the pain of the hurt animal and grieved for it; fervently hoped the creature's piezo-electric properties would not make it unduly vulnerable to the projector.

There was a crackling, blinding flash of electricity as the field hit it.

Ken Tarbell answered the alarm bell reflexively, absorbed the data, and fell into drilled pattern responses with the projector team, getting it out of the airlock, setting it up, aiming, firing.

It should have trapped the animal in an invisible miniature dome through which no physical object could pass. Instead there was a small-scale electric storm over the creature, and when the glare was gone, it was lurching

along just as slowly as before, with an odd look of urgency, but apparently none the worse for wear.

There was total silence in the camp, and then a shot shattered the quiet. Ken saw it hit; he saw the bullet *bounce* off the creature's hide, and saw the ragged black cracks radiate from the point of impact on the glittering surface of the skin. And he saw the *thing* keep moving, a little slower maybe, but still making progress. It was heading out of the camp, in the direction Karga's team had taken. It was heading toward the forest where Emma was.

Had anyone warned them?

Em had a radiphone; Ken turned and raced back to the ship, fear moving his feet while completely separate thoughts went through his head. The thing could fight off an electromagnetic field, but it was vulnerable to shock; he knew how to stop it.

In ship, he clambered up the ladder to Supply, grabbed the two things he needed, and leaped down again, ignoring the footholds. Outside, he realized the others were on the same track, but their weapon was not strong enough. The crowd had separated into three groups, surrounding the thing, and they were shouting at it, screaming, singing, yelling, stomping, first from one side, then the other.

Each time it responded more feebly than before, moving away from the new source of noise. Someone ran past Ken, headed for the ship, and he caught from somewhere else a few words of questioning conversation. They thought they could head it into a trap; but what kind of trap would *hold* it?

Ken had the phone ready at his mouth, and his weapon in his hand. His eyes were on the beast, and he saw that each time the direction of the noises changed, it seemed a little less frightened, a little less anxious to change its path. Any animal learns what to fear, and what is safe. The shouting wouldn't hold it long, he thought, and as he thought it, saw the creature head straight for the group that stood between it and the forest-edge, undeterred by stamping, screaming cacophony.

"Emma! Em!" He spoke urgently, low-voiced, into the phone. "There's an animal here. Headed your way, *Watch out!*"

He didn't realize for the first instant what had happened.

The Ullern wasn't limping out toward the forest any more. It was moving fast now, as if something had galvanized it into action, somehow summoned its last resources of strength and speed. It was gliding fast and smooth and with a purpose in its direction . . . back into camp, back toward the rocket, *straight at Ken.*

It was coming too fast to stop or fight or escape. There was only one thing to do, and Ken did it. He threw the hand grenade he'd brought from the ship.

Let me through now, everybody out of the way, I'm a doctor, let me get through. There's a man hurt in there, I'm a doctor.

Ken, oh Ken . . .

Come on now, everybody out of the way, this door is in the way. Oh, Ken!

"I'm sorry, Emma: You know we can't let you in. We're doing everything we can . . ."

"Oh, Basil, don't be silly. I have a *right* to help."

"Em, I think we can manage better than you could. He's . . . he's pretty badly cut up. You'd be bound to . . ."

"What do you think I am, Dooley? Somebody's snivelling wife? I'm a doctor!" *And this is how they feel when we tell them they have to wait, now I'm not a doctor, he's right. I'm a snivelling wife, I'm even snivelling, I can hear it. But I'm a doctor, if I act like one they'll have to let me in . . .* "What . . . what do you . . . What are his chances. Doctor?"

"They'll be better if we let Basil get back in there, Em."

"Oh, it's you, is it? The nice careful semantic psychologist, the happy little word-weigher, the fellow who wanted to see some native life!" "Leave me alone, Jose. Please, go away! Basil . . ."

Basil is gone, he went back to Ken, you can't go to Ken, they won't let you, they're going to let him die, and they won't let you help, they've got the door locked too, you tried that before, and they're all in there and they'll let him die.

"Em . . ."

"I said go away. Leave me *alone*, won't you?"

"Em . . . it's me, Thad."

And she collapsed gratefully, childishly, in familiar, friendly arms, abandoning the effort to be calm, to be convincing, to be reasonable and professional. They weren't going to let her into that room, whatever she did, so she sobbed in Thad's arms, until he said:

"Go on, Emmy, cry all you want to." And then she stopped.

The door opened and closed again, and she looked up at Thad, and saw the news there, and all the confused emotion was gone. Now she was calm enough, and tired.

"He's . . ."

"Dead," Thad said the word out loud; one of them had to.

"They never let me say goodbye."

"He wasn't conscious, Em."

"He would have known!"

Thad didn't try to answer.

TEN

TWO DAYS LATER, the entire settlement was fenced in with a vibration-field. No other animals showed up in the time it took to get the fence operating; and the occasional creature that came in sight afterwards turned quickly away. We knew, from that first experience, that vibration was not necessarily fatal to the beasts, but that they could be frightened and/or hurt by anything along the line, in or out of the human sonic range.

I think now that most of us rather overestimated, at the time, the danger that vibration represented to them; it was natural enough, because we were all attributing the creature's obvious difficulty when it left the hut to the cracks the first shot had left on its surface. Actually, it took a shock as severe as the bomb that was finally exploded almost underneath it, to damage the brittle armour enough to stop it in its tracks.

It was interesting, too, that when they tested the bullets in the ballistics lab, it turned out the first hadn't touched the animal, and the second had hit squarely, been flattened by the impact of the super-hard hide, and *bounced* off.

Yet the cracks from the second had been hardly more severe than from the first. It was difficult to visualize a living creature, a mobile animal, going about with a skin as brittle as glass, as easily shattered by shock-waves and vibration as by actual impact; yet that was obviously the case.

The bullet cracks, we decided during the autopsy, were just about as serious, and as painful, as whip-welts might be to a human. That is, there was no loss of "blood" and no real impairment of function; there was, instead, a state of potential damage, in which any ill-considered motion might result in a serious tissue-break. However, if you cover a man's *entire* body with welts, no matter how carefully you place them so as not to break the skin, you can incapacitate him completely, and possibly even kill him, by reducing skin-function. This was, apparently, the net effect of the bomb: simply to destroy the animal's exterior mechanism for reacting to stimulus.

There was some doubt, too, as to whether the bomb had actually killed the thing. Possibly it wasn't entirely dead at first, but just immobilized. We didn't get close enough the first few hours to know for sure whether it was still breathing. We did, with instruments, check on temperature and response to various stimuli, and all the results, *in human terms*, indicated an absence of life. But it appears that the creature may have continued to ooze out that curious gel for some time after it fell. At least, when it was moved, there was a largish puddle underneath it; this might, of course, have been ejected at the time of the fall.

It took several days of fine and fancy improvisation at dissection (we had only the one sample, and we didn't want to spoil it) to find out just what that ooze was. Of course, we got a chemanalysis right away, but that only gave us an idea. The stuff was a mixture of alomalloy compounds and body fluids of a high Ph, containing short-chain silicones and some quartz. The analysis presented a variety of interesting possibilities, but it needed the completion of the dissection to be certain.

When we knew, it was funny, in a way. The visiting beastie had got itself a bellyache from eating our house. All we could figure was that it ordinarily subsisted on the native plant life, hard-shelled and soft-interiored, sili-

cone outside and silicarb inside. It had identified, with whatever sense organs it used for the purpose, the discernible trace of silicate in the alu alloy, and the presence of carbon in the interior, and had mistaken the house for an extra-large new variety of plant life. The aluminium, in compound with more tidbits of this and that than I can now remember, had reacted to the additional jolt of silicarb in the animal's stomach by turning into a mess of indigestible (even for *it*) gelatinous-metallic stuff. The oozing trail it left behind it as it tried to leave the settlement was nothing more or less than the trickling regurgitation of an animal with an inflexible outer hide, and an extreme vulnerability to the shock of sudden motion.

This much we knew after we had traced the thing's alimentary canal, with an oxy-torch, a hacksaw, and (when we got inside) more ordinary surgical implements. The inner tissues were more familiar-looking than the outside, of about the same composition and consistency one would find in an earth-animal, differing only in the replacement of the carbon chain compounds by silicon chains. Perhaps the most curious and interesting phenomenon, from a medical viewpoint, was the way the soft inner tissues changed gradually to tough fibrous stuff, somewhat similar to silicon-rubber, and then, still gradually, so that it was almost impossible to determine at what point the actual "skin" began, to the pure amorphous quartz of the hide-armour. The vicious-looking tusks were a natural enough adaptation for a creature that had to chomp up horny-hard surfaces with a minimum of vibration.

All this, and a good deal more of no especial interest except to a medic, we learned in the dissecting room and in reports from the chem lab during the two days it took to get the fence operating. Meantime, all exploration was stopped; a guard was maintained around the camp at all times until the field was in force, and a smaller lookout-guard afterwards. Work on the light aircraft went on, and construction of freight transport planes began immediately. We had already determined that we would move the settlement, if any habitable part of the planet could be found where these creatures did not exist. And all

further investigation, as well as transport, would proceed by air.

The move was made exactly forty days after the Ullern came into the camp. If you've read the old Bible, there's a certain quaint symbolism in that figure. The date, of course, was 12/7—Firstown Day. And it is curious to note, in passing, the odd sentimentalities that were applied to this business of dates and calendars.

One of the most impressive similarities between Earth and Uller was in the matter of time. An Earth-hour is a few minutes shorter than an hour here; the Uller-day, according to the Earth-setting of the chronos when we arrived, was about 26 hours long. And the year on Earth—the actual period of revolution around the sun—is slightly more than 365 days, instead of our 400.

Logically, when we arrived, we should have established a new metrical calendar and time-scale. Ten months of forty days, or forty weeks of ten days each—either one—would have been simple and efficient. A day divided into ten or twenty hours would have been sensible. But either one would have had the same effect: to make us stop and think when we spoke of time.

Humans—set apart from all other indigenous species of Earth by their ability to think—have a long-bred habit of avoiding mental strain. And the similarities to Earth-time, were too noticeable and too tempting. We simply fixed our clocks and chronos to run slower and so saved ourselves from adjustment to the difference. The day here is still twenty-four hours, and the year has twelve months still. It didn't bother us to have 36 days each month; that part of the calendar had always been flexible. And the interim Fourday at year's end was an old Earth custom, too, I've since found out. Our only real departure was the six-day week.

(Parenthesis to Carla: iii)

2/10/52

I'M AFRAID I have been, in these last pages, rather drily concerned with facts as familiar to you as to anyone who has grown up side by side with the Ullerns. This was

partly in an effort to get across to you some of the feeling we had then: how new all this information was to us and how difficult to assimilate. Also, the jump out of emotion into preoccupation with data was typical of my own reactions at the time.

I had one emotion that I was willing to identify, and that was hate. I worked in the dissection lab whenever I was awake, and took my meals there too, watching the work as it proceeded, and enjoying every slice and silver that was carved out of that beast. That much I *felt*; for the rest I had ceased to be aware of any feelings at all. I had an overwhelming thirst for knowledge about the animal that had killed Ken; but Ken himself, and what his death meant to me . . . this I refused to think about at all.

When I realized I was pregnant, I was still sleepwalking as the true love of a dead man. I was gloriously happy, and terribly depressed. Ken's baby would be Ken-continuing, and so not-quite-dead. But Ken *was* dead! I had no husband, and my child would have no father to grow up with.

Most of the time, the first few months, I just forgot I was pregnant. I meant that, literally. Someone would say something about it, and I'd have to collect my wits and remember, consciously, what they were talking about. Maybe I didn't want to have the baby, and was trying to lose it by behaving as if I weren't pregnant, working long hours at tough jobs . . . but I don't think so. I think I was determined not to be happy about anything, and afraid of being depressed. I was, in short, determined not to *feel* anything.

You can't grow a child inside you without feeling it: feeling it physically, as your body changes, and feeling the subtle complex of emotions that accompanies the change. But I tried, and for a short time I succeeded.

I remember that Jose fell into step with me one time, as I was going from my room to the lab, and tried to talk to me; it didn't occur to me that he was taking a professional interest. I thought I had myself completely under control, and was rather proud of the way I was behaving. I didn't even listen to what he said, but took for granted that he

still considered me his ally in the stupid argument of the first day of exploration.

"How are you feeling, Emma?" I guess he said . . . some such thing, because it gave me an opening to turn on him and demand:

"How do *you* feel? Now you've got your *intelligent* life, how do you like it?"

I can remember thinking I'd said something witty as I stalked away. The unforgivable thing that Jose had done to me, you see, was not that he had convinced me of an erroneous attitude, but that he had convinced me of something about which I argued with Ken the last time I saw him . . . and that I had continued to question Ken, and to cling to Jo's attitude, right up to the moment Ken proved his point with his own death.

I do not now apologize for these reactions, or even comment on them, but simply state them here as honestly as possible. Perhaps it was healthy, after all, that I reacted as I did. Hate kept me going where grief would have, literally, prostrated me. And I did not mourn Ken, then; I just hated: everything and everyone that contributed in any way to his death.

It occurs to me only now that perhaps that curious business of our time-reckoning system, as well as many other apparently irrational things we did, were done in part to save our faculties of adaptation for necessities. I still don't know whether it was inherent weakness or instinctive wisdom. It doesn't matter, really, and I see I'm digressing again. I *am* getting older. But I can still remember being very scornful of the same sentimental clinging to a calendar, when I was a child on Pluto—and there they'd had more excuse. Pluto doesn't rotate at all; it has no natural day. And its year is hundreds of Earth-years long. So for a system of time-reckoning that applied to human values, the old one was as good as any other there, except in terms of arithmetical efficiency.

Here it was another matter altogether: we *forced* an old system to fit new circumstance; why? Because we were human, and each of us had grown up somewhere. Because we had been children back there, and some part of each of us was still a child *there*, and needed a safe

familiar handle of some sort to cling to. In space, we were completely set apart from "home." Time was our handle.

ELEVEN

THE NIGHTS WERE already long when the colony moved south. Firsttown was located just below the 47th parallel, close enough to the pole so that few of the Ullern animals cared to brave the scorching summers, or freezing winters; still far enough so that humans could hope to survive them.

They had just about nine weeks of steadily shortening days in which to prepare for the winter-night; and at that latitude, it would be fourteen weeks after the last sunset before it would rise again for a few minutes of semi-daylight. The temperature, in Fourmouth, was already below freezing, and Meteorology predicted cheerfully that the winter-night low would be somewhere about -50 deg.

To some of the others, the long stretch of cold and darkness was frightening. To the Plutonians and Marsmen the cold meant nothing, and for the former, artificial light was as natural as sun. Emma, had she stopped to think about it, would have been grateful for even the few months each year of Earth-normal temperate weather and sunlight.

She didn't think about it. She worked, with grim preoccupation, all through those early months. When she no longer had the body of the beast to cut up, she threw herself into the conquest of the *planet* that had killed Ken . . . which was, too, the fulfilment of their joint dream. She was alone now, but somehow if she worked twice as hard, she could still make the dream come true for *both* of them.

She was lucky, too because throughout that fall and winter there was always more work to be done than there were hands to do it. When her own shift at Medicentre was done each day, she went out and found more work; filled in on the auxiliary powerplant construction when people were sick; helped build the nursery and furnish it; spent long hours in the library, as she had done in her youth. Now she was studying chemistry, silicon chemistry.

Organic silicon chemistry, working it out where it didn't exist, from what little the films recorded of solar knowledge.

She worked alongside other people, but made little contact with any of them, and she was happiest in the hours she spent alone, studying. She did not join the others in the big social hall, when they met on 18/5 to spend the last full hour of sunlight under the U.V. glass dome; she barely noticed when the long night set in. Almost, she might have been Emma Malook again, living under the Pluto dome, moving through artificial light and air, such as she'd known since birth, between Joan Thurman's library and Joe Prell's home, living all the time, wherever she was, in a fantasy of being grown-up, and a doctor. Only now she *was* a doctor, and the fantasy was being Emma Malook. She was Emma Tarbell, and she was going to have a baby, by which she knew indisputably that she was full grown now.

The days went by, one like the last, and all of them almost painless. In her sleep, she would reach out across the bed to emptiness, and withdraw her hand before she woke to know her own loneliness. But once awake, she followed the pattern of work and study rigorously, tended her body and the new body growing inside it, and when she was tired enough not to lie awake, went back to bed again.

