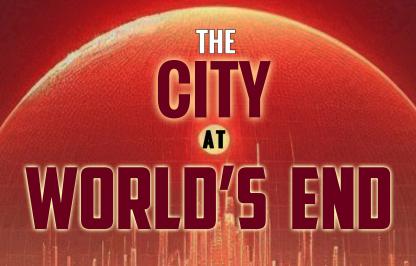


THE **DECISION OF AGE INTERCEDENTIAL OF AGE New and Classic Stories From Sci-Fi's Golden Age**

ISSUE 03



By Edmond Hamilton

OTHER STORIES

THE INTRUDER Christopher Murphy

ALL THINGS BOTH FLESH AND STEEL Anderson Rearick III SELLER OF THE SKY Bryce Walton

HAPPY ENDING Henry Kuttner

Plus a biography on Edmond Hamilton, and more.

A ROCKETBOOKS PUBLICATION

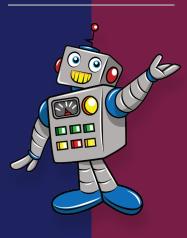
Press



THE **HEBORIC CONTROLLED INTERCEDENCE OF CONTROLLED** New and Classic Stories From Sci-Fi's Golden Age

IN THIS ISSUE

New, Original Short Stories



Timeless Classics by the Masters

THE INTRUDER By Christopher Murphy

ALL THINGS BOTH FLESH AND STEEL

By Anderson Rearick III

4 PAGES

18 PAGES

13 PAGES

118 PAGES

SELLER OF THE SKY

Bryce Walton

CITY AT WORLD'S END (PART 1 OF 2) by Edmond Hamilton

30 PAGES

HAPPY ENDING

By Henry Kuttner

THE FAMOUS AUTHOR NOBODY KNOWS

Discover Edmond Hamilton

Anderson Rearick

SCI-FI RETROSPECTIVE

A Look Back at <mark>Classic Sci-fi</mark> Part Two

Chislain Barbe

REPORT FROM THE HELM

Your Editor, on our FIRST ISSUE

Dane Ccótt

WHY DO WE EXIST?

There's a gold mine of fantastic science fiction short stories in the old pulp magazines of the mid-20th Century, but much of it can only be read by viewing "scans" of the original old pages, with their squinty text, multiple columns, and faded print. *The Interocitor is here to bring these classics back to vibrant life in a format that's easy-to-read on modern, digital devices.* Compare the examples below.



stolen secret, a mysterious woman, a person high in the government—it had all the angles. Then Senator Trexel was acquitted, Molly Borden confessed. Now she was journeying to a life sentence on the penal planet.

"Too bad she burned Adison's plans when they trapped her."] er's self-appointed traveling companion again.

"We lost the resources of four worlds by that little trick," Bill agreed. "The police found enough in the ashes to convince them it was the plans." He smiled to himself stightly, like someone who expected something but wasn't quite sure he could count on it. Ricker glanced up, then stiffened erect.

The Martian stood in the aisle beside the calmly over his shoulder at Ricker and the sourdough and in his right hand was a pistol leveled generally at them both. "Please be very quiet," his lips moved in soft, even to out taking his snaky

"Too bad she burned Adison's plans when they trapped her." It was Ricker's self-appointed traveling companion again.

"We lost the resources of four worlds by that little trick" Bill

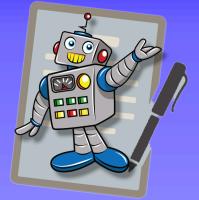
in his left vest pocket," he said. "We'll take a small boat and drop out of this before the pilots can be warned."

he spoke to the woma

RICKER stared like he was watching

THE INTEROCITOR

Thanks to This Issue's Contributing Writers



We Couldn't do it Without You!



Dane Scott

After 20 years in radio, Dane snipped the cord in '96 and went full time as freelance voiceover guy. He also developed a radio automation system.

Now semi-retired, Dane still does voiceovers, coaches others on voiceover, and was recently hired as the voice of "Kup" (an Autobot) for a Transcience fictionormers video game. He manages and writes for Facebook groups like "Keep Watching the Skies" (classic sci-fii), "BoomTown," a group for baby boomers, and is Founder/Editor of *The Interocitor*.



Christopher Murphy

Christopher Murphy is a retired IT auditor living in Stafford, England. He began reading science fiction as a teenager, enjoying collections of stories mostly written in the 1940s and 50s. Later he explored the screen science fiction of the 50s, discovering such classics as Forbidden Planet and the Quatermass television series. His other interests include model rocketry and studying history. Chris has only recently started writing fiction and "The Intruder" is his first published story.



Anderson Rearick III

Born on Christmas in 1955, Anderson Rearick did his doctorate on Charles Dickens. His masters examined Tennyson's Arthuriad "Idylls of the King," He taught English for 25 years while advising the science fiction and Fan club. His articles include "Why Is the Only Good Orc a Dead Orc? and "Father Knows Best: The Narrator's Oral Performance as Paternal Protector in 'The Hobbit." He now lives in Ohio with his wife, Loretta, of 36 years.



Ghislain Barbe

Ghislain Barbe has worked as an art director in video games for over 20 years and as a full-time dad to three lovely daughters for nearly as long. Previously, he was a character designer and story artist in the animation industry, and has illustrated over 100 penand-paper RPG books. He has published portfolios of his doodles, and the essay, "Cosmopopicon: Cosmogony through Mythology, Science Fiction, Fantasy, Pop Culture and more." We begin excerpts from his book, The Fifties" in this issue. Thanks G!



You're Next

If you're a short story writer, contact us through our volunteer page and tell us about one or more stories you'd like us to consider for use in a future issue of *The Interocitor.* Remember that, for our magazine, stories should look and feel like those written in the mid-20th century, without reference to modern things like cellphones and "Starbucks." Also in keeping with the storytelling of that era, they should not contain sexual scenes, vulgarity, or swearing.



Greetings, Fleet! Wecome to Issue 03 of The Interocitor. Word is spreading of our magazine's existence, and it's gaining traction in the sci-fi community. More and more people are coming on-board, downloading issues, and enjoying the easy-read, audience-friendly classic science fiction stories.

Our New YouTube Channel

We've launched a <u>YouTube channel</u>, where we post narrated previews of stories that will be in a yet-to-be-released issue of *The Interocitor*. These dramatic readings are designed to generate excitement about each upcoming release. I'm your narrator for these. Feel free to listen to a few, and hit the Subscribe button so you're notififed whenever we add fun new videos to the channel.





One Book, Two Bites

One of science fiction's less-recognized authors wrote one of the most interesting sci-fi books of the 20th Century, in my opinion. Edmond Hamilton's "City at World's End" is a story I've been excited to share here in *The Interocitor* because it really takes readers on an interesting journey.

