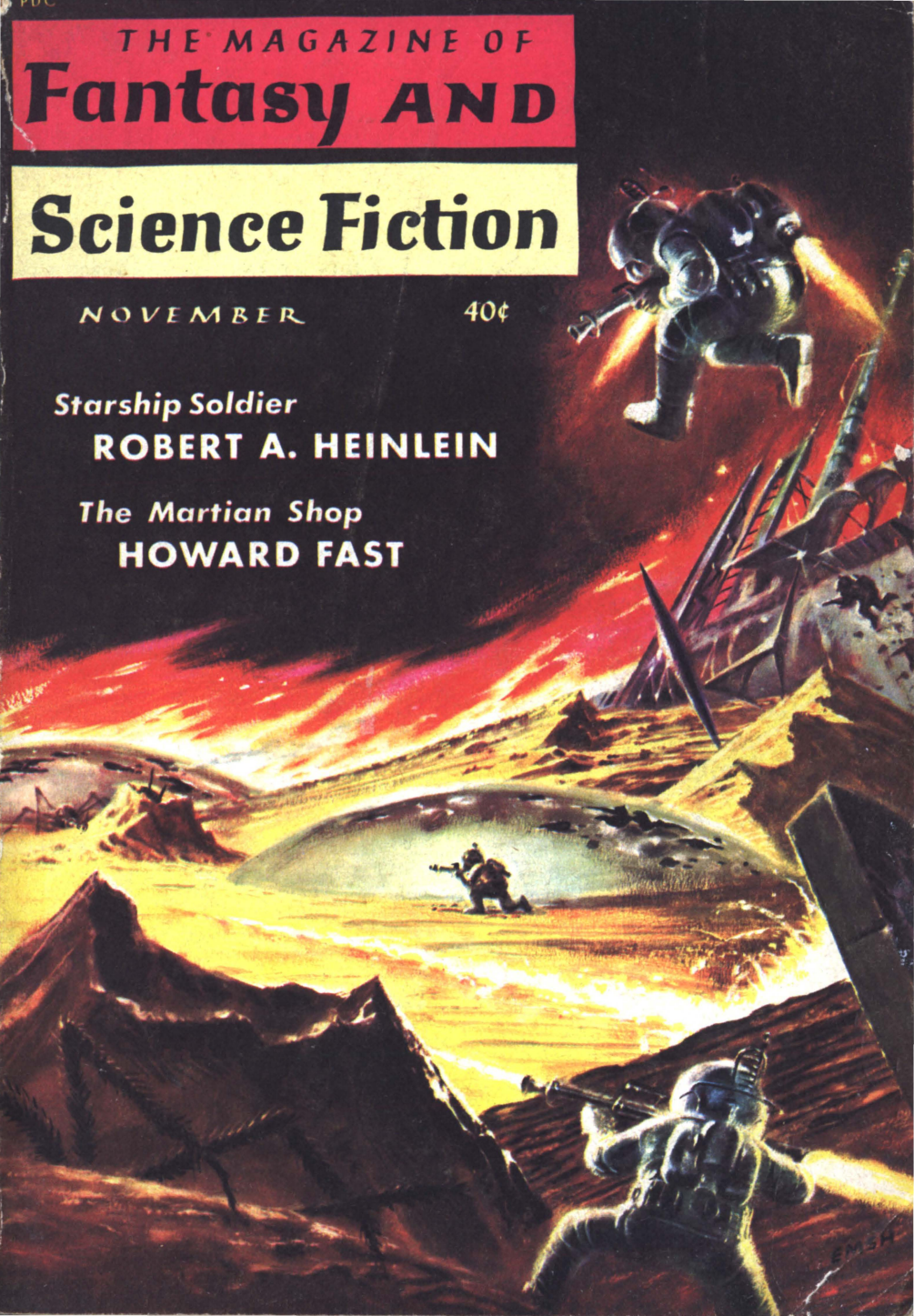
THE MAGAZINE OF
Fantasy AND
Science Fiction
NOVEMBER
40¢
Starship Soldier
ROBERT A. HEINLEIN
The Martian Shop
HOWARD FAST

Fantasy and Science Fiction

NOVEMBER *Including Venture Science Fiction*

Cover by Emsh, illustrating "Starship Soldier"

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The fields of fantasy and science fiction attract all sorts of writers, and those writers tend to have one thing in common—a desire to say things that are not so easily said in other fields. Howard Fast, a superb story-teller, here offers a case in point.

THE MARTIAN SHOP

by Howard Fast

THESE ARE THE BACKGROUND FACTS given to Detective Sergeant Tom Bristol when he was instructed to break down the door and go into the place. It is true that the locksmiths at Centre Street have earned the reputation of being able to open anything that has been closed; and that reputation is not undeserved. But this door was an exception. So Bristol went to break down the door with two men in uniform and crowbars and all the other tools that might be necessary. But before that he studied a precis of the pertinent facts.

It had been established that three stores had been opened on the same day and the same hour; and more than that, as an indication of a well-organized and orderly mind, the space for each of the stores had been rented on the same day, the leases signed on the same hour. The store in Tokyo was located in the very best part of The Ginza. The space had been occupied by a fine jewelry and watchmaking establishment, perhaps the second or third best in all Japan; they vacated the premises, refusing to give the press any explanation whatsoever at the time. Later, however, it was revealed that the price paid to the jewelry establishment for the purchase of its lease consisted of fifty diamonds of exactly three carats each, all of them so perfectly matched, so alike in their flawlessness, that diamond experts consider the very existence of the collection—hitherto unknown—to be a unique event in the long history of jewels.

The store in Paris was, of course, on Faubourg St. Honore. There were no stores vacant at the time, and the lease of a famous couturier was purchased for forty million francs. The couturier (his name is omitted at specific request

of the French government) named the price facetiously, for he had no intention of surrendering his place. When the agent for the principal wrote out a check on the spot, holding him to his word, he had no choice but to go through with the deal.

The third store was on Fifth Avenue in New York City. After thirty years on the Avenue, the last ten increasingly unprofitable, the old and stodgy firm of Delbos gave up its struggle against modern merchandising. The store it had occupied was located on the block between 52nd and 53rd Street, on the east side of the street. The property itself was managed by Clyde and Abrahams, who were delighted to release Delbos from a twenty-five year lease that had been signed in 1937, and who promptly doubled the rent. The Slocum Company, acting as agents for the principals —who never entered into the arrangements at all, either with Clyde and Abrahams or subsequently with Trevore, the decorating firm—made no protest over the increased rent, signed the lease, and then paid a year's rent in advance. Arthur Lewis, one of the younger partners in the Slocum Company, conducted the negotiations. Wally Clyde of Clyde and Abrahams, remarked at the time that the Slocum Company was losing its grip. Lewis shrugged and said that they were following instructions; he said that if he had bargaining power himself, he would be damned before he ever agreed to such preposterous rent.

Lewis also conducted the negotiations with Trevore, turning over to them detailed plans for the redesigning and decoration of the store, and agreeing to the price they set. He did make it plain, however, that his specific instructions from his principal was to agree to all prices asked and to deal only with the firms he was told to deal with. He pointed out to Trevore that such practices were abhorrent to the Slocum Company and were not to be anticipated under any circumstances in the future.

When the information for this precis was gathered, Mr. Samuel Carradine of the Trevore Company produced the original plans for the remodeling and decoration of the store, that is the plans turned over to him by Mr. Lewis. They are hand-drawn on a fine but strong paper of pale yellow tint. Two paper experts, one of them chief chemist for Harlin Mills, have already examined these plans, but they are unable to identify the paper, nor have they seen similar paper before. They do assert that the paper has neither a pulp nor a rag base. Part of the paper is at present undergoing chemical analysis at Crestwood Laboratories.

From this point onward, the

history of the three stores is sufficiently general for the data on the Fifth Avenue store to suffice. In all three cases, rental and alteration were managed under similar circumstances; in all three cases the subsequent progress of events was the same, making due allowance for the cultural patterns of each country. In each case, the decoration of the store was in excellent taste, unusual, but nevertheless artfully connected with the general decor of the particular avenue.

Trevore charged over a hundred thousand dollars for alteration and decoration. The storefront was done in stainless steel panels, used as tile. Window-space was enlarged, and a magnificent bronze-veneered door replaced the ancient oak portal of Delbos. The interior was done in tones of black and crimson, with drapes and carpeting of mustard yellow, and the display cases and platforms were of bronze and glass. Decorators whose opinions have been sought all concur in the assessment of results. Without doubt the three stores were done in excellent, if not superb, taste—the decoration bold, unique, but never vulgar or distressing. It must be noted, however, that Mr. Ernest Searles, who heads the decor department of the Fifth Avenue Association, pointed out certain angular—that is, unfamiliar degree angles—concepts never used before by American decorators.

On Fifth Avenue, as in the other cases, the center focus of the decorating scheme was the crystal replica of the Planet Mars, which was suspended from the ceiling in each shop, and which revolved at the same tempo as Mars itself. It has not yet been determined what type of mechanism activates these globes. The globes, which display a unique and remarkable map of Mars' surface, were installed by the principals, after Trevore had completed the overall alteration and decoration. While the Fifth Avenue storefront is striking, it was done with the type of expensive modesty that would do credit to Tiffany's. The last thing installed was the name of the shop itself, MARS PRODUCTS, in gold letters, each letter a half-inch in relief and five inches high. It has since been determined that these letters are cast out of solid gold.

The three shops opened their doors to the public at ten A.M., on the tenth of March—in local time and day. In New York, the letters spelling out MARS PRODUCTS had been displayed for eight days, and a good deal of curiosity had been aroused, both among the public and the press. But until actual opening, no information had been offered.

During those days, four objects had been on display in the shop windows. No doubt the reader of this precis has seen or examined

these objects, each of which stood upon a small crystal display stand, framed in black velvet, for all the world like precious jewels, which in a sense they were. The display consisted of a clock, an adding machine, an outboard motor and a musicbox, although only the clock was recognizable through its appearance, a beautiful precision instrument, activated as a number of clocks are by the variation in atmospheric pressure. Yet the workmanship, materials and general beauty of this clock outdid anything obtainable in the regular market.

The adding machine was a black cube, measuring slightly more than six inches. The covering is of some as yet undetermined synthetic or plastic, inlaid with the curious hieroglyphs that have come to be known as the Martian script, the hieroglyphs in white and gold. This machine is quickly and easily adjusted or sensitized to the sound of an individual voice, and it calculates on the basis of vocal instruction. The results emerge through a thin slit in the top, printed on paper similar to that mentioned before. Theoretically, such a calculator could be built today, but, so far as we know, by only two shops, one in Germany and the other in Japan, and the cost would be staggering; certainly, it would take years of experimental work to develop it to the point where it would deal with thirteen digits, adding, subtracting, multiplying and dividing entirely by vocal command.

The outboard motor was an object about the size of a small electric sewing machine, fabricated of some blue metal and weighing fourteen pounds, six ounces and a fraction. Two simple tension clips attached it to any boat or cart or car. It generated forty horsepower in jet propulsion, and it contained, almost microcosmically, its own atomic generator, guaranteed for one thousand continuous hours of operation. Through a muffling device, which has so far defied even theoretical solution, it produced less sound than an ordinary outboard motor. In each shop, this was explained, not as a muffling procedure, but as a matter of controlled pitch beyond the range of the human ear. Competent engineers felt that this explanation must be rejected.

In spite of the breathtaking implications of this atomic motor, it was the music box that excited the most attention and speculation. Of more or less the same dimensions as the adding machine, it was of pale yellow synthetic, the hieroglyphs pricked out in dark gray. Two slight depressions on the top of this box activated it, a slight touch of one depression to start it, a second touch on the same depression to stop it. The second depression, when touched, changed the category of the music desired.

There were twenty-two categories of music available—symphonic music in three chronological sections, chamber music in three sections, piano solo, violin solo with and without accompaniment, folk music for seven cultures, operatic in three sections, orchestra, full cast and orchestra, that is the complete opera, and selected renderings, religious music, divided into five religious categories, popular songs in national sections, instrumental music in terms of eighty-two instruments, jazz in five categories and three categories of children's music.

The salespeople in each of the three shops claimed that the music box had a repertoire of eleven thousand and some odd separate musical selections, but this, of course, could not be put to the test, and varying opinions on this score have been expressed. Also the use of vocal instruction to set the sound and pitch—which was not inferior to the best mass-produced high fidelity—was poo-pooed as fakery. But Mr. Harry Flannery, consulting sound engineer for the Radio Corporation of America, has stated that the music box could be compiled out of available technical knowledge, especially since the discovery of transistor electronics. As with the adding machine, it was less the technical achievement than the workmanship that was unbelievable. But Mr. Flannery admitted that a content of eleven thousand works was beyond present day knowledge or skill, providing that this enormous repertoire was a fact. From all witnesses interrogated, we have compiled a list of more than three hundred works played by the shop's demonstration music box.

These were the four objects displayed in the windows of each of the three stores. The same four objects were available for examination and demonstration inside each of the stores. The clock was priced at $500.00, the adding machine at $475.00, the outboard motor at $1620.00 and the music box at $700.00—and these prices were exactly the same, at the current exchange, in Tokyo and Paris.

Prior to the opening—that is, the previous day—quarter-page advertisements, in the New York *Times* only, stated simply and directly that the people of the Planet Mars announced the opening, the following day, of a shop on Fifth Avenue, which would display, demonstrate, and take orders for four products of Martian industry. It explained the limited selection of offerings by pointing out that this was only an initial step, in order to test the reactions of Earth buyers. It was felt, the advertisement stated, that commercial relations between the Earth and Mars should be on the friendliest basis, and the Martian industrialists had

no desire to upset the economic balance of Earth.

The advertisement went on to say that orders would be taken for all of the products, and that delivery was guaranteed in twelve days. The advertisement expressed the hope that this would mark the beginning of a cordial and fruitful and lasting relationship between the inhabitants of both planets.

This advertisement was hardly the first word in the press concerning the Martian shops. Already, every columnist had carried an item or two about what was, without question, one of the most imaginative and novel publicity schemes of the space age. Several columnists had it on the best authority—for rumors were all over the city—that General Dynamics was behind the Martian shops. They were also credited to General Electric, the Radio Corporation, and at least a dozen of large industrial enclaves. Again, a brilliant young merchandiser was named, a Paris dress designer, and a Greek shipping magnate. Still others spoke of a scheme by German industrialists to break into the American market in force, and of course there were hints that the Soviet Union was behind the method of destroying capitalism. Engineers were willing to grant Russia the skill, but interior decorators refused to acknowledge the ability of the Russians to produce original and tasteful decor. But until the shops actually opened and the working capabilities of the machines were actually demonstrated, no one was inclined to take the matter too seriously.

On the tenth of March, the shops opened in each of the three cities. The tenth of March was a Monday in New York. The shops remained open until Friday, and then they closed down for good—so far as we know.

But in those five days, thousands of people crowded into the Fifth Avenue store. The machines were demonstrated over and over. Thousands of orders were taken, but all deposits and prepayment were refused. The New York shop was staffed by one man and five tall, charming and efficient women. What they actually looked like is a matter of dispute, for they all wore skin-tight face masks of some latex-like material; but rather than to make them repulsive, the effect of the masks was quite pleasant. Gloves of the same material covered their hands, nor was any part of their skin anywhere exposed.

John Mattson, writing in the *News* the following day, said. "Never did the inhabitants of two planets meet under more promising circumstances. Having seen the Martian figure and having had a touch of the Martian charm, I am willing to take any chances with the Martian face. Uncover,

my lovelies, uncover. Earth waits with bated breath."

Professor Hugo Elligson, the famous astronomer, visited the shop for *Life*. His report says in part, "If the masked people in this shop are Martians, then I say, Space must be conquered. I know it is strange for an astronomer to dwell on shapely legs and muted, rippling accents, yet I know that from here on my wife will eye me strangely whenever I look at the Red Planet. As to the relationship of an excellent publicity scheme to the Planet Mars, common intelligence orders me to withhold comment—"

Perhaps the Soviet Union thought different; for on the second day of the shop's business, two gentlemen from the Russian Embassy were known to enter and offer a cool million United States dollars for the demonstration sample of the atomic outboard. The Martians were polite but firm.

By Wednesday, Mars Products occupied more space in the New York press than international news. It crowded out the crises in the Middle East, and Formosa was relegated to page seventeen of the *Times*. A dozen authorities were writing scholarly opinions. Traffic on Fifth Avenue was impossible, and one hundred extra police were detailed to maintain order and make it possible for any of the Fifth Avenue stores to do business. The Fifth Avenue Association decided to apply for an injunction, on the grounds that Mars Products disrupted the ordinary practice of business.

Much the same was happening on Faubourg St. Honore, and on the Ginza.

Also on Wednesday, American industry awoke and panicked. Boards of Directors were convened all over the nation. Important industrial magnates flew to Washington, and the stock of electronic, business-machine and automobile companies sent the Dow-Jones averages down twenty-six points. The largest builder of systems and calculating machines in America saw its stock sell ten minutes ahead of the ticker, down one hundred and eighty points for the day. So also on the London, Paris and Tokyo exchanges.

But the intelligence service was not perturbed until Thursday, when it sent formal requests to the F.B.I. and to the New York City Police Department to determine who and what the principals behind Mars Products were—and to ascertain where these machines had been manufactured, whether they had been imported, and whether duty had been paid. The Surete and the Tokyo Police were by then taking similar steps.

Without going into the details of this investigation, it suffices to say that in every case, the investigating authorities were baffled.

All three bank accounts were the result of large cash deposits by very commonplace men who were no different from thousands of other average men. The acting agents were given, by mail, full power of attorney as well as instructions. The investigations were not completed until Friday evening.

By Friday, each of the three shops was under surveillance by various government and police agencies. In New York, city detectives put a twenty-four hour watch on Mars Products Wednesday evening, even before any instructions or requests came from Washington. But no member of the staff left the shop after closing hours, or at any other time. Curtains were drawn across the windows, blocking off the display products. At ten A.M., the curtains were drawn back.

During Friday, in New York and Washington, discussions were held on the advisability of issuing injunctions or search warrants. At the same time, there was understandable hesitancy. If this was a publicity scheme of some industrial group, whatever agency acted could be the laughing stock of the nation—as well as opening itself to considerable liability, if legal action was taken by the injured party. Plainclothesmen had been in and out of the shop a hundred times, searching for some violation. None had been found. No loophole had been detected.

Friday night, the shop on Fifth Avenue closed as usual. The curtains were drawn. At eleven P.M., the lights went out. At three A.M., the door of the shop opened.

At that time on Saturday morning, Fifth Avenue was deserted. The shop was then being observed by four city detectives, two federal agents, two members of Central Intelligence, and three private operatives hired by the National Association of Manufacturers. The eleven men made no attempt at concealment. There was only one store entrance. Across the avenue, four cars waited.

When the door of Mars Products opened, the five members of the staff walked out. They all carried packages. At precisely the same moment, a large black automobile drew up at the curb in front of the shop. The man opened the back door of this car, and all five staff members entered. Then the door closed and they drove away. They were followed by the four cars. The agents who were watching them had instructions not to interfere, to make no arrests, but to follow any member of the staff to his or her destination and to report along the way by radio.

We have an exact description of the automobile. Shaped somewhat like a Continental, it was at least a foot longer, though no broader. It had a strange hood, more rounded than a stock car; but it was larger than any known sport car.

It headed uptown, well within the speed limits, turned into Central Park, emerged at 7th Avenue and 110th Street, proceeded north and then beneath 155th Street to the Harlem River Speedway. When it reached the Speedway, two police cars had joined the caravan behind it. Toward the George Washington Bridge approach-ramp, it began to pick up speed, and when it passed the ramp, continuing on the deserted Speedway, it was already doing eighty miles an hour. The police cars opened their sirens, and by radio, additional police cars were instructed to set up a roadblock at Dyckman Street.

At that point, the black car put out wings, at least seven feet on either side, and went over to jet power. It left the pursuing cars as if they were standing still. It is impossible to arrive at any accurate estimate of its ground speed then, but it was certainly well over a hundred and thirty miles an hour. It was airborne in a matter of seconds, gained altitude quickly, and disappeared, by its sound, eastward. It was picked up twice by radar at an altitude of twenty thousand feet, moving at very high speed, even for jet power. The airforce was immediately notified and planes took off within minutes, but there is no report of the black car—or plane—being sighted again, nor was it again raised with radar.

It is sufficient to note that the progress of events in Tokyo and Paris was more or less identical. In no case, was the staff of the shop interfered with or taken.

Such was the precis that Detective Sergeant Bristol reviewed before he went uptown to break in the door of Mars Products. It told him nothing that he did not already know, and in all truth, he knew a great deal more. His own specialty was *entry and search,* but like almost every other citizen of New York, he had speculated during the past days on the intriguing problem of Mars Products. He was well trained in the art of rejecting any conclusions not founded on facts he could test with sight, touch or smell; but in spite of this training, his imagination conjured up a host of possibilities behind the locked door of Mars Products. He was still young enough to view his work with excitement, and all during this day, his excitement had been mounting.

Both the city police and the F.B.I. had decided to wait through Saturday before opening the shop, and these decisions were communicated to Tokyo and Paris. Actually, the New York shop was opened a few hours later than the others.

When Bristol arrived at 52nd Street and Fifth Avenue, at least a dozen men were waiting for

him. Among them were the police commissioner, the mayor, General Arlen Mack, the Chief of Staff, a colonel in Military Intelligence and several F.B.I. officials. There were also at least a hundred onlookers, held back by policemen. The police commissioner was irritated, and indicated that Bristol was the type to be late at his own funeral.

"I was told to be here at seven o'clock, sir," Bristol said. "It is still a few minutes before seven."

"Well, don't argue about it. Get that door open!"

It was easier said than done. When they ripped off the bronze plate, they found solid steel underneath. They burned through it and hammered off the bolted connection. It took almost an hour before the door was open—and then, as had been the case in Tokyo and Paris, they found the store empty. The beautiful crystal reproduction of the Planet Mars had been pulverized; they found the shards in a waste basket, and it was taken to Centre Street for analysis. Otherwise, none of the decorations had been disturbed or removed, not even the solid gold letters on the store front—a small fortune in itself. But the eight products, the four from the window and the four used in the shop as demonstrators, were gone.

The high brass prowled around the place for an hour or so, examining the decorations and whispering to each other in corners. Someone made the inevitable remark about fingerprints, and the commissioner growled, "People whose skin is covered don't leave fingerprints." By nine o'clock, the brass had left, and Bristol went to work. Two F.B.I. men had remained; they watched the methods of the three men from Centre Street in silent admiration.

Bristol's specialty was, as we noted, *entry and search*. He had four children, a wife he adored, and he was soberly ambitious. He had long since decided to turn his specialty into a science and then to develop that science to a point unequaled elsewhere. First he brought in lights and flooded the store with three thousand additional watts of illumination. Since there was only the main room and a small office and lavatory behind it, he brightened the space considerably. Then he and his two assistants hooked portable lights onto their belts. He told the F.B.I. men:

"The first element of search is find it."

"Do you know what to look for?"

"No," Bristol said. "Neither does anyone else. That makes it easier in a way."

First they removed all drapery, spread white sheets, brushed the drapery carefully on both sides, folded it and removed it. The dust was collected and labeled. Then

they swept all the floors, then went over them a second time with a vacuum cleaner. The dust was sifted, packaged and labeled. Then, fitting the vacuum cleaner with new bags each time, they went over every inch of space, floor, walls, ceiling, molding and furniture. Again, the bags were packaged and labeled. Then they took the upholstered furniture apart, bit by bit, shredding the fabric and filling. The foam rubber in the cushions was needled and then picked apart. Once again, everything was labeled.

"This is more or less mechanical," Bristol explained to the government men. "Routine. We do the chemical and microscopic analysis downtown."

"Routine, eh?"

"I mean for this type of problem. We don't get this kind of problem in terms of search more than two or three times a year."

At two o'clock in the morning, the government men went out to buy coffee and sandwiches. They brought back a box of food for the city men. By four A.M., the carpeting had been taken down to Centre Street, the toilet walls stripped of tile, the plumbing removed and checked, the toilet and sink entirely dismantled. At six o'clock on Sunday morning, in the cold gray light of dawn, Bristol was supervising the taking apart of every piece of bonded wood or metal in the shop.

He made the find in a desk, a modern desk of Swedish design that had been supplied by the decorators. Its surface was of polished birch, and there was a teak strip across the front. When this strip was removed, Bristol found a bit of film, less than an inch long and about three millimeters in width. When he held it up to the light with tweezers and put a magnifying glass on it, it was discovered to be film strip. It contained sixteen full frames and part of a seventeenth frame.

Minutes later, he was in a car with the government men, racing down to Centre Street; and only then did he permit himself the luxury of a voiced opinion.

"They must have been editing that film," he remarked. "I have been reading how orderly and precise they are. But even an orderly person can lose something. Even a Martian," he finished doubtfully.

Strangely enough, the government men made no comment at all.

Bristol is remembered, and it has been said in many places that he will go far. He has already been promoted, and without question he will be mentioned by historians for years to come. He was an honest and thorough man, and he had an orderly mind to match other orderly minds.

Professor Julius Goldman will

also be remembered. The head of the Department of Semitic Languages at Columbia University, he was also the leading philologist in the Western Hemisphere, if not the world; and to him as much as to any other goes the credit for breaking through the early Cretan script. He pioneered the brilliant —if again failing—recent Etruscan effort. Along with Jacobs of Oklahoma, he is the leading authority on American Indian languages, specializing there in the Plains dialects. It is said that there is no important language on earth, living or dead, that he cannot command fluently.

This is possibly an exaggeration, but since he was reached by the White House that same Sunday, flown to Washington, put at the head of a team of five of the country's finest philologists—and since he accomplished what was expected of him in thirty-two hours, it might be said that his reputation was deserved.

Yet by the grace of God or whatever force determines our destiny, he was given a "Rosetta Stone," so to speak. Without it, as he was the first to point out, the Martian script would not have been broken, not now and possibly not ever. The "Rosetta Stone" —which, you will recall, originally enabled philologists to break the mystery of the Egyptian hieroglyphs by providing them, on the same stone tablet, with translations in known tongues—was in this case a single frame of the film strip, containing both an English and Martian inscription. Acting on the possibility that one was a translation of the other, Professor Goldman found an opening for the attack. Nevertheless, it remains perhaps the most extraordinary case of reconstruction in all the history of language.

That Tuesday, the Tuesday after the store had been broken into, the President of the United States held an enlarged meeting of his cabinet at the White House. In addition to the regular members of the cabinet, some forty-two other persons were present, Julius Goldman among them; and it was not Goldman alone who appeared haggard from want of sleep. Each of the men present had a precis—somewhat enlarged—that was not too different from the one presented here. Each of them had read it and pondered it. Opening the meeting, the President reviewed the facts, mentioned some of the opinions already gathered from experts, and then said:

"What are we to think, gentlemen? Our own halting probes into outer space have removed the starry realm from the province of fiction writers and gullible fools. As yet we have no firm conclusions, but I do hope that at the end of this meeting, we will formulate a few and be able to act upon them. I need not repeat that

some of the keenest minds in America still consider the Martian shops to be a remarkable hoax. If so, a practical joke costing its originator a great many millions of dollars, has been played out to no point. In all fairness, I reject this conclusion, nor can I, at this point in my knowledge, support any arguments that we have seen a great publicity campaign. I have come to certain conclusions of my own, but I shall withhold them until others have been heard.

"As most of you know, through the energy and resourcefulness of the New York City police department, we found a tiny bit of film strip at the Fifth Avenue shop. Nothing of any value was found either in Paris or Tokyo. Nevertheless, I have invited the Japanese and French ambassadors to be present tonight, since their countries have been chosen, even as ours was. I do not say that their interest is higher than that of other nations, for perhaps—"

The President hesitated then—and shrugged tiredly. "Well, at this point, I will turn the meeting over to Professor Julius Goldman of Columbia University, our greatest philologist, whose contribution to the unravelling of this problem cannot be overestimated."

Professor Goldman said quietly that, for the record, he had made no contribution not shared equally by his colleagues, who were not present this evening. They had, all six of them, prepared an affidavit, which he would read in the name of the entire team. First, he would like the people assembled to see the film strip for themselves.

The room was darkened. The first frame appeared on a prepared screen at one end of the room. It was covered with vertical lines of what had already come to be called the Martian Hieroglyphic. So with the second and the "Rosetta Stone." At the top, in English block letters;

"Compound for white males—16 to 19 years of age."

And directly beneath, again in English, "General warning. Any discussion of escape or resistance will be met by permanent stimulation of the tri-geminal nerve."

And beneath that, "Feeding room—yellow-skinned females, 7 to 10 years of age."

And as a final line in English, "Much have I travelled in the realms of gold."

Beneath these English lines were a number of vertical hieroglyph columns.

The voice of Professor Goldman explained, "This frame gave us our key, but we do not claim any clear knowledge of what these inscriptions mean. Medical authorities consulted have suggested that a certain type of irritation of the trigeminal nerve can result in the most trying pain man knows. The line from Keats is utterly meaningless, so far as we can determine;

the reason for its inclusion remains to be explained in the future, if ever. The remaining frames, as you see, are in the hieroglyph."

The lights went on again. Professor Goldman blinked tiredly, wiped his glasses, and said, "Before I present our affidavit, I must ask your indulgence for a few words concerning language. When we philologists claim to have cracked the mystery of some ancient tongue, we do not talk as a cryptographer who has broken a code. Philology and Cryptography are very different sciences. When a code is broken, its message is known. When a language is broken, only the first step in a long and arduous process is taken. No single man or single group of men has ever revealed an ancient language; that is an international task and must of necessity take generations to complete.

"I say this because perhaps your hopes have been raised too high. We have very little to work from, only a few words and numerals; we are dealing with an unrelated tongue, totally alien; and we have had only a few hours to grapple with the problem. Therefore, though we have been able to extract some meaning from two of the frames, there are many blank spaces and many perplexities. In our favor are these facts: first—all language, possibly anywhere in the universe, appears to have a developmental logic and relationship; secondly, these frames deal with life on earth; and finally, it is our good fortune that this is an alphabetic form of writing, consisting, so far as we can determine, of forty-one sound signs, at least thirty of them consonantal. These consonantal forms suggest a vocal arrangement not unlike our own—that is in physical structure, for sounds are to a large extent determined by the physical characteristics of the creature producing them. My colleagues agree that there is no indication of any relationship between this alphabet and language and any known language of Earth. For my part, I will make no comment on the origin of this language. It is not my field—nor is it my purpose."

The President nodded. "We understand that, Professor Goldman."

Goldman continued: "The affidavit itself will be projected on the screen, since we consider it more effective for the partial translation to be read rather than heard."

The room was then darkened again, and the following appeared on the screen:.

"A tentative and partial translation of the first two frames of a film strip, given to the undersigned for translation purposes:

"—— —— greedy lustful—[dedicated?] [practicing?] mass [murder?] [death?] —— [time] generations [of?] murder —— [docile?]

[willing? O when shown pleasure — — — [titled?] [self styled?] [boastful self styled?] man [or humanity?] — — [compare to?] [equate with?] disease [or plague or rust] on face of [fair?] [rich?] planet [or globe] — — — — —"

The voice of Professor Goldman cut in, "That is the first frame. As you see, our translation is tentative and incomplete. We have very little to work from. Where the word is within brackets and coupled with a question mark, we are making what might be called a calculated surmise not a guess, but a surmise from too few facts. Now the second frame.

"Force [or violence] understood [or reacted to] — man [or humanity] — — primitive [or [number 1] development of atomic [force or power or engine]— — — [space station or small planet] — [non-possession-relating possibly to space station] — — [outer space?] [void?] negative [long arm?] [weapon?] — — — — [superstition?] [ignorance?] [mindless] — —"

The inscription remained on the screen, and Goldman's voice, flat, tired and expressionless, explained:

"When we bracket a number of words, one after another, we are uncertain as to which is preferable. Actually, only a single word is being translated—" His voice faded away. The names of the six philologists appeared on the screen. The lights went on, but the silence was as deep and lasting as the darkness before it. Finally, the Secretary of State rose, looked at the President, received his nod, and said to Professor Goldman:

"I desire your opinion, Professor. Are these faked? Do they originate on earth? Or are we dealing with Martians? That's not a dirty word. Everyone is thinking it; no one will say it. I want your opinion."