The single event that stirred her immediate interest that winter was the Ullern they caught. One of the regular weekly scouting parties brought it back, along with their charts and statistics on conditions outside. They'd thought it was dead at first, then they discovered it was living, but too weak to resist capture. In the lab, they found out quickly enough that the animal was simply half starved. They fed it on specimens of local flora, and it flourished.

Then why, outside, surrounded by the same plants in abundance, had it almost died of starvation? That took a little longer to find out. Cabrini tried a specimen from outside on it when the next scouting squad returned, and found it refused the frozen food. After that, they tried a range of temperatures, and discovered it would eat nothing below the freezing point of carbon dioxide.

That made sense, too, when you thought about the problem of eliminating solid CO_2 .

Jo was tremendously excited. "If they had fire, they could use the whole planet!" he pointed out, and met a circle of questioning eyes.

"Planning to teach this one?" Basil asked, too quietly. Jose joined the general laughter, and let the matter slide. It was encouraging to know that at least half the year the colony was completely safe from the beasts . . . and to have some kind of clue to a method of attack.

They kept the animal in a sort of one-man zoo, an island of Uller-earth and Uller-plants surrounded by a five-foot moat of gluey fluid through which its runners could not penetrate. And Jo, apparently through sheer stubborn conviction that it was possible to do so, actually managed to make "friends" with the creature, at least, he was the only one who could approach it when it regained its strength, without some display of hostility.

The first sun rose again on 6/8, and by the beginning of Ninemonth, the days were already nine hours long. By then, too, Emma was far enough along to have to slow her pace; she had just twelve more weeks—two months—to term.

It was a sad and lovely springtime. In the last weeks of waiting, Emma gave up everything except her regular work at Medicentre. Studying no longer interested her; instead she would go out and sit for hours in the crisp fresh air and Tenmonth sunshine, intensely conscious of the life within her, impatient for its birth, and yet somehow fearful of letting it loose. It would be a boy, of course, it had to be a boy, and she would name it Kenneth.

Leah was born on 36/10, right in the middle of Medicentre's first and biggest baby-boom. There were twenty-three new infants in the colony in two weeks' time.

Inevitably, Emma spent much of her time the next month with the other young mothers, all of them learning and sharing the care of their babies. After the first—not disappointment, but surprise—she didn't mind Lee's being a girl; and she was surprised, too, to discover how much pleasure she could find in the simple routine of feeding and cleaning a tiny infant. Her own infant.

She was busy and useful again, because the other mothers came to her for advice and opinions at every turn. She was a medic, after all, and had *some* kind of previous experience with babies.

Under the best of circumstances, it is likely to be eight or ten weeks after birth before the mother is once again quite convinced of her own existence as a separate and individual person. Emma had little desire to return to that conviction. She was stirred by occasional questioning curiosities about the details of the refrigerating system, as the heat outside mounted through the summer-day. She began to pick up some of the chemistry films a little more often, and went, from time to time, to the zoo-in-a-lab where the Ullern was still kept, to find out what they had learned about it. But on the whole, she was more than content with the narrow slice of reality in which she found herself. Even her work at Medicentre, as she resumed it, somehow concerned itself primarily with babies: those already born, and those that were still expected.

The first New Year's Eve on Uller came in midsummer, just long enough after Lee's birth for Em to have gone to the celebration comfortably if she wished. She preferred to stay in the nursery, and let the other mothers go, with their husbands. Two months later, when the early fall nights were beginning to be long enough to cool the air a little, she found her first real pleasure in contact with the new environment.

In the hour before dawn, it was possible to go outside without frig-suits; and every day, from that time, Em adjusted her sleeping so that she would be awake at that time of day. First, when the nights were still short, she would leave the sleeping baby in the nursery; later, when dawn began to coincide with the chrono-morning, she would take Lee with her.

Alone, or with the baby at her side in a basket on the ground, she would sit by the edge of the dry river-bed, and watch the world wake up. The first sun's rays, felt before they were seen, brought a swarm of near microscopic life out of the moist earth of the river bed, and started an almost imperceptible stirring in the trees. Emma would sit and watch while the budded branches snaked up

and out of the sparkling columns of their trunks, turned their tender new greenery up to the sun for a brief time, and then melted back into the safety of the cool trunk shells.

Day after day, she tried to remember why the flexible tree-trunks were so fondly familiar. It was *silly*, somehow; and then at last the memory came. A little ball of stuff that bounced, and broke off clean when you stretched it . . . that moulded to any shape, and dropped back slowly to a formless mass again when you left it alone . . . a childhood toy, that someone had called *silly putty*. Some kind of silicon compound, she supposed, and told little Lee, who did not understand: "See? See the silly-putty trees?"

On another level of interest, the phenomenon of twice-yearly budding fascinated her, as well as the marvellous apparatus offered by the flexible branches to protect the leaves against too much sun as well as against the winter cold. Each day, too, as the sun rose farther in the north, the branches turned their budded sides to catch its rays aslant: like the sunflower on Earth, but these trees turned to face the source of life throughout the year, instead of by the day.

When the tree-trunks began to crawl back in their shells, it was time to go inside. Minutes later, the sun would be too hot to take. But for the hour before that, it was a cool and peaceful world on the river bank.

By the time Lee was six months old, the weather outside had passed its brief month of perfection, and was once again too cold for pleasure. By that time, too, the first epidemic of parenthood was dying down. Emma was back at general medic work; the world was achieving a sort of normalcy. She had her baby. She had her work. And she was beginning to be aware of the fact that she was terribly lonely.

By that time, too, there were some unattached men. A good many of those early marriages broke up in the first year. In spite of the growing emphasis on typically frontier-puritan monogamous family patterns, divorce was, of necessity, kept easy: simply a matter of mutual decision, and registration. For that matter, the morality in

the early years was more that of the huddled commune than of the pioneer farmland.

Emma saw a lot of men that winter. Lee was a convenient age . . . old enough not to need hovering attention, young enough still to be asleep a large part of the time. Emma was a romantic figure, too, by virtue of her widowhood ; her long grief for Ken established her as a better marriage risk than those who had made an error the first time, and had had to admit it. The dawning recognition of these facts provided her at first with amusement, and later with a certain degree of satisfaction. She had been an intellectual adolescent, after all. Now, for the first time, she found out what it was like to be a popular girl. She discovered a new kind of pleasure in human relationships: the casual contact.

She found out that friends could be loved without being *the* beloved ; that men could be friends without intensity ; that affection came in varying degrees, and that she could have many different kinds of affection from many different people . . . even though Ken was dead.

Yes, she found out too that Ken *was* dead. Perhaps it was fortunate that Lee was a girl ; a boy named Kenneth might have helped her keep the truth from herself a while longer. And the inescapable violence of the seasonal changes made a difference. Life was determined to continue, and to do so it was constantly in a state of change. Even the silly-putty trees told her that much.

There was an impulse toward gaiety throughout the colony generally during the second winter-night. The first one had been too full of work and worry. Now, they felt established and moderately secure. They had survived a full year of what troubles the planet could offer, and Ken's death was still their only loss. A new science of chemistry and physics in the labs and a new technology beginning to appear. Perhaps a new biology as well: Jo now had two Ullerns in his zoo, and there was some reason to believe that the creatures were capable of mating.

There was a warm sense of security in the colony, and when they had to take to the underground corridors again to keep their warmth, it added a womb-like complacency. It was a winter of parties and celebrations and increasing complexities of human relations. It merged into a spring-

time of renewed activity and interest for everyone, and most of all for Emma.

Now, when she went to the river-bank at dusk, instead of dawn, she had to watch the toddling one-year-old baby, and keep her from the rushing waters of the river. Everything, all around, was full of motion and excitement, even the intellectual life that she was hesitantly picking up once more.

There was so much to learn: she started going to the library again, after Lee was in bed for the night, and scanning the recorded knowledge there for clues to the new facts of life. She spent hours, sometimes, in the zoo-lab, watching the two Ullerns, and in spite of her open amusement at Jo's undiminished belief in their intelligence as a species, she listened eagerly while he talked about their habits. He had been watching them for months. She did not have to accept his interpretation on the data he'd acquired, but the observations themselves were fascinating.

The zoo became something of a centre of debate throughout the colony. It was now firmly established that one of the creatures was, in human terms, female. Medicentre wanted the male for dissection now that a new generation was assured. Jose wouldn't hear of it. There was a good deal of humour at his expense, and an increasing amount of discussion and argument too, on both sides. Emma couldn't take it too seriously; the birth of her child had given her a new attitude toward time. There were years ahead of them. If Jose wanted his pet alive, why kill it? They'd catch more . . .

The days were constantly longer and fuller. Now sunset came too late to take Lee with her when she went down to the river bank, and the water was beginning to move more thinly and slowly, low between the sides. The half-hour out there before bed was the only part of the day now that was quiet and unoccupied. It was a time for feeling, instead of thinking or doing, for a renewal of the loneliness she refused, quite, to surrender.

Refused, that is, until the evening Bart Heimrich met her there, and in the cool of twilight, just as the sun went

down, took her in his arms. It shouldn't have made that much difference; they were two grown people, and one kiss by the side of the slow moving water could hardly have mattered so much.

Emma was frightened. For t o weeks after that, she stayed away from the river, and she wouldn't see Bart either. She'd been in love once, and once was enough. There were plenty of men around. This kind of thing was more than she wanted. As she had done a year ago, she threw herself into study and work.

There was still plenty to do. As unofficial specialist in obstetrics, she had been somehow selected to watch over the Ullern creature's pregnancy. She spent more time at the zoo, now, trying to weed out the facts and theories Jo threw at her. He was so sure of his conclusions about the Ullerns that it was almost impossible for him to separate observations from hypotheses, and Emma was alternately amused and infuriated by the problem of working with him. He was a first-rate psychologist, after all, and a careful semanticist . . . where other people's attitudes were concerned. Even about himself, she decided on reflection—except in this one area of most-intense belief.

Was that true for everyone? Was there, for each person, a space where one's own judgment *could not* be trusted? How about herself, and Bart?

Jo was a good psychologist, almost all the time. They were talking for the thousandth time, about the fate of the male Ullern. Jo had achieved a reprieve for the beast, till after the young ones were born, ith the argument that they should at least wait and make sure they had another male to replace it. Emma approved the argument; it suited her tendency to temporize.

"Emmy," Jo asked in a sudden silence: "Has it occurred to you yet that *you* have a long time to live too?"

Her first impulse was to laugh. "Never thought about it much," she said lightly.

"Well, why don't you?"

"I don't know." She was decidedly uncomfortable. "What's that got to do with the price of baby Ullerns?"

"Nothing at all. I was just wondering, most intrusively, about you and Bart."

"Me and . . . what are you talking about?"

"I told you I was being intrusive. It's none of my business. Would you rather not talk about it?"

"I'd much rather . . ." She changed her sentence half-way through; "much rather talk about it, I guess."

"All right then. What's the matter, Emmy? Don't you like him?"

"*Like* him? I . . ." Then she saw he was smiling, and grinned ruefully herself. "All right, so I'm wild about him. But . . ." There was no way to explain it.

"But what?"

"Well . . . it's not the *same*. I can't feel the same way about him that I did about . . . Ken. I don't think I'll ever feel that way about anybody again. It wouldn't be fair . . ."

"Come off it, Emmy. What are you afraid of? If you're sure you'll never feel the same way, what's there to worry about?"

She looked up, startled, and waited a moment to answer, while she admitted to herself that it wasn't Bart she was afraid of hurting at all.

"I don't know. Look, things are all right the way they are. I don't need him; he doesn't need me. Why should we get all tangled up so we *do* need each other? What for? Oh, Jo, don't you see I can't take a chance on anything like that again? I . . . this is a crazy thing to say, but I think if he was married, I'd be more willing to . . . that's not very nice, is it?"

"Nice?" he shrugged. "It's pretty normal. Understandable, anyhow. And just what I was talking about. You've got a long time to live yet, Emmy. You going to stick it out alone?"

She nodded slowly. "Yes," she said. "I am." And with the words spoken aloud, the impossible loneliness of the future struck her for the first time fully. She hadn't cried since the day Ken died; now a slow tear came to one eye, and she didn't try to stop it. There was another, and another, and she was sobbing, great gasping sobs, against Jo's comforting shoulder.

He *was* a good psychologist. He didn't tell her it was all right to cry; he didn't tell her anything, except to murmur an occasional word of sympathy and affection. He stroked her hair and patted her shoulder, and waited till

she was done. Then he grinned and said: "You look like hell. Better wash up here before you go see him."

For a year and more, Bart and Emma spent most of what free time they had together. They had fun, and they had tender happy moments. They understood and enjoyed each other. They might have married, but marriage was a sacred cow still; no matter how much she loved Bart, or liked being with him, Emma steadfastly refused to sign the vows. It wasn't the same as it had been with Ken; she was both relieved and disappointed to discover that. But if she married him, it might get to be the same—or it might not. Which prospect was the worse she hardly knew.

When, occasionally, she still felt frightened about caring as much as she did, there was always Jose to talk it over with, and talking to him always made her feel better. She might have resolved the ambivalence entirely through therapy. Jose hinted at the notion from time to time, but she didn't want to, and he knew better than to push it.

More and more, too, Emma and Jo were working so closely together in the zoo-lab that a therapy relationship between them would have been hard to establish. And Jo was the only really qualified therapist in the colony. The techniques were familiar to all the people in Medicentre, but psychotherapy is not a skill to be acquired in rapid training. Jo had a natural aptitude for it, that was all.

Jo was good to work with as Bart was to love. The important factor in each case was enthusiasm, the ability to participate completely. Emma's interest in the Ullerns differed from Jo's in all respects but one, and that was intensity. She listened to his theories both patiently and painstakingly, believing little and using much to further her own knowledge of the weird biology of the creatures. She was quite content to discard the largest part of what he said, and select the most workable of his ideas for follow-up. By the end of that year, she had begun to recognize, reluctantly, that she was getting good results surprisingly often when she worked along the lines suggested by his thinking. But it took a major incident to make her look back and count the trials and errors,

before she would admit how consistent the pattern of predictability had been.

The Ullern babies had been born in the fall of '92. There were three of them, but it wasn't until early spring that it was possible to determine with any degree of certainty that two of them were female and one a male. Perhaps it could have been determined a little sooner; Jose had managed to get a postponement of the father-Ullern's death sentence once again, until the sex of the young ones was known, and there was some feeling that he, at least, knew for quite a while before he told anyone.

Once the announcement was made, however, there was no further question of delaying the opportunity for an autopsy. The only question now was whether it might not be best to take the older female, and gain some additional information about the reproductive system.

Discussion and debate went round and about for some ten days. It was terminated by the incredible information that the adult male had escaped.

The talk stopped then, because nobody wanted to say out loud what everybody was thinking. You see, it was simply not possible for the creature to make his way unaided through that gluey moat.

If there was any doubt at all in the public mind about what had happened, there was none in Emma's. She was shocked and angry and she saw to it that she had no further talks with Jo in which he might be tempted to confide anything she didn't want to know.

T W E L V E

THE ANNOUNCEMENT, POSTED two days after the Ullern's escape, said simply:

LECTURE

In the Small Hall, 19/5/93, at 20.00 hours.

A report by Jose Cabrini on
the possibilities for direct communication
with the native inhabitants of Uller.

I read it, and couldn't help feeling relieved on Jo's behalf. I might have known he wouldn't risk anything so

unpopular as letting that animal get away unless he had something else up his sleeve. What it was, I didn't know; Jose had never discussed with me any clues he had to the problem of direct communication.

He should have known the Small Hall wouldn't hold the crowd that turned out. Maybe he did know; if so, it was effective staging, when the early arrivals had to move to the Main Hall, and latecomers found a sign directing them there.

Jose began his speech very informally, joking about the size of his audience, with some hoary gags about being unaccustomed to such *very* public speaking. Then his tone changed.

"I'm afraid the news I have for you tonight is more dramatic than it is useful . . . so far. I think what has already been learned will eventually enable us to communicate directly with the natives of this planet, and perhaps—if my estimate of their capacities is accurate—to live on a co-operative basis with them. For the present time, however, my information does little more than answer a question that has baffled a good many of us."

I had no idea what was coming.