In the 1950s, the first full decade after the emergence of the most powerful destructive force ever devised by science, the world was struggling to grasp what atomic weaponry and atomic power might mean for the future of humanity. The subject was fertile ground for creative science fiction authors and filmmakers like Edmond Hamilton, who released a startling yarn about an unexpected effect a superbomb might have. I'll say no more than that.

Generally, the case of a full-length book like this one, the traditional approach taken by the old pulp sci-fi magazines would have been to serialize it in many installments to sell more issues. Since we're strictly non-profit and are just interested in making your experience as fun, rewarding, and convenient as possible, we're going to break the book into just two pieces. Part One will be this time, and Part Two next time.

I hope you enjoy this very creative story as much as I did!



Want to Show Your Appreciation?

We've created a beautiful *Interocitor Magazine* mug that's available at a reasonable price with free shipping to the continental U.S. Not only will you appreciate having it, but each mug purchased helps support what we're doing. Here's the link to our little <u>online store</u>.

Dane Scott, Editor, and Fellow Sci-Fi Lover



Thanks to these special people

Alexander Smith, Technical Assistance Jerry Fuchs, Cartoonist Lyza Herman, Story Research Ben Taylor, Story Research Mark Nelson, Story Research Jay Rietz, Story Review and Proofreading Jason Karpf, Publicity

The beauty of an online magazine like this is that we can quickly and easily update the current issue even after it's released, so if we've failed to mention someone who has contributed their talents to this issue, please email us and we'll get them added pronto. And please be assured that your contributions of time and talents are *greatly* appreciated!

The Best of Edmond Hamilton



DECEMBER, 1956

LAST CALL

PTEMBER

Why has this crewative, prolific science fiction writer gone so unrecognized all these years?

EDMOND HAMILTON THE FAMOUS AUTHOR WHO NOBODY KNOWS!

Written and Illustrated by Anderson M. Rearick III

THE STAR KINGS by EDMOND HAMILTON

<u>Edmond Hamilton</u> The Famous Author Who Nobody Knows

Science Fiction, or what he called "scientifiction prose," with all its traditional trimmings of rampaging robots, mad scientists, rockets with air fins, and system-wide planetary cultures would be profoundly different without the influence of Edmond Hamilton. And yet his name does not appear within either the Encyclopedia Britannica or the Wikipedia entry of "Science Fiction." There are bio videos on his contemporary and fellow

alumnus of Weird Tales, H.P. Lovecraft (The E. "Doc" Smith appears in a YouTube search author during the fifties. Bradbury (R is for Rocket) Brackett who was herself a of Lost Ships) and together (Legion of Space) and Mistress). So why has he



It's certainly not because of a lack of output. According to Allen Steele, who is currently updating the Adventures of Captain Future, one of Hamilton's regular outlets, Hamilton's career lasted over forty years. "Although his earliest work ran the gamut from horror to fantasy to nearfuture...it was together with contemporaries Jack Williamson, Edward E. "Doc" Smith, and Phillip Francis Nowlan that Hamilton invented the subgenre that eventually came to be known as "space opera" (Steele). Hamilton began writing at the age of 22 when he submitted "his first attempt, the short story "The Monster-God of Mamurth," [which[^] was



submitted to Weird Tales and published in 1926." (Gay, Famous and Forgotten Fiction). Hamilton published about 79 works of fiction in Weird Tales between 1926 and 1948, making him one of the most prolific of the magazine's contributors. According to Science Fiction Encyclopeida "Much of this material remained in magazines, or was erratically put into book form" ("Hamilton, Edmond"). Thus it is difficult to be exact since records were not closely kept with pulp magazines and there were times he used pseudonyms. Still, some sources state that during his career, he wrote over 500 stories, and more than 70 novels are credited to him.

He was unquestionably brilliant. Steele again notes that Hamilton's "wife Leigh Brackett claimed in her introduction to [the Del Ray's[^] The Best of Edmond Hamilton that "her husband had been a child prodigy, a bibliophile who recalled everything he read (Steel "About the Creator"). Bob Gay confirms that "Hamilton had always been a voracious reader, particularly of the works of A. Merritt and Edgar Rice Burroughs." Hamilton entered Westminster College at age 15 to study physics but dropped out three years later, leaving his professors to wonder as Steele puts it `why a kid with a genius IQ didn't do better at his studies.' Hamilton's colleague and lifelong friend Jack Williamson, in his introduction to Richard W. Gombert's World Wrecker: An Annotated Bibliography of Edmond Hamilton, speculates that his academic career ended without earning a degree was probably because he was bored with academia (Qtd in Steel "About the Creator."). This is certainly kinder than Gary Moss's assessment that he had "washed out at 17." Bob Gay suggests that "Unfortunately, the age discrepancy between Hamilton and the other students made it very difficult for him to adapt socially to his new surroundings" (Gay, Famous and Forgotten Fiction). But Hamilton himself took a far more humorous and self-effacing tone in a short blip published in Thrilling Wonder Stories. In it, he writes that he "Entered Westminster College at the ripe age of 14.

"Three years later, the dean summoned me and gently informed me that regular attendance was necessary to an education and that mine had become so irregular he had decided to suspend it altogether" (Qtd. in Thomas, "The Monster God: Premier..."). Still, one wonders if the raging scientist who creates an artificial intelligence which builds killer robots in Hamilton's novella "The Metal Giants" after he's been expelled from the institution "as quietly as possible" because "Juston University [his school^ was the third oldest college in the country with an ancient, scholarly tradition that it...[took^ very seriously" might not be an echo of a frustrated young genius being summarily turned out of a place into which he had entered with such promise. Steele notes that "Although Hamilton's early aspiration had been to become an inventor, it was in science fiction, instead, that he left his mark" (Steele "About the Creator"). An interesting point is that Hamilton never showed any interest in writing throughout his youth or academic career. Only after some tries as a railroader and an assistant yardman (and in the writing of a very unfunny humor column for the local newspaper, did he identify his science fiction writing as "a whole-time proposition" (Qtd. in Thomson, "The Monster God Premier...").

Hamilton lived a quiet and unassuming life profoundly different from the spectacular events he pictured in his narratives Born in Youngstown Ohio in 1907, he was raised on a farm there and in New Castle Pennsylvania. As mentioned he attended college but did not graduate and after a short stint working on the Pennsylvania Railroad, turned to writing. He wrote continuously and sometimes saw several of his works published in the same month. In 1946 he married author Leigh Brackett and they began to restore a 130-year-old house in Kinsman, Ohio, which became their primary home.