"I am a scientist and a scholar, sir. I form opinions only when I have sufficient facts to make them credible. This is not the case now."

"You have more facts than anyone on earth! You can read that outlandish gibberish!"

"No more than you can, sir," Goldman replied softly. "What I have read, you have read."

"You come to it as a philologist," the Secretary of State persisted.

"Yes."

"Then as a philologist, is it your opinion that this language originated on earth?"

"How can I answer that, sir? What is my opinion worth when fashioned out of such thin stuff?"

"Then tell us—do you detect any relationship to any known Earthly language?"

"No—no, I do not," Goldman answered, smiling rather sadly.

And then there was silence again. Now one of the President's secretaries appeared, and distrib-

uted copies of the affidavit to everyone present. A longer silence now, while the affidavits were studied. Then the French ambassador asked for the floor.

"Mr. President," he said, "members of the cabinet and gentlemen —many of you know that my own government discussed this same problem yesterday. I am instructed, if the occasion should so determine, to make a certain request of you. I think the occasion does so determine. I request that you send immediately for the Soviet Ambassador."

No one was shocked or surprised by the suggestion. The Soviet Ambassador was sent for. He had evidently been waiting, for he arrived within minutes; and when he stated immediately that he would also represent the People's Republic of China or take his leave, the President of the United States suppressed a smile and nodded. He was given a precis and a copy of the affidavit, and after he had read both, the meeting began. It went on until three o'clock on Wednesday morning, during which time thirty-two technical specialists arrived, gave opinion or testimony, and departed. Then the meeting was suspended for five hours—and came together again with the representatives of India, China, Great Britain, Italy and Germany in attendance. At six o'clock Wednesday evening, the meeting was adjourned, and the following day an extraordinary session of the Assembly of the United Nations was called. By that time, Professor Goldman, with the assistance of Japanese, Chinese and Russian philologists, had completed a tentative translation of the film strip. Before this complete translation was published in the international press, it was made available to all delegates to the United Nations Assembly.

On Saturday, only a week after Detective Sergeant Bristol had forced the door of the Fifth Avenue shop, the Premier of India arose to address the Assembly of the United Nations.

"It is more than ironic," he said with some sadness, "that we who have been so savagely condemned by another planet, another culture and people, can find more than a little truth in the accusations. How close we have come, time and again, to accomplishing the destruction outlined by these people from outer space! And how unhappy it is to know that our own fitful dream of a peaceful future must be laid aside, perhaps forever! Shall it be some consolation that we must join hands to fight another enemy rather than each other? I pray so, for it is not without deep grief that my country lays aside the slim shield of neutrality it has clung to so desperately. Gentlemen, India is yours; its teeming millions will

labor in the common defense of our mother earth. Its inadequate mills and mines are at the world's disposal, and I hope with all my heart that we have time to build more."

Then Russia spoke, then the United States. China and eight other countries were admitted to the United Nations without a veto; but this was only the beginning of a series of actions which led, within the month, to the creation of World Spaceways—an international plan for the building of four great space stations circling the earth, a mighty fleet of atomically powered space-ships, and the construction of a military defense base on the moon, under the control of the United Nations. A three-year plan for the defense of Earth was put into operation; and, as so few had anticipated, the beginnings of world government in terms of actual sovereign power, came with a comprehensive world general staff.

Within three months after Detective Sergeant Bristol's discovery, the first world code of law was drafted and presented to the General Assembly. The antiquated and rusting ships of the navies of earth, the discarded and useless artillery, the already archaic guided missiles, the laughable small arms—all of them bore witness to the beginning of world government.

And in less than a year, Culpepper Motors, one of the largest industrial complexes on earth, announced that they had duplicated the Martian outboard atomic motor. The people of earth laughed and flexed their arms. When they looked up at the sky, at the tiny red orb of Mars, it was with growing confidence and lessening fear.

For they had discovered a new name for themselves; they had discovered that they were a nation of mankind. It was a beginning—rough and fumbling and uneasy in many of its aspects, but nevertheless a beginning. And all over the earth, this *beginning* was celebrated in a variety of ways.

At the home of Franklin Harwood Plummer, its eighty-three rooms nestled securely in the midst of an eleven hundred acre estate in New York's Putnam County, it was celebrated in a style befitting the place and circumstances. Mr. Plummer could and did give dinners that were large and important and unnoticed by the press—a fact not unrelated to his control of a great deal of the press, among other things. But even for his baronial halls, this evening's gathering was large and unique, three hundred and twenty-seven men and women, apart from Mr. Plummer himself and his eighteen colleagues who composed the Board of Directors of Culpepper Motors.

At fifty-eight, Mr. Plummer was

President of Culpepper. Culpepper Motors had a net value of fifteen million dollars, a private industrial worth exceeded, in all the world, only by American Tel and Tel; but if one were to trace the interlocking and various influences of the nineteen board members, the question of worth became so large as to be meaningless. As the nominal lord of this giant enterprise, Mr. Plummer was best defined by his history. He had started, thirty-five years before, as a lathe operator in the old Lewett Shop, and he had fought and smashed and cut his way to the eventual top. In the recent history of America, there have been a few cases like his, but not more than you could count on the fingers of one hand.

Even in his own circles, he was not loved; feared and respected he was, but without family or university, he remained a strange, violent and unpredictable interloper. He was tall and broad and red-faced and white-haired; and as he stood at one end of the great dining room in his over-large and over-furnished home, he made reference to the fact that he did not even play golf. His three hundred and twenty-seven guests and his eighteen colleagues permitted themselves to smile slightly at that.

"No," Mr. Plummer continued, "No golf, no tennis, no sailing—I have been what most of you would call a preoccupied man, and my preoccupation has been the making of money. If I have ever laved my conscience with any sop, it was to recollect that single witty remark of a man who was otherwise remarkably humorless, Calvin Coolidge—who gave folk like myself grace by stating that the business of the United States was business."

Mr. Plummer grinned. He had an infectious grin—the smile of a man who has made it beyond belief, who drives back to the old home town in a chrome-plated Cadillac.

"I enjoy making money," he said simply. "I am accused of lusting for power. Hogwash! I lust for a naked and nasty word—profit; always have and I always will. It embarrasses my eighteen colleagues, sitting here on either side of me, for me to be as blunt and ignoble as this; but I thank whatever gods may be that I have never been inhibited by breeding. I also make a double point. Firstly, the question of profit—I succeeded. Not only have I been able to insure and secure the future existence of Culpepper Motors; not only have I developed a situation where its profits will increase every year—perhaps double every five years, which makes our stock a pretty good investment for any of you—but I have been able to bring together under this roof as fine a collection of human beings

as mankind can provide. I will not try to explain what that means to me—what it has meant to know and work with each of the three hundred and twenty-seven people here. I think you can guess.

"Secondly, I said what I said to ease the feelings of those among you who have cooperated in our enterprise and have been paid for their cooperation—as against those who would accept no pay. Those who have been paid may feel a certain guilt. To that I say—nonsense! No one does anything strictly for money; there are always other factors. I know. I went into this for dollars and cents—plain and simple, and so did my holier than God colleagues on my Board of Directors. We have all changed in the process. My colleagues can stop wishing me dead. I love them for what they are now. I did not love them for what they were when we began this enterprise two years ago.

"Sitting among you, there is one Jonas Wayne, of Fort Fayette, Kentucky. He is an old-fashioned blacksmith, and possibly the finest hand worker in metal in America. Our enterprise would have been more difficult, if not impossible, without him. Yet he would not take a dollar from me—not even for expenses. He is a God-fearing man, and he saw himself as doing God's work, not mine. Perhaps so. I don't know. At the same table with him is M. Orendell, the Ambassador of France. He is far from being a rich man, and his expenses have been paid. We have no secrets here. We live and die with our knowledge, as a unique fraternity. Professor Julius Goldman—would you please stand up, Professor—was, as you know, central to our whole scheme. If it was painless for him to decipher the Martian script, it was far from painless for him to devise it—a task that took more hours of work than the building of the motor. He would take no money—not because he is religious but because as he puts it, he is a scientist. Komo Aguchi, the physicist—he is at the table with Dr. Goldman, accepted one hundred thousand dollars, which he spent in an attempt to cure his wife, who is dying of cancer. Shall we judge him? Or shall we put cancer on the immediate agenda?

"And what of Detective Sergeant Tom Bristol? Is he an honest cop or a dishonest cop? He accepted four hundred shares of Culpepper Motors—a hundred for each of his children. He wants them to go to college, and they will. Miss Clementina Arden, possibly the finest decorator here or on Mars, charged us forty thousand dollars for her contribution to the decor. The price was reasonable. She is a hard-headed business woman, and if she does not look after herself, who will? Yet she has turned down other

jobs. She didn't turn down this one—

"Well, my good friends, ladies and gentlemen—we will not meet again, ever. My father, a working man all his life, once said that perhaps if I opened a store, even a small store, I would no longer have my life subject to the crazy whim of this boss or that. Maybe he was right. Finally, with your good help, I opened three stores. The total cost, if you are interested, was twenty-one million dollars, more or less—and a shrewd investment, I don't mind saying. Culpepper Motors will add five times that sum to its profits over the next three months. And our three stores, I do believe, have accomplished a little something that wiser men have failed to do.

"That is all I have to say. Many of you may regret that no monuments will enshrine our work. I wish we could change that, but we can't. For myself, I feel that when a man's wealth reaches a certain point of large discomfort, he does better to remain out of the public's eye. So guard our secret—not because you will be believed if you reveal it, but because you will be laughed at . . ."

As time passed, the question arose as to the disposition of the one thing of value left by the "space merchants" as they came to be called—the solid gold letters. Finally, those from the Fifth Avenue shop were set in a glass display case at the United Nations. So visitors to the national museum of France or Japan—or to the United Nations, have always before them to remind them, in letters of gold;

MARS PRODUCTS

The witty Mr. Edmondson once more demonstrates his talent for compression, in a story which at first seems to have no point and then, unsettlingly, does.

"From Caribou to Carry Nation"

by G. C. Edmondson

"*Reincarnation and transmigration/From caribou to Carry Nation,*" my mad friend strophed.

A llama spat, scoring a hit on my No. 3 boy. A wife performed prophylaxy and we returned to the subject. "I don't care if St. Catherine was a Buddhist," my mad friend said, "the whole idea's in direct opposition to the doctrine of free will."

I sighed and we moved on before the llama could score again. It was spring and my mad friend was retaliating for the incident of several months ago when I and mine had descended in visitation upon him and his. With his arrival, we had immediately faced the Great American Problem: What shall we do with the children?

An always resourceful wife came up with the standby: Why not take them to the zoo?

No sooner said than, two and one-half hours and many face-washings later, it was done. The Berlin zoo was larger, someone said. But bombed out and much farther, someone answered, so we went to San Diego's which was now the world's largest. And only four miles away. Here, overlooking the Galápagos tortoises, I had vocally wondered what sort of sin could penalize a transmigrationist into several centuries of amphibian exile.

"The most objectionable facet to any belief in reincarnation," my mad friend continued, "is that it relieves us of any obligation to better the world. As for transmigration, a renegade uncle of mine died outside the Church."

I had not believed such a thing could be possible.

"*Myself, when young, did eagerly frequent,*" my mad friend quoted as we meandered down the greensward where alligators and crocodiles obligingly yawned beneath a sign which pointed out their variant maxillary and dental structures. "To cut it short," he

continued, "like Menotti, I once wasted four bits on a spook raiser."

This was so alien to my friend's normal behavior that I immediately sensed what was coming. "Please continue, Mr. Bones," I murmured.

"A typical setup: a large, rundown house set back in an overgrown weedy yard, a gingerbread anachronism plumped between a second-rate nightclub and a small Japanese-owned bakery with a tremendous thumping machine which pressed out Chinese fortune cookies.

"I was ushered into the seance by a be-turbaned Hiberno-Nubian. After some preliminary fumblings with the wrong light switch I was speaking to my transmigrationist and totally fictitious uncle."

"'It's wonderful over here, nephew,' he said in a cadaverous, echo-chamberish voice. 'The fields are green, the sun always shines, and I've nothing to do all day long but lie in the grass, surrounded by females who gaze at me with large, adoring eyes.'

"It must be wonderful in Heaven," my mad friend had interjected.

"Then suddenly, the cadaverous echo-chamberish voice shifted in timbre. 'Heaven! Are you nuts?' it demanded, 'I'm a Jersey bull on a farm in Iowa.'"

"Not up to standard," I said.

"I was afraid not," my mad friend sighed. "I won't use it again."

We had progressed by this time to the monkeys, who seemed vaguely amused by us and our offspring.

There was a scream from No. 3 boy—the same who had already been target to a llama's displeasure. Some time was consumed in removing the stinger without injecting more poison. After the first bright flame of agony, the boy settled into his usual observant silence. "He's the only one I worry about," I said in confidential tones. "The others are cast-iron-stomached little monsters, each thoroughly capable of giving the world a bad time."

"¿And this?"

"Causes me much preoccupation," I answered in the same tongue. "As you have just observed, a llama and a bee select him from the crowd. He falls heir to all the world's evils. ¿Is he an accident prone or does he have a poor karma rating?"

My mad friend shrugged.

"Timid as he seems, there's something in him. One of these days he'll burst like Attila or Pizarro onto an unsuspecting world. If the world doesn't destroy him first."

My mad friend gazed at the boy, who still limped but ignored his wounds as he stared into the eyes of a puma who regarded him with equal interest. "Probably

grow up to be a writer," my friend muttered.

We moved on to the pachyderms, where our offspring listened to the muted rumblings of digestive processes and stared in fascination as a bull emitted a tremendous ball of steaming sparrow fodder. My mad friend stared with equal fascination at the elephant's forehead. "Almost ready to go *musht*," he said.

"Let's make sure we have our terms correct," I observed. "Kindly define."

"A reincarnationist believes the soul is born into decreasing or increasing opportunities as reward or punishment for his past life. A transmigrationist, on the other hand, returns as an ape, ivory bearer, or peacock."

At this point the elephant trumpeted deafeningly. From the monkey house came additional comment.

"I had a grandfather who believed in transmigration—"

"Please continue," my mad friend murmured. He had a woman-like ability to listen while simultaneously explaining the differences between camels and dromedaries to children and wives.

"My grandfather lived to an old age. And the older, the riper. Though virile enough to participate in the Klondike rush and actually make a little money out of it, his declining years brought on one idiosyncrasy after another.

"First, he stopped eating pork. Some time later he learned beef and lamb were unhealthy. By age sixty he was strictly a fish eater. At sixty-seven my grandfather became a full-fledged vegetarian—by which I mean one who eschews milk, butter, eggs, and all animal products. Had plastics been available, I'm sure he'd have given up woolen suiting and leather shoes."

"A Transcendentalist among Calvinists," my mad friend said. The musk ox nodded and continued chewing.

"Transcendentalist was not the word we used. My family thought he was nuts. But such was the force of the old man's personality that twenty-five years later he was still going strong, and had restricted his diet to a daily two pounds of boiled carrots."

"No kidding?" my mad friend asked. "A girl in England tried that not long ago. She turned yellow."

"Grandpa was redhaired to begin with," I continued, "but he did have an unusual color in his last few years."

"And he was a transmigrationist?"

"Among other things. Of course, I've never tried to contact him. Colorful I'll admit he was, but he was pushing a hundred and had become something of a problem." I pointed at my llama bespat and bee-stung offspring. "There was

his only mourner. The child had an uncanny habit of appearing from nowhere with a match just as the old man reached for a cigar."

"Fascinating," my mad friend said. "And nothing but carrots?"

"For the last three years." I indicated the child, who now communed with a condor. "He also devours them."

Our arches had sagged from triumph through uncertainty to despair before our iron-stomached extroverts decided they'd seen enough. Four miles and several cloverleafs later supper was being prepared.

"I fully intend to excoriate the next beast I see with an elephant gun," my mad friend observed.

From the relative comfort of a gibson, I could afford to be charitable. "You should never have sworn off," I said.

"Dinner is served," said a voice from the kitchen.

And it was, if not superb, at least satisfactory. Though hours had elapsed since the last ice cream and pop, there were the usual difficulties between children and vegetables. "Odd," my wife was saying, "He usually loves carrots. . . . No, darling, you can't trade it for another one."

We were nearing the end of a long and tiresome day. I decided it was time something definitive was done. "Eat your carrot!" I thundered, "Or I shall descend upon you like a wrathful god!"

No. 3 boy made an agonizing reappraisal of how much he could get away with before company. After one quick look he ingested the carrot, meanwhile putting on his pale, drawn act.

"We grew these in the back yard," a wife remarked. "Since the first one sprouted he's had some odd idea that he couldn't eat these particular carrots."

Late that night, after children had been shuffled around into the makeshifts necessary when two families occupy an *Einfamilianhaus,* my mad friend returned once more to the subject. "Like most heresies," he said, "there is a certain dark logic which runs through these two doctrines. And therein lies the danger.

"The reincarnationist is born king or beggar and feels no need to complain about the excesses of the former or the miseries of the latter. Thus man lives complacent in the midst of evil.

"Transmigration is even more absurd. Because a man likes cats, should he be reborn as one? I like filet mignon, but I sincerely hope I shall never be a steer."

There was no sound but a quickening of parental instinct made me suddenly get up. No. 3 boy was crying in his quiet, apologetic manner. "I'm not a cannibal, Grandpa," he whispered into the darkness, "he *made* me do it."

As of this writing, Will Worthington is living on a wild island off the coast of Maine, where he is leading a Thoreau-like existence which will inspire him, it is to be hoped, to more stories like the following. This is Mr. Worthington's first F&SF appearance, and it will not be his last—we have three more of his stories already in the bank. We think he is an exciting new figure on the scene, with a fresh and diversified talent worth keeping your eye on.

PLENITUDE

by Will Worthington

"WHY CAN'T WE GO HOME NOW, Daddy?" asked Mike, the youngest, and the small tanned face I saw there in the skimpy shade of the olive tree was mostly a matter of eyes—all else, hair, cheeks, thumb-sized mouth, jelly-bean body and usually flailing arms and legs, were mere accessories to the round, blue, endlessly wondering *eyes*. (*"The Wells of 'Why'"* . . . It would make a poem, I thought, if a poem were needed, and if I wasn't so damned tired. And I also thought "Oh God! It begins. Five years old. No, not quite. Four.")

"Because Daddy has to finish weeding this row of beans," I said. "We'll go back to the house in a little while."

I would go back to the house and then I would follow the path around the rocks to the hot-springs, and there I would peel off what was left of my clothes and I would soak myself in the clear but pungent water that came bubbling—perfect—from a cleft in the rocks to form a pool in the hollow of a pothole—also perfect. And while I steeped in the mineral water I could think about the fish which was soon to be broiling on the fire, and I could think of Sue turning it, poking at it and sprinkling herbs over it as though it was the first or perhaps the last fish that would ever be broiled and eaten by human creatures. She would perform that office with the same total and unreserved dedication with which, since sun-up, she had scraped deerskin, picked worms from new cabbage-leaves, gath-

ered firewood, caulked the walls of the cabin where the old chinking had fallen away or been chewed or knocked away by other hungry or merely curious creatures, and otherwise filled in the numberless gaps in the world—trivial things mostly which would not be noticed and could not become great things in a man's eyes unless she were to go away or cease to be. I don't think of this because, for all immediate purposes—there are no others—she is the first Woman in the world and quite possibly—the last.

"Why don't we live in the Old House in the valley, Daddy?"

It is All-Eyes again. Make no mistake about it; there is a kind of connectedness between the seemingly random questions of very small kids. These are the problems posed by an *Ur*-logic which is much closer to the pulse of reality than are any of the pretentious, involuted systems and the mincing nihilations and category-juggling of adults. It is we who are confused and half-blinded with the varieties of special knowledge. But how explain? What good is my experience to him?

"There are too many old things in the Old House which don't work," I say, even as I know that I merely open the floodgates of further questions.

"Don't the funny men work, Daddy? I want to see the funny men! Daddy, I want . . ."

The boy means the robots. I took him down to see the Old House in the valley once before. He rode on top of my haversack and hung on to my hair with his small fingers. It was all a lark for him. I had gone to fetch some books—gambling that there might be a bagful of worthwhile ones that had not been completely eaten by bugs and mice; and if the jaunt turned out depressing for me, it was my fault, which is to say the fault of memory and the habit of comparing what has been with what *is*—natural, inevitable, unavoidable, but oh God, just the same . . . The robots which still stood on their size-thirty metal feet looked like grinning Mexican mummies. They gave me a bad turn even though I knew what they were, and should have known what changes to expect after a long, long absence from that house, but to the kid they were a delight. Never mind transphenomenality of rusted surfaces and uselessly dangling wires; never mind the history of a senile generation. They were the funny men. I wish I could leave it at that, but of course I can't. I hide my hoe in the twigs of the olive tree and pick up Mike. This stops the questions for a while.

"Let's go home to Mummy," I say; and also, hoping to hold back the questions about the Old House long enough to think of some real answers, "Now aren't you glad we

live up here where we can see the Ocean and eagles and hot springs?"

"Yeth" says Mike firmly by way of making a querulous and ineffectual old man feel better about his decision. What a comfort to me the little one is!

I see smoke coming from the chimney, and when we round the last turn in the path we see the cabin. Sue waves from the door. She has worked like a squaw since dawn, and she smiles and waves. I can remember when women would exhaust themselves talking over the phone and eating bonbons all day and then fear to smile when their beat husbands came home from their respective nothing-foundries lest they crack the layers of phoney "youthful glow" on their faces. Not like Sue. Here is Sue with smudges of charcoal on her face and fish-scales on her leather pants. Her scent is of woodsmoke and of sweat. There is no artificial scent like this—none more endearing nor more completely "correct." There was a time when the odor of perspiration would have been more of a social disaster for a woman than the gummata of tertiary pox. Even men were touched by this strange phobia.

Sue sees the question on my face and she knows why my smile is a little perfunctory and strained.

"Chris . . . ?" I start to ask finally.

"No. He took his bow and his sleeping-bag. Muttered something about an eight-point buck."

We do not *need* the venison. If anything has been made exhaustively and exhaustingly clear to the boy it is that our blessings consist in large part of what we do not need. But this is not the point, and I know it is not the point.

"Do you think he'll ever talk to me again, Sue?"

"Of course he will." She pulls off my sweaty shirt and hands me a towel. "You know how twelve is. Everything in technicolor and with the throbbiest possible background music. Everything drags or jumps or swings or everything is Endsville or something else which it actually isn't. If it can't be turned into a drama it doesn't exist. He'll get over it."

I can think of no apt comment. Sue starts to busy herself with the fire, then turns back to me.

"You did the best thing. You did what you had to do, that's all. Go take your bath. I'm getting hungry."

I make my way up the path to the hot-springs and I am wearing only the towel and the soles of an ancient pair of sneakers held on with thongs. I am thinking that the hot water will somehow dissolve the layers of sickly thought that obscure all the colors of the world from my mind, just as it will rid me of the day's accretion of grime, but at once I know that I am

yielding to a vain and superstitious hope. I can take no real pleasure in the anticipation of my bath.

When I emerge from the underbrush and come in sight of the outcroppings of rock where the springs are, I can see Sato, our nearest neighbor and my oldest friend, making his way along the path from his valley on the other side of the mountain. I wave at him, but he does not wave back. I tell myself that he is concentrating on his feet and simply does not see me, but myself answers back in much harsher terms. Sato knows what happened when I took my older son to the City, and he knows why my son has not spoken more than a dozen coherent words since returning. He knows what I have done, and while it is not in the man's nature to rebuke another or set himself above another or mouth moral platitudes, there are limits.

Sato is some kind of a Buddhist. Only vaguely and imperfectly do I understand what this implies; not being unnecessarily explicit about itself is certainly a part of that doctrine. But there is also the injunction against killing. And I am —notwithstanding every meretricious attempt of my own mind to convert that fact into something more comfortable—a killer. And so . . . I may now contemplate what it will mean not merely to have lost my older son, but also the priceless, undemanding and yet immeasurably rewarding friendship of the family in the next valley.

"It was not intentional," I tell myself as I lower my griminess and weariness into the hot water. "It was necessary. How else explain why we chose . . . ?" But it isn't worth a damn. I might as well mumble Tantric formulae. The water feels lukewarm—*used*.

I go on flaying myself in this manner. I return to the house and sit down to supper. The food I had looked forward to so eagerly tastes like raw fungus or my old sneakers. Nothing Sue says helps, and I even find myself wishing she would go to hell with her vitamin-enriched cheerfulness.

On our slope of the mountain the darkness comes as it must come to a lizard which is suddenly immured in a cigarbox. Still no sign of Chris and so, of course, the pumas are more vocal than they have been all year. I itemize and savor every disaster that roars, rumbles, creeps, slithers, stings, crushes or bites: everything from rattlers to avalanches, and I am sure that one or all of these dire things will befall Chris before the night is over. I go outside every time I hear a sound—which is often—and I squint at the top of the ridge and into the valley below. No Chris.

Sue, from her bunk, says, "If you don't stop torturing yourself, you'll be in no condition to *do* anything

if it *does* become necessary." She is right, of course, which makes me mad as hell on top of everything else. I lie on my bunk and for the ten-millionth time reconstruct the whole experience:

We had been hacking at elder bushes, Chris and I. It had been a wet winter and clearing even enough land for garden truck out of the encroaching vegetation began to seem like trying to hold back the sea with trowels. This problem and the gloomy knowledge that we had about one hatful of beans left in the cabin had conspired to produce a mood in which nothing but hemlock could grow. And I'd about had it with the questions. Chris had started the 'Why' routine at about the same age as little Mike, but the questions, instead of levelling off as the boy began to exercise his own powers of observation and deduction, merely became more involved and challenging.

The worst thing about this was that I could not abdicate: other parents in other times could fluff off the questions of their kids with such hopeless and worthless judgments as "Well, that's how things *are*," thereby implying that both the questioner and the questioned are standing passively at the dead end of a chain of historical cause, or are existentially trapped in the eye of a storm of supernal origin, or are at the nexus of a flock of processes arising out of the choices of too many other agencies to pinpoint and blame definitively . . . *our* life, on the other hand, was clearly and in every significant particular our own baby. It did not merely proceed out of one particular historical choice, complete with foreseeable contingencies, but was an entire fabric of choices—*ours*. Here was total responsibility, complete with crowding elder bushes, cold rain, chiggers, rattlers, bone-weariness and mud. I had elected to live it—even to impose it upon my progeny—and I was prepared for its hardships, but what galled me was having to justify it.

"The people in the City don't have to do *this*, do they?" ("This" is grubbing out elder bushes, and he is right. The people in the City do not have to do *This*. They do not have to hunt, fish, gather or raise their own food. They do not have to build their own cabins, carry their own water from springs or fashion their own clothes from the skins of beautiful, murdered—by me—animals. They do not have to perspire. One of these days I will have to explain that they do not even have to sleep with their own wives. *That* of itself should be the answer of answers, but twelve is not yet ready; twelves cares about things with wheels, things which spin, roar, roll, fly, explode, exude

noise and stench. Would that twelve were fourteen!)

In the meantime it is *dig—hack—heave; dig—hack—heave!* "Come on, Chris! It isn't sundown yet."

"Why couldn't we bring an old tractor up here in pieces and put it together and fix it up and find oil and . . ." (I try to explain for the fifty-millionth time that you do not simply 'fix up' something which is the outgrowth of an enormous Organization of interdependent Organizations, the fruit of a dead tree, as it were. The wheel will not be turned back. The kid distrusts abstractions and generalities, and I don't blame him, but God I'm tired!) "Let's just clear off this corner by the olive tree, Chris, and then we'll knock off for the day."

"Are we *better* than the City-People?"

(This one hit a nerve. 'Better' is a judgment made by people after the fact of their own decisions. Or there isn't any 'Better.' As for the Recalcitrants, of which vague class of living creatures we are members, they were and are certainly both more and less *something* than the others were—the City people—the ones who elected to Go Along with the Organization. Of all the original Recalcitrant families, I would guess that not ten percent are now alive. I would if I had any use for statistics. If these people had something in common, you would have to go light-years away to find a name for it. I think it was a common lack of something—a disease perhaps. Future generations will take credit for it and refer to their origins as Fine Old Stock. I think most of them were crazy. I am glad they were—proud that they were, but most of them were just weird. Southern California. I have told Chris about the Peters family. They were going to make it on nothing but papaya juice and stewed grass augmented by East Indian breathing exercises. Poor squittered-out souls! Their corpses were like balsa wood. Better? What is Better? Grandfather was going to live on stellar emanations and devote his energies to whittling statues out of fallen redwoods. Thank Nature his stomach had other ideas! And God I'm tired and fed up!)

"Dammit, boy! Tomorrow I'll *take* you to the City and let you answer your own questions!"

And I did. Sue protested and old Sato just gave me that look which said "I'm not saying anything," but I *did.*

The journey to the City is necessarily one which goes from bad to worse. As a deer and a man in the wilderness look for downward paths and lush places if they would find a river, the signs which lead to the centers of human civilization are equally recognizable.

You look for ugliness and sense-

lessness. It is that simple. Look for places which have been overlaid with mortar so that nothing can grow or change at its will. Look for things which have been fashioned at great expense of time and energy and then discarded. Look for tin and peeling paint, for rusted metal, broken neon tubing, drifts and drifts of discarded containers—cans, bottles, papers. Look for flies and let your nose lead you where it would rather not go.

What is the difference between the burrow of a fox and a huge sheet-metal hand which bears the legend, in peeling, garish paint: THIS WAY TO PERPETUAL PARMENIDEAN PALACES . . .? I do not know why one is better than the other, or *if* it is. I know that present purposes—purposes of intellect—lead one way, and intuition leads the other. So we resist intuition, and the path of greatest resistance leads us from one vast, crumbling, frequently stinking artifact or monument to another.

Chris is alternately nauseated and thrilled. He wants to stay in the palatial abandoned houses in the outskirts, but I say 'no'. For one thing, the rats look like Doberman Pinschers and for another . . . well, never mind what it is that repels me.

Much of the city looks grand until we come close enough to see where cement and plaster, paint and plastic have sloughed away to reveal ruptured tubes and wires which gleam where their insulation has rotted away, and which are connected to nothing with any life in it. We follow a monorail track which is a silver thread seen from a distance, but which has a continuous ridge of rust and bird droppings along its upper surface as far as the eye can see. We see more of the signs which point to the PERPETUAL PARMENIDEAN PALACES, and we follow them, giving our tormented intuition a rest even while for our eyes and our spirits there is no relief.

When we first encounter life we are not sure that it *is* life.

"They look like huge grapes!" exclaims Chris when we find them, clustered about a central tower in a huge sunken place like a stadium. The P. P. Palaces are indeed like huge grapes—reddish, semitransparent, about fifteen feet in diameter, or perhaps twenty. I am not used to measuring spaces in such terms anymore. The globes are connected to the central tower, or stem, by means of thick cables . . . their umbilicals. A high, wire-mesh fence surrounds the area, but here and there the rust has done its work in spite of zinc coating on the wire. With the corn-knife I have brought to defend us from the rats and God knows what, I open a place in the fence. We are tres-

passing, and we know this, but we have come this far.

"Where are the people?" asks Chris, and I see that he looks pale. He has asked the question reluctantly, as though preferring no answer. I give none. We come close to one of the spheres, feeling that we do the wrong thing and doing it anyway. I see our objective and I point. It is a family of them, dimly visible like floating plants in an uncleaned aquarium. It is their frightened eyes we first see.