"If you will all think back to our first contact with an Ullern," he said slowly and distinctly, "You may recall that there was one particularly puzzling piece of behaviour on the part of the animal—one question that was never answered in the autopsy."

Thinking back was still too vivid. I shuddered in the warm room, and missed the next few words.

". . . attack Ken Tarbell? What gave it the renewed energy to make such a fierce charge, when it was already badly hurt, and was seeking nothing but escape? My own theory at the time was that the Ullern was reacting with what would be, in the human metabolism, an adrenal release, to the telepathically-received information that Tarbell had found a means of attacking it fatally.

"That theory was inadequate. If you think of telepathy as a mystic or metaphysical power, my analysis was *entirely* incorrect. But if you will try to think of it, for the moment as an emanation similar in nature to radio or electromagnetic waves, I was close to the truth.

"You are all familiar with the piezo-electric properties

of the Ullern physiology. You can see it for yourselves in the zoo, even the babies react electrically to certain irritations. Analogizing pretty broadly, one might say that the electrical reaction to stimulus in an Ullern is similar to the adrenal reaction in humans: that is, it is produced by just such irritations as might reasonably be expected to provoke the emotion of fear or anger.

"Now: in a human, the application of such a stimulus can have differing results. An unkind word, the semi-serious threat of a blow, anything on that order, will produce enough of an adrenal release so that the person affected may express his reaction rapidly in expletive, or door-slamming, or some similarly mild expenditure of energy. A slightly greater threat will produce a cocked fist; a little more will make a man strike out. But a really strong stimulus, ordinarily, will not produce a direct counter-action. If a man threatens your life by holding a gun at your head . . . or if you are knocked over by a blow to the belly . . . you will conserve the extra energy of the resulting adrenal release for an all-out effort against the attacker.

"This is, essentially, what the Ullern did. The many irritations to which it was subjected produced a variety of reactions, most of them in the fear-spectrum. The first shot, which failed to hit it, but shattered a part of its armour with shock-vibrations, angered it only within the fast-reaction range, and it responded, without conscious 'planning', by an emission of 'lightning'. Apparently it was unable to place the source of the shot, and believed the shock to have come from the building; so the electrical 'punch' was aimed at the wall.

"Subsequent irritations made it aware of some consciousness on the part of large lumps of carbon which it had previously ignored as being, in all past experience, most likely inorganic, or at least inedible, entities. The idea was devastatingly new and at least as frightening as the actual vibrations the carbon creatures then commenced to 'hit' it with . . ."

There was a murmur of noise through the hall; some laughter, some coughing, much shuffling.

"All right," Jo said smiling, "I'll get to the point now. So far it's all been theorizing and analogy. Briefly, my in-

formation is this: the Ullerns contain, in their quartz-hide armour, crystals capable of sending and receiving radio waves . . . by which I mean specifically that they can exchange information on the same frequency bands on which our radiphones operate."

The sentence was delivered so quietly, it took a moment to penetrate. Then the hall was in an uproar. Jose couldn't go on with the speech until he had answered a hailstorm of questions from the audience.

"What's that got to do with Tarbell?" somebody wanted to know first.

"Emma," Jo said from the stand, "maybe you can explain that best?"

I was a little confused myself. I got to my feet, and said hesitantly, "Ken tried to warn me . . . he phoned me about the Ullern heading our way . . . that's why we came back . . ."

"I suppose the gooks understand English!" somebody roared from the back of the room, and someone else added:

"Suppose they did? Wouldn't even an Uller-beast give a man the right to warn his wife?"

Laughter, and foot-stamping, and gradual quiet as I continued to stand in my place. "Maybe it's funny to the rest of you," I said, "but *I'd* like to know just what Jo meant. So far, what he's said has made sense. If anybody who isn't interested will leave, perhaps the rest of us can learn something."

I was just angry enough, and just intense enough, I guess, to get an effect. There was prompt and total silence. Jo went on.

There is no point in reproducing the rest of the speech here. It was, like most important discoveries, only very briefly incredible. After even the smallest amount of reflection, we could all see how logical the explanation was. The wonder was that we hadn't thought of it before. The same explanation can be found, almost word for word, in the basic biology text on Ullerns. Cabrini said simply, that when Ken used the phone, on a frequency just a little off the personal-broadcast wave-length that particular Ullern was tuned to, the heterodyning effect was the equivalent to it, in pain, of the belly-punch he'd men-

tioned earlier. It was immobilized momentarily, and the next immediate reaction was to utilize the energy thus generated in a life-and-death charge at the source of the intolerable pain. This time it had no trouble locating the source; a radio beam is easier to track than a bullet, if your senses happen to include a direction-finder.

I didn't listen to most of the discussion that followed the speech. I was busy readjusting, or admitting to readjustments. I had stopped hating the Ullerns a long time back, and now at last I had a rationale on which to hang what had seemed like a betrayal.

The attack on Ken was not irrational or unprovoked. In Ullern terms, Ken had attacked first. A silly difference, a piece of nonsense, really, but important to me at the time. It was no longer necessary to keep hating, even on a conscious verbal level.

As soon as I got that much clear in my mind, I wanted to leave.

"You stay if you want to," I told Bart. "I just want to get out of here and do some thinking."

"Would you rather be alone?" He was a very sweet guy. I knew he meant just that; he'd let me go alone if I preferred it, or come along if I wanted him to.

I shook my head. "No, I wouldn't. If you don't mind missing this, I'd like to have someone to talk to, a little bit."

He took my arm, and saw to it that we got out without interference; stopped people who wanted to question me, and pushed through the knots of conversationalists who were too absorbed or excited to notice us.

Outside, it was hot. So close to summer-time it was always hot, but the sun was down when we left the hall, and it was possible to stay outdoors.

We walked down to the river bank in silence, and stood there and I looked around me and let myself know, for the first time, fully, how much I loved this place. It was mine; I had paid for it with the greatest loss I was ever likely to know. And now the loss was complete, because I understood it.

Bart saw the tears in my eyes.

"That son-of-a-bitch!" he said. "Didn't he even warn you?"

"Who?" I didn't know what he was talking about.

"Cabrini. He had no business . . . look, darling, never mind about him. The big thing is, we've got the know-how now. We've got a way to fight them! We can . . ."

"What?" I was sure I still didn't understand. "What are you talking about Bart?"

"Don't you see, dear? Naturally, Cabrini didn't put it that way, but this thing is a weapon . . . a *real* weapon! We can live anyplace on the planet now. If radio waves hurt the things that much, they'll kill 'em too. We can . . ."

"Bart," I begged. "Don't you understand? Can't you see what it means? They're intelligent! We can learn to talk to them. We can make *friends* with them."

I searched his face for some signs of comprehension, and found only indulgence there. "Emma, you are just too good to be true," he said. "And you need some sleep. Come on, I'll take you back now, and we can talk about it tomorrow." He put his arm around me.

He meant well. I have no doubt at all that he meant well.

"Will you please get the hell out of here?" I said, as quietly as possible. I would have said much more but he went.

When he was gone, I lay down on the river bank and pressed my face against the dirt of my planet and cried. That was the third time I cried, and now it was for the loss of Bart as well as Ken.

(Parenthesis to Carla: iv)

Josetown, Uller, 1/11/52

Dear Child:

I am, frankly, annoyed: This story was supposed to be about the generations of women who came before you, and about the early years on Uller. Looking back, I find it is almost entirely about one small portion of my own life.

I think I know what happened. Somewhat earlier in this narrative, I made a statement about the oddity of reversed pain and pleasure in Recall. I suspect that I enjoyed the reliving of those early months on Uller far

more in the telling than I ever did in the experience. From the day Ken died till the day when I wept out my sorrows on the river bank, I was never entirely happy. There was much isolated pleasure during that period: delight in my baby, and fun with Bart, and satisfaction in my work . . . and certainly much more pleasure in knowing Jose than I realized. But all through those two years, life had no meaning beyond the moment. I did not, would not, believe in any kind of future, without Ken.

In the years that followed, there were many hardships and moments of unhappiness and despair, but from that time on, I had a growing purpose in existence. Apparently, I have less need to re-experience the productive years than the others. And of course, there is really very little more that I can tell you. Thad Levine wrote the story of the bitter three years' quarrel in the colony, and wrote it far better than I could. You have heard from me, and probably from a dozen others too, the woe-filled history of the establishment of Josetown. Jo himself wrote a painstaking account of the tortuous methodology by which the Ullern code was worked out, and I know you have read that too.

(I am sternly repressing the inclination to excuse my many omissions by pointing to the date above, and referring to the page number. Time is short now, and the story too long. But neither of these is an honest reason for my failure to do what I planned . . . no more than are my excuses in the paragraph immediately above.)

I had hoped, when I started this, to give you some clue to my own mistakes, so that you might avoid them. There are such striking similarities, Carla dear, between Joan Thurman and myself, between me and you! And on the other side, there is such a pattern of identity between Martha and Adne and Lee. It seems to me there should be some way of braking the pendulum swing . . . of producing, sometime, a child who is neither rebelliously "idealistic" nor possessively demanding of security in its most obvious forms.

It was at least partly in the hope that the history of those who went before you might teach you how to achieve this goal of impossible perfection with your children, when you have them, that I undertook this journal. I hope I

have managed to include more helpful information in it than it now seems to me I have done.

In any case, I see little purpose in carrying the story further. I have mulled over it for weeks now, and have written several chapters about what came after the day of Jo's lecture, and have decided, each time, to leave them out.

There are many things I wanted to say that I've left out . . . little things, mostly, for which I could not find a proper spot in the narration. I could ramble on here, filling them in, but again there is no real purpose in it, except to satisfy myself.

But, reading what I have just written, I realize that there is still much unresolved conflict in my own attitudes. Yes (I tell myself). I should like to see you rear your children to be perfect little happy mediums—and yet I am so pleased, Carla, to see you playing out the rôle I know so well myself.

Perhaps the "others"—Leah and Ariadne and Martha—perhaps they knew some happiness I never understood; but I am certain that they never knew the kind of total purpose in living that has been my great joy. I had a dream . . . I learned it from Joan Thurman. That dream is yours, too, and I'm quite irrationally pleased to think that you acquired it, in part, from me.

Tomorrow you will leave, Carla, and I will give you this film to take with you. When you leave, it will be as a part of the first great experiment with time . . . and like the fuel for the *Newhope*, which has made over the whole life of man, the mastery of time has come as an adjunct to a commercial venture. Joe Prell, if he were here today, would laugh at the implications I see in your voyage . . . but *not* at the possible profits. I . . . I think it is more risk than merited to go to Nifflenheim for new and more uranium. But to go in profitable comradeship with the Ullerns—this is the fulfilment of my own life's dream. And to go as the advance guard of a whole new science—this is the beginning of yours.

If it takes uranium to make the Prells pay for a time machine (did you know that's what you have?—at least the beginnings of one), why let us have enough of the stuff to blow us all sky-high!

Epilogue

I HAVE JUST come back from the ceremonies of the take-off, and I am more annoyed than ever. Now that I have handed over my imperfect gift, I have found out what it was lacking. There is no way of knowing, as I write, whether Carla has reached . . . will reach . . . her destination safely, or whether, if she does, she will arrive (has arrived?) there in a time-conjunction through which she can communicate with us. I can only wait, and hope there is some word.

But I shall assume, as I must, that she is safe, and that some time these words will reach her. The story is yet to be finished, and I found out today why I was unable to finish it before. (I suppose I thought I was too old and too objective to carry any more scars of hurt or hatred from Leel)

Leah Tarbell was born on Uller, and grew up there. She was too young to understand the fury of the debate that preceded her mother's move from Firsttown to Josetown; but she was not too young at all to resent the loss of her Uncle Bart's company a scant few weeks after she had learned to pronounce his name.

Over the next three years, she understood well enough that her mother was somehow in disrepute with the parents of most of her playmates. And at five years of age, she was quite old enough to blame her mother for the almost complete loss of those playmates. Only four other children accompanied the group of sixty-seven "Josites" when they betook themselves, their pet Ullerns, their special knowledge, and their apportioned share of the human colony's possessions to the new location on the 20th parallel that became known as Josetown.

Only one of the other children was near her own age; that was Hannah Levine, and she was only four, really. The two little girls, of necessity, became friends. They

played and ate and often slept together. At bedtime, they were lonely together too, while their parents went off to conferences and lab sessions. And late at night, sometimes, they would wake up and be frightened together, remembering the stories they'd heard in the nursery at home about the Ullerns who lived at the foot of the hill.

She tried to cry about leaving her mother when she was sent back to Firstown a year and a half later, with Alice Cabrini and the two Cabrini children, to go to school. But she didn't really expect to miss Emma; Em was always working, anyhow. Back home, the grown-ups had more time to pay attention to kids.

From that time till she was fourteen, she lived with Alice in Firstown, and she was happy there. When Alice decided it was safe to rejoin Jose in the smaller settlement, Leah desperately did not want to go. She tried every device an adolescent mind could contrive to keep Alice at home. But when it came down to a choice of going with them, or being left behind, she couldn't quite face the desertion of the family she loved as her own.

She went along, and her adolescent imagination seized on a whisper here and a word there to find real cause to hate her mother. She was not blind, as the adults seemed to be, to the fact that Emma and Jo had worked together day after day through the years, while Alice endured long nights of loneliness for the sake of the three children who needed her care.

Lee watched the three grown-ups closely. She heard the inflexion of every word they spoke to each other, and noticed each small gesture that passed between them. In the end, she satisfied herself that Emma and Jose were not lovers (as indeed we had not been since Alice's return). Then she felt something amounting almost to compassion for her mother. She had not failed to observe the flush of enthusiasm with which Emma listened to Jo's ideas, and poured out ideas of her own to command his attention. At the same time she saw how Alice, sitting quietly in the background, pretending interest in nothing but Jo himself, and his home and the children, succeeded in drawing his attention.

She did not understand how her mother could be so

stupid as to try to attract a man by being *brigh*t. She did not even begin to understand the further fact that she could not help observing: Emma seemed to be perfectly happy sharing Jo's work, and letting Alice share his home and his bed. As long as it was true, however, Lee was willing to let Emma go her own strange way.

She was less willing to accept any of the belated affection her mother tried to give her. And Emma's ludicrous attempts to convince her of the importance of the work they were doing in Josetown did not succeed even in antagonizing her. Lee had lived long enough in Firsttown to know how little it mattered whether the code was ever completed. She knew the plans the other colony had already laid down for an equatorial settlement—a settlement which was to follow the extinction of the Ullerns. The agreement between the larger group and the small one had given Jose ten years to make a go of his project. Eight of those years had passed now, and he could hardly claim that making friends with a local group of Ullerns constituted proof of their intelligence. Any animal may be domesticated by one means or another.

All these things Lee knew, and she was not interested in learning any part of the foolishness in which her mother was engaged. After a while, Emma stopped trying to interest her in the work at Josetown, and for a while they got along together.

Lee never thought of the Josetown period as anything more than an enforced hiatus in her life. If by some miracle the settlement continued after the ten years were up, she for one had no intention of remaining in it. When she was seventeen, she knew, she would have the right to live by herself if she chose and she had already chosen. She would live in Firsttown, where her friends and loyalties were.

She stuck to her resolve, even after the message from Earth. Not even the dramatic opening of subspace communication between Uller and the mother system disturbed her tight little plans. Nor did her private opinion of the foolishness of the Josetown project change when popular opinion shifted to favour it. Earth's problems were no

concern of hers, and she saw no reason to give up her hopes or hatreds either one, just because José Cabrini had somehow turned out to be right.

Her strongest reaction to the news from Earth was irritation, because it meant that Josetown would continue beyond the ten-year period after all, and that she herself would have to spend a full year more there than she had expected.

She made use of the time. She started learning the code, and even studied a little Ullern biology. She helped Jo prepare his lab notes for printing in the form in which they are now available, and learned the history of the project while she did it. By the time she was old enough to go back to Firsttown and take up residence in the single girls' dorm, she knew enough about the Josetown work to take a really intelligent part in discussions with the men back home.

As it turned out, Lee was our best ambassador. She had picked up, from Jo's notes, one item of information we had not intended to release just yet. Fortunately, as it turned out, she felt no ties of loyalty to us. That was how the news got out that Jose actually *had* taught Ullerns the use of fire, and it was that news that led to the Conference of 2108.