Over the decades, while constantly writing (but rarely collaborating) they split their time between restoration work in Ohio and staying at a second home in Lancaster, California, where they wintered. They had no children but traveled as Gay puts it to various destinations around the world. His health began to fail in the seventies He passed in 1977 in Lancaster, California, of complications following kidney surgery. For all the massive amount of writing he published Hamilton only received one award in his lifetime. His story "The Island of Unreason" (Wonder Stories, May 1933) won the first Jules Verne Prize as the best science fiction story of the year Wikipedia notes that "this was the first science fiction prize awarded by the votes of fans, a precursor of the later Hugo Awards. He never received



a Hugo. Even in his lifetime, the SF community had begun to look away from his visions. What caused this?

Starting as young as he did, and noting how much he produced, it is not surprising that there are places in Hamilton's work in which the art of prose suffers. Some of his stories contain awkward descriptions such as "What do you mean?' Captain Future asked quizzically?" (Calling Captain Future). And some descriptions, even by the science of those early years, do not work. In Calling Captain Future, a dark star bearing down upon the solar system is described in several places as "thundering" towards Earth and its sister planets. Of course, thundering can't happen in space.

In an interview conducted by wife, Hamilton admits that a lot of the stuff that got published when he first started would not see print in modern times. "Frankly," Hamilton says, "The first story I wrote I could never sell today. It wouldn't be accepted; it would be crude" (Qtd. in Truesdale, Tangent). It is true that Hamilton's science sometimes has only a loose connection with what is true in the physical world. "In Hamilton's early work, science or pseudoscience served as a magically enabling doubletalk for the easier presentation of interstellar action" ("Hamilton, Edmond"). Steel reminds us that in the golden age "Nothing had yet been launched into space, and all anyone knew of the solar system came from what could be viewed through an observatory telescope lens. Thus the worlds beyond Earth were largely unknown and filled with mystery; anything was possible, so science fiction writers had plenty of latitude to imagine, improvise, and extrapolate at will"(Steele "The Original Captain Future"). Thus, the solar system in which Captain Future patroles has life on every world and moon. The problems of interstellar space travel, light speed, and time differentials, never come up. But this still does not explain his

lack of renown.

Other remembered authors often have had their science shown to be little more than fantasy. H.G, Well's First Men on the Moon had a whole race who were the final product of insect evolution. C.S. Lewis in his Out of the Silent Planet imagines an impossible Mars (Malacandra) as does Edgar Rice Burroughs throughout his Barsoom novels: A Princess of Mars, The Gods of Mars, and Llana of Gathol. In Hamilton's later work "What's it Like Out There?" Mars is portrayed as barren and dangerous. Thus, Hamilton's portrayal of science always improved, gaining the praise, if grudging praise, from the editors of The Enclyopeida of Science Fiction who note that Hamilton "took Space Opera seriously enough to make it good" ("Hamilton, Edmond").

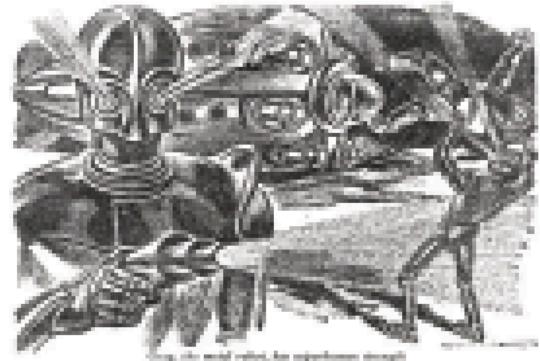
So again, if it is not weak style or the absurdities of pseudo-science, why is Hamilton so often overlooked? In a short article like this, a thorough examination and analysis of his output is impossible. In fact, his anonymity may in part be blamed not only on the mass of work within his canon but on the huge gulf of time his work incorporates. As Ryan Harvey writes "Hamilton's career was sprawling ... it spanned the pre-Golden Age to beyond the New Wave" (Harvey, "Wings, Wind, and World-Wreckers"). Bob Gay says "From the 20s to the mid-40s, Hamilton worked solely as a freelance author and was very prolific, often writing several short stories simultaneously while working on a novellength serial. His style was constantly evolving-eventually leaving behind the space opera style of story in favor of stories that explored humanity, man's place in the universe, and even sociological themes" (Gay, "The Edmond Hamilton Collection"). Furthermore, in the 1940s Hamilton was recruited by Mort Weisinger, a former Captain Future editor and literary agent, to work for DC. There Hamilton for a bit more money composed

stories for Superman, Batman, Adam Strange, and others, including a long run in the 60s on the "Tales of the Legion of Super-Heroes" series in Adventure Comics. So just the span of time might be an obscuring factor in Hamilton's reputation.

Notice, however, Gay's relief that Hamilton left behind his space opera roots. What troubles many science fiction critics is Hamilton's embrace of what many thought of as juvenile, unsophisticated work. This willingness "made it initially somewhat difficult for him to be accepted after World War Two as the competent and versatile professional he had in fact been for years, for he was a writer with a much wider range than was generally realized." ("Hamilton, Edmond" The Enclyopeida of Science Fiction). In the interview from Tangent, Hamilton himself confesses to being a product of the older days: "I can't help feeling affection for those old [pulp^ magazines. I prefer the old stories, but that doesn't change the fact that the field has advanced in literary quality, technique, and everything" (Qtd. Truesdale, Tangent). In many ways, Hamilton faced the same resistance to critical acceptance that JRR Tolkien did. When The Lord of the Rings was voted by readers in a survey put out by the Waterstone Bookstore chain, as the best novel of the 20th century, the critics howled. It's easy to be intimidated by howls.

Hamilton may have been sheepish about his literary taste, but he was probably pressed there by critical opinion. And critical opinion was often formed by editors. In the introduction to the Tangent interview, James Gunn observes "In many ways, science fiction has been an editor's medium, for good or bad. Editors such as John Campbell, Anthony Boucher and J. Francis McComas, and Horace Gold, and later Michael Moorcock, moved science fiction into new and uncharted areas" (Qtd. in Truesdale, Tangent). And those areas included the "adult" elements and a pessimistic worldview. In its entry on "Science Fiction," The Encyclopedia Britannica mentions that some works carry a sense of "cosmic bliss," but notes that science fiction can also contain "cynical despair." And this dark, adult quality seems to be what the author of the entry emphasizes. The opening portion of the Britannica article observes "science fiction's latent radicalism, its affinity for