I do not know very much about the spheres except from hearsay and dim memory. The contents, including the occupants, are seen only dimly, I know, because the outer skins of the thing are filled with a self-replenishing liquid nutrient which requires the action of the sun and is augmented by the waste-products of the occupants. We look closer, moving so that the sun is directly behind the sphere, revealing its contents in sharper outline.

"Those are not real people," says Chris. Now he looks a little sick. "What are all those tubes and wires for if they're real people? Are they robots or dolls or what?"

I do not know the purpose of all the tubes and wires myself. I do know that some are connected with veins in their arms and legs, others are nutrient enemata and for collection of body wastes, still others are only mechanical tentacles which support and endlessly fondle and caress. I know that the wires leading to the metal caps on their heads are part of an invention more voracious and terrible than the ancient television—direct stimulation of certain areas of the brain, a constant running up and down the diapason of pleasurable sensation, controlled by a sort of electronic kaleidoscope.

My imagination stops about here. It would be the ultimate artificiality, with nothing of reality about it save endless variation. Of senselessness I will not think. I do not know if they see constantly shifting masses or motes of color, or smell exotic perfumes, or hear unending and constantly swelling music. I think not. I doubt that they even experience anything so immediate and yet so amorphous as the surge and recession of orgasm or the gratification of thirst being quenched. It would be stimulation without real stimulus; ultimate removal from reality. I decide not to speak of this to Chris. He has had enough. He has seen the wires and the tubes.

I have never sprung such abstractions as 'Dignity' upon the boy. What good are such absolutes on a mountainside? If there is Dignity in grubbing out weeds and planting beans, those pursuits must be more dignified *than* something, because, like all

words, it is a meaningless wisp of lint once removed from its relativistic fabric. The word does not exist until he invents it himself. The hoe and the rocky soil or the nutrient enema and the electronic ecstasy: He must judge for himself. That is why I have brought him here.

"Let's get away from here," he says. "Let's go home!"

"Good," I say, but even as I say it I can see that the largest of the pallid creatures inside the "grape" is doing something—I cannot tell what—and to my surprise it seems capable of enough awareness of us to become alarmed. What frightening creatures we must be—dirty, leather clothes with patches of dried animal blood on them, my beard and the small-boy grime of Chris! Removed as I am from these helpless aquarium creatures, I cannot blame them. But my compassion was a short-lived thing. Chris screamed.

I turned in time to see what can only be described as a huge metal scorpion rushing at Chris with its tail lashing, its fore-claws snapping like pruning shears and red lights flashing angrily where its eyes should have been. A guard robot, of course. Why I had not foreseen such a thing I will never know. I supposed at the time that the creature inside the sphere had alerted it.

The tin scorpion may have been a match for the reactions and the muscles of less primitive, more "civilized" men than ourselves, or the creators of the Perpetual Parmenidean Palaces had simply not foreseen barbarians with heavy corn-knives. I knocked Chris out of the way and dispatched the tin bug, snipping off its tail-stinger with a lucky slash of the corn-knife and jumping up and down on its thorax until all its appendages were still.

When the reaction set in, I had to attack something else. I offer no other justification for what I did. We were the intruders—the invading barbarians. All the creatures in the spheres wanted was their security. The man in the sphere set the scorpion on us, but he was protecting his family. I can see it that way now. I wish I couldn't. I wish I was one of those people who can always contrive to have been Right.

I saw the frightened eyes of the things inside the sphere, and I reacted to it as a predatory animal reacts to the scent of urea in the sweat of a lesser animal. And they had menaced my son with a hideous machine in order to be absolutely *secure!* If I reasoned at all, it was along this line.

The corn-knife was not very sharp, but the skin of the sphere parted with disgusting ease. I heard Chris scream "No! Dad! No!" . . . but I kept hacking. We were nearly engulfed in the pinkish, albuminous nutritive

which gushed from the ruptured sac. I can still smell it.

The creatures inside were more terrible to see in the open air than they had been behind their protective layers of plastic material. They were dead white and they looked to be soft, although they must have had normal human skeletons. Their struggles were blind, pointless and feeble like those of some kind of larvae found under dead wood, and the largest made a barely audible mewing sound as it groped about in search of what I cannot imagine.

I heard Chris retching violently, but could not tear my attention away from the spectacle. The sphere now looked like some huge coelenterate which had been halved for study in the laboratory, and the hose-like tentacles still moved like groping ciliae.

The agony of the creatures in the "grape" (I cannot think of them as People) when they were first exposed to unfiltered, unprocessed air and sunlight, when the wires and tubes were torn from them, and especially when the metal caps on their heads fell off in their panicky struggles and the whole universe of chilly external reality rushed in upon them at once, is beyond my imagining; and perhaps this is merciful. This and the fact that they lay in the stillness of death after only a very few minutes in the open air.

Memory is merciful too in its imperfection. All I remember of our homeward journey is the silence of it.

"Wake up! We have company, old man!"

It is Sue shaking me. Somehow I did sleep—in spite of Chris and in spite of the persistent memory. It must be midmorning. I swing my feet down and scrub at my gritty eyes. Voices outside. Cheerful. How cheerful?

It is Sato and he has his old horse hitched to a crude travoid of willow poles. It is Sato and his wife and three kids and my son Chris. There trussed up on the travois is the biggest buck I have seen in ten years, its neck transfixed with an arrow. A perfect shot and one that could not have been scored without the most careful and skillful stalking. I remember teaching him that only a bad hunter . . . a heedless and cruel one . . . would risk a distant shot with a bow.

Chris is grinning and looking sheepish. Sato's daughter is there, which accounts for the look of benign idiocy. I was wondering when he would notice. Then he sees me standing in the door of the cabin and his face takes on about ten years of gravity and thought, but this is not for the benefit of the teen-age female.

Little Mike is clawing at Chris and asking *why* he went away like that and *why* he went hunting without Daddy, and several other *whys* which Chris ignores. His answer is for his old man:

"I'm sorry, Dad. I wasn't mad at you . . . just sort of crazy. Had to do . . . this . . ." He points at the deer. "Anyhow, I'm back."

"And I'm glad," I managed.

"Dad, those elder bushes . . ."

"To hell with them," say I. "Wednesday is soon enough."

Sato moves in grinning, and just in time to relieve the awkwardness. "Dressed out this buck and carried it down the mountain by himself." I think of mountain lions. "He was about pooped when I found him in a pasture."

Sue holds open the cabin door and the Satos file in. Himself first, carrying a jug of wine, then Mrs. Sato, grinning greetings. She has never mastered English. It has not been necessary.

I drag up what pass for chairs. Made them myself. We begin talking about weeds and beans, and weather, bugs and the condition of fruit trees. It is Sato who has steered the conversation into these familiar ways, bless his knowing heart. He uncorks the wine. Sue and Mrs. Sato, meanwhile, are carrying on one of their lively conversations. Someday I will listen to them, but I doubt that I will ever learn how they communicate . . . or what. Women.

I can hear Chris outside talking to Yuki, Sato's daughter. He is not boasting about the deer; he is telling her about the fight with the tin scorpion and the grape-people.

"Are they blind . . . the grape-people?" the girl asks.

"Heck no," says Chris. "At least one of them wasn't. One of them sicced the robot bug on us. They were going to kill us. And so, Dad did what he had to do . . ."

I don't hear the details over the interjections of Yuki and little Mike, but I can imagine they are as pungent as the teen-age powers of physiological description allow. I hear Yuki exclaim, "Oh how utterly *germy!*" and another language problem occurs to me. How can kids who have never hung around a drugstore still manage to evolve languages of their own . . . characteristically adolescent dialects? It is one more mystery which I shall never solve. I hear little Mike asking for reasons and causes with his favorite word. "*Why,* Chris?"

"I'll explain it when you get older," says Chris, and oddly it doesn't sound ridiculous.

Sato pours a giant-size dollop of wine in each tumbler.

"What's the occasion?" I ask.

Sato studies the wine critically, holding the glass so the light from the door shines through.

"It's Tuesday," he says.

Last year we brought you a previously untranslated nugget of foolishness by Jules Verne, entitled "Gil Braltar." It was found and translated by I. O. Evans, editor of the fine 1957 Rinehart anthology, JULES VERNE: MASTER OF SCIENCE FICTION, *and the man to whom we are indebted for this second forgotten, and rather more serious, fantasy by the master. . . .*

FRRITT-FLACC

by Jules Verne

(translated by I. O. Evans, F.R.G.S.)

Frritt! THAT IS THE WIND GETTING up.

Flacc! That is the rain falling in torrents.

Its roaring force is bending the trees on the adjacent hills and driving on to break against the slopes of the mountains of Crimma. And all along the coast, the towering cliffs are ceaselessly gnawed by the waves of that mighty sea, the Megalocride.

Frritt! Flacc!

Far back in the harbor is hidden the small town of Luktrop: a few hundred houses with greenish verandahs which protect them—or fail to protect them—against the winds from the open sea. Four or five sloping streets—ravines rather than streets—paved with pebbles and smirched with the ashes hurled from the eruptive cone not far inland—the Vanglor. In the daytime, the volcano throws out dust from its depths, dust which spreads to form a sulphurous smoke. During the night, from minute to minute, it vomits flame. Like a lighthouse five hundred kertses away, the Vanglor gives warning of the port of Luktrop to the coasters and native craft whose prows furrow the waters of the Megalocride.

On the far side of the town stand some ruins of the Crimmerean period. Then comes a suburb with rather an Arabian appearance: a *casbah* with white walls and a rounded roof, built on the sun-scorched terrace. A pile of stone cubes thrown at random, looking like a heap of dice whose corners have been rounded off by the attrition of time.

Among the local sights may be noticed the Six-Four, a strange corner building with six openings on one street side and four on the other.

A belfry dominates the town, the square belfry of the St. Philfelène, with its bells suspended in the embrasures of its walls. Sometimes the bells jangle in a strong gale—this is a bad omen, and when it happens the countryside grows apprehensive.

Such is Luktrop. Beyond come the houses—miserable huts scattered about the countryside, among the broom and heather, like those in Brittany. But this is not in Brittany. Is it in France? I do not know. In Europe? I cannot say. At all events, you need not look for Luktrop on the map—not even in the most up-to-date atlas.

II

Froc! A discreet knock has sounded on the narrow portal of the Six-Four, which stands on the left-hand corner of Messaglière Street. It is one of the most comfortable houses in Luktrop—if indeed that word is known in Luktrop.

The *froc* was replied to by one of those savage barks in which is mingled a howl—what the bark of a wolf might be. Then a sash-window opened above the doorway of the Six-Four.

"Devil take the beggars!" came a bad-tempered voice.

A young girl, shivering in the rain and wrapped in a tattered cape, asked if Doctor Trifulgas was in.

"He is or he isn't—it's all according!"

"I've come from my father—he's dying!"

"Where is he?"

"On the slope of the Val Karniou, four kertses away."

"And what's his name?"

"Vort Kartif."

A hard man, this Doctor Trifulgas. Not at all compassionate, and responsive only to cash, paid in advance. His old Hurzof—a cross between a bull-dog and a spaniel—had more heart than he. Moreover, he had his scale of fees, so much for typhoid, so much for a stroke, so much for pericarditis and the other ailments which doctors invent by the dozen. The miserable Vort Kartif was a poor man, with a poor family. So why should Doctor Trifulgas put himself out on such a night?

"Only having got me out of bed," he muttered to himself as he lay down again; "that's worth ten fretzers already."

Scarcely twenty minutes had elapsed when the knocker banged again at the narrow portal of the Six-Four.

Cursing, the doctor left his bed and leaned out of the window.

"Who's there?" he cried.

"I'm the wife of Vort Kartif."

"That good-for-nothing at Val Karniou?"

"Yes, and if you don't come, he'll die!"

"Then you'll be his widow!"

"Here's twenty fretzers."

"Twenty fretzers, to go four kertses off to Val Karniou!"

"For heaven's sake!"

"Go to the devil!"

And again the window slammed shut. Twenty fretzers! To risk getting a cold or stiff joints for twenty fretzers, especially when next day he was expected at Kiltreno by the rich, gouty Edzingov, whose gout he was exploiting at fifty fretzers a visit!

And with that agreeable prospect before him, Doctor Trifulgas went back to bed.

Frritt! Flacc! and then *Froc! Froc! Froc!*

The three blows of the knocker were struck with a firmer hand this time. The doctor was asleep. He awoke, but in what a temper! The window opened and the storm entered like a volley from a machine-gun.

"I'm from the good-for-nothing!"

"That wretch again?"

"I'm his mother!"

"I hope his mother, his wife, and his daughter will all perish with him!"

"He's had a stroke—"

"Then let him ward it off!"

"We've brought some money," the old woman replied. "If you don't come, my grand-daughter will lose a father, my daughter will lose a husband, and I—I shall lose a son!"

It was at once pitiful and terrible to hear the voice of the old woman, to think that the wind must have frozen the blood in her veins, the rain have soaked right through her thin flesh to her very bones.

"A stroke? That's two hundred fretzers" replied the heartless Doctor Trifulgas.

"We've only got a hundred and twenty!"

"Good evening!" And once more the window slammed shut.

But on reflection . . . A hundred and twenty fretzers for a walk of an hour and a half, then half an hour to make the visit, that would make sixty fretzers an hour—a fretzer a minute. A trifling profit, but not to be disdained.

Instead of going back to bed, the doctor put on his jacket, slid into his huge thigh-boots, wrapped himself in his greatcoat, and thrust his hat on his head and his gloves on his hands. He left his lamp burning beside his *materia medica*, open at page 197. Then, emerging from the portal of the Six-Four, he paused on the threshold.

The old woman was there, leaning on her stick, emaciated by her eighty years of poverty.

"The hundred and twenty fretzers?"

"Here they are, and may God repay you five hundred times!"

"God! Has anybody ever seen the color of His money?"

The doctor whistled to Hurzof, thrust the lantern into the dog's mouth, and took the road beside the sea.

The old woman followed him.

What a weather of *frritts* and *flaccs!* The bells of St. Philfelène were jangling in the gale—a bad sign. Bah! Doctor Trifulgas was not superstitious. He had no faith in anything, not even in his own science, except for what he could get out of it.

What weather, and what a road! Pebbles and volcanic ash, the pebbles slippery with seaweed, the ashes crackling like slag. No light except for the lantern carried by the dog Hurzof, dim and flickering. Now and then a jet of flame from the volcano, in the midst of which grey wan shadows seemed to appear. . . . Nobody knew what really lay in the depths of that bottomless crater—perhaps the souls of some subterranean race, which vaporised as soon as they emerged.

The doctor and the old woman followed the slope of the shore. The sea was wet with a livid wetness, a mournful white; it gleamed as it gnawed away at the shore with a phosphorescent line of breakers, which seemed to cast worms of light on the beach.

They went on together, to the turn of the road between rolling dunes, on which the broom and the rushes clashed together like the rattle of bayonets.

The dog had come closer to its master and seemed to be saying: "Well! A hundred and twenty fretzers to put in the strong-box! That's the way to make a fortune! A few more acres to add to the vineyard! An extra course for the evening meal! An extra morsel for the faithful Hurzof! Take care of the wealthy invalids and bleed them—in the purse!"

Then the old woman stopped. With her trembling finger she indicated a reddish light in the shadows. It was the house of the good-for-nothing Vort Kartif.

"There?" asked the doctor.

"Yes," replied the old woman.

"*Harraouah,*" growled the dog.

Suddenly the volcano thundered, the ground shook violently, and a jet of lightning-like flame shot upward, piercing the clouds. The concussion hurled Doctor Trifulgas to the ground.

He swore like a Christian, staggered to his feet, and stared.

The old woman was no longer with him. Had the earth swallowed her up, or had she flown away into the swirling mists?

As for the dog, he was still there, rearing up on his hind legs, his jaws open, the lantern out.

"Let's get on," murmured the doctor.

The honest man had received his hundred and twenty fretzers: he had to earn them.

It was no more than a glimmer, half a kertse away. It was the lamp of the dying man—or maybe of the corpse. That must be the house—the old woman had pointed it out.

Amidst the *frritts* whistling and the *flaccs* pattering in the uproar of the storm, Doctor Trifulgas hurried on

As he drew near he could see the house more clearly. It stood alone in the bare countryside. It was strange to see how closely it resembled the home of the doctor, the Six-Four in Luktrop: the same pattern of windows in front, the same little arched door.

Doctor Trifulgas hurried as fast as the storm would let him. The door stood half-open; he pushed, he entered, and the storm shut it behind him, violently.

The dog Hurzof, left outside, was howling, but fell silent at intervals, as choir-boys do between the verses of a psalm.

It was all most odd. Anyone would have thought that Doctor Trifulgas had got back to his own dwelling. He was undoubtedly at Val Karniou, not in Luktrop, yet here was the same corridor with its low vaulted ceiling, the same wooden stairway with its handrail worn by the grasp of hands.

He went up. He came to a landing. In front of a door, a light gleamed faintly, as at the Six-Four.

Was it an hallucination? In the dim light he could recognize his own room with its yellow settee: on the right, an antique pear-wood chest; on the left, the iron-bound strong-box into which he meant to put the hundred and twenty fretzers. There was his arm-chair with its leather pillows; there was his table with the crooked legs, and on it, beside the lamp which was now giving out its last flicker, was his *materia medica,* open at page 197.

"What's up with me?" he said.

What *was* up with him? He was alarmed; his pupils dilated; his body seemed to be contracting and shrivelling up; a cold sweat bedewed his skin, and he felt his hair standing on end. But he must hurry. Its oil failing, the lamp was on the point of going out—and so was the dying man!

Yes, the bed was there—*his* bed, with its bed-posts and canopy, as broad as it was long, closed by curtains decorated with large flowers. This could not possibly be the bed of a good-for-nothing!

With a trembling hand the doctor grasped the curtains. He opened them and looked in. The dying man, his head protruding from the bed-clothes, lay motionless, as though about to draw his last breath. The doctor bent over him—and cried out.

The dying man—this was not the good-for-nothing Vort Kartif! This was Doctor Trifulgas! It was he who had suffered the stroke—he himself! Cerebral apoplexy with a sudden accumulation of fluid in the cavities of the skull, with paralysis on the opposite side of the body.

Yes! It was he himself for whom he had been sent, for whom the hundred and twenty fretzers had been paid! It was he who, because of the hardness of his heart, had refused to come and tend the good-for-nothing. And it was he who was at the point of death!

Doctor Trifulgas was like a madman. He felt that he was lost. His symptoms were increasing from moment to moment. Not only did he feel his powers failing—the throbbing of his heart and his breathing seemed about to cease—but he had not yet completely forgotten who he was.

What was he to do? Could he reduce the blood-pressure by judicious bleeding? Any hesitation, and Doctor Trifulgas would be lost.

He grasped his instrument case, took out a lancet, and made an incision into a vein in the arm of his counterpart; but the blood no longer flowed in his own arm. He vigorously rubbed the chest of his counterpart, but the movements of his chest were ceasing; he applied warmth to the feet of his counterpart, but his feet were freezing.

Then his counterpart raised himself, struggled, gave forth a frightful death-rattle. And Doctor Trifulgas, in spite of all that his science could teach him, died under his own hands.

Frritt! Flacc!

Next morning in Six-Four House they found the corpse of Doctor Trifulgas. He was placed on the bier and escorted with great pomp to Luktrop cemetery—to which he had sent so many others—in accordance with the book of rules.

As for the dog Hurzof—people say that he may be seen, with his lantern once more alight, roaming the countryside and howling like a lost soul.

I cannot say whether this is true, but there are so many strange things that happen in the land of Volsinie, and especially in the neighbourhood of Luktrop.

But once more I repeat that you must not look for this town on the map. The best geographers have not yet reached agreement about its latitude—or even about its longitude.

Bob Wade and Bill Miller met and began collaborating—on plays—at the age of twelve, and they've been at it ever since. Under the names of Wade Miller and Whit Masterson, they have produced some 30 highly successful novels—mostly crime and suspense—and numerous shorts, including the following new tale of a stranger with a most unsettling trick.

I Know a Good Hand Trick

by Wade Miller

AFTER HER FIRST SURPRISE AT THE chiming of her apartment door—Gloriana had not expected to be interrupted on a Wednesday afternoon—she made one or two quick preparations and then hastened to answer it.

A stranger stood there, obviously some sort of salesman, from the tentative way he was smiling with all of his small, rather pointed teeth.

"My name is Mr. Crawforth," he said.

"I'm sorry—I haven't a single spare moment." She made no move to accept his business card.

"Mrs. Fedroy assured me you'd be interested. That you were always devoted to the latest cause." He had already advanced into the foyer and was glancing with pleasure around the living room. More from curiosity than anything else, Gloriana led him down the three softly carpeted steps into the room proper and let him look his fill. She did like to have her decor admired.

She said, though, to let him know his place, "Rona Fedroy will fall for anything. I've told her to her face that she has one bat too many in her belfry, even if she is among my dearest friends. So don't consider you come highly recommended, Mr. Crawforth."

"After all, what do recommendations amount to, except from one's self?" He continued to smile at her and the room disarmingly, and she noticed how deeply luminous his eyes shone. "The furniture is exactly right, few pieces and simple. Any more would conflict with the ceiling. The ceiling is your own idea, of course."

"Certainly." It was painted the dark blue of vastness and was scattered with tiny crystalline stars handcut from mirror-glass. With the slightest change of light,

it too changed—wonderfully effective. Gloriana dropped her eyes to her wristwatch. "I think I'll change my mind and allow you, say, five minutes."

Crawforth nodded gratefully. She avoided offering to take his hat and deposit it in the guest closet, but she did indicate peremptorily the straightest chair in the room, and there he sat himself. Gloriana found her former warm spot on the long couch and curled herself into it. She picked up her half-finished oldfashioned from the cocktail table.

"Five minutes," she warned him."And I'm not going to offer you a drink. This is one of my two afternoons for relaxation, and I don't appreciate having any little bit of it chipped away."

"I know you're a well-organized woman."

"Please don't bother any more with what you've heard about me or what background material you've troubled to look up. I'll take it for granted that you know your business."

"But I am surprised to feel such a strong personal attraction between us, a current running both ways."

Gloriana sighed. "Please—to business." Yet, despite her determined reserve, he had hit dangerously close to the mark. On sight, she had found herself classifying him as tall, lean and swarthy. And that was approximately how she classified all the men she liked. Her husband, Bruce, was tall, lean and harried. Vic was tall, lean and courtly. Vic was her lover.

"Business," said Crawforth, "is a rather harsh word to apply to what amounts to a crusade. A crusade for the select few, naturally."

"Naturally. How much will it cost me?"

"It begins with a course of instruction. No books to buy, no bulky equipment to clutter up the home. However, the subject matter is by no means easy to absorb. Why, merely to achieve full body levitation requires weeks of concentration and intimate tutoring."

"By you, Mr. Crawforth?"

"By me." He went on to speak of transformation and transmigration. He described in terms she could consider no less than fiery some of the exhilarating results.

"And the price?"

He told her the price. Gloriana shook her head. It was too terribly high.

"Watch," he commanded. He pointed a finger at the ceiling. After a moment one of her precious glass stars came floating down to nestle in his lap. Then he sent it back up, and it attached itself to the ceiling again.

She said dryly, "A rather cute trick. Do you get invited to many parties?"

"Trick?" His face hardened briefly. "If that's what you choose to call it, I know a good hand

trick too." He slid his hands into his coat sleeves until they were completely out of sight. He shifted his position so he was facing her more directly.

Soon his left hand reappeared, detached from his arm and floating in midair. It was not a severed hand or anything so gruesome but simply a part of him that now had an existence of its own. Gloriana watched it in fascination as it soared lightly across to her and lit on her shoulder, as delicately as a butterfly. She had never been especially averse to things that crept or crawled or scurried, and so she could feel only an eerie pleasure as Crawforth's hand caressed her bare flesh.

Even so, her cocktail dress was held up by two mere ribbon straps and when the hand began to pull one of these down, she said sharply, "Now that's enough of that."

Crawforth retrieved his hand through the space between them and when he spread his arms to show his sleeves again, he was all in one piece. He beamed fondly at her, full of success.

"Very interesting," Gloriana admitted. At the same time she rose to her feet. "I won't pretend to understand how you do your tricks. I don't know whether you consider yourself a swami or a seer or—"

"All things," he interrupted. "Please. In the first place, I could never bring myself to pay your price. In the second place, consider my position. I enjoy a certain amount of complication to life—it's part of the game—but my quota is presently full. Don't you understand I have this home to manage, my husband to look after, dinner engagements to pay off, my beautician and my board memberships to attend regularly, my own affairs to keep in order." She looked at her wristwatch again. "Really, I can't see why I've allowed you to linger this long. It's Wednesday afternoon."

Crawforth, also standing now, inspected her darkly from head to toe. "I'm disappointed in you. I'm not used to being dismissed."

"Who is? No, please don't bother to leave your card."

He flung it down on the cocktail table anyway. Gloriana put on her icy look and didn't deign to touch it.

By the time Crawforth had reached the door, he had regained some of his composure. "You simply haven't given the whole idea enough thought," he said more gently. "You're an exciting woman with depths worth exploring and —speaking from an extremely personal point of view—exploiting. So all I intend to do is put a mild curse on you."

She curled her lips sweetly. "Of course, you won't tell me in what form. That would spoil all the spooky powers of self-suggestion, wouldn't it?"

Crawforth said, "Don't be cynical. All I want you to believe is that I have no intention of hurting you or any important part of you. So don't be expecting to shrivel up in a burst of flame or anything. No aches or pains, I promise you."

"Thank you so much."

She latched the door behind him and listened until she heard the elevator arrive and descend again. Then she took two paces to the guest closet and opened that door. "All clear," she announced. "And wasn't that an ungodly experience for you."

Vic came out, grinning, smoothing back his hair where it had gotten mussed by the coats and hangers. "Well, it was quaint," he told her just before he kissed her. Next he turned his oldfashioned glass upside down to demonstrate how empty it was.

Gloriana made up another pair of drinks for them, Vic tickling the nape of her neck while she worked. "Sometimes I think you've got an overdeveloped sense of scandal, but on the other hand, why should we advertise? Wasn't I quiet as a mouse, though?"

She gave him the drink and the praise he needed. "Oh, you were very good, pet. Notice how goodness can have its roots in absolute indecency?"

"Who was that bugger, anyway? I couldn't overhear much."

"Some salesman," she said, as they collapsed on the couch together. "Some charlatan with oh-such-hypnotic eyes, and quite a talent at sleight-of-hand." She described the parlor tricks that Crawforth had made her see. At the same time, she toyed with the silvery streaks at Vic's temples. She knew perfectly well they were dyed there, but they did lend a distinguished look.

"Well, who and what was he, for God's sakes?" Vic wanted to know.

"Simply another expert at fooling women like me, he thought. Attractive, to a certain degree—and he was past the crystal ball stage. Some seer—he couldn't even see you hiding in that closet, darling!" In the midst of a burst of laughter, Gloriana caught sight of her wristwatch.

"Let's finish our drinks," she commanded. "No, quit kissing me on the shoulder—at least, not that one." She wriggled out of his embrace. "Please, it's already past three and Bruce will be home at seven sharp. I'm guilty of frittering away one of our afternoons."

She fled into the bedroom, squirmed out of her clothes and cloaked herself in her most flowing white negligee. It was heavily trimmed in silver brocade which was a little scratchy against her smooth skin but she did so love things silvery . . . such as the stars on her ceiling, the mirror on her wall.

When she had finished inspecting herself, she peeped out into the living room. "Oh, Vic!"

She went out and picked up all his clothes, which were scattered carelessly on the floor. "Now, is this going to turn out to be one of your impetuous days?" she called.

Gloriana folded the clothes and made them into a neat pile. "Vic, where are you?"

At last she saw the tiny gray mouse huddling on the cocktail table. It had a minute silver streak alongside each round pink ear.

"Oh, Vic!" she said sadly and picked it up in her hand. It trembled there, whiskers twitching.

She sat down and held her forehead with her other hand. Eventually, her eyes wandered to Crawforth's business card. It bore his name, the legend "Instruction & Entertainment," and a number.

Still cradling the mouse in her hand, Gloriana went to the phone and dialed the number. All she got was an answering service, but she left an urgent message to call back. After that, she took two aspirin and sat down to wait and pet the frightened mouse some more.

Eventually, the phone rang and it was Crawforth. He was both tender and explicit. He even made a little joke about keeping her affairs in order. Most of the time she agreed with him, saying yes to this and yes to that. He was being very kind and not bullying her in any way.

She asked the price again and this time it didn't seem so high, not quite.

She questioned him about the problem from every angle; his logic, based on her own desires, was impregnable; so, following his instructions, she laid the receiver aside momentarily.

"Oh, poor Vic," she whispered as she carried the mouse out onto the terrace and looked down the dizzying distance into the street. "But you're no good to anyone now." She tried not to hear the whimpering squeak as she tossed him over the balustrade.

Back at the telephone, Gloriana found herself drawing a deep breath of relief. "Well," she said. "As I told you—or as I guess you know—my relaxation afternoons are Wednesday and Saturday. That's right, I'm looking forward to it. And you'll arrange to dispose of this stack of clothing that seems to be left over, won't you? No, I don't care—in a puff of smoke if that's the best you can think of."

She noticed her negligee, which made her consult her wristwatch once more. "Look, I've got to get changed before my husband comes home. . . . Yes, of course, I'm sure we'll be good for each other, but I'll be seeing you Saturday and we can talk about all that then. Goodbye. . . . All right, then—good-bye, *dear*" She blew a kiss into the phone, hung up and scampered for the bedroom.

In the melancholy event that you missed the first installment of Mr. Heinlein's new book, the following synopsis, written by Mr. Heinlein himself, will bring you up to date in all important respects.

STARSHIP SOLDIER

by Robert A. Heinlein

(Second of two parts)

SYNOPSIS:

I get the shakes every time we make a drop.

I never really intended to join up —and certainly not the Infantry!

Let me tell you how it is in the Mobile Infantry. My outfit is Rasczak's Roughnecks, a platoon of M.I. carried by the starship Terran Federation Corvette *Rodger Young*. Our own platoon leader, Lieutenant Rasczak, had been killed last drop, so we were making this drop commanded by the platoon sergeant, Ship's Sergeant Jelal . . . and I was making my first drop as an acting non-com, assistant section leader. We were fired out of the ship thirty miles above the surface of the home planet of the Skinnies, to hit their capital city with a smash & run.

It's climbing into the capsule and waiting, strapped down and dark and silent in the firing tube, that makes me shake—I don't mind it so much after I'm fired clear of the ship. Once you hit the ground you're always too busy to be scared. This time we hit at dawn—bombing, smashing, burning, lobbing A-bomb rockets, and always moving at top speed in our powered armor, for surprise and speed is what keeps a doughboy alive.

But one of my section didn't make it. Just as the retrieval boat from the transport landed, Flores, a private in the sixth squad, failed to answer muster; his squad leader and I cut out to make pick up. But Flores was hurt so badly we couldn't take him out of his armor; we had to drag nearly a ton of steel back with us. It made us late, with the girl who was piloting the boat screaming that we had all had it. Sergeant Jelly made her wait—but Flores died on the way up anyhow.

That's the Infantry— Scare yourself silly by dropping out of space onto a strange planet . . . then let a lot of strangers shoot at you . . .

then get picked up, if you're lucky Silly, huh?

I think so, too.

But I didn't mean to join the Infantry; I meant to be a spaceship pilot—and I didn't really mean to do that. My Old Man is wealthy; he expected me to go to Harvard and then manage the family business. He didn't see any point in my wasting two years of my life just to win the right to vote; Father regarded citizenship as a mere vanity and politics as something a gentleman should leave alone.

But my best friend in high school was joining up, so, just after my eighteenth birthday, I went down to the Federal Building with him. I guess I still would have chickened out if little Carmen had not shown up —the prettiest girl in our class and here she was to enroll for spaceship piloting.