Fifteen of us went back to Firsttown for the Conference, armed with notes and speeches and films to document our defence. We were somewhat taken aback to find that no defence was necessary; Firsttown was way ahead of us in recognizing the implications of the Ullerns' use of fire. I suppose we had grown so accustomed to defensiveness by then, we simply couldn't see beyond the necessity of protecting next year's work. The people at Firsttown were used to thinking in terms of expansion and utilization of knowledge; they had the engineering minds to put our research to use.

Lee was only seventeen, but her greatest ability, even then, was the tactful manipulation of other people. It was her carefully developed friendship with Louis Dooley that made it possible for Basil and Jose to meet privately before the Conference started, and hash out their ideas.

And it was in that private meeting that the mutual advantages of humans—Ullern co-operation in the Nifleheim venture were recognized.

When we went back to Josetown, it was with the long-range plan already worked out: the further development of the code to the point where we could communicate with Ullerns in the abstractions we were certain they were capable of understanding; they continued work on Ullern biochemistry to determine whether the quartz-to-teflon adaptation would actually take place, as we believed, in the atmosphere of Nifleheim; and the long, long process of persuading the Ullerns that other humans besides our own small group now wanted friendship with them.

That was our part of the job. Back in Firstown, they worked, in communication with Earth, on the other end of the problem: the improvement of sub-space transport to eliminate the mishaps, and make it safe for live freight.

(P.S. to Carla)

IT IS TWO weeks now since I went to the take-off of the Nifleheim *Ark* and stood beside my daughter Lee, watching the whole show through her eyes, and gaining some of the understanding that made it possible for me to finish this story.

We were all together, Lee and Louis and the three youngsters. Carla, of course, was participating in the ceremonies.

Johnny, my youngest grandson, looked at the domed building in the centre of the field, and was disappointed.

"Just like any other building," he grumbled.

Lee nodded automatically. "Yes, dear, it is," she said, but something made her shiver as she said it. It was ordinary-looking, far more like a house than a spaceship. Nothing frightening at all . . . to look at. Yet it stood there, triumphant and menacing, the most impregnable

enemy she had ever met. She hadn't even been able to stay away from the take-off as she'd planned. She had to come: she was Louis Dooley's wife and Carla's mother, and Emma Tarbell's daughter, and they wouldn't let her stay home. She had to bring her other children, too, and any minute now, she'd have to watch the plain domed structure *disappear*.

"Centuries gone, man looked to the stars and prayed," the worn tape intoned. "He made them his gods, then his garden. . . ."

Leah shuddered, and reached for her young son's hand, but he never felt her touch. The magic of the old, old words was wrapping itself around him.

". . . of thought, and at last his goal. We have not. . . ."

Inside the dome was all the equipment for separating and storing the uranium that could be had, for the simple extraction, from the atmosphere of Nifleheim. Inside, too, were quarters for humans and Ullerns to live side by side together. Inside was Carla's bridal home, and beyond the wall that held her bed was the dread machinery of sub-space itself.

". . . reached that goal. This is not a beginning nor an end; neither the first step nor the last. . . ."

Lee looked around at all the others, the mothers who were supposed to be proud and pleased today, and saw the tense fists clenching, the tired eyes squinting, the hands reaching for a younger child's touch. She felt better then, knowing they shared the mockery of the moment.

She stood patiently, listening to Jo's speech, hearing him explain once more how Ullerns could venture forth on the surface of Nifleheim, and actually benefit by the change . . . how changing shifts of Ullern workers could spend an adaptation period on the alien planet, expose themselves to the fluorine that would change their brittle skins to flexible teflon hides, while human hands inside worked the machinery that would process the desperately-needed uranium for transport back to Earth. Lee stood and listened to it all, but it meant no more than it had meant last year, or forty years before, when they started work on it.

Then at last, Carla was standing before her, with all the

speeches and display finished, and nothing left to do but say goodbye. She reached out a hand, but Louis was there first, folding the slender girl in a wide embrace, laughing proudly into her eyes. . . .

Then Johnny, and Avis and Tim, they all had to have their turns. And finally Carla turned to her.

Lee leaned forward, kissed the smooth young cheek, and said, before she knew herself what words were coming:

"Carla . . . Carlie, darling, aren't you *afraid*?"

Carla took both her mother's hands and held them tight.

"I'm terrified!" she said. And turned and left.

THE END

(This short novel will soon be published in a revised version, together with two other short novels, by Victor Gollancz Ltd.)

EDITORIAL—*continued from page 5.*

is the composer's proving ground. "It is naked music," one composer told me. "You cannot disguise your mistakes with noise." It is the repository for the most profound musical statements of Haydn, Mozart, Beethoven and Bartok.

Modern science fiction is stretching, growing, re-examining its conventions. It is trying to approach the theoretical ambiguities of living—which must be solved before the practical ambiguities can be dealt with in mainstream. We are nearing a point where we can judge its best opening attempts a success.

Samuel R. Delany

aid to nothing

p.f. woods

THERE WAS UNREST in the village of the Sussorr. An unrest that had been unknown on Mars for countless aeons. In some inexplicable way, the Tuaranth, the beloved neighbours who dwelt a few hundred miles away, now assumed a bewildering . . . ugliness . . . in the minds of the Sussorr. The flawless dual culture that had existed undisturbed for a longer time than intelligent beings could grasp suddenly seemed to writhe in an alien way.

The Sussorr were frightened.

For many days they had moped about the village, saying little, their minds in turmoil. They had refrained from communication with the neighbouring village for about twenty days, uncertain, almost unconscious of their actions. The High One strode rapidly to and fro, clenching his hands, his violet eyes simmering with uncomprehended emotion.

In the depths of the Sussorr mind, twisted, subconscious patterns struggled into tentative being. For a million million years there had been a slow, imperceptible undercurrent flowing with almost negligible life in the inner mind. So overwhelmingly weak had it been that it had held not the

slightest place in the surface thoughts of the Sussorr. They had been completely unaware of its existence.

But, in microscopic motion, it had been there.

It was a reaction against the Tuaranth.

Now, it was becoming predominant. Weakly, but with amazing rapidity, it was becoming ruler of the subconsciousness. Cunningly, it prepared its assault upon the actions of the Sussorr.

The High One lifted his straining arms in a spasm of internal conflict. His subjects regarded him with sympathy, their eyes reflecting the agony of mental unbalance.

Reason dripped from them like silver drops of rare water.

A vicious word broke from the High One's lips. "*Tuaranth!*"

The village erupted into action. The Sussorr tended to the flying machines parked near the centre of the village, preparing them for flight, adjusting their simple upper structure. They flowed through the village and a little way out of it, carrying large rocks, chemicals and canisters to the flying machines, storing them on the platforms.

The preparations complete, the Sussorr milled around the machines. There was a soft hiss for a moment, and one machine drifted from the ground, hovering above.

The entire Sussorr population, some two hundred, climbed aboard the platforms. Another barely audible hiss, and a second climbed gently to drift waiting with the first. Three, four circled, turned and hovered just above the highest dwellings of the village . . . five . . . six . . . seven.

With slow, crippled ease, the machines swung to the south-west, to the village of the Tuaranth.

Crghutch pointed with a forelimb. "Sussorr," he said.

Bugh blinked lazily in the direction Crghutch indicated and settled his body on the ground. "I wonder why so many."

Crghutch didn't answer, but continued to gaze at the approaching machines. His wide, flat tail began to ripple slightly, and the skin around his eyes contracted momentarily. At length, a hesitant growl rasped his lips, a growl that hardly stirred the sound-membrane within him. "I've

been wondering why no one has been here for so long," he muttered. "Sshoosh should have brought his new picture eight days ago."

"Perhaps he made a mistake and couldn't get it finished in time," offered Btigh, staring intently into the ghegh he was carrying. "Anyway, he's probably bringing it now."

"Somehow, I don't think so. I've been feeling . . . sort of *worried* . . . one, two, three, five . . . why, there are seven! *Seven!* Btigh, why? . . ."

The machines began a slow climb. They were nearer, now, and Crghutch could see a writhing of frenzied activity on their platforms. The telescopic lenses of his eyes shifted as they sought to make out the scene in greater detail.

The machines increased their rate of climb until they were ascending almost vertically. Crghutch let his heavy jaws loosen in wonder. He had never seen them do that before. Surely no one had ever been so high!

He shivered a little, not knowing why. Something was wrong, he sensed it. He tried to shake off his fears, striking the ground an angry blow as if he could do it physically. Then he lay still, his six eyes focused on the aircraft.

They hovered over the village, so high that they were little more than dots to the Tuaranth who lay squinting at them from the ground. The dots seemed to waver a little, and then swelled larger as they began their descent. Down they wafted, until the intricately moulded designs on the underparts of the platforms were clearly visible.

Crghutch trembled again. "Btigh, I . . ."

Btigh was still studying his ghegh. Slowly he took his eyes from it and announced: "I have an idea for a beautiful new ghegh. A four-optional——"

The first rocks fell.

Crghutch gave a wailing scream as Btigh died under the crunching pressure of a toppling wall. He ran to avoid its last fragments as they rattled to the stone-laid floor of the village, and scuttled towards the central park, where the majority of the inhabitants were engaged in painting a new design on the stone surface.

He cowered in fear as a jagged mass of stone crashed onto the roof of the reproduction building. He winced as a crunch told of the delicate stone figures being crushed to

a powder, and then the structure of the building shuddered, and began to collapse inward. The inspiring murals disintegrated into trembling fragments, and he could imagine devices and artworks being smashed helplessly. Regard for his own safety suddenly ceased as heavy, grumbling sobs shook his great frame. The reproduction building, where he had been created, and his parent before him, and every single Tuaranth since the dual race of the Tuaranth and the Sussorr began—destroyed in a moment of rending stonework and sudden dust. Hydrochloric acid seeped from overloaded glands along his back as unbearable grief seized him.

But half the village was crumbling about him, now. The floor cracked beneath his claws and dust swirled about him and stone fragments rattled off his skin as he made his way sorrowfully through the exploding rubble towards the park. They were dropping canisters now, as well as stones, canisters filled with chemicals that blasted in a violent chemical reaction as they hit dwellings or floors of the village.

He lurched over the fragments of an abstract figure that blocked his path and slid down onto the indented strip that marked the limits of the park. There was but one living Tuaranth on the wide space, though several crouched on the outskirts, and a large number of bodies littered the ground. The living Tuaranth was stumbling pitifully, dragging a torn tail. Mercifully, a canister thudded the stone near him, engulfing him in its loud eruption. As the billowing smoke and flame faded, another scar of blistered, torn stone marred the half-completed pattern.

Crghutch lumbered almost unconsciously onto the smooth stone, sweeping aside the scattered fragments. He gazed sadly at the soft-coloured pattern that, blistered by the heat of the exploding canisters, lay like a film upon the continuous stone of the park.

Out of habit, he slid forward on the glossy surface, but a moan of pain lifted his bulk onto his claws. The sharp, broken fragments had slashed his soft underside.

Slowly and mournfully, he swung round his long head to look behind him. The village, which had once delighted the senses of both Tuaranth and Sussorr with its soft

colour shades and gentle shapes, was in ruins. Only broken shards balanced precariously upwards, seeming on the edge of downfall. Rubble lay in jagged confusion, and here and there was a glitter of bright flame and a rolling of thin smoke from the rare burnable material. The only movement was the burning, sometimes a stirring of the rubble as a bewildered survivor moved through the ruins, and an occasional blast of a canister or smash of a destructive stone.

Drifting but a few feet above the destroyed village, the flying machines seemed to be kept aloft by the upward movement of the flame and smoke. Things of great beauty despite their savage act, their task was almost done. As Crghutch regarded them, he could find no explanation for their actions in his tortured mind.

He swung his head round again to regard the scar-scattered plain of the park. In the centre was the decorated top of the great well from where came the precious stone of the village. Unthinking, he lumbered towards it, an undamaged oasis of beauty amid a desert of wanton destruction. He stopped a few yards away, fondling with his eyes the delicateness of the stonework. Hundreds of feet down the well was the strata of stone that for countless millennia had supplied the scanty needs of the Tuaranth and some of those of the Sussorr. In a way, it had given birth to Crghutch's beloved home.

A shadow fell across him. He looked upward, to see the underpart of an aircraft float above. Automatically, he studied the form and colour of it until it was past him. Then he watched the Sussorr aboard as the machine slowed, as though by air friction, above the well. There was something despairing in the movements of the Sussorr, something despairing and pitiful, and he pitied them. But he sobbed again as five of them, straining, dragged a large rock to the edge of the platform and flung it over the side. The well-top crunched under the impact, and white dust sprinkled the surrounding ground.

The craft drifted on, even more slowly; and one of the Sussorr hesitated on the edge of the platform, clutching something in his long fingers. Then he leaped to the ground and ran towards Crghutch.

It was Sshoosh, and he held the picture he had promised. He hesitated again, looking bewildered and confused. Finally, he thrust the picture into Crghutch's limbs and ran back to the machine, leaping up and swinging himself back onto the platform.

To Bungleton's indifferent gaze the Martian terrain, when viewed from a helicopter, was of a particularly drab and unvarying nature. An endless plain of thin dust, with a faint tinge of yellow, rolled listlessly beneath him. Strangely, the light powder was not even stirred by the occasional breezes that whispered round the Martian globe.

But even so, it was better than Earth, or even the thriving settlements round on the other side of this planet. This half of Mars at least was sterile, while Earth festered with humanity.

Bungleton had come to Mars to try to be alone. He didn't like people; nor did he have any great love for human civilisation. It wouldn't be so bad, he thought, if the population was less—say five million—but instead there was not a square mile of Earth that was free from some sign of civilisation, even if it was only a sickening advertisement board. People seethed in millions, swarming about their odious tasks, about their mass pleasures, or just with no seeming purpose at all, all milling and bubbling together like some vile concoction boiling in a cauldron. He had never been able to endure crowds, or the environment of the crowds, and that was why he had fled to Mars.

But in a few hundred years, he knew, Mars would be like that. There would be big cities every fifty miles or so, wide, straight roads connecting them, and lining the roads would be advertisement displays flashing and blaring at the harassed car drivers, while every so often someone would complain about the accidents caused by the distraction. But no one would be daring or powerful enough to stand up against the private companies.

And so these thoughts revolved rebelling in Bungleton's mind, as they always did on these 'copter flights of his. He rode on, soaring up and swooping down in moody pleasure, and leaned back when he felt like it to watch the rotor blades shimmer in visible movement. People laughed at

him when he did that, so now he never indulged in the pleasure unless he was alone. But he loved that silver shimmer. . . .

He came forward to face the controls again, and swept the 'copter downwards in a rush that churned and broke the air. Down . . . down . . . down. . . .

He slowed just a few hundred feet above the Martian dust and cruised along, enjoying with a smile the memory of the exhilarating downward fall. The controls were lax in his hands as he went limp in his chair and glanced idly through the transparent walls of the cabin.

To his left, midway between himself and the horizon, a jagged break in the otherwise eternal plain imprinted itself forcibly on his eyes. He hovered the 'copter for a time, scrutinising the rugged little spot. It had a suggestion of infinite colour about it, a promise of subtle shades and variations . . . strange that it should affect him like that.

He swung the 'copter round and headed in the direction of the spot, keeping his eyes fixed on it as if he was afraid it would vanish if he once lost sight of it. What was it? Underneath the dust was a layer of rock, but that was of the same colour as the blanket of dust. He would easily have dismissed the spot as an outcropping of rock if it hadn't been for the colour.

He thrilled as he thought he could distinguish certain shapes. When he was nearer, however, he could see that the shapes were irregular and battered—but it still didn't look natural. Oh, suppose he had discovered traces of some ancient civilisation!

Why, the place looked just like some old ruins!

He was soon hovering over the top of it, soaking in the sight with his eyes. It was a collection of ruins. Once, he supposed, this had been a beautiful place, though exactly what it had been he didn't know. It wasn't very big for a city. It would be about the size of a very small Earth village, but much more compact, and somehow he knew far more beautiful, though judging from the colour schemes and shapes that could be picked out from the ruins, it would not be any accepted standard of beauty.

He stiffened abruptly, his hands impulsively clenching the controls so that the 'copter bobbed in the air.

Had he seen . . . a movement? A shifting in the rubble? But what could move here? Surely not . . . !