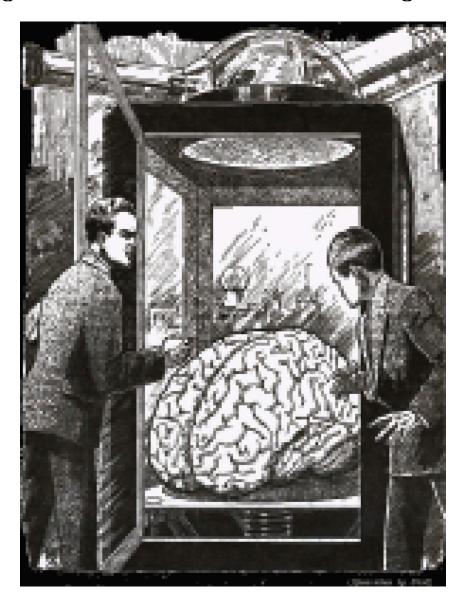
aggressive satire and utopian political agendas, as well as its dire predictions of technological destruction" are all parts of its landscape (Sterling, "science fiction"). Ryan Harvy,



James Gunn, and the author of The science fiction Enclyopeida entry all suggest that Hamilton's artistic reputation suffered because he embraced and developed the pulp hero Captain Future—a super scientist who patrols the solar system whenever the need arises. However, in spite of these critical opinions, Hamilton's affection for the character suggests both why he is overlooked and why his work still endures. Edmond Hamilton's writing exhibits three profound qualities: innovation, wonder, and optimism.

To cover the range of Hamilton's speculative offerings would take far more space than available. Artificial intelligence which creates an army of giant robots (The Metal Giants Dec. 1926) to space vampires hiding out on Easter Island (Across Space Sept. 1926) are just a few of the amazing ideas he presented in Weird Tales. Although coming later in his career, in the 1940s, Captain Future illustrates Hamilton's skills in innovation in a broader light. Ironically, the character was not created by Hamilton but by the editors Leo Margulies and Mort Weisinger. They envisioned a "Mr. Future" as a sort of Space Age answer to Street and Smith's Doc Savage.

However, Hamilton took that fundamental germ and developed the character into Curt Newton, a brilliant red-haired young scientist, blessed with a powerful physique and unwavering courage. He is a hero of the old school. Hamilton also introduced Newton's cohorts dubbed "the Futuremen." They included Grag, a massive robot of great strength but also emotive loyalty; Otho, a white-skinned, emeraldeyed android intelligent sharp-witted who can alter his artificial skin in



appearance to take on any identity; and Simon Wright, an elderly scientist who, at the moment of his death, had his brain encased in a transparent, life-sustaining box fitted with artificial eyes and mouth (Waller, "Eighty Years of Captain Future"). Beyond the imagination-bending physical nature of these characters, Hamilton's innovations allowed the interweaving of mind, emotion, and spirit exemplified in the Star Trek triad of Kirk, Spock, and McCoy and predate the disruptive dynamics of Star-Lord and the Guardians of the Galaxy. This interaction set the stage for violent disagreements among Newton's crew, adding dramatic tension.

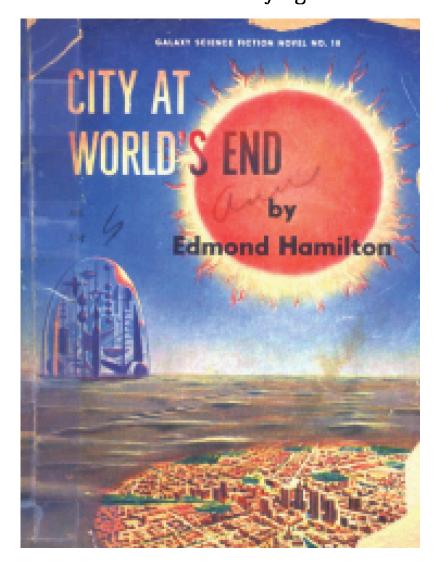
From the first novel of the series Captain Future and the Space Emperor, the innovative Hamilton introduced the strange crew, a semi-love interest, Space Agent Joan Randall, and even used a kind of "bat-signal" activated from Spitzbergen (an island in Norway) using a "magnesium flare signal from the North Pole" so he could be contacted on his base on the far side of the moon (Hamilton, Space Emperor). In Calling Captain Future, the reader meets a range of aliens including three from Pluto and its moons. There is also the threat of a dark star which seems to suggest a black hole (decades before the concept became common) and the use of holographlike rays which create illusions for those looking on from the outside. As Steele notes "Although much-maligned in their time, the adventures of Captain Future and the Futuremen have had remarkable staying power" (Steele, "The Original Captain Future"). Hamilton did not feed the editorial expectations for grim nihilism and that may have cost him a Hugo. Instead, he offered adventure, and something else. The narratives are full of celestial threats, space battles, and natural catastrophes. Critics may laugh, but The Enclyopeida of Science Fiction notes that "the scope, colour and dynamic clarity of this liberated action did much to define the Sense of Wonder for a generation of readers" ("Hamilton, Edmond").

The sense of wonder is a central element in Hamilton's approach to science fiction. In an interview for Tangent, Hamilton makes it clear that money was what drew him into comics, but it was never the reason he composed science fiction. What drew him to "scientifiction" was a feeling that he experienced even before he could read: "Some people, myself included, are born with a feeling about these things [the fantastic in science fiction[^]. In my case, I couldn't couldn't even read. This was on a farm in Ohio back in 1908 when I was four years old. I got hold of some magazine that contained an article by H. G. Wells called "The Things That Live on Mars." It was, as I see it now, a follow-up to his very successcience fictional The War of the Worlds. And it had these pictures of tall, slender trees; strange looking Martians moving about. I looked at that magazine until it wore out. I wasn't yet able to read it, to read the article, but those pictures! I sat and wondered if Mars was a long way off and if it was a very strange place. This feeling I say; I think people have a bent toward this.

This manifestation of the spirit of Wonder is central to both Hamilton's appeal and his critical anonymity. Wonder stems from being touched by the mystic and most 20th-century critics do not recognize myths. However, C.S. Lews, Tolkien and others did. Lewis writes in An Experiment in Criticism "There is, then, a particular kind of story which has a value in itself—a value independent of its embodiment in any literary work" (26). Thus a text can have a power separate even from technical expertise and social commentary. Many still do not understand the appeal of Star Wars, the inheritor of Space Opera genre, but thanks to George Lukas following his inner voice and the advice of Joseph Cambell (The Hero with a Thousand Faces), wonder still thrives in science fiction. Reading Hamilton confirms this. Embedded in that wonder is one other attribute of Hamilton, optimism.