The recruiting sergeant couldn't talk me out of it; I stuck up my right hand and swore to uphold and defend the Constitution.

Carmen was accepted for pilot training, but I didn't have enough math—I wound up on the cold Canadian prairie, a recruit private in the Infantry, under the meanest, toughest man in the whole M.I.—Ships' Sergeant Zim, my company commander. Zim introduced himself to us by whipping four of us with his bare hands, before breakfast. That was just a sample.

Of course I could have resigned. Shucks, more than half of us did resign in the first six weeks—plus those kicked out for discipline, paid off for incompetence, or sent to hospital. That was the Infantry's prime intention at first—run you right home with your tail between your legs.

But my parents had not forgiven me for joining, so I sweated it out. I hit my lowest point the day one of my mates was not allowed to resign —instead he got flogged at the whipping post and was kicked out . . . for hitting a sergeant.

I made up my mind to resign—before I pulled some such stunt myself.

It was a letter from one of my high school teachers that got me over my hump—my instructor in History & Moral Philosophy. He was a veteran, of course, since the law requires that H.&M.P. be taught only by citizens. But I had not suspected that he was not merely a veteran but a retired lieutenant colonel of Mobile Infantry.

Nor can I say just how his letter changed my mind. But he seemed to assume that of course I would stick it out: "—the noblest fate that a man can endure is to place his own mortal body between his loved home and the war's desolation . . . this is true for all men and all nations."

I wasn't sure he was right. But I was never again tempted to resign. Not even when I got a dose of the whip myself (five lashes), because by then I understood that I had earned them—I had pulled a colossal goof-off in combat drill, one which in battle would have resulted in my killing one of my own team mates.

My goof-off was during powered armor drill. An M.I. trains in every sort of personal fighting, from knife throwing and judo to advanced special weapons that turn him into a one-man catastrophe. But most of all

we train in how to use our powered armor. An M.I.'s suit really is a wonderful gadget—nearly a ton of steel and power and communication equipment, yet a soldier wears it like his own skin, with negative feedback causing that great, heavy, powerful suit to mimic exactly everything the man's body does. Want to jump over that house next door? Just jump, that's all. No switches to throw, no calculations to perform—jump . . . and the suit jumps with you and lifts you right over that house.

I loved 'em! So I goofed off. So I caught it. Fair enough. It's a lot better to get some rough punishment in recruit camp than it is to do something in battle which means the death of a mate. For this cuts both ways—it means that, in a combat drop, I can trust the men on my flanks. Is recruit training too tough? Not at all! There is no possible way to make it tough enough . . . and only those who have never been in combat think otherwise.

But I will agree that M.I. recruit training is fairly tough. After we learned to use powered armor we started in on practice drops and that weeded out still more and I learned about the shakes. I never quite refused to enter my capsule. But lots of us did refuse—an automatic resignation. Those that were left made tougher and tougher practice drops—desert, mountains, arctic ice, even the airless face of the Moon where parachutes can't be used and a mistake will make you eat space.

Over two thousand of us started; 187 of us graduated—the rest having resigned, been killed, or dropped. We passed in review for the last time and received certificates. Big day.

The biggest in my whole life—I was a "trained soldier!"

IX

The Tree of Liberty must be refreshed from time to time with the blood of patriots . . ."

—Thomas Jefferson, 1787

THAT IS, I THOUGHT I WAS A "trained soldier" until I reported to my ship. Any law against having a wrong opinion?

I see I didn't mention how the Terran Federation moved from "peace" to a "state of emergency" and then on into "war." I didn't notice it too closely myself. When I enrolled, it was "peace," the normal condition, at least so people think (who expects anything else?). Then, while I was at Currie, it became a "state of emergency" but I still didn't notice it as what Corporal Bronski thought about my haircut, uniform, comb at drill, and kit was much more important—and what Sergeant Zim thought was overwhelmingly important. In any case, "emergency" is still "peace."

"Peace" is that condition in which civilians pay no attention to military casualties.

But, if there ever was a time in history when "peace" meant that there was no fighting going on, I have been unable to find out about

it. When I reported to my first outfit, "Willie's Wildcats," sometimes known as Company C, Third Regiment, First M.I. Division, and shipped with them in the *Valley Forge,* the fighting had already been going on for several years.

Historians can't seem to settle whether to call this one "The Third Space War" (or the "Fourth"), or whether "The First Interstellar War" fits it better. We just call it "The Bug War" if we call it anything, which we usually don't, and in any case the historians date the beginning of "war" after the time I joined my first ship. Everything up to then and for a while afterwards were "incidents," "patrols," or "police actions." However you are just as dead if you buy a farm in an "incident" as you are if you buy it in a war.

But, to tell the truth, a soldier doesn't notice war much more than a civilian does, except his own tiny piece of it and that just on the days it happens. The rest of the time he is much more concerned with sack time, the vagaries of sergeants, and the chances of wheedling the cook between meals. However, when Kitten Smith and Al Jenkins and I joined them at Luna Base, each of Willie's Wildcats had made more than one combat drop; they were soldiers and we were not. We weren't hazed for it and the sergeants and corporals were amazingly easy to deal with after the calculated frightfulness of instructors.

It took a while to discover that this gentle treatment simply meant that we were nobody, hardly worth chewing out, until we had proved in a drop—a real drop—that we might possibly replace real Wildcats who had fought and bought it.

Let me tell you how green I was. While the *Valley Forge* was still at Luna Base, I happened to come across my section leader as he was about to hit dirt, all slicked up in dress uniform. He was wearing in his left ear lobe a small earring, a tiny gold skull beautifully made and under it, instead of the crossed bones of the ancient Jolly Roger design, was a bundle of little gold bones, almost too small to see.

Back home I had always worn jewelry when I went out on a date —I had some beautiful ear clips, rubies as big as the end of my little finger which had belonged to Mother's grandfather. I like jewelry and had rather resented being required to leave it behind when I went to Basic . . . but here was jewelry which was apparently okay to wear with uniform. My ears weren't pierced—Mother didn't approve of it, for boys—but I could have the jeweler mount it on a clip . . . and I still had money left from graduation pay call and was anxious to spend

it before it mildewed. "Unh, Sergeant? Where do you get earrings like that one? Pretty neat."

He didn't look scornful. "You like it?"

"I certainly do!" The raw gold pointed up the gold braid and piping of the uniform even better than gems would have done. I was thinking that a pair would be still handsomer, with just crossbones instead of all that confusion at the bottom. "Does the PX carry them?"

"No, the PX here never sells them." He added, "At least I don't think you'll ever be able to buy one here. But tell you what: when we reach a place where you can buy one, I'll see to it you know about it. That's a promise."

I saw several of the tiny skulls thereafter, some with more "bones," some with fewer; my guess had been correct, this was jewelry permitted with uniform. Then I got my own chance to "buy" one almost immediately thereafter and discovered that the price was unreasonably righ.

It was Operation Bughouse, the First Battle of Klendathu, soon after Buenos Aires was smeared. It took the loss of B.A. to make groundhogs realize that anything was going on, because people who haven't been out don't really believe in other planets, not down deep. I hadn't and I had been space-happy since I was a pup.

But B.A. stirred up the civilians and inspired loud screams to bring all our forces home—orbit them around the planet practically shoulder to shoulder and interdict the space Terra occupies. This is silly; you don't win a war by defense but by attack—no "Department of Defense" ever won a war; see the histories. But it seems to be a standard civilian reaction to scream for defensive tactics as soon as they do notice a war. They then want to run the war—like a passenger trying to grab the controls from the pilot in an emergency.

However, nobody asked my opinion. Quite aside from the impossibility of dragging the troops home in view of our treaty obligations and what it would do to colony planets and to our allies, we were awfully busy carrying the war to the Bugs. I suppose I noticed the destruction of B.A. less than most civilians. We were a couple of parsecs away under Cherenkov drive and the news didn't reach us until we got it from another ship later.

I remember thinking, "Gosh, that's terrible!" But B.A. wasn't my home and Terra was a long way off and I was very busy, as the attack on Klendathu, the Bugs' home planet, was mounted immediately after and we spent the time to rendezvous strapped in bunks, doped and unconscious, with the internal-gravity field of the *Valley Forge* off, to save pow-

er and to give us greater spead.

The loss of Buenos Aires changed my life enormously, but this I did not know until months later.

When it came time to drop onto Klendathu, I was assigned to PFC Dutch Bamburger. He managed to conceal his pleasure and as soon as the platoon sergeant was out of earshot, he said, "Listen, boot, you stick close and stay out of my way. You go slowing me down, I break your silly neck."

I just nodded. I was beginning to realize that this was not a drill.

Then I had the shakes for a while and then we were down—

Operation Bughouse should have been called "Operation Madhouse." Everything went wrong. It had been planned as an all-out move to bring the enemy to their knees, occupy their capital and the key points of their home planet, and end the war. Instead it darn near lost the war.

I am not criticizing General Diennes. I don't know whether it's true that he demanded more troops and more support and allowed himself to be over-ruled by the Sky Marshal-in-Chief—or not. Furthermore I doubt if some of the smart second-guessers know all the facts.

What I do know is that the General dropped with us and commanded us on the ground and, when the situation became impossible, he personally led the diversionary attack that allowed quite a few of us (including me) to be retrieved—and, in so doing, bought his farm. He's radioactive debris on Klendathu and it's much too late to court-martial him, so why talk about it?

I do have one word for any arm-chair strategist who has never made a drop. I agree that the Bugs' planet could have been plastered with H-bombs until it was surfaced with radioactive glass. But would that have won the war? The Bugs are not like us. The Pseudo-Arachnids aren't even like spiders. They are arthropods who happen to look like a madman's conception of a giant, intelligent spider, but their organization, psychological and economic, is more like that of ants or termites; they are communal entities, the ultimate dictatorship of the hive. Blasting the surface of their planet would have killed soldiers and workers; it would not have killed brain caste and queens—I doubt if anybody can be certain that even a direct hit with a burrowing H-rocket would kill a queen; we don't know how far down they are. Nor am I anxious to find out; nobody who went down those holes came up again.

So suppose we did ruin the surface of Klendathu? They would still have ships and colonies and other planets, same as we have, and their HQ is still intact—so unless they surrender, the war isn't

over. We didn't have nova bombs then; we couldn't crack Klendathu open. If they absorbed the punishment and didn't surrender, the war was still on.

If they *can* surrender—

Their soldiers can't. Their workers can't fight (and you can waste a lot of time and ammo shooting workers who wouldn't say *boo!*) and their soldier caste can't surrender. But don't think that Bugs are just stupid insects because they look the way they do and don't know how to surrender. Their warriors are smart, skilled, and aggressive—smarter than you are, by the only universal rule, if the Bug shoots first. You can burn off one leg, two legs, three legs, and he just keeps on coming; burn off four on one side and he topples—but keeps on shooting. You have to spot the skull case and get it . . . whereupon he will trot right past you, shooting at nothing, until he crashes into a wall or something.

The drop was a shambles from the start. Fifty ships were in our piece of it and they were supposed to come out of Cherenkov drive so perfectly co-ordinated that they could hit orbit and drop us, in formation and where we were supposed to hit, without even making one planet circuit to dress up their own formation. This is difficult. But when it slips, it leaves the M.I. holding the sack.

We were lucky at that, because the *Valley Forge* and every Navy file in her bought it before we ever hit the ground. In that tight, fast formation (4.7 miles/sec. orbital speed is not a stroll) she collided with the *Ypres* and both ships were destroyed. We were lucky to get out of her tubes—those of us who got out, for she was still firing capsules as she was rammed. But I wasn't aware of it; I was inside my cocoon, headed for the ground. I suppose our company commander knew that the ship had been lost (and half his Wildcats with it) since he was out first and would know when he suddenly lost touch, over the command circuit, with the ship.

But there is no way to ask him, because he wasn't retrieved. All I ever had was a gradual realization that things were in a mess.

The next eighteen hours were nightmare. I remember just snatches, stop-motion scenes of horror. I have never liked spiders; a common house spider in my bed can give me the creeps. Tarantulas are simply unthinkable, and I can't eat lobster, crab, or anything of that sort. When I got my first sight of a Bug, my mind jumped right out of my skull and started to yammer. It was seconds later that I realized that I had killed it and could stop shooting. I suppose it was a worker; I doubt if I was in any shape to tackle a warrior and win.

But, at that, I was in better shape than the K-9 Corps. They were to be dropped (if the drop had gone perfectly) on the periphery of our target and the neodogs were supposed to range outwards and provide tactical intelligence to interdiction squads whose business it was to secure the periphery. Those Calebs carry no arms, of course, other than their teeth. A neodog is supposed to hear, see, and smell and tell his partner what he finds by radio; all he carries is a radio and a destruction bomb with which he (or his partner) can blow the dog up in case of bad wounds or capture.

Those poor dogs didn't wait to be captured; most of them suicided as soon as they made contact. They felt the way I do about the Bugs, only worse. They have Calebs now that are trained to observe and evade without blowing their tops at the mere sight or smell of a Bug. But these weren't.

That wasn't all that went wrong. Just name it, it was fouled up. I didn't know what was going on; I just stuck close behind Dutch, trying to shoot or flame anything that moved, dropping a grenade down a hole whenever I saw one. Presently I got so that I could kill a Bug without wasting ammo, although I did not learn to distinguish between the harmless and those that were not. Only about one in fifty is a warrior—but he makes up for the other forty-nine. Their weapons aren't as heavy as ours but they are lethal just the same—they've got a beam that will penetrate armor and slice flesh like cutting a hard-boiled egg—and they cooperate even better than we do because the brain that does the thinking for a "squad" isn't where you can reach it; it's down one of the holes.

Dutch and I stayed lucky for a long time, milling around over an area about a mile square, corking up holes with bombs, killing what we found above surface, saving our jets for emergencies. The idea was to secure the target and allow the reinforcements and heavy stuff to come down without opposition; this was not a raid, this was a battle to establish a beachhead and enable fresh troops and heavies to capture or pacify their home planet.

Only we didn't.

Our own section was going all right. It was in the wrong pew and out of touch with the other section—the platoon leader and sergeant were dead and we never reformed. But we had staked out a claim, our special-weapons squad had set up a strong point, and we were ready to turn our real estate over to fresh troops as soon as they showed up.

Only they didn't. They dropped where we should have dropped, found unfriendly natives and had

their own troubles. We never saw them. So we stayed where we were, soaking up casualties and passing them out ourselves as opportunity offered—while we ran low on ammo and jump juice and even power to keep the suits moving. This stemed to go on for a couple of thousand years.

Dutch and I were zipping along by a wall, headed for our special-weapons squad in answer to a yell for help, when the ground suddenly opened in front of Dutch, a Bug popped out, and Dutch went down.

I flamed the Bug and tossed a grenade and the hole closed up, then turned to see what had happened to Dutch. He was down but he didn't look hurt. A platoon sergeant can monitor the physicals on every man in his platoon, but you can do the same thing ing. This seemed to go on for a man's suit.

Dutch didn't answer when I called him. His body temperature read ninety-nine degrees, his respiration, heart beat, and brain wave read zero—which looked bad but maybe his suit was dead rather than he himself. Or so I told myself, forgetting that the temperature indicator would give no reading if it were the suit rather than the man. Anyhow, I grabbed the can-opener wrench from my belt and started to take him out of his suit while trying to watch all around me.

Then I heard an all-hands call in my helmet that I never want to hear again. *"Suave qui peut!* Home! Home! Pickup and *home!* Any beacon you can hear. Six minutes! All hands, save yourselves, pick up your mates. Home on any beacon! *Suave qui—"*

I hurried.

His head came off as I dragged him out of his suit, so I dropped him and got out of there. I should have salvaged his ammo, but I was too sluggy to think; I simply bounced away to rendezvous with the strong point we had been heading for.

It was already evacuated and I felt lost and deserted. Then I heard recall, not the recall it should have been: *Yankee Doodle* (if it had been a boat from the *Valley Forge*)—but *Sugar Bush*, a tune I didn't know. No matter, it was a beacon; I headed for it, using the last of my jump juice lavishly—got aboard as they were about to button up and shortly thereafter was in the *Voortrek*, in such shock that I couldn't remember my serial number.

I've heard it called a "strategic victory"—but I was there and I claim we took a terrible licking.

Six weeks later (and feeling sixty years older) at Fleet Base on Sanctuary I boarded another ground boat and reported for duty to Ship's Sergeant Jelal in the *Rodger Young*. I was wearing, in

my pierced left ear lobe, a broken skull with one bone. Al Jenkins was with me and was wearing one exactly like it (Kitten never made it out of the tube). The surviving Wildcats were distributed around the Fleet; we had lost half our strength in the collision between the *Valley Forge* and the *Ypres;* that disastrous mess on the ground had run our casualties up over eighty per cent and the powers-that-be decided that it was impossible to put the outfit back together with the survivors—decided to close it out, put the records in the archives, and wait until the scars had healed before reactivating Company "C" (Wildcats) with new faces but old traditions.

Besides, there were a lot of empty files to fill in other outfits.

Sergeant Jelal welcomed us warmly, told us that we were joining a smart outfit, "best in the Fleet," in a taut ship, and didn't seem to notice our ear skulls. Later he took us forward to meet the Lieutenant, who smiled shyly and gave us a fatherly little talk. I noticed that Al Jenkins wasn't wearing his gold skull. Neither was I —because I had noticed that nobody in Rasczak's Roughnecks wore the skulls.

They didn't wear them because, in Rasczak's Roughnecks, it didn't matter how many combat drops you had made, nor which ones; you were either a Roughneck or you weren't—and if you were not, they didn't care who you were. Since we had come not as recruits but as combat veterans, they gave us all benefit of doubt and made us welcome with no more than that trace of formality anybody shows to a house guest who is not a member of the family.

But, less than a week later when we had made one combat drop with them, we were full-fledged Roughnecks, members of the family, called by first names, chewed out without any feeling on either side that we were less than blood brothers thereby, borrowed from and lent to, included in bull sessions and privileged to express our own silly opinions with complete freedom—and have them slapped down just as freely. We even called non-coms by first names on any but strictly duty occasions. Sergeant Jelal was always on duty, of course, unless you ran across him dirtside, in which case he was "Jelly" and went out of his way to behave as if his lordly rank meant nothing between Roughnecks.

But the Lieutenant was always "The Lieutenant"—never "Mr. Rasczak," nor even "Lieutenant Rasczak." Simply "The Lieutenant," spoken to and of in the third person. There was no god but the Lieutenant and Sergeant Jelal was his prophet. Jelly could say "No" in his own person and it might be subject to argument, at least from junior sergeants, but if he said,

"The Lieutenant wouldn't like it," he was speaking *ex cathedra* and the matter was dropped. Nobody tried to check up on whether or not the Lieutenant would or would not like it; the Word had been spoken.

The Lieutenant was father to us and loved us and spoiled us and was nevertheless rather remote from us aboard ship—and even dirtside . . . unless we reached dirt via a drop. But in a drop—well, you wouldn't think that an officer could worry about every man of a platoon spread over a hundred square miles of terrain. But he can. He can worry himself sick over each one of them. How he could keep track of us all I can't describe, but in the midst of a ruckus his voice would sing out over the command circuit: "Johnson! Check squad six! Smitty's in trouble," and it was better than even money that the Lieutenant had noticed it before Smith's squad leader.

Besides that, you knew with absolute certainty that, as long as you were alive, the Lieutenant would not get into the retrieval boat without you. There have been prisoners taken in the Bug War, but none from Rasczak's Roughnecks.

Jelly was mother to us and was close to us and took care of us and didn't spoil us at all. But he didn't report us to the Lieutenant—there was never a court martial among the Roughnecks and no man was *ever* flogged. Jelly didn't even pass out extra duty very often; he had other ways of paddling us. He could look you up and down at daily inspection and simply say, "In the Navy you might look good. Why don't you transfer?"—and get results, it being an article of faith among us that the Navy crew members slept in their uniforms and never washed below their collar lines.

But Jelly didn't have to maintain discipline among privates because he maintained it among his non-coms and expected them to do likewise. My squad leader, when I first joined, was "Red" Greene. After a couple of drops, when I knew how *good* it was to be a Roughneck, I got to feeling gay and too big for my clothes—and talked back to Red. He didn't report me; he just took me back to the washroom and gave me a medium set of lumps, and we got to be pretty good friends. He recommended me for lance, later on.

Actually we didn't know whether crew members slept in their clothes or not; we kept to our part of the ship and the Navy men kept to theirs, because they were made to feel unwelcome if they showed up in our country other than on duty—after all, one has social standards one must maintain, mustn't one? The Lieutenant had his stateroom in male officers' country, a Navy part of the ship,

but we never went there except on duty and rarely. We did go forward for guard duty, because the *Rodger Young* was a mixed ship, female captain and pilot officers, some female Navy ratings; forward of bulkhead thirty was ladies' country—and two armed M.I. day and night stood guard at the one door cutting it. (At battle stations that door, like all gas-tight doors, was secured; nobody missed a drop.)

Officers went forward of bulkhead thirty on duty and all officers, including the Lieutenant, ate in a mixed mess just beyond it. But they didn't tarry; they ate and got out. Maybe other transports were run differently, but that was the way the *Rodger Young* was run—both the Lieutenant and Captain Deladrier wanted a taut ship and got it.

Nevertheless guard duty was a privilege. It was a rest to stand beside that door, arms folded, feet spread, doping off and thinking about nothing . . . but always warmly aware that any moment you might see a feminine creature even though you were not privileged to speak to her other than on duty. Once I was called all the way into the Skipper's office and she spoke to me—she looked right at me and said, "Take this to the Chief Engineer, please."

My daily job, aside from cleaning, was servicing electronic equipment under the supervision of "Padre" Migliaccio, section leader of the first section, exactly as I used to work under Carl's eye. Drops didn't happen too often and everybody worked every day. If a man didn't have any talent, he could always scrub bulkheads; nothing was ever clean enough to suit Sergeant Jelal. We followed the M.I. rule; everybody fights, everybody works. Our first cook was Johnson, the second section's sergeant, a big friendly boy from Georgia (the one in the western hemisphere, not the other one) and a very talented chef. He wheedled pretty well, too; he liked to eat between meals and saw no reason why other people shouldn't.

The *Rodger Young* made a number of drops, all different. Every drop has to be different so that they never can figure out a pattern on you. But no more pitched battles; we operated alone, patroling, harrying, and raiding. The Terran Federation was not then able to mount a large battle; the foul-up with Operation Bughouse had cost too many ships, 'way too many trained men. It was necessary to take time to heal up, train more men.

In the mean time, small fast ships, among them the *Rodger Young* and other corvette transports, tried to be everywhere at once, keeping the enemy off bal-

ance, hurting him and running. We suffered casualties and filled our holes when we returned to Sanctuary for more capsules. I still got the shakes every drop, but drops didn't happen too often nor were we ever down long—and between times there were days and days of shipboard life.

It was the happiest period of my life although I was never consciously aware of it—I did my share of beefing just as everybody else did, and enjoyed that, too.

We weren't *really* hurt until the Lieutenant bought it.

I guess that was the worst time in all my life. I was already in bad shape for a personal reason: my mother had been in Buenos Aires when the Bugs smeared it.

I found out about it when we put in at Sanctuary for more capsules and some mail caught up with us—a note from my Aunt Eleanora, one that had not been coded and sent fast because she had failed to mark for that; the letter itself came. It was three bitter lines. Somehow she seemed to blame me for my mother's death. Whether it was my fault because I was in the Armed Services and should therefore have prevented the raid, or whether she felt that my mother had made a trip to Buenos Aires because I wasn't home where I should have been, was not clear; she implied both in the same sentence.

I tore it up and tried to walk away from it. I thought that both my parents were dead—since Father would never send Mother on a trip that long by herself. Aunt Eleanora had not said so, but she wouldn't have mentioned Father in any case; her devotion was entirely to her sister. I was almost correct—eventually I learned that Father had planned to go but something had come up and he stayed over to settle it, intending to come along the next day. But Aunt Eleanora did not tell me this.

A couple of hours later the Lieutenant sent for me and asked very gently if I would like to take leave at Sanctuary while the ship went out on her next patrol—he pointed out that I had plenty of accumulated R&R and might as well use it. I don't know how he knew that I had lost a member of my family, but he obviously did. I said no, thank you, sir; I preferred to wait until the outfit all took R&R together.

I'm glad I did, because if I hadn't, I wouldn't have been along when the Lieutenant bought it . . . and that would have been just too much to be borne. It happened very fast just before retrieval. A man in the third squad was wounded, not badly but he was down; the assistant section leader moved in to pick up—and bought a small piece himself. The Lieutenant, as usual, was watch-

ing everything at once—no doubt he had checked physicals on them by remote, but we'll never know. What he did was to make sure that the assistant section leader was still alive—then made pickup on both of them himself, one in each arm of his suit.

He threw them the last twenty feet and they were passed into the retrieval boat—and with everybody else in, the shield gone and no interdiction, was hit and died instantly.

I haven't named the private and the assistant section leader on purpose. The Lieutenant was making pickup on *all* of us, with his last breath. Maybe I was the private. It doesn't matter who. What did matter was that our family had had its head chopped off. The head of the family from which we took our name, the father who made us what we were.

After the Lieutenant had to leave us, Captain Deladrier invited Sergeant Jelal to eat forward. But he begged to be excused. Have you ever seen a widow keep her family together by behaving as if the head of the family had simply stepped out and would return at any moment? That's what Jelly did. He was just a touch more strict than ever and if he ever had to say: "The Lieutenant wouldn't like that," it was almost more than a man could take. Jelly didn't say it very often.

He left our combat organization almost unchanged; he moved the assistant section leader of the second section over into the (nominal) platoon sergeant spot, leaving his section leaders where they were needed—with their sections—and moved me from lance and assistant squad leader into acting corporal as a largely ornamental assistant section leader. Then he behaved as if the Lieutenant were merely out of sight and that he was just passing on orders.

It saved us.

X

"I have nothing to offer but blood, toil, tears, and sweat."

—W. Churchill, XXth century soldier-statesman

AS WE CAME BACK TO THE SHIP after the raid on the Skinnies—the raid in which Dizzy Flores bought it, Sergeant Jelal's first drop as platoon leader—a ship's gunner who was tending the boat lock spoke to me:

"How'd it go?"

"Routine," I answered briefly. I suppose his remark was friendly but I was feeling very mixed up and in no mood to talk—sad over Dizzy, glad that we had made pickup anyhow, mad that the pickup had been useless, and all of it tangled up with that washed-out but happy feeling of being back in the ship again, able to

muster arms and legs and note that they are all present. Besides, how can you talk about a drop to a man who has never made one?

"So?" he answered. "You guys have got it soft. Loaf thirty days, work thirty minutes."

"Yeah," I agreed and turned away. "Some of us are born lucky."

"Soldier, you ain't peddlin' vacuum," he said to my back.

Yet there was much truth in what he said. We cap troopers are like aviators of the earlier mechanized wars; a long and busy military career could contain only a few hours of actual combat, the rest being: train, get ready, go out—then come back, clean up the mess, get ready for another one, and practice, practice, practice. We didn't make another drop for almost three weeks and that on a different planet around another star—a Bug colony. Even with Cherenkov drive, stars are far apart.

In the meantime I got my corporal's stripes, nominated by Jelly and confirmed by Captain Deladrier in the absence of a commissioned officer of our own. The rank would not be permanent until approved against vacancy by the Fleet M.I. repple-depple, but that meant nothing, as the casualty rate was such that there were always more vacancies than there were warm bodies to fill them. I was a corporal when Jelly said I was; the rest was red tape.

But the gunner was not quite correct about "loafing"; there were fifty-three suits of powered armor to check, service, and repair between each drop, not to mention weapons and special equipment. Sometimes Migliaccio would down-check a suit, Jelly would confirm it, and the ship's weapons engineer, Lieutenant Farley, would decide that he couldn't cure it short of base facilities—whereupon a new suit would have to be broken out and brought from "cold" to "hot," an exacting process requiring twenty-six man-hours not counting the time of the man to whom it was fitted.

We kept busy.

But we had fun. There were always competitions, from acey-deucey to Honor Squad, and we had the best jazz band in several cubic light-years (the only one, maybe), with Sergeant Johnson on the trumpet leading them mellow and sweet for hymns or tearing the steel right off the bulkheads, as the occasion required. After that retrieval rendezvous without a programmed ballistic, the platoon's metalsmith, PFC. Archie Campbell, made a model of the *Rodger Young* and we all signed and Archie engraved our signatures on a base plate: "To Hot Pilot Yvette Deladrier, with thanks from Rasczak's Roughnecks," and we invited the skipper aft to eat with us and the Roughneck Downbeat Combo

played during dinner and then the junior private presented it. She got teary and kissed him—and kissed Jelly and he blushed purple.

After I got my chevrons I simply had to get things straight with Ace, because Jelly kept me on as assistant section leader. A man ought to fill each spot on his way up; I should have had a turn as squad leader instead of being bumped from lance and assistant squad leader to corporal and assistant section leader. Jelly knew this, but he was trying to keep the outfit as much as possible the way it had been when the Lieutenant was alive—which meant that he left his squad and section leaders unchanged.

But it left me with a ticklish problem; all three squad leaders under me were senior to me—but if Sergeant Johnson bought it on the next drop, it would not only lose us a mighty fine cook, it would leave me leading the section. There mustn't be any shadow of doubt when you give an order in combat; I had to clear up any possible shadow before we dropped again.

Ace was the problem. He was not only senior of the three, he was a career corporal and older than I was. If Ace accepted me, I wouldn't have any trouble with the other two squads.

I hadn't really had any trouble with him aboard. After we made pickup on Flores together he had been civil enough. On the other hand we hadn't had anything to have trouble over; our shipside jobs didn't put us together, except daily muster and guard mount, which is all cut and dried. But you can feel it. He was not treating me as somebody he took orders from.

So I looked him up during off hours. He was in his bunk, reading a book: *Space Rangers against the Galaxy*—a good yarn but I doubt if a military outfit ever had so many adventures and so few goof-offs. The ship had a good library.

"Ace. Got to see you."

He glanced up. "So? I just left the ship."

"I've got to see you now. Put your book down."

"What's so aching urgent?"

"Oh, come off it, Ace. If you can't wait, I'll tell you how it comes out."

"You do and I'll clobber you." But he put the book down and listened.

I said, "Ace, you're senior to me, you ought to be assistant section leader."

"Oh, so it's *that* again!"

"Yep. I think you and I ought to see Johnson and get him to fix it with Jelly."

"You do, eh?"

"Yes, I do. That's how it's got to be."

"So? Look, Shortie, I got nothing against you. Matter of fact.

you were on the bounce that day we had to pick up Dizzy; I'll hand you that. But if you want a squad, go dig up one of your own. Don't go eyeing mine. My boys wouldn't even peel potatoes for you."

"That's your final word?"

"That's my first, last, and only word."

I sighed. "Well, that settles that. But I've got one other thing on my mind. I happened to notice that the washroom needs cleaning . . . and I think you and I ought to attend to it. So put your book aside . . . as Jelly says, noncoms are always on duty."

He didn't stir. He said quietly, "You really think it's necessary, Shortie? As I said, I got nothing against you."

"Looks like."

"Think you can do it?"

"I can sure try."

"Okay. Let's take care of it."

We went aft to the washroom, chased out a private who was about to take a shower, locked the door. Ace said, "You got any restrictions in mind, Shortie?"

"Well . . . I hadn't planned to kill you."

"Check. And no broken bones, nothing that would keep us out of the next drop—except maybe by accident, of course. That suit you?"

"Suits," I agreed. "Uh, I think I'll take my shirt off."

"Wouldn't want to get blood on your shirt." He relaxed.

I started to peel it off and he let go a kick for my kneecap. No wind up. Flat-footed and not tense.

Only my kneecap wasn't there —I had learned.