But as he jolted the 'copter nearer in his haste, he was sure of it. He had seen living creatures, moving in the remains.

He landed just outside the ruins and waited for a full minute of indecision before carefully sealing the oxygen helmet over his head. Fear laid a caressing hand over him as he stumbled, almost reluctantly, out of the 'copter. Then he fought it off in a savage attack and walked with the mincing steps required on Mars towards the ruins.

They were waiting for him in the broken rubble, patiently resting their huge weight on the ground. They fleetingly reminded him of pictures of prehistoric monsters he had seen, but a moment's inspection revealed an altogether different appearance. True, they had a cumbersome and even ugly bulk, but they carried it with an odd grace, even though they had a habit of slithering along a smooth surface, and spreading themselves out on the ground with a relieved snort, as if their five short legs soon tired of supporting them.

The leader groaned to its feet and lumbered towards him to tower over him and gaze down with a set of brilliantly yellow eyes, golden splotches that swelled and withdrew in fluid motion.

All trace of anxiety flowed from Bungleton as he returned the gaze, and beheld the head of the Martian. Those brilliant but gentle eyes, set at the top of a head that tapered down to a peaceful, camel-like appearance, reflected flawlessly a mind of quiet sanity and benign regard. Surely never an unpleasant thought or evil glimmer had disturbed the tranquillity of that peaceful head.

And yet—the habitat of these creatures, as he supposed it was, had been smashed.

A spear of frustration flashed through his thoughts. How could he even begin to set about the arduous task of effecting some kind of communication between himself and these Martians?

The leader of the group swung its eyes from him and growled—it was just a low growl—to the eight or ten behind it. There were a thousand minute crashes of stone

as one of them clambered through the ruins and disappeared behind a mass of crack-riddled and scarred artwork. A few moments passed, in which the Martians stood motionless except for a faint rippling of their wide, flat tails, and once more came the sound of dislodged rubble. The Martian returned from his quest grasping a hemispherical object in a multiple claw arrangement set at the tip of its forelegs. Somehow, it managed to lumber along on all five limbs yet still hold the object perfectly steady, its long claws writhing round it as its legs stumped forward.

Bungleton stared at the object inquisitively. It was heavily carved on the outside with weird, crawling designs. It was hollow, but he could see only enough of the rim to give him an almost unbearably tantalising dread of what lay within the glow that shone inside but didn't seem to venture out, stopping abruptly at the rim.

His eyes tore away from the opening and explored the carvings on the bowl-shaped exterior . . . but . . . *the object had changed shape*. As Bungleton's view of it shifted when the Martian moved, it took on an elongated appearance, changing as the view in a mirror might change when the mirror was moved. Bungleton watched fascinated as the object was handed to the leader, dancing fragmentarily into a thousand different shapes in the process.

The leader held the thing before him, just below the level of Bungleton's head. It blurred into a million forms, but he noticed that the rim remained static, about two feet in diameter. He let his head drop, and stared into the thing.

He was staring into infinity.

The inside of the thing seemed to have no bounds. It was a vast endless space, illuminated by a heavy glow that ceaselessly shifted through the spectrum, but which continually reverted to heavy, fluid gold. Moving through the eternity, as if swimming against the impediment of an iridescent liquid, were slowly flowing shapes, rolling through the shifting light in purposeful motion, their movements unified in the formation of inconceivable patterns, incorporating every imaginable shape, every possible blend and hue of the spectrum, and hues that Bungleton swore

were beyond the visible spectrum, yet his eyes comprehended them . . . almost. . . .

Bungleton's senses strained as he strove to understand the eternal pulsations. But he could not. It was alien, conceived by an alien mind, and fashioned by alien means. His human mind had never been intended to encounter such a conception, and without the necessary equipment fought desperately to escape it. Involuntarily, his eyes began to hide behind descending lids, but he forced them brutally open, and bullied his mind into considering the swelling forms.

The strange terror, the alien thought-forms comprised in the shapes, sent him into a trance, where he was fully conscious, but engulfed in the eternity into which he gazed. The waving motions, the heavy, fluid light and flowing, merging colours seemed to be translating or bringing into being some meaning, some sensible thought patterns or message that was received by his subconsciousness and assimilated into his whole mind. There was a straining in his being, a squeezing and pulling, as if his brain was being forcibly moulded to a new shape, a new existence, being made to beat in sympathy with the conception within the boundless *thing*.

There was a slow wrench, and then there arose—meaning.

Hesitant, even something akin to shy, it was vaguely in the form of a question, but it was weak in its demanding qualities, and even to his adjusted mind it was incomprehensible. It gave him a strong impression of being little more than an introduction. He treated it as so, and desperately tried to return some intelligence to the Martian. He took what seemed to be the only possible course, and tried to engulf himself in the strange universe the . . . receptacle . . . opened up. Ah! The forms seemed to respond, but only slightly. He spoke, and they responded more, wavering at his words. Meaning was stronger when crystallised into words, he realised.

His head drooped a little. His being now existed beyond the rim of the many-shaped thing. For him there was only a dim awareness that somewhere, lost in the forgotten dimness of another universe, other states of existence could

be. He knew that once there might have been a different type of cosmos from the one he now inhabited, with stars and galaxies and space where no living thing could normally venture. He felt something like amusement that such a crude conception could survive even its own time scale—and then he realised that it couldn't. Slowly, clumsily, it was dying.

But here, in this new existence of his, life was welcome everywhere. Life was everywhere, was everything.

And he was life.

His identity became submerged for an ecstatic moment, and then he was an individual again, like a man thrusting his head above water. But not quite an individual. He felt his soul drifting and eddying under the force of the light that was not light, but was *life*. He moved of his own volition, swimming, flowing through the heavy glow. With a heave, he thrust himself out towards golden infinity, and kept on moving endlessly, although he felt delaying pressure against him. Here, the normal laws of motion and mass could be violated.

He stopped. He had yet to complete the communication between himself and the Martian. He concentrated once more upon the form and movement of this strange universe. He found he could control them quite easily, and that, under his direction, they crystallised meaning into an unmistakable form. He felt also the presence of the Martian, aiding him, guiding him. The shapes swirled, pulsed, glistened with living colour, and then he was speaking, speaking, not with his voice, but with the very structure of the cosmos in which he lay. The Martian also was speaking, answering his initial outburst of speech, the bursting explosion of inquiry that was the first manifestation of his new ability.

Then, with a bewildering sense of calmness, his viewpoint began to dissolve. The shapes quivered as his position changed, and the gold glow shimmered into oily movement, flowing into merging colour as if in token of its knowledge of what was taking place.

He was standing outside the receptacle, his head bowed to gaze into it. He felt conscious of the Martian gazing from above, and of the others patiently waiting, and he

sensed the ruins about him, broken and humbled. But he did not let his mind wander from the alien universe from where he had just come. The point of contact had been made, and there was no longer any need for him to remain there. He could still speak to the Martian by way of the receptacle, falteringly and imperfectly, but no less so because of his altered position.

He took advantage of the Martian's docility and became the leading factor in the conversation that followed. He asked the questions, demanded knowledge of the Martians, and of the ruins.

The Martian told him of the village as it had been, and how its inhabitants had lived. Of the art, and the beauty that had once been, and now was not. And Bungleton listened, absorbing a picture of simplicity and wisdom. A conception flowered within his mind. A village, built to look beautiful. Built not to attract, not impress, not to advertise, but simply to be pleasing to the Martian senses. A people, few in number, living a life of contentment; not lazy, for they had interests, and developed them; certainly not backward; could any backward or primitive race have produced the device Bungleton was now using? Was not life created in it?

The picture matured, and Bungleton recognised in it a realisation of a dream he had unconsciously harboured and tended for thirty years. It was the opposite of all he had hated, the essence of all the non-existent—to him—things he had loved. Here, a little spot on the yellow expanse of Mars, was his dream.

And the Martian told of the others, how they had come and smashed all with their big rocks and their explosives, until everything was like it was now, devoid of its old beauty.

Bungleton lifted his eyes from the communication device and looked at the ruins. They were dead, now, dead as the dust that surrounded them; but once they had lived, and breathed their alien beauty. They had been *murdered* by a race that was probably not above the level of degrading humanity. *Murdered*. Hate coursed through his veins and washed tolerance from his brain.

"These others," he asked, "what are they like?"

The shapes flowed. "... Like you ... but different ... larger ... different. ..."

Hah! Humanoid. They were even roughly the same shape as their brothers in damnation.

Something else occurred to him. "This attack—how long ago was it?"

As an answer there came some time measurement that conveyed little to him. He received the impression, however, that several terrestrial weeks had passed since the incident. At any rate, the blood was still red on the hands of the Humanoids, so to speak.

Now, determination controlled him. "Where is this other village?" he demanded.

The Martian turned its head and pointed it in a northeasterly direction. "... Over there. ..."

Bungleton realised the futility of trying to extract any idea of distance from the Martian. He took a compass reading. "I will help you," he proclaimed.

"... We do not understand ... why ... the others destroyed. ..." The Martian was struggling hard to tell Bungleton something, and was failing. There was the faintest hint of some binding link with the Humanoids, and a strong atmosphere of bewilderment. Bungleton's mad rage drowned any interest in it.

"I'll deal with the others. They won't interfere with you any more."

"... Don't ... harm them ... must not harm them ... or ...?" The meaning trailed into confusion.

Bungleton stood puzzled for a moment. Then he laughed. "Don't worry," he said. "I won't."

He turned, and trod the rubble to the 'copter.

The distant sun, as if weary from the effort of shedding its weak load of light and heat, was crawling towards the dusty harbour of the horizon. Crghutch watched it, appreciating the semi-black twilight of the extreme East, and the gentle, smooth sweep to the thin brilliance that the slumbering sun cast in the West. The eternal plain seemed but a mirror to the gradated sky.

Crghutch turned to face the village once more, and noticed the crude play of shadow among the ruined rem-

nants. Before the attack, he remembered, there had been specially-built shapes to capture the twilight shadow, and bring it into the realms of Tuaranth-Sussorr art, fling it into gaunt forms of dusk. But that was all gone, now. Gone in one savage impact of incomprehensible hostility.

No rebuilding had been undertaken since the attack. The few survivors were still stupefied, driven into hopeless apathy by a disaster beyond their reasoning. No more had been seen of the Sussorr, and no one had been able to summon enough courage to visit the Sussorr village.

Thirty-seven Tuaranth, cowering on the edge of insanity.

But how could he have explained to the Man through the ghegh-tg'ran? He had tried, but conversation was weakly linked through the device, and communication of abstract matters bordered on the impossible.

The Man had promised to help them, but how did it propose to do so? Crghutch shivered. He felt as he had done just before the Sussorr attacked, but this time the feeling was stronger, as if the small flower-spore had now developed into the giant shkin plant, any moment about to experience the final climax of its life-span.

He shivered again, as he had done on that other occasion. The Man had made him a little afraid as he spoke to it. He had sensed a difference from himself, a radically different reasoning. But the Man had obviously wished very much to be of assistance, and Crghutch was glad of that. However, he was still worried about what the Man intended to do. He still didn't know what had made him beg that the Sussorr shouldn't be harmed. Had the Man hinted that he would harm them? Perhaps Crghutch had sensed it through the ghegh-tg'ran. Whether he had or not, the thought had roared in his mind, and he had been shocked and surprised that he could conceive such a possibility. Still, it had made him all the more anxious to convey to the Man the impossibility of the situation. But the task had been doomed before it was begun. The ghegh-tg'ran could not be expected to carry such complex meaning. How could the Man be expected to understand that the races of Tuaranth and Sussorr were in reality one? That this had been so since racial memory had begun, and that the one could no more exist without the other than Crghutch's

body could function without the direction of his motor nerves? If one race should die, then the other must inevitably succumb to a state of irrationality and unawareness, as one half of Crghutch's mind would should the other half suddenly become paralysed. Even now, his mind had been grasping with desperate claws at the last few slippery drops of sanity, trying to maintain a hold under the force of an overwhelming blow. Eventually, he knew, the claws must relinquish their claim and fall apart, to let sentience flow into the dry dust. With the position between the Tuaranth and the Sussorr in so insane a position, insanity must reign.

And his reasoning mind felt death approaching. Unless the Man could find the reason, or fault, for the attack, and cure it, then the infinitely old race of Tuaranth-Sussorr could already be regarded as part of the ruins that cowered as if in memory of their past pain.

Crghutch poised in his clumsy gait towards the village. His head reared to the skies, and his listening cavities extended themselves into wide, protruding cups set behind his golden-gleaming eyes. A faint whirring was whispering through the air towards him, barely stirring the thin atmosphere.

It was the Man's flying machine, with the whirling blades and the bright glitter. In the daylight it had shone the sun's brightness to advertise its glory, but now it was no more than a dark glimmer among the stars.

Crghutch cast a glance to the last vanishing glow of the sun's rays, flickering on the horizon, and shivered once again, trying to fling from him his unaccountable dread. Suddenly, he feared the Man's coming, and wished that he might never have to speak to it.

But he knew that he must do so. Some strange sense told him that the Man had already acted. The thought made his mind reel, his sanity stagger. He was afraid.

He shuffled to the spot the machine had chosen for a landing place, and flinched at the blast of knife-air the busy blades flung at him. He took a firmer hold on the ghegh-tg'ran he carried, and backed away a few feet, out of the path of the shining canopy.

The machine touched the dust. The blades swung idly,

as if for their own amusement. There was a shadow of movement within the transparent front of the machine.

Suddenly, light, brighter than the midday sun, struck his eyes. The flyer was outlined in brilliance. Crghutch's eyes contracted and writhed in discomfort. It took several seconds for him to adjust his sight.

The Man was climbing out. It leaped from the machine, its feet scuffling up a small cloud of dust that glowed like the Milky Way in the flyer's light.

Crghutch crept forward, the ghegh-tg'ran held before him.

As best he could in the low gravity, Bungleton swaggered towards the Martian. A grin commanded his lips, and his eyes shone with the glory of triumph. Ah, triumph! Hate was triumph, washing great tides within him now, even after his vast surge of released emotion. Bewildered Humanoid cries echoed in his ears, bringing pleasure, the hot pleasure of revenge. Smoke swirled before his eyes, and stone rended in his enjoying memory.

The communication device was before him. He knew how to use it now.

He laughed. "I promised I would help!" he exulted. "You have no troubles now."

". . . You have diagnosed . . . the fault? . . ."

Bungleton grinned again. He had already worked this out. These creatures abhorred violence. They could not even entertain the thought of their most hated enemies being hurt. Why, they had made him promise not to hurt them! They probably didn't realise that it was the only solution, the only way to their angelic peace. He would have to tell them, of course. They would reconcile themselves to it once it became known.

The Martian seemed worried over his short silence. ". . . You . . . have not . . . harmed . . .?"

Bungleton leered into the communication device. "Hurt 'em!" he roared. "It's the only way. The only way! Half a ton of high explosive. That settled 'em! You don't have to worry any more. I made sure they were all dead before I left!" He spat. "Bastards!" Had there been an insult stronger to his mind, he would have used it.

Crghutch shrank back, horror agitating his skin, distending his eyes. Within the ghegh-tg'ran meaning surged at him with a distinctness that carried with unbelievable detail the original intelligence that was its driving force. The Sussorr village crumbled in a single blast. Sussorr withered in white flame that gouted from a machine with a shimmering canopy.

Crghutch half-dropped the ghegh-tg'ran to the ground.

The claws of his mind clutched uselessly. Sanity flowed through, sliding from their grasp.

Screaming, Crghutch ran into the night.

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three short stories by thomas m. disch

I. the contest

"NO."

"You didn't let me finish."

"It's still *no*."

"But I don't want money. . . . I just wanted to talk."

"Talk to yourself."

"I can walk as fast as you. Unless you call a policeman. . . ."

"If you're hustling, if you're selling something, even if you want a cigarette—No."

"Let's pretend I'm human."

"We would have nothing in common."

"Consider me a curiosity then: a part of the street, a mobile artifact. Already, you see, I have adopted your style. People passing will suppose we are discussing a matter of commerce, military secrets, commonplaces."

They walked together before the Racquet Club and were mirrored in the glass façade of the Seagram Building. Beneath their feet, sewers flowed silently into the sea.

By a curious chance, the two men wore identical suits. From the upper stories of the Pan-Am Building, they were scarcely visible: all suit seemed identical from those heights.