This may be the point that receives the most pushback, especially from Ryan Harvey, whose excellent review of The Best of Edmond Hamilton from Blackgate provided so much insight for this essay. However, his central claim is that the best of Edmond's work contains a "tone of bitterness and cynicism [that[^] pervades many of the stories, which makes them stand out among other 1930s and '40s science fiction'' (Harvey "Wings, Wind, and World-Wreckers"). There is no denying that there

are dark and sad events within Hamilton's work, and Harvey's specific examples support this. However, it might be important to clarify what optimism means. Does it involve the "grand right of humanity to conquer other worlds" (Harvey "Wings...") or assume that the conquest of space would always be a glorious expedition? If so, then Hamilton is certainly not that. But the nihilism of some science fiction was not that of Hamilton. There is, in Hamilton's works, a general assurance of the



survival of good. It is true that especially his space opera narratives included what Steele calls "the cosmos-apocalyptic nature of many of those early stories...[they^ bore titles like "The Universe Wreckers," "The Star-Stealers," and "Comet Doom." (Steele "About the Creator"). This was so typical of Hamilton's work that "science fiction fans nicknamed him "World Wrecker Hamilton" (or, alternatively, "World-Saver Hamilton")" (Steele "About the Creator").

That last "alternative" point is vital to recognize.

Worlds may stand on the brink of destruction but in most cases, in Hamilton's vision, something is saved. In The Metal Giants, the scientist who unleashes with his AI a hoard of robots sacrifices himself to bring them down. In the 1950 novel City at World's End when a small town is pushed through time into a hostile future on a dead Earth, humans still struggle even in their pettiness and fear to survive. And when they are confronted with advanced versions of themselves (giving a grim reminder of what occurs when those with great technology confront those with little) a way is still made to reinvigorate the Earth and inspire even one of the future humans to join herself with "the primitives." In "What's It Like Out There" a work Harvey calls "the most disenchanted story" in The Best of Edmond Hamilton collection, the narrator lies to grieving families and loved ones about the deaths of members of his Martian exploratory unit. He tells them how brave and strong they all were when some had in fact died suffering from illness or the physical trauma of space flight or even while in mutiny. But what motivates this action is not weakness but kindness. He knows he would just bring suffering to them and in an act of gentilness shields them. He is the voice of every soldier who has suffered through action and recognizes that those whom he loves could not bear to hear what he'd seen. In Hamilton's bleak "The Man Who Evolved" the narrator, having witnessed his friend and college devolve into protoplasm seems to shudder at its implications; "Will that cycle of evolutionary change" he asks "be repeated over and over again upon this and other worlds, ceaselessly, purposelessly, until there is no more universe for it to go on in? (Hamilton, "The Man Who Evolved"). But Hamilton's narrator admits that he does not have all the answers. He speculates "Or is this evolutionary cycle we saw a cycle in appearance only, is there some change that we cannot understand, above and beyond it?" ("The Man Who Evolved"). The humility of saying we do not have all the answers and trusting to a greater reality leads to optimism.

Although being scientific is the prime quality of Hamilton's heroes, there is room to trust in something larger. Many in City at World's End offer up prayer when faced with what might be devastation. Not the hero, of course, but others do and he does not sneer at them. In Calling Captain Planet the encased brain of Simon Wright suggests that there is a higher calculation beyond human understanding. Humility and trust keep Hamilton's texts from the deep pessimism that so much of current culture finds itself. The question today is whether the faith and trust Hamilton portrayed is based on an illusion or reality. Only by reading his work and determining one's satiscience fictionaction with the experience can answer that question. I must admit as Harvey does, that there is still a lot of Hamilton for me to read. Fortunately, a lot of his work is available online even today and many titles are being republished in hard copy. This means, according to science fiction Encyclopdia, Hamilton's work is experiencing a rising reputation; the article concludes that "a revival of interest in Hamilton has inspired more sustained efforts to make this early era available to a larger audience" ("Hamilton, Edmond"). And that is how it should be.

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THE **DECISION OF ANTICAL ANTICAL OF ANTICALO**

<u>Heck Yeah, we're fans!</u>

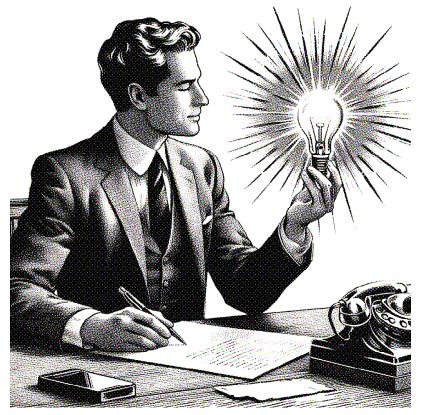




Press



man stood in darkness. Two metal rods shot into his eye sockets and withdrew, leaving eyes behind. The eyes stared unblinking at nothing.



Gleaming claws snatched at the long slit down the front of his body, dragging it open. Steely tendrils uncurled and touched what was inside, feeling, checking, adjusting. They moved back and the claws closed the slit, which healed almost immediately. With a sigh the man began to breath, and his eyes blinked. He moved his arms to cooperate as the clothes

already hanging loosely on his body were buttoned up by the tendrils and more were added. Soon he was dressed in a white shirt with a neatly knotted tie, a business suit and highly polished shoes. Finally, an overcoat was slipped onto him and a hat set on his head.

He turned to his right. A door slid to one side ahead of him, revealing a dimly lit stretch of damp, recently mown grass. He walked out onto the lawn. Behind him the door shut and the round craft that had brought him

there flicked away silently into the sky. He marched across the grass, knowing his way. A small animal stopped to look at him, then ran off into the shadows. His feet found a path and he followed it. It led him to a pair of iron gates, padlocked to separate the park from the bright street until morning came. The man tapped the padlock with his finger, and it sprang open. He stepped through the gates, closed them and reset the padlock. As he was doing this a young couple went past, talking in low voices. They ignored him and he them.

He turned and headed along the street, looking neither left nor right. Soon he was in a downtown area where the streets were lined with offices, shops, restaurants and bars. The man was aware that theaters, cinemas, museums and city hall lay ahead, but none of these was his destination.

A car approached with a woman and a young girl in the back. The girl seemed to be asleep, but as it went by she opened her eyes and stared. "Look, a funny man," she said. Her mother glanced back through the rear window. She could see no one on the sidewalk. "You've been dreaming, honey," she told the child. "You're going straight to bed when we get home."

The man walked quickly. Once he had to sidestep to avoid a drunk lurching towards him. The drunk squinted, mumbled something and shook his head. Then he went on his way. So, more purposefully, did the man.

Presently he crossed the street and halted outside a tall office block. He approached the glass entrance doors and looked inside. A security guard was sitting in the receptionist's chair, talking to a colleague standing on the other side of the desk. The man waited for a few seconds. The



standing guard stopped speaking halfway though a sentence and came to the doors. He unlocked them, let the man enter and immediately locked them again. As the man walked to the elevator, the guard returned to the receptionist's desk and resumed his conversation.