A real fight ordinarily can last only a second or two, because that is all the time it takes to kill a man, or disable him to the point where he can't fight. But we had agreed to avoid permanent damage; this changes things. We were both young, in top condition, highly trained, and used to absorbing punishment. Ace was bigger, I was maybe a touch faster. Under such conditions the miserable business simply has to go on until one or the other is too beaten down to continue—unless a fluke settles it sooner. But neither was allowing any flukes; we were professionals and wary.

So it did go on, for a long, tedious, painful time. Details would be pointless; besides, I had no time to take notes.

A long time later I was lying on my back and Ace was flipping water in my face. He looked at me, then hauled me to my feet, shoved me against a bulkhead, steadied me. "Hit me!"

"Huh?" I was dazed and seeing double.

"Johnnie . . . hit me."

His face was floating in the air in front of me; I zeroed in and slugged it with all the force in my body, hard enough to mash any mosquito in poor health His eyes

closed, he slumped to the deck and I had to grab a stanchion to keep from following him.

He got slowly up. "Okay, Johnnie," he said, shaking his head, "I've had my lesson. You won't have any lip out of me . . . nor out of anybody in the section. Okay?"

I nodded and my head hurt.

"Shake?" he asked.

We shook on it, and that hurt, too.

Almost anybody else knew more about how the war was going than we did, even though we were in it. This was the period after the Bugs had located our home planet, through the Skinnies, and had raided it, destroying Buenos Aires and turning "contact troubles" into all-out war, but *before* we had built up our forces and before the Skinnies had changed sides and become our co-belligerents and de-facto allies. Partly effective interdiction for Terra had been set up from Luna (we didn't know it), but speaking broadly, the Terran Federation was losing the war.

We didn't know that, either. Nor did we know that strenuous efforts were being made to subvert the alliance against us and bring the Skinnies over to our side; the nearest we came to being told about that was when we got instructions, before the raid in which Flores was killed, to go easy on the Skinnies, destroy as much property as possible but to kill inhabitants only when unavoidable.

What a man doesn't know he can't spill if captured; neither drugs, torture, brainwash, nor endless lack of sleep, can squeeze out a secret he doesn't possess. So we were told only what we had to know. In the past, armies have been known to fold up and quit because the men didn't know what they were fighting for, nor why, and therefore lacked the will to fight. But the M.I. does not have that weakness. Each of us was a volunteer, each for some reason or other—some good, some bad. But now we fought because we were M.I. We were professionals, with esprit de corps. We were Rasczak's Roughnecks, the best unprintable outfit in the whole expurgated M.I.; we climbed into our capsules because Jelly told us it was time to do so and we fought when we got down there because that is what Rasczak's Roughnecks do.

We certainly didn't know that we were losing.

Those Bugs lay eggs. They hold them in reserve, hatch them as needed. If we killed a warrior—or a thousand—or ten thousand—his or their replacements were hatched and on duty almost before we could get back to base. You can imagine, if you like, some Bug supervisor of population flash-

ing a phone to somewhere down inside and saying, "Joe, warm up ten thousand warriors and have 'em ready by Wednesday . . . and tell engineering to activate reserve incubators N, O, P, Q, and R; demand is picking up."

I don't say they do exactly that, but those are the results. But don't think that they act purely from instinct, like termites or ants; their actions are as intelligent as ours (stupid races don't build space ships!) and are much better coordinated. It takes a year to train a private to fight and to mesh his fighting in with his mates; a Bug warrior is *hatched* able to do this.

Every time we killed a thousand Bugs at a cost of one M.I. it was a net victory for the Bugs. We were learning, expensively, how efficient a total communism can be when used by a people adapted to it by evolution; the Bug commissars didn't care any more about expending soldiers than we cared about spending ammo. Perhaps we could have figured this out about the Bugs by noting the grief the Chinese Hegemony gave the Russo-Anglo-American Alliance; however the trouble with "lessons from history" is that we read them best after falling flat on our chins.

But we were learning. Technical instructions and tactical doctrines resulted from every brush with them, spread through the Fleet. We learned to tell workers from warriors—if you had time, you could tell from the shape of the carapace, but the quick rule was: if he comes at you, he's a warrior; if he runs, you can turn your back on him. We learned not to waste ammo even on warriors except in self protection; instead we went after their lairs. Find a hole, drop down it a gas bomb which explodes gently a few seconds later, releasing an oily liquid which evaporates as a nerve gas tailored to Bugs (it is harmless to us) and which is heavier than air and keeps on going down—then you use a grenade of H.E. to seal the hole.

We still didn't know whether we were getting deep enough to kill the queens—but we did know that the Bugs didn't like these tactics; our intelligence through the Skinnies and on back into the Bugs themselves was definite on this point. Besides, we cleaned their colony off Sheol completely this way. Maybe they managed to evacuate queens and brains . . . but we were learning to hurt them.

However, so far as the Roughnecks were concerned, these gas bombings were simply another drill, to be done according to orders, by the numbers, and on the bounce.

Eventually we had to go back to Sanctuary for more capsules.

Capsules are expendable (well, so were we) and when they are gone, you must return to base, even if the Cherenkov generators could still take you twice around the Galaxy. Shortly before this a despatch came through brevetting Jelly to lieutenant, vice Rasczak. Jelly tried to keep it quiet but Captain Deladrier published it and required him to eat forward with the other officers. He still spent the rest of his time aft.

By then we had taken several drops with him as platoon leader and the outfit had gotten used to getting along without the Lieutenant—it still hurt but it was routine now. After Jelal was commissioned the word was slowly passed around among us and chewed over that it was time for us to name ourselves for our boss, as with other outfits.

Johnson was senior and took the word to Jelly; he picked me to go along as moral support. "Yeah?" growled Jelly.

"Uh, Sarge—I mean 'Lieutenant,' we've been thinking—"

"With what?"

"Well, the boys have been talking it over and they think—well, they say the outfit ought to call itself: 'Jelly's Jaguars.'"

"They do, eh? How many favor that name?"

"It's unanimous," Johnson said simply.

"So? Fifty-two ayes . . . and one no. The noes have it." Nobody ever brought up the subject again.

Shortly after that we orbitted at Sanctuary. I was glad to be there, as the ship's pseudo-gravity field had been off for two days while the Chief Engineer tinkered with it, leaving us in free fall—which I hate. I'll never be a real spaceman. Dirt underfoot felt good. The platoon went on ten days rest & recreation and transferred to accommodation barracks at the Base.

I never have learned the co-ordinates of Sanctuary, nor the name or catalog number of its star—because what you don't know, you can't spill; the location is ultra-top-secret, known only to ships' captains, piloting officers, and such . . . and, I understand, with each of them under hypnotic compulsion to suicide if necessary to avoid capture. So I don't want to know. With the possibility that Luna Base might be taken and Terra herself occupied, the Federation kept as much strength as possible at Sanctuary, so that a disaster back home would not mean capitulation.

But I can tell you what sort of a planet it is. Like Earth, but retarded.

Literally retarded, like a kid who takes ten years to learn to wave bye-bye and never does master patty-cake. It is a planet as near like Earth as two planets can be and its star is the same sort as the Sun, so say astrophysicists. It

has plenty of flora and fauna, the same atmosphere as Earth, near enough, and much the same weather; it even has a good-sized moon and Earth's exceptional tides.

With all these advantages it barely got away from the starting gate. You see, it's short on mutations; it does not enjoy Earth's high level of natural radiation.

Its most highly developed plant life is a primitive giant fern; its top animal life is a proto-insect which hasn't even developed colonies. I am not speaking of transplanted Terran flora and fauna—*our* stuff moves in and brushes the native stuff aside.

With its evolutionary progress held down by lack of radiation and a most unhealthily low mutation rate, native life forms on Sanctuary haven't had a decent chance to evolve and aren't fit to compete. Their gene patterns remain fixed for a relatively long time; they aren't adaptable—like being forced to play the same bridge hand over and over for eons, with no hope of a better one.

As long as they competed with each other, this didn't matter—morons among morons, so to speak. But when types that had evolved on a planet enjoying high radiation and fierce competition were introduced, the native stuff was outclassed.

The above is obvious from high school biology . . . but the high forehead from the research station there who told me about this brought up a point I would never have thought of.

What about the human beings who colonized Sanctuary?

Not transients like me, but colonists who live there, many of whom were born there, and whose descendants will live there, even unto the umpteenth generation—what about those descendants? It doesn't do a person harm not to be radiated; in fact it's a bit safer—leukemia and some types of cancer are almost unknown there. Besides that, the economic situation is at present all in their favor; when they plant Terran wheat, they don't even clear out the weeds. Terran wheat displaces anything native.

But the descendants of those colonists won't evolve. Not much anyhow. This chap told me that they could improve a little through mutation from other causes, from new blood added by immigration, and from natural selection among the gene patterns they already own—but that is very minor compared with evolution on Terra or any usual planet. So what happens? Do they stay frozen at their present level while the rest of our race moves past them, until they are living fossils, as out of place as a pithecanthropus in a space ship?

Or will they worry about the fate of their descendants and

dose themselves regularly with X-rays or maybe set off lots of dirty-type nuclear explosions each year to build up a fallout reservoir in their atmosphere? (Accepting the immediate dangers of radiation to themselves in order to provide a proper genetic heritage of mutation for their descendants.)

This bloke predicted that they would not do anything. He claims that the human race is too individualistic, too self-centered, to worry that much about future generations. He says that genetic impoverishment of distant generations through lack of radiation is something most people are incapable of worrying about. And of course it is a far-distant threat; evolution works so slowly, even on Terra, that the development of a new species is a matter of many, many thousands of years.

I don't know. But I'm sure of this: Sanctuary is going to be fully settled, either by us or by Bugs. Or by somebody. It is a potential utopia, and, with desirable real estate so scarce in this end of the Galaxy, it will not be left in the possession of life forms that failed to make the grade.

Already it is a delightful place, better in many ways for a few days R&R than is most of Terra. In the second place, while it has a lot of civilians, as civilians go they aren't bad. They know there is a war on. Fully half of them are employed either at Base or in war industry; the rest raise food and sell it to the Fleet. You might say they have a vested interest in war, but, whatever their reasons, they respect the uniform. If an M.I., walks into a shop, the proprietor calls him, "Sir," and seems to mean it, even while he's trying to sell something worthless at too high a price.

But in the *first* place, half of those civilians are female.

You have to have been out on a long patrol to appreciate this properly. You need to have looked forward to your day of guard duty, for the privilege of standing two hours out of each six with your spine against bulkhead thirty and your ears cocked for just the *sound* of a female voice. I suppost it's easier in the all-stag ships . . . but I'll take the *Rodger Young*. It's good to know that the ultimate reason you are fighting actually exists and is not just a figment of the imagination.

Besides the civilian wonderful fifty per cent, about forty per cent of the Federal Service people on Sanctuary are female. Add it up and you've got the most beautiful scenery in the explored universe.

Besides these unsurpassed advantages, a great deal else has been done to keep R&R from being wasted. Most civilians seem to hold two jobs; they've got circles under their eyes from staying up all night to make a service man's

leave pleasant. Churchill Road from Base to the city is lined with enterprises intended to separate a man from money he really hasn't any use for anyhow, to the pleasant accompaniment of refreshment, entertainment, and music.

If you are able to get past these traps, through having already been bled of all valuta, there are other places almost as satisfactory (I mean there are girls there, too) which are provided free by a grateful populace—much like the social center in Vancouver, these are, but even more welcome.

Sanctuary, and especially Espiritu Santo, the city, struck me as such an ideal place that I toyed with the notion of asking for my discharge there when my term was up—after all, I didn't care whether my descendants (if any) twenty-five thousand years hence had long green tendrils or just the equipment I had been forced to get by with. That professor-type from the Research Station couldn't frighten me with that no-radiation scare talk; it seemed to me (from what I saw around me) that the human race had reached its peak.

No doubt a gentleman wart hog feels this way about a lady wart hog—if so, both of us are very sincere.

There are other opportunities for recreation, too. I remember with pleasure one evening when a table of Roughnecks got into a friendly discussion with a group of Navy men (not from the *Rodger Young*) at the next table. The Base police broke it up with stun guns just as we were warming to our rebuttal. Nothing came of it, except that we had to pay for the furniture—the Base Commandant thinks that a man on R&R should be allowed a little freedom as long as he doesn't pick one of the "thirty-one crash landings."

The accommodation barracks are all right, too—comfortable and the chow line works twenty-five hours a day with civilians doing all the work. No reveille, no taps, you're on leave and you don't have to go to the barracks at all. I did, however, as it seemed preposterous to spend money on hotels when there was a clean, soft sack free and so many better ways to spend pay. That extra hour in each day was nice, too, as it meant nine hours in the sack and the day still untouched—I caught up clear back to Operation Bughouse.

It might as well have been a hotel; Ace and I had a room to ourselves in visiting non-coms quarters. One morning, when R&R was drawing to a close, I was turning over about local noon when Ace shook my bed. "On the bounce, soldier! The Bugs are attacking."

I told him what to do with the Bugs.

"Let's hit dirt," he persisted.

"No dinero." I had had a date the night before with a chemist (female, of course, and charmingly so) from the Research Station. She had known Carl on Pluto and Carl had written to me to look her up. She was a slender redhead, with expensive tastes. Apparently Carl had intimated to her that I had more money than was good for me, for she decided to get acquainted with the local champagne. I didn't let Carl down by admitting that all I had was a trooper's honorarium; I bought it for her while I drank what they said was (but wasn't) fresh pineapple squash. I had to walk home, afterwards—cabs aren't free. Still, it had been worth it.

"No ache," Ace answered. "I can juice you—I got lucky last night. Ran into a Navy file who didn't know percentages."

So I got up and shaved and showered and we hit the chow line for half a dozen shell eggs and sundries such as potatoes and ham and hot cakes and so forth and then we hit dirt to get something to eat. The walk up Churchill Road was hot and Ace decided to stop for a beer. I went along to see if their pineapple squash was real. It wasn't, but it was cold.

We talked about this and that and Ace ordered another beer. I tried their strawberry squash—same deal. Ace stared into his suds, then said, "Ever thought about greasing for officer?"

I said, "*Huh?* Are you crazy?"

"Nope. Look, Johnnie, no matter what propaganda they hand the folks at home, you and I know that the Bugs aren't ready to quit. So why don't you plan ahead? As the man says, if you've got to play in the band, it's better to wave the stick than carry the drum."

I was startled by such talk, especially from Ace. "How about you? Are you planning to buck for a commission?"

"Me?" he answered. "Check your circuits, son. I've got no education and I'm ten years older than you are. But you've got enough education to hit the selection exams *and* you've got the I.Q. they like. I guarantee that if you go career, you'll make sergeant before I do—and get picked for O.C.S. the day after."

"Now I know you're crazy!"

"You listen to your Pop. I hate to tell you this, but you are just stupid and eager and sincere enough to make the kind of officer that men love to follow into some silly predicament. But me—well, I'm a natural non-com, with the proper pessimistic attitude to offset the enthusiasm of the likes of you. Someday I'll make sergeant and presently I'll have my twenty years in and retire and get one of the reserved jobs—cop, maybe—and marry a nice fat wife with the same low tastes I have, and I'll follow the sports and fish and go pleasantly to pieces."

Ace stopped to salt his beer. "But *you*," he went on. "You'll stay in and probably make high rank and die gloriously and I'll read about it and say proudly, 'I knew him when. Why, I used to lend him money—we were corporals together.' Well?"

"I've never thought about it," I said slowly. "I just meant to serve my term."

He grinned sourly. "Do you see any term enrollees being paid off? you expect to make it on two years?"

He had a point. As long as the *war* continued, a "term" didn't end—not for cap troopers. It was mostly a difference in attitude. Those of us on "term" could feel like short-timers; we could talk about: "When this flea-bitten war is over." A career man didn't say that; he wasn't going anywhere, short of retirement—or buying it.

On the other hand, neither were we. But if you went "career" and then didn't finish twenty . . . well, they could be pretty sticky about your franchise even though they wouldn't keep a man who didn't want to stay.

"Maybe not a two-year term," I admitted. "But the war won't last forever."

"It won't?"

"How can it?"

"Blessed if I know. They don't tell me these things. But that's not what is troubling you, Johnnie. You got a girl waiting?"

"No. Well, I had," I answered slowly, "but she 'Dear-Johnned' me."

This was a mild decoration, which I tucked in because Ace seemed to expect it. Carmen wasn't my girl and she never waited for anybody—but she *did* address letters with "Dear Johnnie" on the infrequent occasions when she wrote to me.

Ace nodded wisely. "They'll do it every time. They'd rather marry civilians and have cold feet in bed and somebody to chew out when they feel like it. Never mind, son—you'll find plenty willing to marry when you're retired . . . and you'll be better able to handle one then. Marriage is a young man's disaster and an old man's comfort." He looked at my glass. "It nauseates me to see you drinking that slop."

"I feel the same way about beer," I told him. "I don't like its taste, I don't like its smell, and I certainly don't like its looks."

He shrugged. "As I say, it takes all kinds. You think it over."

"I will."

Ace got into a card game and lent me some money and I went for a walk; I needed to think.

Go career? Quite aside from that noise about a commission, did I want to? I had gone through all this to get my franchise, hadn't I?—and if I went career, I was as far away from the privilege of voting as if I had never enrolled

. . . because as long as you were in uniform you weren't entitled to vote. Which was the way it should be, of course—why, if they let the Roughnecks vote, the idiots might vote not to make a drop. Can't have that.

Nevertheless I had signed up in order to win a vote.

Or had I?

Had I ever cared about voting? No, it was the prestige, the pride, the status . . . of being a citizen.

Or was it?

I couldn't to save my life remember *why* I had signed up.

Anyhow, it wasn't the process of voting that made a citizen—the Lieutenant had been a citizen in the truest sense of the word, even though he had not lived long enough to cast a ballot. He had "voted" every time he made a drop.

And so had I!

I could hear Colonel Dubois in my mind: "Citizenship is a state of mind, an emotional conviction that the whole is greater than the part . . . and that the part should be humbly proud to sacrifice itself that the whole may live."

I didn't know whether I yearned to place my one-and-only body "between my loved home and the war's desolation"—I still got the shakes every drop and that "desolation" could be pretty desolate. But nevertheless I knew at last what Colonel Dubois had been talking about. The M.I. was mine and I was theirs. If that was what the M.I. did to break the monotony, then that was what I did. Patriotism was a bit esoteric for me, too large scale to see. But the M.I. was my gang, I belonged. They were all the family I had left, they were the brothers I had never had, closer than Carl had ever been. If I left them, I'd be lost.

So why shouldn't I go career?

All right, all right—but how about this nonsense of greasing for a commission? I could see myself putting in twenty years and then taking it easy, the way Ace had described, with ribbons on my chest and carpet slippers on my feet . . . or evenings down at the Veterans Hall, rehashing old times with others who belonged. But O.C.S.? I could hear Al Jenkins, in one of the bull sessions we had about such things: "I'm a private! I'm going to stay a private! when you're a private they don't expect anything of you. Who wants to be an officer? Or even a sergeant? You're breathing the same air, aren't you? Eating the same food. Going to the same places, making the same drops. But no worries."

Al had a point. What had chevrons ever gotten me?—aside from lumps.

Nevertheless I knew I would take sergeant if it was ever offered to me. You don't refuse, a cap

trooper doesn't refuse anything; he steps up and takes a swing at it. Commission, too, I supposed.

Not that it would happen. Who was I to think that I could ever be what Lieutenant Rasczak had been?

My walk had taken me close to the candidates' school, though I don't believe I intended to come that way. A company of them were on their parade ground, drilling at trot, looking for all the world like boots in Basic. The sun was hot and it looked not nearly as comfortable as a bull session in the drop room of the *Rodger Young*—why, I hadn't marched farther than bulkhead thirty since I finished Basic; that breaking-in nonsense was past.

I watched them, sweating through their uniforms; I heard them being chewed out—by sergeants, too. Old Home Week. I shook my head and walked away. —went back to the accommodation barracks, over to B.O.Q., found Jelly's room.

He was in, his feet up on a table and reading a magazine. I knocked on the frame of the door. He growled, "Yeah?"

"Sarge—I mean, 'Lieutenant—'"

"Spit it out!"

"Sir, I want to go career."

He dropped his feet to the deck. "Put up your right hand."

He swore me, reached into the table drawer and pulled out papers.

He had my papers already made out, ready to sign. How about that?

XI

"It is by no means enough that an officer should be capable . . . He should be as well a gentleman of liberal education, refined manners, punctillous courtesy, and the nicest sense of personal honor . . . No meritorious act of a subordinate should escape his attention, even if the reward be only one word of approval. Conversely, he should not be blind to a single fault in any subordinate.

"True as may be the political principles for which we are now contending . . . the ships themselves must be ruled under a system of absolute despotism.

"I trust that I have now made clear to you the tremendous responsibilities . . . We must do the best we can with what we have—"

—John Paul Jones, 14 Sep 1775; excerpts from a letter to the naval committee of the N.A. insurrectionists.

THE *Rodger Young* WAS AGAIN RETURNING to Base for replacements, both capsules and men. Al Jenkins had bought his farm, covering a pickup—and that one had cost us the Padre, too. And besides that,

I had to be replaced. I was wearing brand-new sergeant's chevrons (vice Migliaccio) but I had a hunch that Ace would be wearing them as soon as I was out of the ship—they were mostly honorary; the promotion was Jelly's way of giving me a good send-off as I was detached for O.C.S.

But it didn't keep me from being proud of them. At Fleet landing field I went through the gate with my nose in the air and strode up to the quarantine desk to have my orders stamped. As this was being done I heard a polite, respectful voice behind me: "Excuse me, Sergeant, but that boat that just came down—is it from the *Rodger*—"

I turned to see the speaker, flicked my eyes over his sleeves, saw that it was a small, slightly stoop-shouldered corporal, no doubt one of our—

"*Father!*"

Then the corporal had his arms around me. "Juan! Juan! Oh, my little Johnnie!"

I kissed him and hugged him and started to cry. Maybe that civilian clerk at the quarantine desk had never seen two noncoms kiss each other before. Well, if I had noticed him so much as lifting an eyebrow, I would have pasted him. But I didn't notice, I was busy. He had to remind me to take my orders with me.

By then we had blown our noses and quit making an open spectacle of ourselves. I said, "Father, let's find a corner somewhere and sit down and talk. I want to know . . . well, *everything!*" I took a deep breath. "I thought you were dead."

"No. Came close to buying it once or twice, maybe. But, Son . . . Sergeant—I really do have to find out about that landing boat. You see—"

"Oh, that. It's from the *Rodger Young*. I just—"

He looked terribly disappointed. "Then I've got to report in." He added eagerly, "But you'll be back aboard soon, won't you, Juanito? Or are you going on R&R?"

"Uh, no." I thought fast. Of all the ways to have things roll! "Look, Father, you can't go aboard for at least an hour and a bit. That boat is not on a fast retrieve; she'll make a minimum-fuel rendezvous when the *Rog* completes this pass—if the pilot doesn't have to wait for the next pass; they've got to load first."

He said dubiously, "My orders read to report at once to the pilot of the first available ship's boat."

"Father, Father! Do you have to be so confounded regulation? The girl who's pushing that heap won't care whether you board now, or just as they button up. Anyhow they'll play the ship's recall over the speakers ten minutes before boost and announce it. You *can't* miss it."

He let me lead him to an empty

corner. As we sat down he added, "Will you be going up in the same boat, Juan? Or later?"

"Uh—" I showed him my orders; it seemed the simplest way to break the news. Ships that pass in the night—cripes, what a way for things to break!

He read them and got tears in his eyes and I said hastily, "Look, Father, I'm going to try to come back—I wouldn't want any outfit but the Roughnecks. And with you in them . . . oh, I know it's disappointing but—"

"It's not disappointment, Juan."

"Huh?"

"It's pride. My boy is going to be an officer. My little Johnnie—Oh, it's disappointment, too; I had waited for this day. But I can wait a while longer." He smiled through his tears. "You've grown, lad. And filled out, too."

"Uh, I guess so. But, Father, I'm not an officer yet and I might only be out of the *Rog* a few days. I mean, they sometimes bust 'em out pretty fast and—"

"Enough of that, young man!"

"Huh?"

"You'll make it. Let's have no more talk of 'busting out.'" Suddenly he smiled. "That's the first time I've been able to tell a sergeant to shut up."

"Well . . . I'll try, Father. And if I do make it, I'll certainly put in for the old *Rog*. But—" I trailed off.

"Yes, I know. Your request won't mean anything unless there's a billet. Never mind. If this hour is all we have, we'll make the most of it—and I'm so proud of you I'm splitting my seams. How have you been, Johnnie?"

"Oh, fine, just fine." I was thinking that it wasn't all bad. He would be better off in the Roughnecks than in any other outfit. All my friends . . . they'd take care of him, keep him alive. I'd have to send a gram to Ace—Father like as not wouldn't even let them know he was related. "Father, how long have you been in?"

"A little over a year."

"And corporal already!"

Father smiled grimly. "They're making them fast these days."

I didn't have to ask what he meant. Casualties. There were always vacancies; you couldn't get enough trained soldiers to fill them. Instead I said, "Uh . . . but, Father, you're— Well, I mean, aren't you sort of old to be soldiering? I mean the Navy, or Logistics, or—"

"I wanted the M.I. and I got it!" he said emphatically. "And I'm no older than many sergeants—not as old, in fact. Son, the mere fact that I am twenty-two years older than you are doesn't put me in a wheel chair. And age has its advantages, too."

Well, there was something in that. Sergeant Zim had always tried the older men first, when

he was dealing out boot chevrons. And Father would never have goofed in Basic the way I had—no lashes for him. He was probably spotted as non-rom material before he finished Basic. The Army needs a lot of really grown-up men in the middle grades; it's a paternalistic organization.

I didn't have to ask him why he had wanted M.I., nor why or how he had wound up in my ship—I just felt warm about it, more flattered by it than any praise he had ever given me in words. And I didn't want to ask *why* he had joined up; I felt that I knew. Mother. Neither of us had mentioned her—too painful.

So I changed the subject abruptly. "Bring me up to date. Tell me where you've been and what you've done."

"Well, I trained at Camp San Martín—"

"Huh? Not Currie?"

"New one. But the same old lumps, I understand. Only they rush you through two months faster, you don't get Sundays off. Then I requested the *Rodger Young*—and didn't get it—and wound up in McSlattery's Volunteers. A good outfit."

"Yes, I know." They had had a reputation for being rough, tough, and nasty—almost as good as the Roughnecks.

"I should say that it *was* a good outfit. I made several drops with them and some of the boys bought it and after a while I got these." He glanced at his chevrons. "I was a corporal when we dropped on Sheol—"

"You were *there*? So was I!" With a sudden warm flood of emotion I felt closer to my father than I ever had before in my life.

"I know. At least I knew your outfit was there. I was fifty miles north of you, near as I can guess. We soaked up that counter attack when they came boiling out of the ground like bats out of a cave." Father shrugged. "So when it was over I was a corporal without an outfit, not enough of us left to make a healthy cadre. So they sent me here. I could have gone with King's Kodiak Bears, but I had a word with the placement sergeant—and, sure as sunrise, the *Rodger Young* came back with a billet for a corporal. So here I am."

"And when did you join up?" I realized that it was the wrong remark as soon as I made it—but I had to get the subject away from McSlattery's Volunteers; an orphan from a dead outfit wants to forget it.

Father said quietly, "Shortly after Buenos Aires."

"Oh. I see."

Father didn't say anything for several moments. Then he said softly, "I'm not sure that you do, Son."

"Sir?"

"Mmm . . . it will not be easy to explain. Certainly, losing your

Mother had a great deal to do with it. But I didn't enroll to avenge her—even though I had that in mind, too. You had more to do with it—"

"*Me?*"

"Yes, you. Son, I always understood what you were doing better than your mother did—don't blame her; she never had a chance to know, any more than a bird can understand swimming. And perhaps I knew *why* you did it, even though I beg to doubt that you knew yourself, at the time. At least half of my anger at you was sheer resentment . . . that you actually did something that I knew, buried deep in my heart, I should have done. But you weren't the cause of my joining up, either . . . you merely helped trigger it and you did control the service I chose."

He paused. "I wasn't in good shape at the time you enrolled. I was seeing my hypnotherapist pretty regularly—you never suspected that, did you?—but we had gotten no farther than a clear recognition that I was enormously dissatisfied. After you left, I took it out on you—but it was not you, and I knew it and my therapist knew it. I suppose I knew that there was real trouble brewing earlier than most; we were invited to bid on military components fully a month before the state of emergency was announced. We had converted almost entirely to war production while you were still in training.

"I felt better during that period, worked to death and too busy to see my therapist. Then I became more troubled than ever." He smiled. "Son, do you know about civilians?"

"Well . . . we don't talk the same language. I know that."

"Clearly enough put. Do you remember Madame Ruitman? I was on a few days leave after I finished Basic and I went home. I saw some of our friends, said good-bye—she among them. She chattered away and said, 'So you're really going out? Well, if you reach Faraway, you must look up my dear friends the Regatos.'

"I told her, as gently as I could, that it seemed unlikely, since the Arachnids had occupied Faraway.

"It didn't faze her. She said, 'Oh, that's all right—they're civilians.'" Father smiled cynically.

"Yes, I know."

"But I'm getting ahead of my story. I told you I was getting still more upset. Your mother's death released me for what I had to do . . . even though she and I were closer than most, nevertheless it set me free to do it. I turned the business over to Morales—"

"Old man Morales? Can *he* handle it?"

"Yes. Because he has to. A lot of us are doing things we didn't know we could. I gave him a nice

chunk of stock—you know the old saying about the kine that tread the grain—and the rest I split in a trust: half to the Daughters of Charity, half to you whenever you want to go back and take it. If you do. Never mind. I had at last found out what was wrong with me." He stopped, then said very softly, "I had to perform an act of faith. I had to prove to myself that I was a man. Not just a producing-consuming economic animal . . . but a *man.*"

At that moment, before I could answer, the wall speakers around us sang: "*—shines the name, shines the name of Rodger Young!*" and a voice added, "Personnel for F.C.T. Rodger Young, stand to boat. Berth 'H.' Nine minutes."

Father bounced to his feet, grabbed his kit roll. "That's mine! Take care of yourself, Son—and hit those exams."

"I will, Father."

He embraced me hastily. "See you when we get back!" And he was gone, on the bounce.

In the Commandant's outer office I reported to a fleet sergeant who looked remarkably like Sergeant Ho, even to lacking an arm. However, he lacked Sergeant Ho's smile. I said, "Career Sergeant Juan Rico, to report to the Commandant pursuant to orders."

He glanced at the clock. "Your boat was down seventy-three minutes ago. Well?"

So I told him. He pulled his lip and looked at me meditatively. "I've heard every excuse in the book. But you've just added a new page. Your father, your own father, was reporting to your old ship just as you were detached?"

"The truth, sergeant. You can check—Corporal Emilio Rico."

"We don't check the statements of the 'young gentlemen' here. We simply cashier them if it turns out that they have lied. Okay, a boy who wouldn't be late in order to see his old man off wouldn't be worth much. Forget it."

"Thanks, Sergeant. Do I report to the Commandant now?"

"You've reported to him." He made a check mark on a list. "Maybe a month from now he'll send for you along with a couple of dozen others. Here's your room assignment, here's a check-off list—and you can start by cutting off those chevrons. Save them; you may need them later. But as of this moment you are 'Mister,' not 'Sergeant.'"

"Yes, sir."

"Don't call me 'sir,' *I* call *you* 'sir.' But you won't like it."

Officer Candidates School is like Basic, cubed with books added. In the mornings we were privates, doing the same old things and being chewed out for the way we did them—by sergeants. In the afternoons we were 'gentlemen' and recited on an endless list of subjects; math, science, galactog-

raphy, xenology, hypnopedia, logistics, strategy and tactics, communications, military law, terrain reading, special weapons, psychology of leadership, anything from the care and feeding of privates to why Xerxes lost the big one. Most especially how to be a one-man catastrophe while keeping track of fifty other men, nursing them, loving them, leading them, saving them—but *never* babying them.