The younger, less garrulous man stepped on a dog turd and grimaced. His companion smiled. "To pursue the metaphor," he said *à propos* this new unpleasantness, as though it had been a parenthesis in his conversation, "some poet—Goethe, I think—said that architecture is frozen ordure."

"Architecture is the empty spaces in between."

They stopped and considered these empty spaces. Light, sound, electro-magnetic waves, and orgone energy contested for their attention. Somewhere, a defective toaster sent out signals to airplanes. Every five minutes a retarded child was born, but elsewhere cybernetic machines were being assembled at a much faster rate.

The elder man continued. "We could tell anecdotes. Play games. Join contests. If you still worry about money—look: fifty, sixty, seventy dollars, and these are credit cards. Which means that I've won the first contest, eh?"

"I hadn't joined."

"You want us to have nothing in common, but there is in each of us a certain residue of Christianity. We have read Dostoyevsky. We can, if we wish, feel exquisitely guilty over a number of things we have not done. We disapprove of genocide and, perhaps, bomb testing."

"That should be enough of a sop for the residue. But I concede: you may tell an anecdote. On one condition: if at any time you falter, you have lost. You go away."

"When your turn comes, the stipulation holds."

"Begin then."

"Once I knew a girl. She's dead now, killed herself. Not on my account, of course, although we were in love. No, no—suspend your judgment a while yet; this is an anecdote.

"It was in the early Fifties. You wouldn't remember them too well. I was the superintendent of an apartment house on East End Avenue. My responsibilities were few, and most of them I had sub-let, as it were, to my staff of doormen, janitors, and cleaning ladies. I hadn't enjoyed such leisure since leaving the Army.

"I met her at Union Square. In those days, the ghosts of old radicals had not yet deserted their soapboxes——"

"A banality. Watch yourself."

"Old men, strident, defeated, observed, like lobsters in a restaurant window, without fear of personal guilt, sometimes even with a distant compassion—although that is not necessary, A pretty metaphor, the lobsters?"

"Continue."

"For my own part, I pay no attention to politics, but even the unaffiliated can feel the presence or absence of those tensions. No, I don't mean the bomb. It's only your generation that observes everything through a gun-turret."

At 46th Street, they turned toward the East River. Tourists' cameras blinked at the vastness of the city; 12.05 exactly displaced 12.04 and 50 seconds. The toaster ejected two crisped pieces of rye bread, kept fresh by minute traces of formaldehyde. Steam rose mysteriously from the perforations in manhole covers. The elder man picked a ball of lint from the shoulder of his companion's suit.

"She was listening to one of those vanished ghosts, unable to lose herself in the sparse crowd."

"The lonely crowd?" his companion asked mockingly.

"The sparseness of the crowd allowed us to see each other. She half-raised her hand as though to greet me—no, as though she were identifying herself by a secret sign, a gesture of complicity. Then, she reconsidered. She must have wondered if, instead of a fellow-agent, I were an *agent-provocateur*."

"A Communist!"

"Nothing so gross. *She* was unaffiliated, I am sure. But she was in advance of history. She was terrified of the F.B.I., of French spies, of traffic cops, of sailors, of the Mafia, of simply everyone."

"But why?"

"She was impressionable. I introduced myself. She suspected my motives, but then all motives—the very idea of a motive—aroused her suspicions. She consented, at least, to have lunch with me."

"And, then, an affair of the heart?"

"Such as it was."

"Perhaps she needed to compromise herself."

"When she visited my rooms (for she never allowed

me into hers) it was only after taking the most devious precautions. She was followed everywhere, so she claimed. She whispered—so that her voice would not be taped. She was afraid to sleep, for fear I would, perhaps, rifle her purse or notify confederates. She admitted all this freely, and yet I don't believe she ever trusted me, even then. She always believed that I was leading her on to betray something."

"What?"

"That she would never reveal. She committed suicide before she could tell me. The curious thing happened long afterwards. An F.B.I. man came to question me about her. I assume he was from the F.B.I., but he might equally well have been a spy posing as a G-Man. I would not have known the difference."

"And what did you tell him?"

"All that I knew, although I doubt it helped him. He seemed old enough to be her father."

"Perhaps he was."

"I didn't overlook that possibility. I didn't refer to the intimacies of our *liaison*. I pretended to friendship, but I did not confess passion."

"Your story undoubtedly has a moral."

"That what allows love still to exist in our society is precisely its totalitarianism. We made our vows under the threat of torture."

"I'm surprised she didn't prefer a lobotomy to suicide."

"Ah, she was afraid of doctors, too."

All along the street, the store-fronts defied the designs of architects made manifest in upper stories. Everywhere one looked, there were infinite, unknowable ramifications; nexuses, relationships, tangents. One had no choice but to ignore them.

The younger man stopped to look in a shop window.

"Now it is your turn."

"I've heard all I need to," said the younger man, who was, of course, a secret agent. As a token of his love, he shot M—— twice through the heart, through, that is to say, the left side of the chest. The two shots seemed to be in code.

2. the empty room

GREY SLICES of plaster curled down from the low ceiling. Thadeus laid his hand on Diane's woolly hip. "Do you like it?" he asked. Her hip shrugged.

The linoleum represented a large basket-weave. The warp and the woof were of two colours of tan—straw and mustard. A yellowed sink drooped from the wall.

"I don't think we'll do much better than this," he said.

"No," she said, uncertainly. She twisted away from him and walked to the open window. Smiling, he watched her and pretended that she was smoking a cigarette. Her exquisite hair, blonde as lemonpulp, stirred in the delicate breezes.

Within the wall, mortar crumbled, and fell with a rattling sound. "We'll keep a look out for a better place, of course," he said.

She was twenty-seven years old, or twenty-six. Except for a single summer working in New Jersey, Diane had lived all her life in New York. "We'll buy chairs," she said. "And Nathan can give us the convertible sofa he promised us last week."

He nodded eagerly.

"And you can have another set of keys made," she went on, listlessly.

"For you," Thadeus said.

"My set of keys," she said. "It will seem very real then."

"It's only temporary," he assured her again. A lie, of course—but told more for his own sake than for hers. At forty-eight, unskilled, he wasn't apt to find a better job than he had now.

Thadeus rented his brain, on a temporary basis, to small companies that couldn't afford full-time cybernation. He was, by analogy, a vacuum tube.

Diane drew a face in the grime on the window.

"Who is that?" he asked.

"You," she said. "Or me."

Thadeus opened the door of the small toilet. The enamel base was capped with a black plastic cover. "Somehow," he said, reflectively, "I always expected something more . . . of life."

"Yes, I thought it would be more fun," Diane said. She took off her coat, rolled it up, laid it on the linoleum. Then, sitting on the rolled coat, she began to remove her shoes.

A song floated in the open window, like smoke. Thadeus swore and slammed the window to.

"More meaningful," Diane went on.

"Is it *our* fault," Thadeus said.

"No," said Diane. Then, after a while, "I don't think so." She took off her furry stockings. Her bare legs were red with goosebumps. He imagined her lying in bed, a single, long, white leg sticking out from the black sheets. He helped her unzip the back of her dress.

"Do you really love me," she said.

"Oh yes," he said.

She stood up, and he helped her pull the dress over her head. "How do you *know*?" she said.

"I fell in love with you the very first time I saw you."

She nodded. She took off the paper brassière and pantilettes and handed them to him. He flushed them down the toilet. She took a new set out of her purse. She said, "I'm not sure that I love you."

"That's all right," Thadeus said. "As long as you're with me."

"Are you afraid to be alone?" she asked.

"No," he said.

She wriggled back into the dress. "I wish I could afford some nice new clothes."

"You look very nice in that dress," he said.

"Thank you," she said.

One of the larger pieces of plaster fell from the ceiling into the sink, exposing a patch of lathe and wire. Thadeus swore. Diane said, "We'd better ask the landlord to do something about the ceiling before we move in."

Thadeus nodded, knowing already, however, that it was a hopeless task.

Diane sat back down on the rolled-up coat and pulled on the stockings of synthetic white fur. "It must be a very old building."

"Listen," he said. "The water still hasn't stopped."

"Jiggle it," she said.

He went into the tiny bathroom and jiggled the chain. The water stopped. Diane had left the black plastic lid up, and he looked into the clear water of the toilet bowl. He imagined a very tiny person (in his fantasy he did not differentiate between male and female) swimming in the tiny pool of water. Then he imagined how, when the toilet was flushed, the tiny person would be sucked down into the pipes. He tried to imagine what would happen next, but couldn't.

"I'm ready," Diane said.

When he came out she was already back in her tweed-type coat. He kissed her. "Do you love me?" she asked, glancing at him sideways.

"Oh yes," he said. Then he said, "Well?"

She said, "Well what?"

"Shall we take this place or go on looking?"

"Let's take this place," she said. "I like it."

"It's only temporary," he said. "And once it has a fresh coat of paint, it will be a lot . . . nicer."

"Do you have a pill," she said.

He gave her one of the yellow pills. She shuddered.

"You know," he said, walking to the door across the straw and mustard floor, stepping only on the interstices of the basket, never on the warp or on the woof, ". . . maybe I am."

"Maybe you are what?" she asked, still shivering in her woolly coat.

"Maybe I am afraid of being alone."

"Of course," she said.

When they had left the room, the room was empty.

3. the descent of the west end

WHEN THE SHIP began to sink, Mrs. Neary was in her stateroom, reading, from his palm, the destiny of a young Aryan cabin steward. "Here, you see, the lifeline is interrupted," she informed him. "You will die young."

"Ja?"

She sighed, fondled his short blond hair, reflected: "Ah, we never know when our hour will come. Tragedy is just around the corner, and the sea . . . the sea is a cruel woman." Playfully, she dug her sharp nails into the tender flesh of his opened hand, interrupting a little more his lifeline. "*Ich liebe dich*," she susurrated. "Let us, as the poets say, gather rosebuds while we may. Don't deny the springtime in your heart."

"Ja, aber ich muss gehen."

The steward believed what Mrs. Neary had told him of his destiny, for she was seventy years old and looked rather like a gypsy in a Strauss operetta, and he was young and fatal. Nevertheless, there are limits, and Mrs. Neary was certainly one of them.

"Oh, no, *mein Liebchen*," she moaned. "Don't go, don't leave me. The night is young, and you're so——"

A knock on the door prevented Mrs. Neary from continuing: it was Mr. Neary's knock. "Darling," he announced, "the ship is sinking. Come see."

"I'm busy, love," Mrs. Neary shouted through the door, while she helped the steward hide in an empty trunk kept ready for just such emergencies as this. "And my hair is in a terrible mess." Her hair rested on the bureau, waiting to be combed.

Mr. Neary—or Alfredo, as his friends in Milan called him—returned to the ship's bar, where a world-renowned

Irish poet was reading the opening chapter of his first novel, a trilogy that had recently been adapted to the stage. Now, the famous poet was sailing to Manhattan for its première, or was, at least, under that impression. Alfredo had to mix his own drinks at the bar, for the bartender and the customers had gone to the lifeboats.

"Here are words," the poet read, "two words, one, perhaps three words, yes, just three words, three words exactly, all together, first one word, the first word, and then another, and then, in a little while, the last. . . ."

"The last word?" Alfredo asked of his Rum-and-Cola, with hope.

". . . The last of three, the third, all three words together in a space, here, in this space, filling it, beginning at the edge of the space and extending across a middle distance to another edge, not yet apparent. . . ."

While the poet read these words to himself and Alfredo, who, though Italian, lacked an education in the classics, the navigator argued with the captain of the *West End*, a man no longer young but not yet old, who had commanded a destroyer during one of the recent wars. The destroyer had been sunk, much to the captain's dismay, by a myopic Kamikaze pilot, with all hands on deck. "Sir," the navigator began, choosing his words carefully, "the ship is sinking."

"Yes, yes, I know—the ship is sinking, very funny. An iceberg hit us perhaps? And the engine-room is flooded, the boilers are ready to explode? There aren't enough lifeboats?" Though not himself Jewish, the captain possessed what might be called a Jewish sense of humour.

"No, sir—another ship."

"Another ship what? Speak to the point."

"Another ship hit us, sir. We're sinking."

"Well, that's a change. Last week it was an iceberg. The week before that, another iceberg. You'd think the *Titanic* was the only damned ship that had ever sank. Or is it sunk?"

"Sunken, I think, sir. As in 'sunken treasure'."

The captain turned his back on the navigator and returned to the newspaper he had been reading.

"Just come to the bridge and see for yourself. Please!

"We're sinking!" the navigator sang out, although he did not actually sing. "Run for your life!"

"Wolf! Wolf! Wolf!" the captain mocked. "You've cried wolf once too often. Let it be a lesson. Now, don't bother me. I'm reading the *Philadelphia Enquirer*. Go tell the telegrapher, if you must have your little joke. He'll fall for anything."

The telegrapher, busy transmitting the poet's speech to a newspaper syndicate, just which news syndicate cannot be revealed at this time, had no time to listen to the navigator. "Don't bother me!" he snapped, as his fingers tapped out, in dots and dashes, the poet's message: ". . . to another edge not yet apparent, apparent to whom, to me, for instance, don't bother me, not yet apparent to me, looking at the edges of the words that are here, all together, filling this space, in rows, one above another, and another below that one, just as the words themselves go on, one, then another, with still others on either side of those two, so that I am able, looking at the words, to look either up or down, to the right or to the left. . . ."

The earphones went dead, for several tons of salt water had just flooded the ship's bar, killing the poet and Alfredo, and breaking the telephone communication to the telegrapher's cabin.

Mrs. Neary, meanwhile, was having difficulty with the catch on the trunk in which she had concealed the cabin steward. It had locked by itself, and Mrs. Neary couldn't find the key, having carelessly let it fall into four inches of brine on the floor of her stateroom.

"*Ich muss gehen!*" the attractive young steward was saying over and over, in a rather hysterical manner, banging his fists at the same time on the sides of the sturdy trunk.

Mrs. Neary decided that she was wasting her time looking for the key and went out to the deck, forgetting, in her anxiety, to don her hair, which lay on the bureau, its luxuriant curls blowing about in the fresh sea breeze that had entered the cabin when Mrs. Neary opened the door.

It was a beautiful afternoon, the sort of afternoon that makes an ocean trip so rewarding. The air was warm, the sky unclouded, and the sea as still as a mirror, despite the breezes that blew playfully through her hair.

"What a beautiful afternoon," Mrs. Neary thought. "I wonder where Alfredo is. He could help me with the trunk."

Alfredo was floating languidly three feet from the ceiling of the ship's bar, drifting past islands of pink light (the lighting fixtures were recessed into the ceiling) that softened and flattered his Italianate features, features already soft and often flattered. Pages of the poet's manuscript could be seen (had there been someone there to see them) bobbing about on the water, one, and then another, up and down, and all together, like the petals of an oversized flower floating on the languid waters of some blue lagoon on some tropical isle. The poet, however, could not be seen (had there been someone there unable to see him), for like a submarine balloon, or like the seaweed at the bottom of the lagoon already described, he was washing about beneath the surface of the water, tangled in the wires of the microphone.

The receiver in the telegrapher's cabin dotted and dashed: S.S. WEST END COME IN, S.S. WEST END OVER PLEASE CONTINUE TRANSMITTING SPEECH OF WORLD-RE-OWNED POET OVER S.S. WEST END COME . . . And so on.

The telegrapher was desperate. This was a period of national, even international emergency. His failure, however inadvertent, to convey the poet's message to the news syndicate (who somehow was persuaded that it had a bearing on Irish foreign policy) might mean his dismissal. It was very likely, in fact. He had a wife and children to support, and a good job was hard to find.

Hesitantly, then with the giddy speed of criminal resolution, he transmitted: "... to the left and to the right, down and up, diagonally even, or, if I tire, stopping, examining one word, any word, this word perhaps, or any other, it doesn't really matter, but, just to give an example, this word, *word*, looking at it closely, studying its constitution, *word*, w, o, r, d, or, reading from right to left, d, r, o, w, *drow*, and then, upside down, thus, p 'I 'o 'M 'p'om . . ." And so on.

"Have you seen my husband?" Mrs. Neary asked of the navigator, as he hurried to the Captain to get permission to lower the lifeboats where the passengers were waiting.