The elevator had an operator in the daytime, but it was empty now. The man worked it himself, without difficulty. When it reached the floor he needed, he emerged into a corridor with a row of doors. He went to the one at the end without hesitation. It had a plaque with gold lettering, which read:

M. J. FINLAY PRESIDENT

The door opened on an outer office. He walked past the secretary's desk to the inner office and entered without knocking. It was a large, comfortable room. Finlay was sitting behind a bulky desk, reading a document. The desk lamp was the only illumination.3 Finlay had craggy features and greying hair. He looked up sharply as the man entered, then relaxed a little. The man watched him get up and go to a coat rack at the side of the room. He put on a jacket, overcoat and hat, then left the office without a word. The man hung his own hat, coat and jacket on the rack. They were identical to the ones worn by Finlay. He sat the desk and began looking at the papers there.

Suddenly the desk lamp shimmered and died. He crossed the room to switch on the main light, moving confidently in the dark, and went into the outer office. There he scrawled a note for the secretary about replacing the desk lamp bulb. Back at Finlay's desk, his desk, he continued to study the papers and signed some of them. The documents confirmed what he already knew. The company was being subtly steered into business activities that supported his controllers' plans for this planet. While one part of his mind absorbed what was in the papers, another reviewed his arrival. It had been satiscience fictionactory. The failure of the desk lamp was just an example of human inefficiency. They were not always so inefficient. There was a place for distraction that they had made called Disneyland. The thousands of light bulbs there were all changed regularly, so that none ever burned out. Replace before failure. That was a rational policy, and one that his controllers followed. He would eventually be replaced himself. In the meantime, there was work to be done.

THE END



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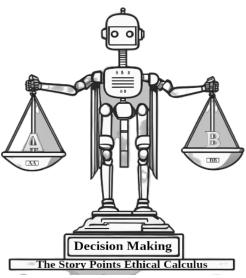
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ALL THINGS BOTH FLESH AND STEEL Anderson Rearick III

The question in our future is not whether machines will, by gaining self-awareness, demonstrate their "humanity" but whether humans by granting grace to machines, will demonstrate theirs.

He prayeth best, who loveth best All things both. . Coleridge Rime of the Ancient Mariner Lines 615-618

words! Swords! Swords! Swords! The rhythmic cry of the crowd paused only for a moment when the joust took a turn for the worse.

Description of the barrier of the hard dirt surface amidst shifting dust; each pierced by the expert thrust of an opposing knight's lance. Horribly, they continued to try to move, though they were obviously finished. Now, the mob wanted the two mechs to fight it out, hand to hand. A bad business, with too much lost already. There would be no quarter here. Ignoring the sound



of the roaring spectators, the Moon Knight pulled himself free from his

saddle and, drawing his shining blade, he stepped gingerly toward his enemy. He hefted up his shield, upon which a white, crescent moon gazed serenely from a blue and purple background. Despite treading lightly, the warrior's shining, reflective armor rang with each footfall.

The Sun Knight stood and watched his enemy's approach. He took in the sight of his own fallen mount, which flailed beneath him. The horse's wide eyes darted to and fro, hopelessly looking for a way of escape, even in its death struggle. With a swift pull, his sword gleamed in the light, then vanished into the breast of the beast, quieting it. As if also struck, the crowd went silent for a moment. The silver-armored figure, his orange and yellow banners flowing prophetically from its helm like flames, stepped over the now-still form of his mount, halted, and braced itself for the attack that must come. In his left hand he held his shield, a golden yellow sun upon an orange and white field.

"Why did he do that?" One of the spectators whispered to his neighbor. "Do what?"

"Kill his horse."

"Probably was concerned about it being a distraction."

"Oh, I thought maybe he was trying to put it out of its misery." "Ptsh! Don't be absurd! These guys don't feel; they just fight." The other's response was drowned out as the blades of the two knights came together with a resounding clang followed by a new surge from the collected voice of the mob. For several minutes all that could be heard were cries of support for one or the other, with the whoosh of the blade passing through air, ending with either another ringing clang of sword on steel or the grating crash of sword on shield.

"They're too evenly matched!"

"Wait for the second run." Trumpets sounded and the voice of the Joust

master named the white knight in the lead.

"And now!" the Joust Master continued, "let us raise the stakes to level two!" The crowd thundered its approval. There was a crackle of sparks that ran up each combatant's blade while the air smelt of ozone. In the background rose the hum of each knight's shield as it powered up. "Swords and Sorcery!" shouted the mob. "Sorcery and Swords!" "Begin!" cried the Joust master.

Now the battle turned fiery. Blow upon blow caused showers of sparks to fly from the crashing swords upon each figure. The plume of the Sun Knight's helm actually ignited so that for a moment he was crowned in flames rather than streamers. The shields of each combatant now hummed angrily, and when struck, repulsed the blow with powerful blue or crimson energy. Again the two fought on, equally matched, neither giving nor taking any clear advantage. Finally, as the Sun Knight whirled about to use the shield to raise his foe's defensive arm, the Moon Knight brought his blade squarely down on the shield's center causing it to split and explode. For a moment the Sun Knight looked down to where his forearm and hand used to be. Because he had not felt the heat and strain of the blow quickly, he had failed to let go of the overloading shield: Now there was only charred metal, wire tendrils, and hydraulic fluid splashed from the wreck of his arm, to be absorbed into the sawdust. Again the trumpets sounded as the Joust master stepped forward.

"The second round is given to the Moon Knight for his outstanding success with the power sword." Cheers (with a few nay-sayers) for the knight whose blue and purple streams floated behind him like a shadow. In their separate corners, the two combatants prepared themselves. The Moon Knight looked over each weapon. The Sun Knight, while doing the same, appeared almost pitiful as it tore off some of the orange and yellow decorative cloth from its steed, still smoldering from where the lance and sword had pierced it. The Sun Knight faced the crowd as if not wanting to show the wound to its enemy in the opposite corner. Wrapping the ruined wrist tightly seemed to slow the blue-green liquid, but it still covered his remaining gauntlet and made holding the sword difficult. The illusion sustained by the secret identities of the Sun and Moon Knight for the Renaissance Day setting of the "robo-war" organizers was about to be shattered. The Joust Master silenced the crowd with a raised hand.

"And now we shall take it to the final and third level!"

"Swords, Sorcery, and Science!" the mob howled. "Science, Sorcery, and Swords!"

"For the last time--Begin!" cried the Joust master.