We had beds, which we used all too little; we had rooms and showers and inside plumbing; each four candidates had a civilian tiger, to make our beds and clean our rooms and shine our shoes and lay out our uniforms and run errands. This service was not a luxury; its purpose was to give the student more time to accomplish the plainly impossible by relieving him of things any graduate of Basic can already do perfectly.

"Six days shalt thou work and do all thou art able,
"The seventh the same and pound on the cable."

Or the Army version ends: "*—and clean out the stable,*" which shows you how many centuries this has been going on. I wish I could catch one of those civilians who think we loaf, and put him through one month of O.C.S.

In the evenings and all day Sundays we studied until our eyes burned and then slept (if we slept) with a hypnopedic speaker droning away under the pillow.

Our marching songs were appropriately down-beat: "*No Army for mine, no Army for mine! I'd rather be behind the plow any old time!*" and "*Don' wanta study war no more,*" and "*Don't make my boy a soldier, the weeping mother cried,*" and—favorite of all—the old classic "*Gentlemen Rankers*" with its chorus about the Little Lost Sheep: "*—God ha' pity on such as we. Baa! Yah! Bah!*"

Yet I don't remember being unhappy. Too busy, I guess. There was never that psychological "hump" to get over, the one everybody hits in Basic; there was simply the ever-present fear of flunking out. My poor preparation in math bothered me especially. My roommate, a colonial from Hesperus with the appropriate name of "Angel," sat up night after night, tutoring me.

Most instructors, especially officers, were disabled. The only ones I can remember who had a full complement of arms, legs, eyesight, hearing, etc., were some non-commissioned combat instructors—and not all of those. Our coach in dirty fighting sat in a powered chair, wearing a plastic collar, and was paralysed from the neck down. But his tongue wasn't paralysed, his eye was photographic, and the savage way he could analyse and criticize

what he had seen made up for his minor impediment.

At first I wondered why these obvious candidates for full-pay pension didn't take it and go home. Then I quit wondering.

About the middle of the course each member of each class was shipped out as a supernumerary & probationary officer (a "third lieutenant," as necessary as feet on a fish) to serve makee-learnee combat under the commander of a combat team. This was a semi-final examination and some never returned to school. My examiner was Captain Blackstone ("Blackie's Blackguards") and I suppose he was pleased with me, though all he said was: "Stick close to me, use up your ammo, and stay out of my way."

The high point in my whole course was a visit from Ensign Ibañez, she of the dark eyes, junior watch officer & pilot-under-instruction of the Corvette Transport *Mannerheim*. Carmencita showed up, looking incredibly pert in Navy dress whites and about the size of a paperweight, while my class was lined up for evening meal muster—walked down the line and you could hear eyeballs click as she passed—walked up to the duty officer and asked for me in a clear, penetrating voice.

The duty officer, Captain Chandar, was believed never to have smiled at his own mother, but he smiled down at little Carmen, straining his face out of shape, and admitted my existence . . . whereupon she waved her long black lashes at him, explained that her ship was about to boost and could she *please* take me out to dinner?

I got a highly irregular and totally unprecedented three-hour pass. Perhaps the Navy has developed hypnosis techniques that they have not yet passed on to the Army. Or her secret weapon may be older than that and not usable by M.I. In any case I not only had a wonderful time but my prestige with my classmates, none too high until then, climbed to amazing heights.

One thing did startle me. Carmen relaxed and took off her hat while we were eating, and her blue-black hair was gone. I knew that a lot of Navy girls shaved their heads—after all, it's not practical to take care of long hair in a war ship and, most especially, a pilot can't risk having her hair floating around, getting in the way, in free-fall maneuvers. Shucks, I shaved my own scalp, just for convenience and cleanliness. But my mental picture of little Carmen included this mane of thick, wavy hair.

But once you get used to it, it's rather cute. If a girl looks all right to start with, she still looks all right with her head smooth. And it does set a Navy girl apart from

civilian chicks—sort of lodge pin, like the gold skulls for combat drops. It made Carmen look distinguished, gave her dignity, and for the first time I fully realized that she really was an officer and a fighting man—as well as a very pretty girl.

I got back to barracks with stars in my eyes and whiffing slightly of perfume.

The only O.C.S. course the content of which I'm even going to mention was: History and Moral Philosophy.

I decided that the course must be a repeat for the benefit of those of us from associated territories and other places where H. & M.P. might not be taught. So I figured it for a cinch course.

Wrong again. Unlike my high school course, you had to pass. If the instructor gave you a down check, a board sat on you, questioning not merely whether you could be an officer but whether you belonged in the Army at *any* rank.

History and Moral Philosophy works like a delayed-action bomb. In high school I hadn't known what Colonel Dubois was talking about. I thought it was silly for a course with such a title to be in the science department. It was nothing like physics or chemistry; why wasn't it over in the fuzzy studies where it belonged?

I had no idea that "Mr." Dubois was trying to teach me *why* to fight—until long after I had already decided to.

Well, why should I fight? Wasn't it insane to expose my tender skin to the violence of unfriendly strangers? Especially as the pay was barely spending money, the hours terrible, and the working conditions worse? When I could sit home while such matters were handled by thick-skulled characters who *enjoyed* such games? Particularly when the strangers against whom I fought never had done anything to me personally—what sort of nonsense *is* this?

Fight because I'm an M.I.? Brother, you're salivating like Dr. Pavlov's dogs. Cut it out and start thinking.

Major Reid, our instructor, was a blind man with a habit of looking straight at you and calling you by name. We were reviewing the war between the Russo-Anglo-American Alliance and the Chinese Hegemony, 1987 and following. But this was on the day that we heard of the destruction of San Francisco and the San Joaquin Valley; I thought he would give us a pep talk. After all, even a civilian ought to be able to figure it out now—the Bugs or us. Fight or die.

Major Reid didn't mention San Francisco. He had one ape summarize the treaty of New Delhi, discuss how it ignored prisoners of war . . . and, by implication,

dropped the subject forever; the armistice became a stalemate and prisoners stayed where they were —on one side; on the other side they were turned loose and, during the Disorders, made their way home—or not.

Major Reid's victim summed up the unreleased prisoners: survivors of two divisions of British paratroopers and some thousands of civilians. "There were many other military prisoners," he went on, "captured during and before the war—there were rumors that some had been captured in an earlier war and never released. The total was never known. Best estimates place the number around sixty-five thousand."

"Why the 'best'?"

"Uh, that's the estimate in the book, sir."

"Please use precise language. Was the number greater or less than one hundred thousand?"

"Uh, I don't know, sir."

"And nobody knows. Was it greater than one thousand?"

"Probably, sir. Almost certainly."

"Utterly certain—because more than that escaped, found their ways home, were tallied. I see you did not study your lesson. *Mr. Rico!*"

Now I was the victim. "Yes, sir."

"Are a thousand unreleased prisoners sufficient reason to start or resume a war? Bear in mind that millions of innocent people will almost certainly die, if war is started or resumed."

I didn't hesitate. "Yes, *sir!* More than enough reason."

"Very well, we have an upper bracket. Is *one* unreleased prisoner enough reason to start or resume a war?"

I hesitated.

He said sharply, "Come, come, Mister! We have an upper limit of one thousand; I invited you to consider a lower limit of one. But you can't pay a promissory note which reads 'somewhere between one and one thousand pounds'—and starting a war is *much* more serious than paying a trifle of money. Wouldn't it be criminal to endanger two countries to save one man? Answer! You're holding up the class."

He got my goat. I gave him the cap trooper's answer. "Yes, sir!"

"'Yes' what?"

"It doesn't matter whether it's a thousand—or just one, sir. You fight."

"Aha! The number of prisoners is irrelevant. Good. Now prove it."

I *knew* it was the right answer. But I didn't know why. He kept hounding me. "Speak up, Mr. Rico. This is a class in exact science. You have made a statement with reference to numbers one and a thousand; you must give mathematical proof. Someone may claim that you have asserted by analogy that one potato is

worth the same price as one thousand potatoes."

"No, sir!"

"Prove it."

"Men are not potatoes."

"Good, good, Mr. Rico! I think we have strained your brain enough for one day. Come to class tomorrow with written proof in symbolic logic of your answer. See reference seven in today's chapter. Mr. Salomon! How did the present political system evolve out of the Disorders? And what is its moral justification?"

Sally stumbled through the first part. Nobody can describe accurately how the Federation came into being; it just grew. With almost every government in collapse at the end of the XXth century, something had to fill the vacuum, and in many cases it was returned veterans. Most of them hadn't any jobs, many were sore as could be over the Treaty of New Delhi, especially the P.O.W. foul up—and they knew how to fight. It was like what happened in Russia in 1917—the system collapsed; somebody moved in.

The first known case, in Aberdeen, Scotland, was typical. Some veterans banded together to stop rioting and looting, hanged a few (including two veterans) and decided not to let any but veterans on their committee. What started as an emergency measure eventually became constitutional practice.

Probably those veterans, since they were finding it necessary to hang some veterans themselves, decided that, if they had to do this, they weren't going to let any "bleedin', profiteering, blackmarket, double-time-for-overtime, army-dodging, unprintable" civilians have any say. They'd do what they were told, see?—while us apes straightened things out!

Major Reid cut Sally off. "Bring a summary of today's chapter to class, three thousand words. Mr. Salomon, can you give a reason—not theoretical but practical—why franchise is limited to discharged veterans?"

"Uh, because they are picked men, sir. Smarter."

"Pre*post*erous!"

"Sir?"

"Is the word too long for you? I said it was a silly notion. Service men are not brighter than civilians. In many cases civilians are much more intelligent. That was the excuse underlying the attempted coup d'état before the Treaty of New Delhi, the so-called 'Revolt of the Scientists.' It fell flat on its foolish face of course. Because the pursuit of science, despite its social benfits, is not itself a social virtue; scientists can be and often are men so self-centered as to lack social responsibility. I've given you a hint, Mister; can you pick it up?"

Sally answered, "Uh, service men are disciplined, sir."

Major Reid was gentle. "Sorry. A theory not backed up by facts. You and I are not permitted to vote as long as we remain under military discipline, nor is it verifiable that military discipline necessarily makes a man self-disciplined once he is free of it; the crime rate of veterans is much like that of civilians. And you forget that in peacetime most veterans come from non-combatant services and have not been subjected to the full rigors of military discipline—yet their votes count."

Major Reid smiled. "Mr. Salomon, I handed you a trick question. The practical reason for continuing is the same as the practical reason for continuing anything: it works satisfactorily.

"Nevertheless, it is instructive to observe how it works. Throughout history men have labored to place the sovereign franchise in hands that would use it wisely, for the benefit of all. An early attempt was absolute monarchy, its theory defended as 'divine right of kings.'

"Methods range from absolute monarchy to utter anarchy; mankind has tried thousands of ways and many more have been proposed, some extremely weird such as the ant-like communism urged by Plato under the misleading title *'The Republic.'* But the intent has always been to provide stable and benevolent government.

"All systems seek to achieve this by limiting franchise to those who are *believed* to have the wisdom to use it justly. I repeat *'all* systems;' as even the so-called 'unlimited democracies' excluded from franchise never less than a quarter of the population by age, birth, poll tax, criminal record, or other."

Major Reid smiled cynically. "I cannot see how a thirty-year-old moron can vote more wisely than a fifteen-year-old genius . . . but that was the age of the 'divine right of the common man.' Never mind, they paid for their folly.

"Franchise has been bestowed by all sorts of rules—place of birth, family of birth, race, sex, property, education, age, religion, et cetera. All these systems collapsed or were overthrown.

"Now here we are with still another . . . and our system works quite well. Many complain but none rebel; personal freedom is greater than ever, laws are few, taxes are low, living standards are as high as productivity permits, crime is at its lowest ebb. Why? Not because our voters are smarter; we've disposed of that argument. Mr. Singam—can you give a practical reason why our system works better than those used by our ancestors?"

Singam answered, "Uh, I guess its because the electors are a small group who know that the decisions are up to them . . . so they study the issues."

"No guessing, please. The ruling nobles of many another system were a small group fully aware of their grave power. Furthermore, citizens are not everywhere a small fraction; you should know that the percentage among adult residents ranges from over eighty per cent on Iskander to less than three per cent some places —yet government is much the same everywhere. Nor are the voters picked men; they are volunteers of no special wisdom, talent, or training. So what practical difference is there between our voters and the wielders of franchise in the past? I'll state the obvious: under our system every voter and office holder is a man or woman who has demonstrated through voluntary and difficult service that he places the welfare of the group ahead of his personal advantage.

"And that is the only practical difference.

"He may sometimes lapse, but his average performance is enormously better than that of any other ruling class in history."

Major Reid paused to touch the hands of an old-fashioned watch. "The period is almost over and we have yet to determine the moral reason for this success. Bear in mind that this is a class in science; the universe is what it *is*, not what we want it to be. To vote is to wield authority; it is the supreme authority from which all other authority derives. *Force*, if you will!—the franchise is force, naked and raw, the Power of the Rods and the Ax. Whether exerted by ten men or ten billion, political authority is *force*.

"What is the converse of authority? Mr. Rico."

He picked one I could answer. "Responsibility, sir."

"Applause. For mathematically verifiable moral reasons, authority and responsibility must always be equal—else a rebalancing takes place. To permit irresponsible authority is to sow disaster; to hold a man responsible for anything he does not control is to behave with blind idiocy. The unlimited democracies were unstable because their citizens were not responsible for the fashion in which they exerted their sovereign authority . . . other than through the tragic logic of history. The unique 'poll tax' that we must pay was unheard of. No attempt was made to determine whether a voter was socially responsible. If he voted the impossible, the disastrous possible happened instead—and responsibility was then forced on him willy-nilly and destroyed him and his foundationless temple alike.

"Our system is only slightly different; we have democracy unlimited by race, color, creed, birth, wealth, sex, or conviction, and anyone may win sovereign power by a term of voluntary service.

But that slight difference is one between a system that works, being constructed to match the facts, and one that is inherently unstable. Since the franchise is the ultimate in human authority, we insure that all who wield it accept the ultimate in social responsibility—we require each person who wishes to exert sovereign control over the state to wager his own life—and lose it, if need be—to save the life of the state. The maximum responsibility a human being can accept is thus equated to the ultimate authority any human can exert. Yin and yang, perfect and equal."

The Major added, "Can anyone define why there has never been revolution against our system? Despite the notorious fact that complaints are loud and unceasing?"

One of the older candidates took a swing at it. "Sir, revolution is impossible."

"Yes. But why?"

"Because real revolution requires aggressiveness. A rebel has to be willing to fight—or he's just a parlor pink. If you separate out the aggressive ones and made them the sheep dogs, the sheep can never give you any trouble."

"Nicely put! Analogy is always suspect, but that one is close to the facts. Bring a mathematical proof tomorrow. Time for one question—you ask and I'll answer. Anyone?"

"Uh, sir, why not go—well, go the limit? Require everyone to serve and let everybody vote?"

"Young man, can you restore my eyesight?"

"Sir? Why, no, sir!"

"You would find it easier than to instill moral virtue—that is to say, social responsibility—into a person who doesn't have it, doesn't want it, and resents having the burdens thereof thrust on him. This is why we make it so hard to enroll, so easy to resign. Social responsibility requires imagination—devotion, loyalty, all the so-called higher virtues—which an individual must develop himself; if he has them forced down him, he will vomit them out. Conscript armies have been tried. Look up the psychiatric report on brainwashed prisoners in the so-called 'Korean War,' circa 1950—the Mayer Report. Bring an analysis to class." He touched his watch. "Dismissed."

Major Reid gave us a busy time.

But it was interesting. I caught one of those mammoth assignments he chucked around so casually; I had ventured to suggest that the Crusades were different from most wars. I got handed this: *Required:* to prove that war and moral perfection derive from the same genetic inheritance.

Briefly, thus: All wars arise from population pressure. (Yes, even the Crusades, though you have to dig into trade routes and

several other things to prove it.) Morals—*all* correct moral rules—derive from the instinct to survive; moral behavior is survival behavior raised above the individual level—a father who dies to save his children survives more thoroughly than if he himself had lived. But population pressure is a direct result of the physical process of surviving through others. Therefore war, which results from population pressure, derives from the same inherited instinct which produces all moral rules suitable for human beings.

Check of proof: Would it be possible to do away with the evils of war through constructing a moral code under which population is limited to resources?

Without debating the merits of planned parenthood for any other purpose, it can be observed that any breed which stops growing commits slow suicide and other breeds move in. Some human populations did so, in Terran history—and other breeds *did* move in and engulf them. Such is the risk of tinkering with the mechanisms of the instinct to survive.

Nevertheless, let's assume that the human race does manage to balance birth and death, just right to fit its own planets, and thereby becomes peaceful. What happens?

Soon (about next Wednesday) the Bugs move in, kill off this breed which "ainta gonna study war no more" and the universe forgets us. Which may happen. Either we spread and wipe out the Bugs, or they spread and wipe us out—because both races are tough and smart and want the same real estate.

Do you know how fast human population pressure could cause us to fill the entire universe? Work it out yourself or you'll never believe it.

But does Man have any "right" to spread through the universe?

Man is what he is, a wild animal with the will to survive and (so far) the ability, against all competition. Unless you accept that, anything you say about morals, war, politics—you name it—is necessarily nonsense. Correct morals arise from knowing what Man *is*—not what do-gooders and well-meaning old Aunt Nellies would like him to be.

The universe will let us know whether or not Man has any "right" to expand. We shall see.

In the meantime the M.I. will be in there, on the bounce and swinging, on the side of our own race.

I guess Major Reid approved of what I soaked up; I graduated.

A classmate of mine, Second Lieutenant Bennie Montez, and I were at quarantine gate of Fleet landing field, waiting to go up to our ships. We were so brand-new that being saluted made us nervous and I was covering it by

reading the list of ships in orbit around Sanctuary—a list so amazingly long that it was clear that something big was stirring. I felt excited. I had my two dearest wishes in one package—posted to my old outfit and while my father was still there. And now this, whatever it was, meant that I was about to have the polish put on me by "makee-learnee" under Lieutenant Jelal, with some important drop coming up.

I was so full that I couldn't talk about it, so I studied the lists. Whew, what a lot of ships! They were posted by types, too many to locate otherwise. I started reading off troop carriers, the only ones that matter to an M.I.

There was the *Mannerheim!* Any chance of seeing Carmen? Probably not, but I could send a dispatch and find out.

Big ships—the new *Valley Forge* and the new *Ypres, Marathon, El Alamein, Iwo, Gallipoli, Leyte, Marne, Tours, Gettysburg, Hastings, Alamo, Waterloo*—all places where mud feet had made their names shine.

Little ships, named for foot sloggers—*Horatius, Alvin Yorke, Swamp Fox,* the *Rog* herself bless her heart, *Colonel Bowie, Devereux, Vercingetorix, Sandino, Kamehameha, Audie Murphy, Xenophen, Aguinaldo*—

I said, "There ought to be one named Magsaysay."

Bennie said, "What?"

"Rámon Magsaysay," I explained. "Great man, great soldier—probably be chief of psychological warfare if he were alive today. Didn't you study history?"

"Well," admitted Bennie, "I learned that Simon Bolívar built the Pyramids, licked the Armada, and made the first trip to the Moon."

"You left out marrying Cleopatra."

"Oh, that. Yup. Well, I guess every country has its own version of history."

"I'm sure of it." I added something to myself and Bennie said, "What did you say?"

"Sorry, Bernardo. Just an old saying in my own language. You could translate it, more or less, as: 'Home is where the heart is.'"

"But what language was it?"

"Tagalog. My native language."

"Don't they talk Standard English where you come from?"

"Oh, certainly. For business and school and so forth. We just talked the old speech around home a little. Traditions. You know."

"Yeah, I know. My folks chatter in Español the same way. But where do you—" The speaker started playing *Meadowland;* Bennie broke into a grin. "Got a date with a ship! Watch yourself, fellow! See you."

"Mind the Bugs." I turned back and went on reading ships' names *—Pal Malcter, Montgomery, Tchaka, Geronimo—*

Then came the sweetest sound in the world: *"—shines the name, shines the name of Rodger Young!"*

I grabbed my kit and hurried. "Home is where the heart is"—I was going home.

XII

"Am I my brother's keeper?"
Genesis IV 9

"How think ye? If a man have an hundred sheep, and one of them be gone astray, doth he not leave the ninety and nine, and goeth into the mountains, and seeketh that which is gone astray?"
—Matthew XVIII 12

"How much then is a man better than a sheep?"
—Matthew XII 12

"In the Name of God, the Beneficent, the Merciful . . . whoso saveth the life of one, it shall be as if he had saved the life of all mankind."
—The Koran, Sûrah V 32

"TIME, SIR." MY J.O. UNDER INstruction, Candidate or "third Lieutenant" Bearpaw, stood just outside my door. He looked and sounded awfully young, and was about as harmless as one of his scalp-hunting ancestors.

"Right, Jimmie." I was already in armor. We walked aft to the drop room. I said, as we went, "One word, Jimmie. Stick with me and keep out of my way. Have fun and use up your ammo. If by any chance, I buy it, you're the boss—but if you're smart, you'll let your platoon sergeant call the signals."

"Yes, sir."

As we came in, the platoon sergeant called them to attention and saluted. I returned it, said "At ease," and started down the first section while Jimmie looked over the second. Then I inspected the second section, too, checking everything on every man. My platoon sergeant is much more careful than I am, so I didn't find anything; I never do. But it makes the men feel better if their Old Man scrutinizes everything—besides, it's my job.

Then I stepped out in the middle. "Another Bug hunt, boys. This one is a little different, as you know. Since they hold prisoners of ours, we can't use a nova bomb on Klendathu—so this time we go down, stand on it, hold it, take it away from them. The boat won't be down to retrieve us; instead it'll fetch more ammo and rations. If you're taken prisoner, keep your chin up and follow the rules—because you've got the whole outfit behind you, you've got the whole Federation behind you; we'll come and get you. That's what the boys from the

Swamp Fox and the *Montgomery* have been depending on. Those who are still alive are waiting, knowing that we will show up. And here we are. Now we go get 'em.

"Don't forget that we'll have help all around us, lots of help above us. All we have to worry about is our one little piece, just the way we rehearsed it.

"One last thing. I had a letter from Captain Jelal just before we left. He says that his new legs work fine. But he also told me to tell *you* that he's got you in mind . . . and he expects your names to *shine!*

"And so do I. Five minutes for the Padre."

I felt myself beginning to shake. It was a relief when I could call them to attention again and add: "By sections . . . port and starboard . . . prepare for drop!"

I was all right then while I inspected each man into his cocoon down one side, with Jimmie and the platoon sergeant taking the other. Then we buttoned Jimmie into the no. 3 centerline capsule. Once his face was covered up, the shakes really hit me.

My platoon sergeant put his arm around my armored shoulders. "Just like a drill, Son."

"I know it, Father." I stopped shaking at once. "It's the waiting, that's all."

"I know. Four minutes. Shall we get buttoned up, sir?"

"Right away, Father." I gave him a quick hug, let the Navy drop crew seal us in. The shakes didn't start up again. Shortly I was able to report: "Bridge! Rico's Roughnecks . . . ready for drop!"

"Thirty-one seconds, Lieutenant" She added, "Good luck, boys! This time we're going to take 'em!"

"Right, Captain."

"Check! Now some music while you wait?" She switched it on:

"To the everlasting glory of the Infantry—"

THE END

HISTORICAL NOTE

Young, Rodger W., *Private, 148th Infantry, 37th Infantry Division (The Ohio Buckeyes); born Tiffin, Ohio, 28 April 1918; died 31 July 1943 on the island New Georgia, Solomons, South Pacific, while single-handedly attacking and destroying an enemy machine-gun pillbox. His platoon had been pinned down by intense fire from this pillbox; Private Young was wounded in the first burst. He crawled toward the pillbox, was wounded a second time but con-*

tinued to advance, firing his rifle as he did so. He closed on the pillbox, attacked and destroyed it with hand grenades, but in so doing he was wounded a third time and killed.

His bold and gallant action in the face of overwhelming odds enabled his team mates to escape without loss; Private Young was awarded posthumously the Medal of Honor.

Ballad of Outer Space

When sailors sang shanties of working and drinking
They fired off their ballads like salvoes from guns—
But who'll turn the verses when spaceships are sinking
Beyond the bleak mountains of time-hidden suns?

The air on the moon lies as thin as a whisper;
While poets and pioneers battle for breath
As bloodsucking Conscience, that cowardly lisper,
Comes silently rhyming her couplets of death.

O tell me tall spaceman with stars at your knuckles,
Are you content to go flighting unsung—
Weightless in space as your rocket-ship buckles
Or deep in the planet-dust where you were flung?

Bring back your loot from the universe, show it
To eyes less bedazzled by wonders than mine:
I crave the spoils of some sky-riding poet
With galaxies caught at the end of his line.

—ANTHONY BRODE

BOOKS

Without Hokum

by Damon Knight

ANTHONY BOUCHER REMARKED three years ago, in THE MYSTERY WRITER'S HANDBOOK (Harper, $3.95), that "the dividing line between 'mystery' and 'novel,' so clear for a couple of decades in the nineteen twenties and thirties, has become progressively vaguer. . . . And the borderline is being crossed from two directions: mystery novelists have steadily improved until their best work has all the qualities demanded of any fiction, while some mainstream writers have found, in the structural techniques of the mystery, a valuably solid armature to shape their creations."

Something similar now seems to be going on in science fiction. More and more during the last ten years, the field has come to be dominated by writers who are interested in s.f. chiefly as a convenient vehicle.

Hardened old addicts have been watching this change a little dubiously. In style, depth of character, and other literary values, the new work is superior (that is to say, the top tenth of it—the remainder, according to Sturgeon's Formula, is, was and will be crud). But what we used to regard as the essential thing in s.f. —the technical idea, rigorously and imaginatively worked out—is an all but dead duck.

This is dramatically shown by the contents of Judith Merril's fourth annual SF, THE YEAR'S GREATEST SCIENCE-FICTION AND FANTASY (Dell, 35¢). The thirteen s.f. and fantasy stories are of high quality; but there is not one new s.f. idea in the book, unless you count Avram Davidson's madly ingenious notion about the life-cycle of the bisexual bicycle.

This year, by my reckoning, there are two first-rate stories (McKenna's and Leiber's) in the book, and nine which in spite of some flaws carry a real emotional

charge. (Short of top quality by a hair are Sheckley's "The Prize of Peril," which I find bitingly honest right up to the phony ending, and Sturgeon's "The Comedian's Children," which blunts its point with a clumsily unbelievable piece of misdirection.) Three of the stories are from this magazine, one from *Venture*, two from *Astounding*, two from *Playboy*, one each from *Galaxy*, *The Saturday Evening Post*, *If*, *Star Science Fiction*, *Nebula*, *Science-Fantasy* and *Fantastic Universe*.

Unaccountably omitted: "Unwillingly to School," by Pauline Ashwell, surely one of the most brilliant and delightful first entries in many years, and "Unhuman Sacrifice," an equally brilliant performance by old pro Katherine MacLean. Both appeared in *Astounding*.

The book is filled out with a "science fact" section which I find less intrusive and dull than last year's. Miss Merril's own contribution, "Rockets to Where?" is surprisingly pointed, and the two articles by Daniel Lang and Isaac Asimov are both relevant and readable.

Of the fifteen stories in the collection, six are not classifiable as s.f. (including two short satirical pieces, by John Steinbeck and Richard Gehman, which simply do not belong in the book at all). The other nine are distributed along a broad spectrum, from fantasy to mainstream: almost without exception, they are s.f. by courtesy. In "Pelt," by Carol Emshwiller, "The Prize of Peril," by Robert Sheckley, Theodore L. Thomas's "Satellite Passage," "Ten-Story Jigsaw," by Brian W. Aldiss, and "The Beautiful Things," by Arthur Zirul, it's clear that the author's principal intent was to say something about people: the s.f. background, whether carefully handled or not, is only a convenience, or, worse, a concession to the market.

As I noted earlier, "Casey Agonistes" by Richard M. McKenna, and "Space-Time For Springers," by Fritz Leiber, seem to me the strongest stories in the anthology. Both are pure fantasy. Almost invariably, where an s.f. gimmick appears in the other stories, it does so with an air of intrusion, and the story is weakened by it.

What we are still calling "s.f.," it seems to me, is at an awkward transitional stage. Either that, or (more hopefully), the field has drifted as far as it can go in the direction of indifference to science; and in the next few years we can expect a resurgence of space stories written by men who can tell the moons from the comets.

In that case, I hope science-fiction writers who find s.f. too confining on any terms will be able to move on to other and more rewarding fields. For an ex-

ample of how difficult this can be, however, see Algis Budrys's new novel, THE FALLING TORCH (Pyramid, 35¢).

Budrys's previous novel, WHO?, was nine-tenths non-science-fiction. This one is ten-tenths: it's the story of a Lithuanian boy, brought up in America, returning to his homeland to liberate it from the Soviets; and it would undoubtedly have been published in that form if the author could have found any publisher to buy it. Because he couldn't, the Lithuanians have been turned into "Earthmen," the Soviets into "Invaders," Lithuania into America, and America into the planet Cheiron, of "Alpha Centaurus" (*sic*). For the most part, only the nomenclature has been changed (with an occasional slip, as when a character refers to "international law" in speaking of the relations between planets).

In form this is a growing-up story, but it is never quite clear, at least to me, what turns the hero overnight from a callow youth into a magnetic leader of men. Muddy writing is partly to blame; I am inclined to suspect that muddy thinking underlies it. At his best, Budrys is brilliantly lucid and believable. The old man, the hero's father, who appears at the beginning and end of the book, is a moving, thoroughly convincing portrait.

The portrait is beautiful, because it is honest and deeply felt. At a guess, the main section of this novel is neither: Budrys does not really believe that Lithuania can be liberated by any remarkably gifted young man from America. Instead of writing what he thought would happen, he wrote what he thought the editor would like to read.

The impulse to inject a little hokum into a story like this is almost irresistible, as I can testify, when the author is so painfully aware that he is writing something that will be looked on with suspicion or incomprehension by most people. But what's the use of getting out (or partly out) of science fiction, if not to leave the hokum behind?

Donald H. Tuck, the Tasmanian fan who published a remarkable HANDBOOK OF SCIENCE FICTION AND FANTASY in 1954, has now produced a second edition which is about twice as large (two thick legal-sized volumes, each running over 180 pages) and at least as remarkable. Tuck has assembled every scrap of information he could get hold of about s.f. and fantasy books, magazines, authors, &c. In these neatly mimeographed pages you will find listings of the contents of anthologies, capsule biographies of writers, checklists of magazines and paperbacks, pseudonyms and much more. Collectors and an-

thologists may find the book worth its stiff price ($6.75): sole U. S. agent is Howard W. DeVore, 4705 Weddel St., Dearborn, Mich., who offers a money-back guarantee.

George O. Smith's THE FOURTH "n" (Ballantine, 35¢) is a pleasant surprise. After more than two million published words, Smith still writes pure engineerese. The characters in this book are rather flat (though not as paper-thin as the usual Smith hero and heroine); the plot grows shapeless toward the end, and there are noticeable holes in the logic: but if you are reading for fun, none of this matters very much. This story of a super-child, in flight from the murderer of his parents, has the well-balanced outlook of Wilmar H. Shiras's IN HIDING, together with something of the drive of Van Vogt's SLAN. It's an engrossing book, and I was sorry to put it down.

Harcourt, Brace has republished two of Arthur C. Clarke's novels, CHILDHOOD'S END and EARTHLIGHT, along with eighteen of his short stories, in a giant omnibus called ACROSS THE SEA OF STARS ($3.95). All this material has been available in Ballantine paperbacks, but this is its first appearance in hard covers in this country. CHILDHOOD'S END is Clarke's very best work, one of the monuments of modern science fiction, and EARTHLIGHT is nearly as good. The short stories are uneven, but with 584 pages, this book is a bargain for Clarke fans.