"He's about twenty years old and very Italianate, if you know what I mean."

"No, madam, I'm sorry to say. Perhaps he's in one of the lifeboats."

"That may be. Only a minute ago, he told me that the ship was sinking, and I haven't seen him since."

"The ship *is* sinking," the navigator declared with carefully chosen words. "The sea is a cruel woman. We never know when our hour will come."

"You don't know how true that is. You take the words out of my mouth."

"Would you help me get a trunk out of my cabin, as it doesn't seem that I'll find my husband?"

"I'm sorry, but I must speak to the captain on a quite urgent matter."

Mrs. Neary had been too embarrassed to explain that the cabin steward was in the trunk, which might have made the navigator reconsider. Waving good-bye to him and calling out a cheery *chin up!* she returned to her stateroom, where she found the trunk floating in a foot of water. Like a child sailing a toy-ship in the Luxembourg Gardens or the Tuilleries, or like a Polynesian maiden wafting the petals of some over-sized flower on the blue waters of some tropical lagoon, Mrs. Neary negotiated the trunk through the shallows of her cabin and onto the deck. The afternoon sun warmed her wrinkled face, and back in the stateroom sea-breezes played in her hair. "What a beautiful afternoon," she reflected once again. "I wonder where Alfredo is."

"You can't take luggage on the lifeboat," the bartender, whom the navigator had put in charge of the passengers during his absence, explained patiently to Mrs. Neary.

"But it contains my most valuable possessions!"

"Human life is more valuable than possessions," he replied with moral fervour. He was a Frenchman, and he had a Frenchman's respect for human dignity and worth.

Meanwhile, the young Aryan had suffocated in the trunk, fulfilling Mrs. Neary's prophecy with Aryan punctuality.

The navigator returned, looking angry. "He won't listen to me."

"Did you explain that the ship was sinking?"

"Yes, but he won't listen. Perhaps we should lower the lifeboats anyway," he suggested.

"I think that would be a damned good idea," one passenger (who was drunk) volunteered from his seat in the lifeboat.

"No, for it would be mutiny," the bartender decided, with typical French succinctness. "But we may sing. Nothing prevents that."

Mrs. Neary led off the singing. "Nearer my God to Thee," sang Mrs. Neary, lustily.

When the ship sank, with all hands on deck, the captain went down with it. And so on.

APOLOGY

In NEW WORLDS 168, Peter Tate in his story "The Thinking Seat" quoted without permission the works of Gregory Corso and Lawrence Ferlinghetti.

Both author and editor wish to apologise for this oversight.

the key of the door

by arthur sellings

WHEN GODFREY, WITH the long and pious Victorian grace scarcely out of his father's mouth, had kicked his sister under the table and called her a *squeed*, his father knew that the young rascal had discovered his time machine. The word had not been minted, as title to a TV serial, until 1985. It was only by chance that he knew that, for dear Dolores had admonished him not to be one the second time they met, and to his query as to what it meant had told him that it meant—well, anything you wanted it to mean, and said that she was only trying to make him feel at home by using a word of his period, but of course they hadn't had TV in 1866, had they? She'd never had much of a head for dates, she had said. Had she need of a head for anything with a figure like that, begad, he had said, which she had for some reason found quite irresistible.

Ah, what a creature was Dolores! Will be Dolores, that is. No, *is*. Will have been. Oh no, a new tense would have to be manufactured, just as a new word would need to be invented to describe Dolores herself. There was no word to describe her adequately in this era, and speech in her own was grotesquely abbreviated and infuriatingly obscure. Words as meaningless as *squeed* were half the language. *Squeed!*



J. CRAWFORD. C. C.

"Godfrey," he said sternly, "see me in my study immediately after breakfast."

"Yes, father," said Godfrey dutifully.

What could the old man want now? Enough time had elapsed between his use of the word *squeed* and his father's order, for Godfrey not to connect the two. Indeed, he was not aware that he had used the word, so many and various were the words that he applied to his sister to tease her. The thought did flicker in and out of his brain that his father *had* somehow discovered that he knew about the time machine. That was his constantly recurring fear now. But how could he have?

No, it must be something else. Perhaps he had discovered

the broken pane in the conservatory. Yes, that was it. That would mean a fine of a shilling. He hadn't broken a pane of the conservatory for a long time now—there were too many much more exciting things to do—so there ought not to be a tanning as well. What was a shilling? He could afford a shilling fine when he had over a thousand pounds saved up from the sale of mint copies of the first edition of *Alice In Wonderland* in 1985. Of course, he couldn't use it in 1866, with the funny heads printed on it and all, but it could buy a lot in 1985, even though the value of the pound seemed to have shrunk mysteriously by then. Seemed? *Would* seem. Would have seemed? Blow! It was worse than Latin pluperfects and future perfects.

Ah, future perfects! That was Melinda. A future perfect. Delicious. But definitely hyperspacious!

Father was pacing the study carpet when he entered. He made a journey once and back in silence as was his habit, then turned and faced his son.

"I have reason to believe that you have—ah—been tampering with some of my equipment."

So his father knew! Godfrey felt his knees weaken. But how? He had always set the dial back exactly to where he had found it, and—after that first time when he had stepped through the curious wrought-iron gates to see where the humming was coming from—always carefully chosen times when his father was away in London or Edinburgh at conferences. But he could see from the look on his father's face that he wasn't bluffing. He *knew* all right. There was nothing to be gained by denying it.

"Yes, Papa," he murmured. He hated that diminutive, but knew that it was policy to use it when he was on the carpet.

"And may I ask what licence you were given so to do?"

"None, Papa."

"Do you realize that it is highly dangerous to tamper with intricate machinery of which your childish mind can have little or no comprehension?"

"Yes, Papa." Childish mind be blowed! He was fourteen and a half, wasn't he?

"So that if I were to punish you severely you would

appreciate that it would be for your own good and to preserve you from danger?"

"Y—yes, Papa."

His father made a return trip on the carpet before he spoke again.

"But first I have some questions to ask you. On the frankness of your replies will depend the degree of your punishment. I know that you not only know of the apparatus in question, but have actually used it. How many times have you, in fact, done so?"

"Once. Once, Papa."

"How many times, sir?"

"Twice, Papa."

"That's better." His father liked to think that his penetrating gaze struck a wholesome fear into the heart of his son, so that all evasions were laid bare and the truth confessed. Knowing this, Godfrey always told the big lie first and the only slightly less big one next. Actually, the old man's gaze *was* rather terrifying, so that any confusion in telling the second lie, any flushing or casting down of eye, was attributable to being discovered in the first lie, not to any shame in uttering the second.

In fact he had been through the gates more than a dozen times.

"You will learn," his father was saying, "that truth between man and man is the only possible foundation of a moral society."

Lord, thought Godfrey, what a whopping old hypocrite he really is!

"Yes, Papa."

"And may I ask how you discovered my apparatus, since it is contained in my laboratory which is always kept locked?"

Godfrey thought furiously. Telling the truth would mean the end of everything. But what alternative was there? He could hardly say that he had got in through the window because, ever since that time when the villagers had marched on the house with brickbats in their hands because of the ungodly lights that sometimes flickered about the place, his father had had the windows of his secret sanctum bricked in. And his father *never* left the door unlocked. So, resign-

ing all hope, he reached inside his Eton jacket and produced the key.

"I found it, father. In a box of rusty old keys in the attic one day when it was raining, and I went round the house trying where they fitted. This was the only one that fitted anything."

His father took the key grimly.

"Do I suppose then, sir, that if this had been the key to a case of gunpowder you would similarly have employed it and risked blowing your whole dear family—your sister, your poor mother lying on her sickbed upstairs—into eternity?"

"I—yes, father. I mean, no, father."

"Unbridled curiosity, my boy, is hardly better, if at all, than complacent ignorance. Now, tell me about these surreptitious visits of yours. To which year in the future did you proceed?"

"2035, father." And, despite his despair, he could not help smiling inwardly to see his father start.

"How do you know, boy, that it was 2035?"

"I didn't, Papa, not until I came back and noticed that that was the figure on the dial."

"And what did you *do* in 2035?"

I saw you in the house next door that isn't built yet, dancing with a big beautiful blonde lady, Papa. Did he dare? He looked at his father's slightly bulging eyes and ferocious moustaches. He did not dare.

"I—I just walked around, father, and then came back. I was rather scared."

"A correct attitude, my boy. But you were not too scared to go again."

"No-o, father. I went again, but this time set the dial for 1985. I liked it much better in 1985."

He'd say he did! In 2035 the big garden next door was set out in prickly cactus plants, which seemed to be all the vogue then, for all the gardens thereabouts had them. But in 1985 it was, would be, a lovely place with tall trees and grass and at the foot of it a little lake with a bridge—and Melinda.

Melinda had been startled when he first found her in the garden. Her first words had been, "Are you *real*?" He had

laughed, "Of course I'm real. Here," and he pinched her, and she pinched him and only then did she believe that he was real.

At first he'd thought it was his unfamiliar clothes that had made her doubt his reality. Clothes changed in style ; he knew that from drawings and daguerreotypes in the family album. But by 1985 the wheel had turned and he soon found out that his dress was not unusual enough to attract attention. It wasn't that. It was, as Melinda explained with a trembling lip, that sometimes she saw things that *weren't* real. It was part of her illness, her *neurosis*. That was something he had never heard of, but it was evidently something very grave. "Is it a kind of decline?" he had asked. "A *decline*?" she said, and laughed a little hesitantly. Then she stopped and said, "I laughed. I *laughed*. That's the first time I've laughed for ages."

As he came to visit her again and again she laughed more and more often, because his funny ways and the funny way he said things seemed to amuse her. He didn't mind her laughing at him. Her laughter was like tinkling music in his ears, and he experienced a strange pleasure in making her happy. The anxious lines that belonged, if anywhere, only on a person much older, left her pretty face, and colour came into her cheeks.

And they went out into the wonderful world of 1985, a world of living cinemas and rocket-planes overhead and wonderful gossamer candy. It was a world that frightened him rather at times, but he would have died rather than admit that in front of Melinda.

"—And if," he suddenly realized his father was saying, "I hear of your mentioning this apparatus to anybody, I shall do something which I should have done three years ago, but for the sake of your dear Mama—I shall pack you off to naval school."

"But, father, I meant no harm."

"Silence, boy," his father thundered. "Have you no realization of the delicate cosmic forces involved? No, of course, at your age you could not."

Not only cosmic forces, thought Godfrey. The thought came again to reveal to his father that he knew all about his lady friend in 2035. Perhaps that would make him

realize that his son was not so stupid as he seemed to think. Perhaps then they could talk it over man to man. But one daring again of his father's gaze was enough to dispel the idea. Oh blast! Why did his father behave so pompously? He had never questioned it before, but now that he knew something of the way they managed things in 1985 he found his father's attitude ridiculous. But this was 1866.

He sighed. "Very good, father."

And that was that, he thought, as he closed the study door behind him. He would never see Melinda again. He was rooted permanently in 1866—a prisoner. He suddenly felt the spirit of the age descend upon his soul in swathe upon swathe of red plush and flannel.

But father had his problems, too. That evening he repaired to the time machine and travelled to 2035 to meet his dear Dolores. He should have known that something was wrong when he found that her front door had been re-painted in strident fluorescent stripes of crimson and violet. Hardly Dolores' taste, he thought, but, then, she was such an impulsive creature, bless her. But when the door was opened by a frightful harridan with bright green hair who took one look at him and said, well what did he want and if he was selling anything he was wasting his time, he retired in great agitation and fled back to 1866. He sat panting in his laboratory and poured himself a stiff peg of whisky.

Something had gone seriously and terribly wrong. He knew—it was that rascally son of his! In his tampering with the mechanism he had somehow thrown it out of gear. Confound the boy! He would pack him off to the navy. The boy was definitely degenerate. He whistled down the speaking tube to the servants' quarters.

"Send Master Godfrey to my—" no, here to the laboratory would never do—"to my study."

But as he himself departed for the study another thought struck him. The apparatus had worked perfectly well the night before. And on his return, stimulated as always by the pleasure of Dolores' company, he had worked the night through in the laboratory. So, he thought as he

seated himself at his desk to await his son's arrival, the young villain had had no opportunity to meddle with the machine. Then—a vague and frightful suspicion of what had actually happened struck him at the moment that a hesitant knock came on the door.

"Come in."

Godfrey entered. "You sent for me, father?"

"Ah, yes." Better not to be stern. Too much was at stake. He had to know the truth. "Take a seat, my boy."

Godfrey did gingerly as he was bid. His father's attitude was a whole lot too ample to be above suspicion.

"Now, my boy, tell your father just what you *did* when you went to the year 1985."

So that was it! Couldn't his father leave well alone? He had succeeded in blighting his life. There was nothing left, now that he was parted from Melinda for ever. Well, he'd tell him about Melinda and her neurosis. And if he gave him any of that pompous 1866 moral chat he'd tell him what he saw through the window that first time. And if he packed him off to the navy, well let him. He didn't care now.

So he told his father without worrying one bit about whether his father thought it a lot to have done in just one visit or not. But his father seemed not to notice. All he said, rather strangely, when his son had finished, was, "This girl, what is her name?"

"Melinda."

"Melinda what?"

"Melinda Blackett."

Heavens! His father twirled the end of one moustache in agitation. The girl was Dolores' maternal grandmother Melinda, the famous beauty whom Dolores had mentioned to him once or twice. Then, because he had prevented his son from seeing Melinda—Dolores had never come into being? Could it be? Could that mean that—?"

He looked at his son. His son looked blankly back, his round face above the Eton collar looking a shade too innocent. It was impossible. He'd have to ask Dolores.

But he couldn't ask Dolores because Dolores wasn't there any more. Then where was she? Consigned to some

limbo of conjecture that would never now take flesh—he writhed at the thought of the word—because of something his son had done . . . or not done? He had to know, and know immediately. In theory it was possible, but practice in such a complicated affair as time travel might not be quite the same thing.

“Godfrey, my boy, perhaps I have been rather hard on you. The spirit of adventure is not to be curbed so drastically in the young. I think you might be allowed to pay another visit to your, ahem, little friend in 1985. Come with me to the laboratory.”

Godfrey followed his father as if in a dream. But it was no dream. It was his father who set the switch and who said, “Just for five minutes this time, you understand.”

Godfrey didn’t have an idea of the reasons behind his father’s benevolence, and five minutes was all too short a time. But five minutes was heaven after thinking he had lost Melinda for ever. It was hard to tear himself away from her, but he explained that there was a little difficulty with father, but that it would be all right. And tried to believe so himself.

When he returned his father told him to go and wait in his study. Godfrey was mystified, but began to feel the stirrings of a strange hope. He couldn’t understand how or why, but it seemed that somehow his father . . . *needed* him.

Father set the dial for 2035 and travelled over.

He heaved a sigh of relief to find the front door painted in the familiar pale yellow. And when he rang the bell it was Dolores who answered.

“Come in, come in, my bold time traveller,” she said. “Goodness, Cyril, has something alarmed you? You look quite breathless, my poor dear.”

“Ah, my dear Dolores,” he said, clutching her two hands between his own in one of those gestures which she found so attractive. “Tell me, my precious, who was your maternal grandfather?”

The corners of her lips drooped. “You haven’t come to see your little Dolores just to ask her that, have you?”

His moustaches twitched agitatedly.

“Please, Dolores.” He fell down on his knees. “It’s most

important. Humour me, my sweet, and tell me who your grandmother Melinda's husband was."

"What a dear funny boy you are. His name was Tom James."

"And, pardon me, my dear—oh, this is dashed difficult—he was your grandfather?"

"Really, Cyril. I can hear poor Grandma Melinda turning in her urn. All right, I'll humour you. It would have been hard for him not to have been. You've heard me tell you that Grandma Melinda was a famous beauty of her day. She could have had anybody, but *anybody*. As it was, Tom James came along and swept her off her feet. He was one of the space pioneers. They spent a year's honeymoon on Phobos, or some such dreary rock out in space. My mother was born only three months after they came back."

"Thank you, oh thank you, Dolores. You've taken a weight off my mind."

Dolores laughed her delicious chuckling laugh. "Oh, what a dashing, unpredictable world you must come from!" She snuggled against his Norfolk jacket. "I've got some stereophone tapes of some dreamy old waltzes. I turned the shop upside down to find them. We're going to have a lovely evening."