In the booth where team Moon Knight aka "Hector" sat, the controller shouted "This is it! Don't give'em time to turn around. Lock On and Fire!" The chest of the Moon Knight sprung open and a cluster of small missiles shot forward. Sun Knight, however, did not turn around: in fact, it was clear he had never intended to turn. Instead, he waited until the missiles had nearly reached their mark and only then fell into what appeared to be a squatting position, his orange and yellow tunic tore apart, while two Gatling Guns simultaneously appeared out from under his back armored plate. Most of the missiles struck the shielded outer wall of the Joust Circle in a pyrotechnic display that left the spectators hoarse with shouts. One impacted on the Sun Knight's back and another found its mark on what had originally been the Sun Knight's heel. There came an explosion, with shards of metal shrapnel bouncing off the protective windows surrounding the battle zone. Although the leg's end was severely damaged, he held his position. Meanwhile, the helm of the Sun Knight spun 180 degrees so that he now looked down his own back towards the now-exposed Moon Knight.

"Shut the Shield Doors! Quickly, shut them up!" cried the leader of Moon

Knight Hector. But it was too late. With merciless precision, the Sun Knight emptied its armor-piercing bullets into the already exposed chest cavity of the Moon Knight. In the Moon Knight Hector control booth, screen after screen, monitor after monitor went dead. In disgust, team members tore off their earphones and mikes.

Meanwhile, in team Sun Knight's aka Achilles' booth, shouts of jubilation almost overwhelmed the controller's newest commands. A heavy man with an undone tie and rolled-up sleeves who chomped on a smoldering cigar quieted them down.

"People! People! Hold off on the self-congratulations! He hasn't won until he's planted the flag! Stand him up!" One of the operators opened an audio link.

"Achilles: resume warrior mode. Complete Goal Omega." The Sun Knight morphed back into the familiar humanoid figure with which he'd fought most of the battle.

"Well? Tell Achilles to take the flag and plant it into the circle."

"He's having a hard time moving; severe damage to his lower leg: he's losing hydraulic fluid rapidly."

"What? Didn't we tell him to bind that up?"

"No, he bound up the wrist wound, but the leg just happened."

"Then get him to locate the second wound, deal with it, and proceed with the final goal."

"Working: telemetry says he's lost too much liquid; he's losing his standing ability." In the arena, the Sun Knight, Achilles, wavered as his leg weakened, and even while trying to use the flag pole as a supportive staff, he suddenly fell with a crash.

"Con-Found-It! Tell that rust bucket to crawl. We've got a fortune riding on this."

"You keep pushing him, and his servos will freeze and maybe even his

circuits'll fry."

"Noted, now push him!"

Meanwhile, the Joust Master had raised Achilles' flag—his identity now revealed to the crowd.

"Ach-kill-ees! Ach-kill-es! Ach-kill-ees!" The crowd's chants meant nothing to Achilles. He had his order. Stick the pole into the winner slot. As long as his body could perform the action, he would attempt it. Crawling inch by inch he made his way to the place on the floor which would serve as his flag's base if he could just reach the hole. He was stretching his hand with the staff towards the hole when there came a flash inside his servos, and sensors reported that a fire had started. His legs and arms stopped responding and the cameras through which Achilles saw the world went dark. Internal power was the last to fail. He just barely made backup copies of his system programs before he went offline. A moan came from the spectators as Achilles collapsed into a burning pile of debris. The Joust Master cleared his throat:

"In light of the fact that neither warrior has been able to plant his flag on the field of honor, this contest is determined to be `a draw.' However, because of the number of hits and the duration of The Sun Knight's performance, our players, now revealed as Team Achilles, earn the consolation award of 'Best in Combat." Inside the Sun Knight's booth, the cigar chomper swore and tossed the butt away.

"All right people, it's over. Get out there and hose him down and see what we can salvage."

Two days later, Team Achilles gathered in the company briefing room. Grant Savage, now chewing on a new cigar, stood at the table's head, glaring down at his subordinates.

"Is everyone here? Where, the blazes is Frank? Just because some journal calls him 'the most innovative robotics engineer of his generation' doesn't

excuse him from being at these meetings on time!"

"I'm here." Dr. Frank Hephaestus lumbered into the room while coworkers made a point of getting out of his way. This always amused Frank since his frail, five-foot-six frame had never been formidable and no one back in high school had ever moved aside for him. After the car accident that bound him to a wheelchair, things had even been worse; suddenly losing eye contact, he found himself invisible to many. He'd lost count of the number of collisions he had endured. Frank was a paraplegic. In fact, his pursuit of robotics had arisen primarily because he wanted a different option than just a wheelchair.

Now, at least, people got out of his way, but he was—as he knew in moments of painful honesty—still hardly a physical specimen. The thinness of his frame was made all the more grotesque in that his slim waist emptied into a massive pair of mechanical legs upon which he shambled through the halls.

"Crud," Frank thought as he attempted to gingerly step into the doorway only to hear the crunch of something on the floor—it was only a pencil now pulverized. Last time it had been Savage's new Mont Blanc pen. Once again he'd failed to sense an object under his feet. "These legs still have some major bugs." Even while keeping his feet low, the extra weight Frank worked with made his steps audible, not only in the meeting room, but throughout the building. His android creations were, in fact, defter in their tread than he, since they did not have to deal with the mass of the useless legs that were encased in his "walking pants." This system was better, much better, than wheels, but he had gone from being invisible to being a spectacle. Still, he was not so much a mad professor as to ever seriously think of cutting his legs off. Medical science might yet find some way to re-invigorate his flesh.

"All right then," Savage looked about, "now that we are ALL here, let's

consider what went wrong in the last bout. I really thought we had this one in the bag." He threw himself into the head chair beside which was a keyboard and terminal.

"So did we," Quafer, the chief mechanic shook her head. "After the pounding we took from Atlas two years ago, I thought that we'd solved the strength and speed issues."

"Well, in fact, we did." Peters, Quafer's assistant, raised his voice. I've been looking at the replay of the bout and there is no doubt that we dominated that fight. Achilles was undoubtedly stronger and faster." "And yet," Grant pulled his cigar from his mouth and pointed it like a

gun at his team, "we lost. What went wrong?"

"What went wrong is that Achilles did not respond fast enough." Hephaestus paused. He'd come prepared but he's not intended to jump in so soon.

"Are you blaming my servos, Frank?" Quafer arched her eyebrows.

"Not at all, your servos were plenty fast enough. It was Achilles himself who was too slow to recognize the need to engage them."

"Well, how can we change that?" Grant's cigar smoldered. Hephaestus tried desperately not to cough; he failed.

"Grant you should have an electronic message from me that contains a vid." Looking down at the computer screen, connected to the projection screen, Savage indeed found the message.

"Boxing?"

"That's the one. You'll also see a small vid taken from Achilles' last fight entitled 'Fatal Flaw'." Savage leaned back and addressed the ceiling.