THE NIGHT OF THE AUK (Horizon, $3.50) is Arch Oboler's free-verse science fiction play which ran only a few performances on Broadway in 1956. Oboler, in his introduction, blames this on unimaginative staging. Without having seen the play, it's hard to know whether he's right or not. But the play as we have it here is a curiously uneven work, in conception and execution. The verse rhythms of the dialogue are sometimes highly effective, but just as often sound like bad translations (e. g., "reflected in the concave bowl of telescopic mirror"). The plot deals with a pioneering trip to the Moon, and sundry murders, suicides and problems of survival on the way back. It's not easy to understand why Oboler chose to tell a futuristic story in such stilted language, but perhaps this is the answer:

If you made a movie out of NIGHT OF THE AUK, and put it into ordinary prose, it would be just one more grade B quickie exactly like ROCKETSHIP X-M.

e, a wise man once said, equals mc^2. *Sound, you say instinctively—it has the ring of truth. But what, exactly, do the terms mean? If you have any doubts, read on. . . .*

C FOR CELERITAS

by Isaac Asimov

IF EVER AN EQUATION HAS COME into its own it is Einstein's $e=mc^2$. Everyone can rattle it off now, from the highest to the lowest; from the rarefied intellectual height of the science-fiction reader, through nuclear physicists, college students, newspaper reporters, housewives, busboys, all the way down to congressmen.

Rattling it off is not, of course, the same as understanding it; anymore than is a quick paternoster (from which, incidentally, the word "patter" is derived) necessarily evidence of deep religious devotion.

So let's take a look at the equation. Each letter is the initial of a word representing the concept it stands for. Thus, *e* is the initial letter of "energy" and *m* of "mass." As for *c*, that is the speed of light in a vacuum, and if you ask why *c*, the answer is that it is the initial letter of "celeritas," the Latin word meaning "speed."

This is not all, however. For any equation to have meaning in physics, there must be an understanding as to the units being used. It is meaningless to speak of a mass of 2.3, for instance. It is necessary to say 2.3 grams or 2.3 pounds or 2.3 tons; 2.3 alone is worthless.

Theoretically, one can choose whatever units are most convenient, but as a matter of convention, the system used in physics is to use "grams" for mass, "centimeters" for distance, and "seconds" for time; and to build up, as far as possible, all other units out of appropriate combinations of these three fundamental ones.

Therefore, the *m* in Einstein's equation is expressed in grams, ab-

breviated *gm*. The *c* represents a speed—that is, the distance travelled in a certain time. Using the fundamental units, this means the number of centimeters travelled in a certain number of seconds. The units of *c* are therefore centimeters per second, or *cm/sec.*

Notice that the word "per" is represented by a fraction line. The reason for this is that to represent a speed in lowest terms—that is, the number of centimeters travelled in *one* second—you must divide the number of centimeters travelled by the number of seconds of travelling. If you travel 24 centimeters in 8 seconds, your speed is 24 centimeters ÷ 8 seconds; or (24 ÷ 8) (centimeters ÷ seconds); or 3 *cm/sec.*

But, to get back to our subject, *c* occurs as its square in the equation. If you multiply *c* by *c*, you get c^2. It is, however, insufficient to multiply the numerical value of *c* by itself. You must also multiply the unit of *c* by itself.

A common example of this is in connection with measurements of area. If you have a tract of land that is 60 feet by 60 feet, the area is not 60 x 60 or 3,600 feet. It is 60 feet x 60 feet; or (60 x 60) (feet x feet); or 3,600 square feet.

Similarly, in dealing with c^2, you must multiply *cm/sec* by *cm/sec* and end with the units cm^2/sec^2 (which can be read as centimeter squared per second squared).

The next question is: what is the unit to be used for e? Einstein's equation itself will tell us, if we remember to treat units as we treat any other algebraic symbols. Since $e=mc^2$, that means the unit of *e* can be obtained by multiplying the unit of *m* by the unit of c^2. Since the unit of *m* is *gm* and that of c^2 is cm^2/sec^2, the unit of *e* is *gm* x cm^2/sec^2. In algebra, we represent *a* x *b* as *ab;* consequently, we can run the multiplication sign out of the unit of *e* and make it simply *gm* cm^2/sec^2 (which is read "gram centimeter squared per second squared).

As it happens, this is fine, because long before Einstein worked out his equation, it had been decided that the unit of energy on the gram-centimeter-second basis had to be *gm* cm^2/sec^2. I'll explain why this should be.

The unit of speed is, as I have said, *cm/sec,* but what happens when an object changes speed. Suppose that at a given instant, an object is travelling at 1 *cm/sec;* while a second later it is travelling at 2 *cm/sec;* and another second later it is travelling at 3 *cm/sec.* It is, in other words, "accelerating" (also from the Latin word "celeritas").

In the case I've just cited, the acceleration is 1 centimeter per second every second, since each successive second it is going 1 centimeter

per second faster. You might say that the acceleration is 1 *cm/sec* per second. Since we are letting the word "per" be represented by a fraction mark, this may be represented as 1 *cm/sec/sec.*

As I said before, we can treat the units by the same manipulations used for algebraic symbols. An expression like *a/b/b* is equivalent to *a/b* ÷ *b,* which is in turn equivalent to *a/b* x 1/*b,* which is in turn equivalent to a/b^2. By the same reasoning, 1 *cm/sec/sec* is equivalent to 1 cm/sec^2, and it is cm/sec^2 that is therefore the unit of acceleration.

A "force" is defined, in Newtonian physics, as something that will bring about an acceleration. By Newton's first law, any object left to itself will travel at constant speed in a constant direction forever. A speed in a particular direction is referred to as a "velocity" so we might say, more simply, that an object left to itself will travel at constant velocity. This velocity may well be zero, so that Newton's first law also says that an object at rest, left to itself, will remain at rest forever.

However, as soon as a force—gravitational, electromagnetic, mechanical or whatever—is applied, the velocity is changed. This changes the object's speed of travel, or its direction of travel, or both.

The quantity of force applied to an object is measured by the amount of acceleration induced, and also by the mass of the object, since the force applied to a massive object produces less acceleration than the same force applied to a light object. (If you want to check this for yourself, kick a beach ball with all your might and watch it accelerate from rest to a good speed in a very short time. Next kick a cannonball with all your might and observe—while hopping in agony—what an unimpressive acceleration you have imparted to it.)

To express this observed fact, one uses the expression: "force equals mass times acceleration"; or, to abbreviate, *f=ma.* Since the unit of mass is *gm* and the unit of acceleration is cm/sec^2, the unit of force is the product of the two, or *gm* cm/sec^2.

Physicists grow tired of muttering "gram centimeter per second squared" every other minute, so they invented a single syllable to represent that phrase. The syllable is *dyne,* from the Greek "dynamis" meaning "power."

The multisyllabic expression and the monosyllable are equivalent: 1 *dyne*=1 *gm* cm/sec^2. *Dyne* is just a breath-saver and can be defined as follows: the *dyne* is the unit of force, and one *dyne* is that amount of force which will impose upon a mass of one gram an acceleration of one centimeter per second squared.

See?

Next, there arises the problem of "work." What I do when I sit down

to map out an article, working my head to the very bone, is not work as defined by the physicist. (In this, my wife and the kindly editor are both on the side of the physicist.) To the physicist, "work" is simply the motion of a body against a resisting force. To lift an object against the force of gravity is work; to pull away a bar of iron against the pull of a magnet is work; to drive a nail into wood against the resistance of friction is work; and so on.

The amount of work done depends on the size of the resisting force and the distance moved against it. This can be expressed by saying: "work equals force times distance"; or, by abbreviation, $w=fd$.

The units of distance are *cm* and the units of force are *dyne*. Consequently, the units of work are *dyne cm*. Again, physicists invented a monosyllable to express "dyne centimeters" and the new monosyllable is the ugly sound *erg*, from the Greek "ergon" meaning "work."

An *erg* is defined as the unit of work, and 1 *erg* is the amount of work performed by moving an object one *cm* against the resisting force of one *dyne*.

Lest you forget that this is all based on the gram-centimeter-second system, bring to mind the fact that a *dyne* is equivalent to a $gm\ cm/sec^2$. This means that the unit of work is *cm* times $gm\ cm/sec^2$ (distance times force) and this works out to $gm\ cm^2/sec^2$. In other words, 1 *erg* is the work done by imposing upon a mass of 1 *gm* an acceleration of 1 cm/sec^2 over a distance of 1 *cm*.

It was discovered a little over a century ago that work and energy are interconvertible, so that the units for one will serve as the units of the other. Consequently, the *erg* is also the unit of energy on the gram-centimeter-second basis.

Now shall we get back to Einstein's equation? There the units of *e* worked out to $gm\ cm^2/sec^2$ and that is equivalent to *ergs*. Those are the units we expect for energy, and it's no coincidence. If the equation had worked out to give any other units for energy, Einstein would have thrown it out and started over again, knowing he had made a mistake.

Now we are ready to put numerical values into Einstein's equation. As far as *m* is concerned, we can suit ourselves and choose any convenient numerical quantity, the simplest choice being 1 *gm*.

In the case of *c*, we have no option. The speed of light in a vacuum has a certain value and no other. In the units we have decided on, the best figure we have today is 29,979,000,000 *cm/sec*. We wouldn't be far wrong in rounding this off to 30,000,000,000 *cm/sec* (a speed at which

thirty billion centimeters—or three-quarters of the distance to the moon—can be covered in one second.) Exponentially we can express this as 3×10^{10} *cm/sec.*

We have to square this to get the value of c^2, remembering to square both the number and the unit, and we end with 900,000,000,000,000,000,000 cm^2sec^2, or 9×10^{20} cm^2sec^2. The expression mc^2 (which is equal to e in Einstein's equation) thus becomes: 1 $gm \times 9 \times 10^{20}$ cm^2sec^2, which works out to 9×10^{20} $gm\ cm^2sec^2$, or, if you prefer, 9×10^{20} *ergs.*

In other words, if 1 gram of matter were completely converted to energy, you would find yourself possessed of nine hundred quintillion ergs. And, on the other hand, if you wished to create 1 gram of matter out of pure energy (and could manage it with perfect efficiency), you would have to assure yourself, first, of a supply of nine hundred quintillion ergs.

This sounds impressive. Nine hundred quintillion ergs—wow!

But then, if you are cautious, you might stop and think: An erg is an unfamiliar unit . . . how large is it anyway?

After all, in Al Capp's Lower Slobbovia, the sum of a billion slobniks sounds like a lot until you find that the rate of exchange is ten billion slobniks to the dollar.

So—how large is an erg?

Well, it isn't large. As a matter of fact, it is quite a small unit. It is forced on physicists by the logic of the gram-centimeter-second system of units, but it ends in being so small a unit as to be scarcely useful. For instance, consider the task of lifting a pound weight one foot against gravity. That's not difficult and not much energy is expended. You could probably lift a hundred pounds one foot without completely incapacitating yourself. A professional strong man could do the same for a thousand pounds.

Nevertheless, the energy expended in lifting *one* pound one foot, is equal to 13,558,200 *ergs.* Obviously, if any trifling bit of work is going to involve *ergs* in the tens of millions, we need other and larger units to keep the numerical values conveniently low.

For instance, there is an energy unit called a *joule,* which is equal to 10,000,000 *ergs.*

This unit is derived from the name of the British physicist, James Prescott Joule, who inherited wealth and a brewery but spent his time in research. From 1840 to 1849, he ran a series of meticulous experiments which demonstrated conclusively the quantitative interconversion of heat and work and brought physics an understanding of the law

of conservation of energy. However, it was the German scientist, Hermann Ludwig Ferdinand von Helmholtz, who first put the law into actual words in a paper presented in 1847, and consequently gets formal credit for the discovery.

(The word "joule", by the way is most commonly pronounced "jowl," although Joule himself probably pronounced his name "jool." In any case, I have heard over-precise people pronounce the word "zhool," under the impression that it is a French word, which it isn't. These are the same people who pronounce "centigrade" and "centrifuge" with a strong nasal twang as "sontigrade" and "sontrifuge," under the impression that these, too, are French words. Actually, they are from the Latin, and no pseudo-French pronunciation is required. There is some justification for pronouncing "centimeter" as "sontimeter," since that is a French word, to begin with, but in that case, one should either stick to English or go French all the way and pronounce it "sontimettre," with a light accent on the third syllable.)

Anyway, notice the usefulness of the joule in everyday affairs. Lifting a pound mass a distance of one foot against gravity requires energy to the amount, roughly, of 1.36 *joules;* a nice, small figure.

Meanwhile, physicists who were studying heat had invented a unit that would be convenient for their purposes. This was the "calorie" (from the Latin word "calor," meaning "heat"). It can be abbreviated as *cal.* A calorie is the amount of heat required to raise the temperature of 1 gram of water from 14.5° C. to 15.5° C. (The amount of heat necessary to raise a gram of water one Celsius degree varies slightly for different temperatures, which is why one must carefully specify the 14.5 to 15.5 business.)

Once it was demonstrated that all other forms of energy and all forms of work can be quantitatively converted to heat, it could be seen that any unit that was suitable for heat would be suitable for any other kind of energy or work.

By actual measurement it was found (by Joule) that 4.185 *joules* of energy or work could be converted into precisely 1 calorie of heat. Therefore, we can say that 1 *cal* equals 4.185 *joules* equals 41,850,000 *ergs.*

Although the calorie, as defined above, is suitable for physicists, it is a little too small for chemists. Chemical reactions usually release or absorb heat in quantities that, under the conventions used for chemical calculations, result in numbers that are too large. For instance, 1 gram of carbohydrate burnt to carbon dioxide and water (either in a furnace

or in the human body, it doesn't matter which) liberates roughly 4,000 calories. A gram of fat would, on burning, liberate roughly 9,000 calories. Then, again, a human being, doing the kind of work I do, would use up about 2,500,000 calories per day; and if he eats the kind of food I do, he would take in about 3,500,000 calories per day (and grow fat *).

The figures would be more convenient if a larger unit were used, and for that purpose, a larger calorie was invented, one that would represent the amount of heat required to raise the temperature of 1,000 grams (1 kilogam) of water from 14.5° C. to 15.5° C. You see, I suppose, that this larger calorie is a thousand times as great as the smaller one (and, incidentally, it is the one you watch if you're on a diet). However, because both units are called "calorie" no end of confusion has resulted.

Sometimes the two have been distinguished as "small calorie" and "large calorie"; or "gram-calorie" and "kilogram-calorie"; or even "calorie" and "Calorie." (The last alternative is a particularly stupid one, since in speech—and scientists must occasionally speak—there is no way of distinguishing a *C* and a *c* by pronunciation alone.)

My idea of the most sensible way of handling the matter is this: In the metric system, a kilogram equals 1,000 grams; a kilometer equals 1,000 meters and so on. Let's call the large calorie a kilocalorie (abbreviated *k-cal*) and set it equal to 1,000 calories.

In summary, then, we can say that 1 *k-cal* equal 1,000 *cal* or 4,185 *joules* or 41,850,000,000 *ergs*.

Another type of energy unit arose in a roundabout way, via the concept of "power." Power is the rate at which work is done. A machine might lift a ton of mass one foot against gravity in one minute or in one hour. In each case, the energy consumed in the process is the same but it takes a more powerful heave to lift that ton in one minute than in one hour.

To raise one pound of mass one foot against gravity takes one foot-pound (abbreviated 1 *ft lb*) of energy. To expend that energy in one second is to deliver 1 foot-pound per second (1 *ft lb/sec*) and the *ft lb/sec* is therefore a permissible unit of power.

The first man to make a serious effort to measure power accurately was James Watt. He compared the power of the steam-engine he had devised with the power delivered by a horse, thus measuring his machine's rate of delivering energy in *horsepower* (*hp*). In doing so, he first measured the power of a horse in *ft lb/sec* and decided that 1 *hp*

* *Stylishly stout, we would say.—The Kindly Editor*

equals 550 *ft lb/sec;* a conversion figure which is now standard and official.

The use of foot-pounds per second and horsepower is perfectly legitimate and, in fact, automobile and airplane engines have their power rated in horsepower. The trouble with these units, however, is that they don't tie in easily with the gram-centimeter-second system. A foot pound is 1.355282 joules and a horsepower is 10.688 kilocalories per minute. These are inconvenient numbers to deal with.

The ideal gram-centimeter-second unit of power would be ergs per second (*erg/sec.*) However, since the *erg* is such a small unit, it is more convenient to deal with joules per second (*joules/sec.*) And since 1 *joule* is equal to 10,000,000 *ergs;* 1 *joule/sec* equals 10,000,000 *erg/sec,* or 10,000,000 *gm* cm^2/sec^3.

Now we need a monosyllable to express the unit *joule/sec* and what better monosyllable than the monosyllabic name of the gentleman who first tried to measure power. So 1 *joule/sec* was set equal to 1 *watt.*

The unit of power on the gram-centimeter-second system therefore is the *watt,* and 1 *watt* may be defined as representing the delivery of 1 joule of energy per second.

Now if power is multiplied by time, you are back to energy. For instance, if 1 *watt* is multiplied by 1 second, you have 1 *watt-sec.* Since 1 *watt* equals 1 *joule/sec,* 1 *watt-sec* equals 1 *joule/sec* x *sec,* or 1 *joule sec/sec.* The *secs* cancel, as you would expect in the ordinary algebraic manipulation to which units can be subjected and you end with the statement that 1 *watt-sec* is equal to 1 *joule* and is, therefore, a unit of energy.

A larger unit of energy of this sort is the kilowatt-hour (or *kw-hr.*) A kilowatt is equal to 1,000 watts and an hour is equal to 3,600 seconds. Therefore a *kw-hr* is equal to 1,000 x 3,600 *watt-sec,* or to 3,600,000 *joules* or to 36,000,000,000,000 *ergs.*

Furthermore, since there are 4,185 *joules* in a kilocalorie (*k-cal*), 1 *kw-hr* is equal to 860 *k-cal* or to 860,000 *cal.*

A human being who is living on 2500 *k-cal/day* is delivering (in the form of heat, eventually) about 104 *k-cal/hr,* which is equal to 0.120 *kw hr/hr* or 120 watts. Next time you're at a crowded cocktail party (or on a crowded subway train or in a crowded theater audience) on a hot evening in August, think of that, as each additional person walks in. Each entrance is equivalent to turning on another hundred and twenty watt electric bulb. It will make you feel a lot hotter, and help you appreciate the new light of understanding science brings.

But back to the subject. Now, you see, we have a variety of units into which we can translate the amount of energy resulting from the complete conversion of 1 gram of mass. That gram of mass will liberate:

	900,000,000,000,000,000,000	ergs,
or	90,000,000,000,000	joules
or	21,500,000,000,000	calories
or	21,500,000,000	kilocalories
or	25,000,000	kilowatt-hours

Which brings us to the conclusion that although the *erg* is indeed a tiny unit, nine hundred quintillion of them still mount up most impressively. Convert a mere one gram mass into energy and use it with perfect efficiency and you can keep a thousand-watt electric light bulb running for 25,000,000 hours, which is equivalent to 2,850 years, or the time from the time of Homer to the present.

How's that for solving the fuel problem?

We could work it the other way around, too. We might ask: How much mass need we convert to produce 1 kilowatt-hour of energy?

Well, if 1 gram of mass produces 25,000,000 kilowatt-hours of energy, then 1 kilowatt-hour of energy is produced by 1/25,000,000 gram.

You can see that this sort of calculation is going to take us into small mass units indeed. Suppose we choose a unit smaller than the gram, say the *microgram*. This is equal to a millionth of a gram, *i.e.* 10^{-6} gram. We can then say that 1 kilowatt-hour of energy is produced by the conversion of 0.04 micrograms of mass.

Even the microgram is an inconveniently large unit of mass, if we become interested in units of energy smaller than the kilowatt-hour. We could therefore speak of a *micromicrogram* (or, as it is now sometimes called, a *bicrogram*.) This is a millionth of a millionth of a gram (10^{-12} gram), which is a billionth of a gram on the English system (hence "*bi*crogram"), or a trillionth of a gram on the American system. Using that as a unit, we can say that:

1 kilowatt-hour	is	equivalent	to	40,000	bicrograms
1 kilocalorie	"	"	"	46.5	"
1 calorie	"	"	"	0.0465	"
1 joule	"	"	"	0.0195	"
1 erg	"	"	"	0.00000000195	"

To give you some idea of what this means, the mass of a typical human cell is about 1,000 bicrograms. If, under conditions of dire emergency the body possessed the ability to convert mass to energy, the

conversion of the contents of 125 selected cells (which the body, with 25,000,000,000,000 cells or so, could well afford) would supply the body with 2500 kilocalories and keep it going for a full day.

Even in terms of bicrograms, the amount of mass which, upon conversion, yields 1 erg of energy (and the *erg*, after all, is the proper unit of energy in the gram-centimeter-second system) is an inconveniently small fraction.

We need units smaller still, so suppose we turn to the *bicrobicrogram* (10^{-24} gram), which by the American system, is a trillionth of a trillion of a gram, or a septillionth of a gram. (By the English system, it is a billionth of a billionth, or a quadrillionth of a gram.) Using the bicrobicrogram, we find that it takes the conversion of 1,950 bicrobicrograms of mass to produce an erg of energy.

And the significance? Well, a single hydrogen atom has a mass of about 1.66 bicrobicrograms. A uranium-235 atom has a mass of about 400 bicrobicrograms. Consequently, an erg of energy is produced by the total conversion of 1,200 hydrogen atoms or by 5 uranium-235 atoms.

In ordinary fission, only 1/1000 of the mass is converted to energy, so it takes 5,000 fissioning uranium atoms to produce 1 erg of energy. In hydrogen fusion, 1/100 of the mass is converted to energy so it takes 120,000 fusing hydrogen atoms to produce 1 erg of energy.

And with that, we can let $e=mc^2$ rest for the nonce.

Addendum

Just a point in connection with my article "Battle of the Eggheads" in the July, 1959 issue. The 15 June 1959 issue of *Chemical and Engineering News* reports that Oxford University, having voted to make Latin an optional, instead of a compulsory, entrance requirement, was forced to retract as a result of a roar of protest from the humanists within the University. (Cambridge, which also voted to make Latin optional, has not yet retracted.) The *C & E News* quotes an advertisement placed in the personal column of *The* (London) *Times* by, presumably, some furious humanist. It goes:

> "LATIN. For disposal, following sale of Western Civilization by Oxford and Cambridge Universities, several thousand Latin grammars; one penny a dozen for quick sale, or would exchange lot for a few spanners, comics, coshes, or bicycle chains."

Note the implication here. Not only is Western Civilization destroyed if an Oxonian is allowed not to know Latin, but the loss of Latin will be balanced by the gain of "a few spanners [monkey-wrenches], comics, coshes [blackjacks], or bicycle chains."

Obviously, then, with the Latin barrier still lowered, Cambridge students will be nothing but the scum of the earth; spanners, coshes, and bicycle chains are all thought of in British circles as the usual weapons of thugs and delinquents, which is what the lack of required Latin naturally breeds.

This sort of detestable Latin-snobbery, part of the Victorian equation of classical education with "gentlemen," almost invariably goes along with the anti-science attitude, which the Western world cannot afford. There is more than one way to insure the "sale of Western Civilization."

Through Time And Space With Ferdinand Feghoot: XX

Ferdinand Feghoot almost introduced modern golf into Scotland in the reign of William the Lion (1165-1214.) His time-taxi stalled, and he had to step out with his clubs. He quickly persuaded the King that he wasn't a wizard, and soon he was ordered to teach the whole court how to play.

He was given as servants all the common folk in Dunfermline, where the links were to be. They graded, ploughed, weeded, seeded, watered, and mowed. Soon, he announced the grand opening. The armorers worked overtime on mashies and niblicks, and his servants celebrated so riotously in advance that the Monarch, wakened by their noise, had all the younger ones mercilessly beaten.

After breakfast, the procession moved out; and the King at first expressed satisfaction. Then he saw huge, hairy Highlanders carrying the clubs. "Ha!" he cried. "You told me the caddies would be the fairest youths of my realm!" He pointed at some boys and young men nursing their bruises. "Tell *them* to carry our clubs."

"Your Majesty," said Ferdinand Feghoot, "those are the lads you had beaten last night. They are quite black and blue. So sore are they I doubt they can walk. Wise though I be—" he drew himself up—"I cannot free the sorest for the tees!"

—GRENDEL BRIARTON
(with thanks to Victor J. Papanek)

James Blish, having achieved considerable distinction as a writer of science fiction, was recently asked to contribute something to a special issue of his college fraternity magazine. The following taut little story, about the human spirit in conflict with an alien master, is what he gave them.

the masks

by James Blish

THE GIRL'S FACE WAS QUITE EXpressionless, with a rigidity which might have been either defiance or fear. She had her hands folded oddly in her lap.

"Lay your hands upon the table," the interrogator said. "We're aware that they're painted."

He seemed totally bored as he talked. Perhaps there had been a time when his display of knowledge had been intended to make prisoners feel that everything was already known, but now he did not seem to be taking even that much interest in his job.

"You are Margret Noland, address dormitory 458, north arm, Bethesda T, Washington," he said. "Husband's name Lincoln Noland. No work permit. Number, 26,L24,-10x5."

"Is that what it is?" she said. "I can never remember."

The interrogator wrote something down; probably it was *Reactionary, resists duodecimal number system.* But all he said was, "Lay your hands upon the table," in exactly the same tone of voice.

Margret obeyed this time. Her fingernails were minutely and elaborately colored, each with a different design. It had recently become a common fashion, though hardly in the swarming unemployed of the dormitories. The girl was not wearing the wrist-charm magnifying lens used by upper-class women—that is, women with rooms and jobs of their own—to examine each other's new nail-tattoos.

"You make these," the interrogator said.

"No, I don't," Margret said. "I—just apply them."

"Without a work permit."

"Yes," she said, in a whisper.

"How?"

"They call me," she said. "I go to them."

"We know that. How do you apply them?"

"Well, first I give the nails a base coat to fill up the ridges in the nails," she said hesitantly. "It's very smooth when it dries, and sensitive to light. Then I put a mask over the nail, like a negative. Ordinary fluorescent light is enough for the exposure. Developing them is harder, to bring up the colors properly; all you need is water and a little iodine, but the temperatures have to be just right."

Her voice had gradually begun to take on a tinge of desperate eagerness, as though against all sanity she thought the interrogator's interest might be merely technical. Suddenly, however, she seemed to remember once more where she was.

"It's—easy," she said. "Like washing a child's hands. Not like work at all."

"You have never had children," the interrogator said brutally. "Who supplies the masks?"

"Different people," she said, expressionless once more. "I get them here and there. People sell them; it's legal."

The interrogator touched a switch. Her hands were bathed in warm light. On a screen to his left, the ten pathetically garish fingernails appeared in full color, considerably enlarged.

"'They call me. I go to them,'" he said, without any real attempt to mimic her. "And then someone calls us. You are in demand; your designs are original, imaginative—and reactionary. Now, what is that?"

His own index finger appeared on the screen opposite one of hers. "What's that?"

"It's a—I don't know just what it is. Something very ancient. A design on a shield, from back when they had shields. I don't know any more."

"You don't know what the writing on the scroll says?"

"I—I didn't know it was writing. It's just curliques."

"'Polloi andres os eis aner,'" the interrogator read. "You don't know what that means?"

"No. Please, I didn't know it said anything at all."

"Not even if it kills you?"

"No. No. Please, it's only a design, only a design."

His finger shifted suddenly on the table and on the screen. "And what is that?"

"That's nothing at all," she said, sounding a little surer of her ground. "Just tiny colored dots in a random pattern. People like to look at them and imagine shapes in them—something like looking at clouds."

There was a muted click and the warm light changed to a pure cadmium red; at the same time, the single fingernail filled most of the screen. In the monochromatic light the design no longer had color of its own, but dot-formed letters were now plainly visible.

GUNS DUE
5/11 PASS
WORD

"We have those guns," the interrogator said. "And most of the 'many men as one man,' as well. Now, once more: who supplies the masks?"

"All right," Margret said. "I make them. Without a work permit."

"You have just committed suicide. Are you fully aware of that?"

She tried to shrug. "It's dreadful to be alive without a job. I don't care."

"Your husband is a skilled micro-engraver."

"He has a work permit," she said.

"Limited. It doesn't cover him as a designer."

She was silent. Slowly, she removed her hands from the table and folded them again in upon themselves, nails to palms, like a child playing "Here's the church and here's the steeple." The interrogator watched, and for the first time his face showed a flicker of interest.

"So," he said. "The game is over, but you are still hiding the clues. Your husband probably is hiding by now. You had better tell me the rest very rapidly."

There was no answer.

"If we need to run all the necessary tests," the interrogator said with a certain avid gentleness, "we will have to remove the nails. If you are helpful, we *might* give you an anesthetic first."

Suddenly the girl seemed to wilt. She leaned forward and put her closed fist on the table, thumb up.

"It's a map," she said dully. "Ultra-violet brings it out. It's a little dim, but please go slowly—it burns me if it becomes very bright."

Without comment, the interrogator snapped a switch. This time there was no visible light, but all

the same the UV came pouring down at full intensity, so that in a split second the girl's wrist and arm began to sunburn angrily. Yet on the screen appeared no pattern at all—only an almost invisibly fast flickering of greenish light.

The interrogator sat bolt upright with a terrible, ringing cry of despair. A sudden convulsion threw him to the floor.

The thumb-nail gave up its last thin coating of fluorescent paint with a burst of light from the screen. Margret withdrew her arm, which was already beginning to blister, and walked around the table. The interrogator sprawled silent, motionless. Linc had been right, the man was an epileptoid; a few seconds of flicker-feedback had brought on a full-scale *grand mal* seizure.

There was, of course, no way out—not after that scream. The room would be filled with guards any minute. But they had the interrogator now. He would have no memory of what had happened to him—and it could be made to happen again and again, until his superiors became alarmed enough to replace him; that would not be for a while, for it might take years to begin to suspect that his "accidents" were epileptic. This one for instance, was going to look like violence; she drew back her foot and kicked him precisely under one ear.

The sharp burning pain in her forearm made it hard for her to kick gently enough, but somehow she managed it.

There was a blurred shouting in the corridor outside. She looked around. It had all been done and she could hope for no more. She peeled the mask off her other thumb and swallowed it.

The poison was very fast. She had time only to remember once more that applying the masks had been absurdly like washing a child's hands.

Mr. Dickinson was meat for one's betters, and to try for him was madness; the young fiend, however, was desperate.

AFTER THE BALL

by John Collier

Which, if in hell no other paines there were,
Makes mee feare hell, because he must be there.
—Dr. John Donne

When Mr. Dickinson put his hand down under the bed, to retrieve his fallen handkerchief, it was at once seized by another hand, hairy and hard as iron, but, even as the nervous gentleman's mild blood stood prickling in his veins, it was pressed, with unmistakable reverence and amity, to a pair of bristly lips.

"Oh!" thought Mr. Dickinson, and, withdrawing his hand, he sat bolt upright, tense in every nerve, in the very middle of his bed.

"Who's there?" he cried.

"Only me," said the fiend, who still crouched submissively below.

"Come out of that," said Mr. Dickinson at last, for he was greatly reassured by the meek and piping tone of this answer. The fiend bumped and scuffled out, and stood sheepishly on the hearth-rug.

What an oaf! His voice had belied him. He was much the size and shape of the largest gorilla, and his hulking body was covered with a short, napless fur, like that of a nasty toy, cheap and gingerish. This fur showed through the gaps in his costume, which was infinitely too small for him, for he had stolen it, on his way here, from a little curate half his size, the better to commend himself to Mr. Dickinson, who abhorred the nude.

A word as to the natures of these two, thus dramatically met at midnight in the first-floor front bedroom of 10 Boskyn Road, N. 14.