"Er—I'm sorry, my precious, but I must ask you to pardon me. It's to do with this time business and all that. I'll come back later. Please—you do understand, don't you?"

Dolores pouted. It was one of her sweetest expressions. Then she smiled.

"Of course, my sweet. Travelling in time must be very difficult and have all kinds of problems attached to it. I think you're very clever. How my grandmother fits into it I don't know, but the whole thing is too complicated for your silly little pigeon to understand."

"Ah, what a kind considerate girl you are. Later we'll waltz through all the tapes. How's that?"

"Oh, hyperspacious. I mean, divine, my sweet, divine."

Father returned to 1866 and his study with the problem only half-solved.

"What did you say this girl Melinda suffered from, will suffer from, that is?" he asked his son.

"They call it neurosis, father. She said it was very serious. It looked like a decline, the same as Aunt Agatha went into."

"Ah yes, Aunt Agatha." Was that the explanation, then? This girl was going into a decline. Along had come his son, and their friendship had arrested the decline. If he didn't come along poor Melinda never recovered, never survived to become a famous beauty and marry the dashing space pioneer. But no, that couldn't possibly be it. . . .

He himself had met Dolores *before* Godfrey had stumbled upon the time machine. The moment he had perfected it he had tried it out. And that very first trip he had met Dolores. He had had dreams of witnessing the marvels of future ages, but all that had paled before Dolores. He brought himself back to his line of reasoning with a conscious effort.

So it hadn't needed his son's intervention to ensure Melinda's recovery. It was too confusing. He had glimpsed the possibility of an infinity of different worlds, all stemming from man's multiplicity of choice. Plainly, the causality of time travel would have to be gone into much more deeply. For in only one of those worlds was Dolores. Or was she in more than one? Certainly there was *one* in which she was *not*.

Then suddenly the only possible answer struck him.

Melinda would have recovered anyway, *without* his son's intervention. But once he *had* intervened, once he had aroused the girl's interest in life, it would prove fatal—literally so—if he did not continue to see her. The moment he had banned Godfrey from the machine, he had set up a time line in which the budding Grandma Melinda would go into a deeper decline than ever, and never live to have any children, and not Dolores but a green-haired harriidan would occupy the house next door and paint it in ghastly fluorescent stripes.

He shuddered. But he could check up, couldn't he? He could go to 1985 and see for himself. But no—the situation was delicate enough. He was not sure yet that he had succeeded in getting Dolores back. He could not risk losing her again, perhaps for ever.

He caught Godfrey's gaze upon him—that too innocent gaze. He looked on his son with a new-found respect. After

all, a clown could have cheered up an ailing girl. But to think that once having met the young rascal, she would pine away if he suddenly stopped seeing her, well it showed that he couldn't be quite the ruffian that he had hitherto considered him to be. Why the boy was quite a chip off the old block—infuriating as it was to recognize that his own secret paradise depended for its very existence on the boy. And how long would it have to go on? However long, he had no choice in the matter. The one alternative—that he go into the future and stay there—did not even enter his mind. A man may throw off some of the conventions of his age—but not all of them.

He put his hand on his son's shoulder.

"Godfrey, my boy, I think I have taken rather too narrow a view of your conduct. We all have a duty to one another, and if you brought happiness into this poor girl's life it would be a wicked act to prevent it. The doers of good should not be made to go in stealth. You have reached the years of discretion. In which case—" he reached into his jacket pocket—"you may have the key of the door. I will arrange times when the machine will be at your disposal."

Godfrey took the key in trembling fingers and made for the door in a daze of joy.

"Oh, and Godfrey—"

"Yes, father?"

"Whatever you do—don't lose it."

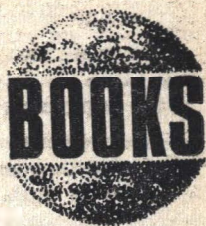
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WHEN THE DORKING HAD TO STOP



"I WOULD ANNEX the planets if I could." The words were not Hitler's, though the thought may well have been. The words were Cecil Rhodes's, the empire builder who gave his name to one of the countries of Africa.

He is quoted very appositely in a new book of central interest to all science fiction readers, I. F. Clarke's *Voices Prophesying War, 1763-1984* (Oxford University Press, 42s.), one of the unacknowledged themes of which is the rapacity of man.

Mr. Clarke, who is head of the English Department of the University of Strathclyde, is well-known as a reviewer of science fiction; in 1961 his "The Tale of the Future" was published. It was an annotated bibliography—the bones, you might say, whereas here he has produced a whole anatomy. His subject is the books and pamphlets written on the theme of future wars since the eighteenth century. It's an extremely interesting topic which, as far as I am aware, has never been treated before. (Incidentally, it's the third notable book Oxford University Press has presented us with this year, following on the excellent translation of the unexpurgated *Cyrano de Bergerac*, "Other Worlds", and the scholarly "American Science Fiction of the Nineteenth Century".

The first specimen Mr. Clarke discusses is an anonymous pamphlet called "The Reign of George VI, 1900-1925". It describes wars that never were to come. King George VI

personally leads his troops into battle ; his biggest victory is before the gates of Vienna in May, 1918. Under George, Britain is restored to her former greatness. At the end of all his marches and campaigns, he makes himself King of France and Master of Europe.

The publication date of this pamphlet is 1763. This is the first account of a future war, and the date explains many of the weaknesses of the story.

The seventeen-sixties, as Mr. Clarke points out, were one of the last decades in which it was possible for an intelligent man to visualise the future as being a continuation of the past, without change. The red dawn of the age of technology was already in the sky. Newcomen's steam engines were pumping away in mines all over the western world ; in another thirteen years, James Watt's much more efficient machines would commence work. Arkwright and Crompton would soon achieve the complete mechanisation of spinning. By the seventeen-eighties, a hydrogen balloon had ascended to 9,000 feet and the first aerial crossing of the English Channel was achieved. The world was changing. Only a quarter of a century after the death of Samuel Johnson, the first passenger railway was running, the Industrial Revolution was launched, and the kings of Europe, taking note of the innovations of dangerous men like Henry Shrapnel, wisely declined to lead their countries to battle any more.

The new methods of warfare were particularly alarming. They seemed to overturn the old certainties. Certainly they killed off the old chivalries. Rifles and artillery became more accurate, killed from increasingly longer range. Torpedoes and electrically-fired mines were developed in the American Civil War ; Gatling guns were soon bringing the pleasures and pains of civilization to the world's reluctant savages. Warships grew thicker and thicker armour plate, as if they were an aberrant family of dinosaurs bent on their own extinction.

These developments appeared especially terrifying in the years of rabid nationalism following the Franco-Prussian War of 1870—the formative years of Cecil Rhodes. There was no safety for a nation but to be strong, and a new

technological development could give a rival nation a sudden lead.

Alarmed by the dramatic German victory over France (to which Krupp's breech-loading artillery, made in cast steel, greatly contributed), a British Colonel Chesney wrote "The Battle of Dorking; Reminiscences of a Volunteer". Intended chiefly as a warning against the inefficient way Britain's shores were defended, it was published in BLACKWOOD'S in May 1871, and became an immediate success.

Chesney's literary method was to tell his story of an overwhelming German invasion of these shores as if it took place fifty years ago and one of the Volunteers closely involved in some of the actions was relating what happened to his grandchildren.

The whole of Europe considered that the Colonel—later promoted to General and knighted—had inaugurated a new type of fiction ideally designed to exploit and at the same time release national fears. French, German, Dutch, Italian, and Scandinavian writers used the technique to produce tales of invasion of their own countries. Chesney, it seems, was almost as much an innovator in his way as Wells was later.

From 1871 until the outbreak of the First World War in 1914, the flow of blood-thirsty warnings never stopped. French dreams often took the form of invasion of Germany. Germans dreamed of outgunning or out-running the British fleet and marching to London. The French occasionally had the same idea, at least until the Entente Cordiale of 1904; in Danrit's "La Guerre Fatale", the story ends with the French dictating the peace terms in the ruins of the House of Commons. The potential Channel Tunnel was regarded by many writers as an open invitation to the wicked French to invade.

Many of these stories were produced by military experts of one sort or another who used fiction to deliver a warning as to what would happen if, say, the Navy was not strengthened. Others were written to cash in on a vogue, like the spy story today, or to increase newspaper circulation, or from genuine xenophobia. There seems no doubt that this fiery literature contributed something to the ill-

will between nations, and thus to the conflict that eventually had even the neutral countries in its toils.

Here I have a minor complaint against Mr. Clarke's method. He clearly possesses or has examined an unrivalled collection of these rather odious future war novels; equally clearly, the ordinary reader cannot hope to find them for himself. So more frequent synopses of entire contents would have helped. It is often impossible to tell if the work under discussion is little more than a popularised military tract or if it has taken on full fictional trappings, with characters whose fortunes are followed throughout the book.

Two important factors, however, Mr. Clarke does make abundantly clear. He shows how the First World War squashed the old notion, firmly held in the eighties, that war was a profitable business, very favourable to the victor and only slightly discommoding to the loser. And he shows that until 1914 no writer came anywhere near grasping what a future war would really be like, with whole populations involved and the full weight of modern technologies thrown into the struggle.

But there were two writers who presented alarming visions before the outbreak of war which came close to the truth. One of them was Arthur Conan Doyle who, in the STRAND MAGAZINE for July 1914, published a story called "Danger!"—one of the illustrations to it forms one of Mr. Clarke's interesting illustrations. The story tells how the submarine fleet of an enemy, by sinking all shipping approaching British ports, brings the Empire to her knees as England starves. Naval experts were very scornful of the idea and declared that no civilized nation would descend to torpedoing unarmed merchant vessels. Yet within a very few months, the German U-boats were doing precisely that.

This seems to me a very impressive form of thinking ahead. Verne is widely credited with forecasting the submarine, although a submarine, like a flying machine, is a pretty obvious dream for a mechanically-minded man; Leonardo was sketching designs for under-water vessels four centuries before Verne. Given the submarine, how-

ever, nobody visualised how it would be employed in the next war—except Conan Doyle.

It is easy to invent impressive machines of the future, as hundreds of sf writers have shown; but to accompany them with plausible social circumstances, the *how* and *why* of their usage, is altogether on a higher level of the imagination: as is demonstrated by the case of the rocket ship, which was constantly being invented or reinvented in the thirties, forties and fifties of this century; yet not one writer predicted that the first tottering step into space would be a by-product of the Cold War, and Russian at that.

The other writer besides Doyle who thought creatively ahead was, of course, Herbert George Wells. Mr. Clarke demonstrates that Wells must have had before him the example of a score of future wars; but when "The War of the Worlds" appeared in 1898, it was something new, the war it depicted so graphically was not between petty nations but between planets. Nor was it only the raising of xenophobia to the *n*th power that set Wells apart from his fellow-alarmists. He wrote a commanding prose. Even now, it is hard to read without a shiver that first paragraph containing the famous sentence: "Yet across the gulf of space, minds that are to our minds as ours are to those of the beasts that perish, intellects vast and cool and unsympathetic, regarded this earth with envious eyes, and slowly and surely drew their plans against us."

After the First World War, and the horrors of the trenches, warfare no longer appeared in the glamorous light it had done to so many people. The fiction about future wars becomes more rare, or else, setting its message of fear at a comfortable distance, it turns towards fantasy by setting the wars far away in space, or on other planets, or even in other galaxies. Mr. Clarke might have added that in this between-war period there emerged for the first time many excellent novels about war, by writers like Ford Maddox Ford and Richard Aldington, which looked back and were based on real experience.

For the rest, the novels of the thirties that predict, like "The Gas War of 1940", "What Happened to the Corbetts", "The Hopkins Manuscript", "The Black Death",

and so on, are more preoccupied with peace rather than politics and, as Mr. Clarke observes, describe war in order to preach peace. After the Second World War, after Hiroshima, world feeling in this direction has crystallised; nobody believes there is profit in war any more; victory echoes hollowly across a depopulated planet. The Dorking type of novel is dead, leaving an heir, the novel of world disaster. The Germans have a word for it: *Weltuntergangsroman*.

Naturally, there have been authors prepared to think about the unthinkable; George Orwell wrote of a perpetual war, maintained for political reasons. And the scare-mongers have been active. But war itself is hardly visualisable any more, except in terms of the Rand Corporation Report, with its cold facts about overkill and megadeath. Novels about future war tend to split on the rock of nuclear war itself and deal either with the situation where the world teeters on the brink of destruction ("The Brink" was a good early example, and "Extinction Bomber", "Fail-Safe" and others followed), or with the situation after destruction where a handful of survivors crawl out of the radioactive ruins (in the fashion of "The Crucified City", "Canticle for Leibowitz", and "Some Will Not Die").

While Mr. Clarke wisely points out the erroneousness of early predictions of war—errors of mood as well as fact—he appears to believe, although here I may be doing him an injustice, that writers have somehow got better at predicting and/or that a future war is easier to predict now than it ever was. I entirely disagree with this. WWII may be a lot nastier than we expect, and not half as brief and merciful. We have, as a generation, allowed ourselves to be so blinded by the might of the H-bomb that we rarely stop to investigate other even more uncomfortable alternatives.

"Voices Prophesying War", like the good scholarly book it is, comes equipped with various notes and bibliographies. But the bibliographies grow thin the nearer they come to 1965. One of the novels that seems to have escaped Mr. Clarke's vigilance is the 1961 "Escape to Berkshire". This is the only novel I know where the survivors crawl from the H-bombed ruins of London only to find that the enemy

has something much worse in store for them. Interestingly, this is a markedly didactic novel, its author, H. C. Asterley, writing from the convinced Christian viewpoint. After the bombs come the vile mycotic sprays which cover living things, killing off humanity, which dies with its mouth and eyes stuffed with white fungus. Though the novel has decided weaknesses in other directions, these scenes are full of horror and conviction. Reluctance to drop H-bombs, as we see in Vietnam, can go hand-in-hand with a readiness to drop napalm. It might be that a future war would avoid conventional and nuclear bombs entirely; an aggressor might gain his end effectively with psycho-delic drugs as his only weapons. Such a possibility is discussed in some detail (all of which is moderately unnerving) in Sidney Cohen's "Drugs of Hallucination"; but the sf brigade is slow to consider the idea. And history has proved that ninety per cent of science fiction writers are far too conservative in their thinking. We can only project the present into the future; the future has to reveal itself in its own good time.

Which brings us back to Cecil Rhodes saying, "I would annex the planets if I could". War is the extreme case of the aggressiveness of man, when individuals band together and pool their fears and frustrations in the therapy of a single, bloodthirsty aim. Inner conflicts are externalised, the threat of death brings health; during the Blitz, when London was bombed continuously for seventy-seven nights, the suicide rate dropped to zero, the psycho-analysts almost had to shut up shop. War and conquest are difficult things to do without, so basic are they. To be taken too early from his mother's breast may make a man thirst for forbidden fruits; the loss may strike so deep that he would annex the planets if he could.

One of the merits of "Voices Prophesying War" is that it makes us see how much of science fiction is preoccupied with the idea of war in one form or another. All the long and popular series—Burroughs's Mars series, the Lensman series, even Asimov's Foundation series, even The Fellowship of the Ring—rely on war for subject matter. And, on a more personal level, people in sf stories are always pulling guns or blasters on each other. Robots symbolise the

idea of reproduction without sex, but they are also analogues of men in full battle armour. Most of the world's great literature centres round struggle, but most of its centres round a very primitive type of struggle, struggle often without aspiration, bare survival—against hostile things or humans or environments. Mr. Clarke would have had much less work to do if he had chosen as his theme "Voices Prophesying Peace".

And, one can't doubt, it would have been a much less interesting book!

Brian W. Aldiss

The Editor and staff of NEW WORLDS regret the delays in appearance of recent issues of the magazine and also the poor distribution in certain areas which readers have complained about. We hope to have these difficulties overcome in the near future. In the meantime copies of the magazine may be obtained by sending 4s. per copy (post free) to the publisher.

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Published on the last Wednesday of every month by Gold Star Publications Ltd., 42-44 Dock Street, London, E.1. Subscriptions 48/- per year (\$7.00). No responsibility accepted for loss or damage of MSS or artwork. All characters fictitious.

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Printed by Richmond Hill Printing Works Ltd., 23/25 Abbott Road, Winton, Bournemouth.

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