Dickinson, a bachelor in the best sense of that much abused term, had led a stainless life. Surrounded by luxury, for he was a cashier in one of our largest stores,

he had never allowed luxury to lead him astray. His stamps tallied: his books, best nutriment of commerce, were uncooked. The racecourse knew him not, the bar and billiard saloon had offered their allure unavailingly. For all that, he was no nincompoop who had never known temptation. If the young ladies of the store withheld their hopeless coquetry, awed by his Galahad eye, it was nevertheless his need daily to steel himself against the gleaming and rounded battalions of beauty, for the way to his desk lay through the corset department, and at an hour when the simpering nymphs, still ungarbed, stood in all the sweet shamelessness of their rosy wax. In his progress down this Cytherean aisle, Mr. Dickinson's emotion was such that his Adam's-apple might have lent a needed inspiration to the lift-boy, but, swiftly as it leapt up to his very teeth, it always subsided, so to speak, unbitten.

It was this experience of the dark god, or devil, within the masculine blood-stream, that made our hero so enthusiastic a murmurer of "Hear, hear!" at meetings of the Anti-Sunbathing Association. His own pure flesh was, I am glad to say, never exposed. Save where the veins ran like azure rivulets just beneath the skin, it was white as a gardenia. His corns, though, were his martyrdom.

Enough of Dickinson. Who was the fiend?

He was, of all Hell's legions, the most calfish hobbledehoy, stupid to such a degree that not even his bulk could gain him a place in the least football team of the lowest division of the Infernal League. There, where everyone plays, this spelt failure. Our fiend, whose name was Tazreel, collected about him one-and-twenty similar outcasts, and proposed that they should start a club between themselves. Their objection was, that he was too great a booby to be included, and that they had no ball. Let him supply the second deficiency, they said, and they would overlook the first. Nettled, he vowed to, and shambled off to the outer playing-fields in the hope of cadging an old one. He saw a cousin of his taking some practice shots with a battered Pope of the fourteenth century, horriby burst asunder at the seams.

"Nick, Nick, what is that ball?"

"Black Mass, Tazreel, why do you stare at him?"

"Give him me. Give him me."

"No."

His cousin described a couple of turns about Tazreel, dribbling with tantalizing finesse.

"Get one for yourself," he said.

"I can't," cried Tazreel. "You know what sort of stuff they serve out nowadays. Machine-made muck that busts up at the second kick! I want one for a proper

game. Give him me. Give him me."

"No." And the cousin netted the pontifical pillule.

"If you want a decent one," he said, "go and tempt a good quality on earth. Yes, go and tempt Mr. Dickinson," he added with a snigger, and scampered off after his game.

At that moment, from an adjacent pitch, the bemuddied and leathern soul of Colonel Ingersoll hurtled through the air, and struck Tazreel a stinger on the ear.

In his fury he sent the poor Colonel back in tremendous style.

"I should be a fine player if I got a chance," he murmured, heartened by the success of his kick. "Damn it! I'll try for Dickinson. I can but fail."

This was madness. He told no one of what he was going to do, for fear of mockery, for in that place they talked of Dickinson's soul as office-boys do of a film-star: meat for their betters.

However, he breached up through the surface of the earth, caught up the curate, disrobed him in mid-air, popped him through the bishop's bedroom window, and next moment was under the bed, waiting till Mr. Dickinson should reach down for his handkerchief before switching off the light and settling himself to sleep.

Now he stood upon the hearth-rug, subserviently turning the round hat in his hands.

"Who are you, and what do you want?" said Mr. Dickinson, very much in a flutter again when he saw how extremely bulky this apparent person appeared.

The fiend fell upon his knees with a supplicating gesture.

"I want to make myself useful, sir," he mumbled. Mr. Dickinson experienced a spasm of genuine revulsion. It must be, he thought, one of the unemployed, masquerading in a cast-off rig.

"Why don't you work?"

"It's like this, sir; I'm one of the fallen angels. Sir, I can prove it. Look," and whisking round, he slightly adjusted his costume, and displayed to our astonished hero the convincing evidence of his tail.

"What's more, I'm repentant, sir," he continued, speaking, in his eagerness, out from between his knees. "Yes, I want to make good, to go straight in future. Oh boy! I want to be altogether changed. But how?

"'You go to Mr. Dickinson,' they told me. 'He's the only man who can show *you* the right path. Be his disciple, serve him, clean his boots, make him rich, any little thing. Take no wages, learn from him: he'll show you what a decent, clean, wholesome, manly life is,' they said."

"*Who* said?" asked Mr. Dickinson.

The fiend, with an expression of awe, jerked his thumb at the ceiling.

"Indeed?" said Mr. Dickinson "Did they?"

"Yessir. They think a lot of you. 'He's wasted,' they said, 'in his manner of life. Go thou, extend his scope, and increase his good works. Make him famous, envied, admired. Make the ladies love him.'"

"Oh!" said Mr. Dickinson. "I must think this over. I must go into it thoroughly." He tapped his teeth importantly. "If I decide to assist you," he said, "I'll let you know. Meanwhile I can't have you about this place. Er . . . begone. Hi! And meet me," he added, causing the fiend to reappear, more effectively than any servant who opens the door again to catch a last instruction, "and meet me on the Embankment by Battersea Bridge at seven to-morrow evening."

With that the fiend vanished respectfully, and Mr. Dickinson lay all of a tremble, excited, timorous, and bewildered.

It might be a trap. On the other hand, need he fear temptation? He desired nothing that was not respectable. But if the fiend spoke the truth, it might be a terrible responsibility, a nuisance. He thought of his landlady. But then, if those above had laid this task upon him, dared he refuse? Never shirk responsibility, that way lies promotion, the success booklet was firm on this point. Besides, the fellow might have powers: he might conjure him up a motor car. Yes, with such a helper he might do anything: become the rage at charity entertainments, a super-Maskelyne on the side of good. Why, he might enter sun-bathing establishments, and after a long homily to the ribald nude he might, at a single flourish, clothe them all in unremovable vests, permanent pants, non-displaceable knickers, everlasting suits, and eternal petticoats and gowns. His imagination soared, and he saw himself cleaning up the whole big city. The prospect was intoxicating. How he wished tomorrow evening was come: there were a hundred questions he longed to ask.

He might, though, have dispensed quite easily with the interval, for Tazreel had withdrawn only from the sight. He had lingered on invisibly in the room to devour the recumbent Mr. Dickinson with a loving and a burning gaze. He sat, picking his devilish great dog-teeth, on the lower bed-rail.

In the cold morning light, ordinariness crowded in, and our hero found his visions fade a little. They seemed fantastic, dangerous. Every step that he took towards his daily work inclined him more to shun such extravagant dreams, and continue to keep to

his straight, if extremely narrow, path.

"There's a catch in it somewhere," he said.

Alas, Mr. Dickinson! A spark of ambition still smoldered in his breast, and as he entered the store, where it might have been quenched for ever, it prompted him to a little action which undoubtedly changed the whole course of his life.

As he made his way up the aisle of immodest figures, it chanced that one, portrayed by the modeller as in the act of bending to draw on a non-existent stocking, had been backed right into his path.

"Outrageous!" cried Mr. Dickinson, thus roundly roused from his reverie. And transferring his newspaper into his left hand, he gave the shameless figure a well-deserved smack. But before that real thrill, which always follows on a good act, had had time to bathe him in its rosy glow, he saw with horror that he had been too rough, too much the cave man. The bending figure shook on its pedestal, and then, slowly, absurdly almost, toppled forward, and lay prone upon the floor, utterly still.

"You clumsy fool," cried the deputy superintendent of brassières and garter belts, emerging from behind an outsize figure. "You've broken her nose."

"I didn't break her nose," cried Mr. Dickinson. ("The floor did," he added to himself, for he was incapable of a lie.)

"You did. I saw you."

"I deny it."

In flagrante delicto."

"*In toto.*"

"Don't touch her, anyone," shouted the deputy superintendent. "We'll have his finger-prints to prove it."

A debate ensued, and everyone was against Mr. Dickinson. Miss Warble came forward and described the slap; Albert lift-boy, who had also witnessed it, serving as interpreter when occasion required.

"Ugh!" said Miss Warble.

"Damn it, man!" said the manager, before them all, "I'd not have thought it of you. It's not the damage; that can, and shall, be made good out of your salary. But Wilfrid Dickinson a hypocrite! This is a great blow to me. In future your books shall be specially checked. Who knows?"

"Oh dear!" said Mr. Dickinson.

"What's more, you shall be transferred to the ironmongery department."

"I resign," said Mr. Dickinson, thinking of his powerful disciple.

"Resign, and be damned!" thundered the manager.

A slight monitory tremor ran through our hero's veins at these words. It was lost, though, in other tremors, those of rage, shame, and resignation. He pouted, and withdrew.

Misunderstood! So ran the current of his thoughts during the hours that followed. He wandered feverishly from tea-shop to tea-shop, finding forgetfulness in none. Just before five he was convulsed by a final spasm, and burst into a heavy perspiration.

"I forgive them," he said.

But, rage deserting him, he was still not at peace.

"To have misunderstood?" So ran the current of his thoughts during the two hours before his appointment. Could his visitor have been the agent of a cruel joke? He remembered the great Thompkins hoax in the Baby-linen department in '27. A dastardly affair!

"Duped!" he cried, arriving at the bridge five minutes too early, and finding no one awaiting him. "And I've thrown up my job! My job! My job!" In reiteration the word became a mere meaningless syllable. He could hardly believe that it connoted literally—his job.

Soon, however, he saw the fiend approaching him, shambling along at a good pace, and pausing only to take an occasional kick at a stone. He was in a better fitting suit: he had in fact robbed another, and a gigantic, clergyman.

"Late," said Mr. Dickinson pettishly, for his nerves were all on edge.

With infinite respect the fiend displayed to him a superb gold watch, the hands of which exactly marked the hour.

"Accept it, sir," he said. "I spent my last penny on it, as a slight mark of my affection and esteem. But pray, sir, may I venture to hope. . . ."

"I have decided to give you a trial," said Mr. Dickinson, "provided, that is, you . . . ah, your powers are satisfactory. Show me some of your tricks. Change that match-box into a motor car."

"I cannot transform objects," said Tazreel, "nor in any way run counter to the laws of nature. Only the big five can do that. But," he added, seeing Mr. Dickinson's look of disappointment, "I am strong, I am swift, I can be invisible, and I enjoy excellent luck at cards. This being so, you need not want for a motor car."

"Honest work, and plenty of it, is certainly your best help in making good," said Mr. D. "Look to it that you use your powers well, and I will apply their fruits in a way that will be to your credit. What do you propose to do? I will not have you play cards. You say you are swift. Perhaps you could run for prizes in the sports."

"There's not much to be made that way," said the fiend. "If only another of us had repented along of me, we could have gone as front and back legs of a Derby winner."

"No racing," said Mr. Dickinson sternly. "Perhaps you could put

your strength to good use. A super-navvy on piecework, eh?"

"The Union would crush me," replied the fiend. "I might box."

"A manly sport," cried Mr. Dickinson, feeling his muscle. "You shall become world's champion, and I will be your manager. Thus we will get money for good works, for the fact is, I am leaving my present situation in order to devote myself to the administrative side."

"I was there when the row was on," said the fiend.

"Then you saw how I was treated."

"They certainly did you dirt. Say, let's muscle in in the morning and clean that joint right up. Yeah?"

"No," said Mr. Dickinson. "I have forgiven them. However, I might go in and try to make them see their vileness. You could be at hand to stay any attempt at brutal violence. I trust there will be none."

The fiend eyed his quarry in grudging admiration He began to appreciate his quality.

"It'll be a bit of practice," he said, "if I'm to start in as a pug."

"Streuth," he added, "I've just remembered I had a bit on the three-thirty. Filly came in, too. 'Scuse me, boss, I'll nip off and collar the polony. Then we'll have some eats."

"No," said Mr. Dickinson, "I have forbidden you horse-racing. But stay—this was done before you heard my command. Perhaps the money should not be allowed to rest in the hands of the bookmaker, or the unhappy man may get drunk and beat his wife. That must be prevented at all costs. Go then, this once, and we will break bread, and devote the rest to good works. Out of evil cometh forth good! How much is it?"

"I stand to net five hundred," said the fiend.

"Good heavens! That will furnish our headquarters. Go then. We will meet outside the Trocadero and take a frugal meal at the nearest restaurant."

It was a pleasant meal. Mr. Dickinson had oysters, to keep his strength up for his future toil; turtle soup that he might know what it was the Lord Mayor ate, and if it would be good for the poor; a little turbot, and some Pol Roger, to which he made a Canaean allusion; a grouse, for he had heard St. Francis was fond of birds; a peach, just to taste one, and a little Bisquit du Bouchet for his cold. The fiend had a whiting and a plate of cold beef ordered for him by his master, and, it must be admitted, a little page-boy to whom he helped himself during a temporary withdrawal.

They discussed their plans. Next day a suitable suite for their headquarters was to be chosen, something very simple though of a good address, furnished more

like a home than an office, but with a roll-top desk in it.

"I know the very place," said Tazreel: "it's just a modest sort of flatette in Park Lane."

"Let it have a kitchenette for you to work in," said his master, "and a miniature gymnasium for my exercises and your professional training. A little drawing-room, *bijou* dining-room, morning-room and that sort of thing for the necessary entertainment of distinguished visitors, a tiny library for myself, the barest sleeping accommodation, and if possible a weeny swimming-bath for the encouragement of the suitably begarbed in pursuit of cleanliness and health."

"Just the place I had in mind," said the fiend. "And at a rental of only two hundred a week."

"Can you earn proportionately?" asked Mr. Dickinson, rather shocked.

"Sure thing!" was the reply.

"You may have some cheese if you like," said Mr. Dickinson.

Next morning they went early to the store, when Mr. Dickinson rebuked his oppressors, who were, when they advanced to make a savage attack on him, invisibly but severely restrained.

"Pick up that figure," said Mr. Dickinson, when they had fled in pain and terror. He pointed to the disgraceful mannequin, who, with her nose restored, still bent to tug the non-existent hose. "I will have her in my room, where she will no longer lead people astray. She will be a constant urge to effort."

Hastily clothing the figure in a cheap tailor-made, for which Mr. Dickinson commanded his follower to leave the wholesale price on the counter, they took it by the elbow and bore it off to a taxi, thus presenting to the inquisitive crowd all the appearance of detectives arresting a recalcitrant shoplifter.

Noonday found them installed in Park Lane. Mr. Dickinson outlined to the fiend a routine of scrubbing and sweeping, waiting at table, admitting visitors, tending the wardrobe, and acting as secretary-chauffeur. He described exactly how he liked his breakfast prepared. These little matters, he said, combined with the practice and execution of a career as boxer, and with attendance on himself when he went to rebuke the wicked, would keep Tazreel busy, and this would be half the battle toward regeneration. The fiend sighed a little. He was brisk when put to it, but he was devilishly lazy by nature, and when he contemplated, in addition to all these tasks, the yet harder one of tempting his master, he almost wished himself back on the desolate touch-line of Hell.

However, he set to, and by laboring twenty-two hours out of the twenty-four he managed to keep abreast of his duties. He was

greatly chagrined to find, though, when he entered on his pugilistic programme, that the science of our British heavyweights was such that not all his strength could bring him victory without a preliminary tattoo of rabbit punches, nobs on the smelling bottle, rousers on the cigar-trap, and cruel fibs in the bread basket. His claret was tapped, shutters put up, ears thickened, grinders made to rock in their sockets. Not only that, but, lest his tail should betray his shameful origin when he was stripped for combat, Mr. Dickinson insisted that he should be docked, and performed the operation himself with a pair of garden shears, notched for branch cutting.

Altogether his lot was a miserable one. The worst of it was, that as the months dragged by, Mr. Dickinson showed no signs of committing mortal sin within the meaning of the Act.

Sometimes, when he stood, with folded arms and reproachful, penetrating gaze, on the threshold of a sun-bathing establishment or night club, his sinister bodyguard would jerk a suggestive thumb at some particularly shameless sylph or piquante dancer on a table, and twitch meanwhile the corner of his mouth violently towards his eye. A stern rebuke would immediately bring him to his senses.

He went to great trouble to introduce Mr. Dickinson into the society of millionaires, that he might become covetous and misappropriate the subscriptions that poured in. His master, returning from a Babylonic week-end, told him that he had arranged a slapstick part for him on the films, the salary of which was commensurate with the incredible sufferings and exertions required.

He introduced a vile book into the covers of Mr. Dickinson's *Black Sheep Turned White*. Mr. Dickinson told him to glance through each new novel that came out, and to bring to him anything similarly deserving of his public censure.

The fiend, hoping to scare him into a murderous panic, sent him letters, apparently signed by a prominent fellow committee-man, and declaring that he (the fiend) was in reality a notorious dancer named Lola de Montmorency, who had disappeared in unsavory circumstances some time ago, now masquerading in male attire. Exposure was threatened. "This must be the work of some practical joker," said Mr. Dickinson, glancing gravely at the supermasculine countenance of his unattractive factotum.

That worthy then tried to persuade him to enter politics. Mr. Dickinson pointed out that politicians were frequently compelled to tell lies.

He described, in glowing terms, the pleasures of eastern monarchs.

His master cut down his diet.

He earnestly sought the good man to consider enlarging his influence by becoming King Wilfrid I. Mr. Dickinson pondered the matter carefully, sighed, and said he feared the throne could hardly become his by immaculate means. However, he instructed the fiend to put in his spare time speaking at street corners on the off-chance of bringing about a bloodless revolution.

The fiend, then, as if he had become raving mad, staggered in with baskets of jewels which he said he had found; raised up Helen, Cleopatra, all that lot; discoursed on witchcraft; transported the good man to tops of mountains overlooking fine landscapes; sat up in adjacent flats during his two hours' rest, pinching the babies to make them cry; tried to scrape up an acquaintance for his master among artists; wrote "Arise, Dickinson, first Emperor of the World!" in phosphorus on his ceiling, and finally introduced him to Mrs. Walker. All was of no avail.

Poor Tazreel grew as lean as a cat. He no longer took light-hearted kicks at stones that lay in his path: he no longer sang at his scrubbing and sweeping. He was a victim of overwork, nervous depression, insomnia, fits of giddiness, bile, utter fatigue.

One day, as he was polishing Mr. Dickinson's brass-plate on the front railings, a party of happier fiends passed by, who were doing themselves well at the Dorchester, from which they were organizing a mass temptation of the Y.M.C.A. They saw Tazreel, and gave each other the nudge. Peals of laughter floated back from this party of well-fed, easy-living, successful executives, and seared the taut nerves of the poor plodding failure on the steps.

The fiend, hysterical with rage, rushed upstairs and broke the waxen trophy in the bedroom.

"You clumsy fool," said Mr. Dickinson, entering upon the crash. "However, I forgive you. I'll get a stenographer."

"Your spelling is atrocious," he added.

"Your typing is slow.

"Your shorthand non-existent.

"It will give you time to get a weight-lifting job at one of the halls."

Tazreel, at this last sentence, uttered a bitter cry. He felt the system was blind, corrupt, utterly rotten, that allowed a man to mislead a poor fiend into the hope of an hour or two's leisure, and then sentence him to new toils, without incurring immediate and eternal damnation. He began to feel that he never would be able to entrap Mr. Dickinson. There was no one to encourage him, no one to advise, to sympathize, to care. That night the poor fellow cried himself to sleep.

Two days later Maisie Williams sat at the old-fashioned typewriter near the big roll-top desk. She was just a mere slip of a thing, with big, almost frightened, blue eyes that darkened nearly to black in moments of excitement. Maisie had had a hard time. She was alone in the world, and the manager at her last place had been a beast. It was with a sigh of real thankfulness that she sank into the pleasant atmosphere of the little library in Park Lane, where a restful sense of luxury and beauty, for which her starved soul craved, filled the air, and her employer seemed a regular simp.

That day Mr. Dickinson dictated an unusual number of letters. Tea was served in the oak-panelled, book-lined room. Maisie could not repress a tiny girlish squeal of delight when she saw the delicious *petits fours* which accompanied the fragrant tea-pot.

"What a child you are!" said Mr. Dickinson kindly. "To squeal like that over a few cakes. My! What a noise you'd make if someone offered you a pearl necklace. It would be deafening."

"Not if it was a relation or a fiancé," said Maisie simply. "But you must not think me a child, Mr. Dickinson, for the fact is I very seldom see any cakes. But really I seem to have been grown up ever since I can remember: I've not had any proper childhood at all, I mean. You see, my dear mother died when I was twelve. . . ." But Maisie could not go on. She sat bravely blinking back the tears from those big eyes, that seemed to have grown very helpless and very serious, and bright, and appealing, and wistful, and so on.

"That's all right. That's all right," said Mr. Dickinson benevolently.

"It's so kind of you, Mr. Dickinson, to let me tell you all this."

"That's all right," said Mr. Dickinson. "Perhaps I am rather a lonely person myself."

"I say, Mr. Butler, the boss is a pretty rich man, isn't he?" said Maisie to Tazreel later on, when Mr. Dickinson had gone off to his meeting.

"Yes'm, he sho is," replied that worthy, pretending to be a negro.

Maisie sat silent, thrilled. What a strange world it was, where a great big rich man could be lonely, just like her little insignificant self. It seemed incredible: too good to be true. She thought of the lion and the mouse.

Yet before a week had passed, Mr. Dickinson, as though the species had become mixed, was calling her "kitten."

In a fortnight they were engaged.

Tazreel, when he heard the news, retired to his room, and dashed his head several times against the wall. He was upset. Not being a fiend of foresight, he

saw nothing in this arrangement but the prospect of two bosses instead of one. Besides, he was rather keen on her himself. He felt utterly broken, and determined to resign.

But as he approached the drawing-room door, he heard Maisie say, in her high, clear, girlish voice, into which (so adaptable was she) there was already creeping a little of the authoritative tone inevitable to her future high position:

"Wilf, when we're wed there's just one teeny little change I want to make, apart from refurnishing and taking over the rest of the house."

"My little Maisy-waisy shall never ask twice," replied the impassioned Dickinson, "for anything that her Wilfywumkin can give her."

"I want you to have a proper staff of servants," said Maisie, "and shunt that tough-looking batman of yours right off the premises. He looks at me in a way I don't like."

"I'll break every bone in his body," cried Mr. Dickinson warmly. "But yet—I think you must be mistaken, dear. He works for next to no wages, and he's the most useful creature imaginable."

"If that's what you call love," said Maisie in a disappointed tone, "It's not what I do. Just like men: you promise a girl anything just to get your way, and then let her down. I was only testing you, but, thank goodness, I've found out in time."

"Not at all, my love," said Mr. Dickinson hastily. "I was only playing. He shall go tomorrow."

"And where will the money come from then?" murmured the listening fiend, catching cries of "Yum! yum!" and "Oh, honey!" from within. He crept back to his little cubby-hole feeling faintly cheered. At all events, there would be no more washing-up.

"In future," said Mr. D. to him next morning, "you are excused all domestic duties. In fact, I don't expect you to be seen here at all. If you come, appear to me only when I'm quite alone; do you understand?"

"O.K.. chief," replied the fiend.

"That doesn't mean you're to be idle. On the contrary, you must exert your earning powers to the utmost. The future Mrs. D. needs beauty, she says. It would be downright selfishness to continue to live in the frugal style of a hermit. So you'd better get some more big contracts as soon as you can."

The honeymoon passed like a dream. Tazreel enjoyed it only less than Mr. Dickinson. Left behind in London with nothing to attend to but occasional cables demanding money, he neglected his contracts, lived the life of a man about town, and replenished

the exchequer in a way that would have shocked his worthy master.

It was a great day when the domestics crowded into the hall of Mr. Dickinson's little palace in Park Lane to welcome their blushing master and his bride. Tazreel sat invisibly on the stairs, pleased to see the glowing looks which the happy husband lavished on his spouse, and still more pleased to see that two short months in Venice had changed the modest, self-effacing typist into a great lady, in no way unfitted to grace the mansion her adoring partner had prepared for her.

"Why, Wilf," she cried, "this hall looks cramped to me after the Splendide. Can't you widen it somehow? I don't want Society to say I squeeze it to death."

"It would mean taking the house next door, to make this hall any wider," said Mr. Dickinson.

"Well, take it then," replied his consort, who was a little frayed by the journey. "You're a man, aren't you? Or aren't you? You got to prove it some way, you know."

"Ssh, my dear," murmured her consort. "The servants will hear you." And he ushered her into the principal drawing-room, from whence the sounds of billing and cooing floated out to the fiend's enraptured ear.

"You must earn fifty thousand before the end of the month," said Mr. Dickinson to him, at their next interview.

"I'll try, boss," he replied. "But money's not so easy in these days. Still, I think I know a way."

"What's that?" said Mr. Dickinson. "But spare me the details. We've a great deal of work to discuss. The organization will have to be modified."

A little while later he summoned the fiend again.

"What was that I asked you for, before the end of the month?"

"Fifty thousand," said Tazreel.

"What, only that? I must be losing my memory. I shall need a hundred and fifty at the least. Be sure you don't let me down."

"I doubt I can come by it honestly," said Tazreel, pulling a long face.

"What's that?" cried his master. "You, an ex-fiend, to talk to me in that way! I hope you do not think I would command you to do anything dishonest. Get it, I say, and don't let me hear another word about it. Put the money on my table next week without fail, or I cast you off, and back you go to Hell for ever."

Tazreel asked nothing much better than this, provided he could only take Mr. Dickinson with him. He half thought of getting him to compromise himself over the money, but feared he might slip off the hook; besides, theft by proxy is a matter for trial, and the fiend wanted immediate possession of his booty.

He saw, in his invisible visits to

their *ménage,* that Mrs. Dickinson, though in all other respects the worthiest young woman in the world, had been starved of beauty so long that her appetite for it was tremendous. She was also a little ambitious to cut a figure among the smart set, and showed signs of not being so passionately enamored of her husband as he was of her.

In short, the besotted wretch was constantly bothering Tazreel for money, and no longer showing any interest in how it was come by. The fortunate devil, now restored to cheerfulness, did no work except a few cracksman's jobs, which were child's play, and, keeping half the proceeds for himself, you may be sure he had a jolly little bachelor establishment round the corner in Mount Street, played pranks all over the town, and heartily commiserated his fellows at the Dorchester on the embarrassment they must feel on being seen with their young victims in public.

"I married mine off six months ago," he said. "He is already in debt to the tune of a half a million, and soon will sign his name to anything for further supplies. That's nothing, however: wait till he becomes jealous. My only trouble then will be to prevent him damning himself so completely off his own bat as to be put up for raffle, it being said that I had no hand in it. Fear nothing, though; I shall be watchful to prevent that disaster."

As a matter of fact, Mr. Dickinson very soon paid a visit to the fiend's snug little place in Mount Street. He was so broken down by love and his wife's tantrums that he no longer summoned him as before, but would ring at his door quite humbly after dinner, and ask the butler if Mr. Tazreel could possibly spare him a few minutes on a matter of importance. Generally it was money he was wanting: this time, after a good deal of beating about the bush, he asked Tazreel if he could do anything for him in the way of a love philter.

"What?" cried the fiend, pretending astonishment. "Do you find yourself insufficiently enraptured by such beauty, charm, and talent as your wife has, that you'd resort to such means of being awakened to it?"

"No, indeed," said the poor fellow. "Her virtues are plain enough, but so also is the fact that she is a little impatient when I fail to come up to the high standard her fine taste demands. In short, I would have her a little more in love with me, that she might overlook my blemishes, without my having to gild them to the ruinous extent I do. Besides, if I don't become more attractive in her eyes, I can't help feeling (it's probably only my fancy) that I may find an intruder

in the house: a home-wrecker, I mean."

The fiend, though knowing perfectly well there had been one of that sort hanging about for the last month, chose not to mention it, nor did he give him any sort of warning, but only the philter: the consequence was, that in a very short time there was not one home-wrecker in Park Lane, but at least ten.

When there are ten, a suspicious, prying husband, such as Mr. Dickinson had become, generally gets wind of one of them sooner or later. One night the unhappy man broke in upon the fiend's ease.

"Ask me no questions," he said, "but tell me, have you anything that will undo the effects of that cursed love philter you gave me? It's all because of that, I'm sure."

"Love," replied the fiend, "is, as you yourself should know, a very tricky passion. In cases like your wife's, what lies in the power of any poor devil to arouse, is often such as the Prince of Darkness himself could not quell. I fear, my dear Dickinson, that we shall have to resort to 'witchcraft.'"

"Heaven forbid!" cried the distracted wretch, piteously.

"Why, as to that, it does."

"All I want is something in a bottle," moaned his victim.

"Come, Dickinson," said the fiend, with an abominable briskness, "it's time to be honest with yourself, to play the man. You can't just accept my help and shut your eyes to the measures I have to take on your behalf, as you've been doing over money matters, for example, for six months."

"What? Do you mean to say the money was not come by honestly?" cried the poor fool, in affright. "Good gracious, and I needed another forty thousand this very evening. I must have it, too. Maisie says she must have a tiara: she finds the place draughty."

"Tell her to get it from young what's-his-name," was the sly answer.

"Don't madden me."

"Well, here's the money. It came from a late bank messenger, who is getting later every minute, and who will never arrive. Take it. All the rest was come by in much the same way."

"After all, it's not for a selfish motive," murmured Mr. Dickinson. "I can't have Maisie getting a cold in the head, can I?"

"No," said the fiend, with a smile.

"Now about this witchcraft," he continued. "You'd better make up your mind quickly. Every minute you hesitate, you're leaving your wife alone. And, as you know, she's very highly strung."

"Oh dear, what have I to do?"

"Oh, just kill a white goat. That's nothing. Butchers do it every day. And gabble a few words after me. What's there in that?"

"After all, I can always repent,"

said Mr. Dickinson tremulously.

"Yes, always," said the fiend.

He gave Mr. Dickinson a stiff brandy and soda, and excused himself for a moment, to fetch the goat, he said. Actually, he took advantage of his withdrawal to telephone to Park Lane, to say that Mr. Dickinson could not return before morning.

He then went back, leading in a poor old nanny, whom his dupe despatched amid a positive blaze of Bengal Lights, provided gratis by the fiend. After an hour or two spent in such jiggery-pokery, our hero found himself in possession of a phial which contained no less than half a gill of tap water.

"Now, I suppose, I'm what you might call a lost soul," he said, trembling like a blancmange.

"*I* wouldn't call you such," said the fiend.

"No, of course I can repent."

"You'd better wait till you've administered that," remarked Tazreel, indicating the phial. "Or it would be as useless as tap water."

"All right, I don't repent then."

"Spoken like a man! I'll stroll round with you. Here! Take the knife as a little memento."

They walked round in silence through the pleasant night air. When they reached Mr. Dickinson's door:

"I'll just come in and have a drink," said Tazreel.

"Better not, old chap. Maisie don't appreciate you."

"Oh, don't worry about the missus. She's in bed. See, there's no lights at all down below."

They entered the hall.

"Nice hat," said the fiend carelessly, picking up a topper from the table. "Yours?"

". . . NO."

"Why, that's certainly the low-down," said the fiend, Caponeishly. "Just while you were jeopardizing your soul for her sake!"

"Oh! Oh! Oh!"

"Dickinson, show yourself a man," said the fiend sternly. "You *are* a man, aren't you? Or aren't you?" He imitated Maisie's voice to perfection.

"Oh! Oh! Oh!"

"You got that knife," shouted the fiend fiendishly. "Come on! I'll hold 'em down."

They rushed up the stairs. Mr. Dickinson applied his ear to the door; the fiend silently opened the door of the lift shaft. They burst into the bedroom; there were screams, and the deed was done. Mr. Dickinson, with a cry of horror, flung down the fatal blade and bolted out of the room.

The fiend followed, tripped him up on the landing, stooped like a hawk after his falling body as he toppled down the lift shaft, nabbed his soul as it popped out, and, with one tremendous kick, landed it favorably into the line-up of Tazreel's United, and in a moment the game was in full swing.