"Abigail, dim lights and run video "boxing"

"Affirmative, Mr. Savage." The central system, nicknamed Abigail, also raised the meeting room's main monitor screen so all could see it. She had performed this function, done this drill, often enough that even if Savage did not remember all the commands she performed. On the screen, two fighters from the early 20th century were dancing about. Each wore only shorts, sneakers, and large gloves. Apparently, Peters had never watched vintage sports footage.

"Wow, look at them dance, is this where you got the "butterfly program" Frank?"

"Yes, that's Mohammed Ali, one of the most successcience fictional fighters of his time. Now in this fight between Mahammad Ali and Floyd Patterson. Notice how, even though Paterson is losing, he's obviously a better fighter than our Achilles. He defends himself."

"Not very well," Peters snickered. "Oow. That hurt, I bet."

"Yes it did, but notice that neither Ali nor Patterson needs to be told to deal with hits that occur outside their eye range. Both fighters knew when something hit them. They fight, but they respond when they are hit. It isn't outside observation that tells them when they've been tagged. Why? It's pain. Now look at this. Abigail, please run "Fatal Flaw" If you wait you will see—yes here it is—Achilles whirls about to use the shield to raise Hector's defensive arm, but Moon Knight brings his blade squarely down on the shield's center causing it to split and explode, You see? Achilles should have felt the heat and the danger. Later none of us caught the wound to the leg, see? And so Achilles did nothing to save himself. I suppose we could just create warning sirens in the systems, but, in fact, pain is the most efficient. If we are going to make our fighter win, we will have to let that fighter feel pain and stress. Grant Savage leaned forward, gazing at the frozen images through the cigar smoke.

"How long will it take to make these new systems?"

"We will need at least a year and that will be pushing it."

"Then start pushing."

A year later the story was very different. Achilles II became the scourge

of the Robot Combat Circuit. But the more fights Achilles was in the more drawn and concerned Frank Hephaestus looked. He had not expected to care about circuits and servos: it annoyed him. And it bothered him that he was the only one who seemed to notice the pain they were putting Achilles and all the other robo-warriors through. It hadn't taken long for the competition to figure out what they had done and to duplicate it. But what had they done? Why didn't anyone else understand? Then, one day while walking back from lunch, Frank's pace was arrested by a cry:

"Help Me, Someone Help Me!" Most people were paying no attention but Frank scanned the neighborhood:

"Help Me! They're hurting me!" He began to move in the direction of the calls. His footfalls sounded elephantine on the pavement. But what the heck? Someone was obviously in trouble. It was only when he saw a flock of birds flit away from a red sports hovercraft before him that he realized that he had been fooled into paying attention to an anti-theft device. A woman's voice spoke from its shining hood. "Help me, someone help me!" For a moment, he was furious and almost gave the car a kick with his mech legs. Maybe a dent in its hide would teach the owner not to take advantage of others' natural responses to aid others for such a mercantile reason as stopping someone from stealing a car. But the vehicle's ability to call for help made him pause. Did it feel? Was it the car's fault that it had been given sensors so light that birds could set it off? Certainly, it had managed to get his attention and this made him pause and think.

Grant Savage plowed his way into the lab where Hephaestus worked on the prone figure of Achilles II. He needed a progress report--yesterday. Team Achilles was just a few months away from a rematch with the Hector team. No hiding behind medieval identities this time. Even the steeds were to be upgraded into what the military called battle-mounts. Because, officially, the last Achilles-Hector match had been a tie, a rematch was needed to determine which mech team would collect the contracts and sponsors. Savage was itchy, since he knew Team Hector had modified their fighter in the same way Achilles had been. No secret has a shorter shelf life than a competitor's—except maybe the military's. Even team Titan Tsunami, their next challenge, had added some sensors that made them faster and more efficient. Savage was half pleased to find Frank working; maybe he had come up with some new ideas to give them a greater edge.

Still, Achilles II looked much like his predecessor. So the changes in its ability to sense were hidden, and he hoped, extensive.

"Achilles" Hephaestus pressed his hand on the chest plate of the machine. "What do you sense?"

"Pressure, one pound, three ounces. Heat 87 degrees and rising.

"Excellent Achilles" Frank typed out some notes on his handheld notepad. "Touch sensors are up to 87% organic. Still some lag time on temperature: feel this." He placed a wet towel on the machine's arm.

"Pressure: 12 ounces, heat: 45 degrees." The humanness of the voice synthesizer pleased Hephaestus and bugged Savage. Why, Savage could not say. Walking up behind the scientist, Savage grunted.

"How can a man of science be so stubborn? You have him using the old Imperial system? You know that if we ever begin selling this model, we'll have to recalibrate for the metric system both at home and abroad."

"I suppose." Hephaestus didn't look up. "Although I am not sure to whom you're planning to sell Achilles. He could hardly be a household servant with this arsenal and with the non-attack programming protecting humans; he's no use to the military either. Savage looked at his colleague sadly. Somehow the thought that programs could be re-written had never



entered Hephaestus' head.

"Well of course we are hoping to sell some of the technology to household utilities manufacturers. Westinghouse is practically standing by online. And then, ahem, some of the weapons used by Achilles will go to the military. You know the old saying, that a 'Good Offense makes the best Defense.' Looking uncomfortably about the lab, Savage saw a computerprinted sign stuck on one of the huge bottles of a new, red lubricant: "Mt. Aetna: Beware of Cyclopes."

"What's this?"

"Oh, just one of the technicians with a liberal arts education. Didn't you know that my last name is the same as the Greek god of weapons making?"

"Uh, no." Savage hoped his face revealed nothing, but Hephaestus was staring down, looking at Achilles' readings.

"Yes, his helpers were the Cyclopes whose hammers supposedly caused the eruptions from Mt. Aetna. Funny thing is that Hephaestus was a cripple too, and made the first robots described in literature. Mechanical men who helped him walk about Olympus."

"Well, that's just eerie."

"Achilles, stand." The eight-foot behemoth rose from the examination table and stood before Hephaestus and Savage.

"Listen Frank; it's ironic that you should mention the non-attack programming. I was wondering if we could modify that a bit." "Why?"

"Analysis of previous bouts shows Achilles pausing about ten seconds as he determines if his opponent is a machine or not. I mean, in shape they actually look so much like us. If we made him, er, less choosey, he'd begin fighting just a bit sooner. And it's not like there's any danger. The machines are sealed inside the battle arena when they fight.



"No, I don't like the idea. Besides the safety issues for pit workers, it will increase the violence of the fight."

"Ah come on Frank; what are we talking about here? Since when do we care about the violence a car experiences when crashing into another car especially in a demolition derby, or, say, on a testing range? We don't, because they're machines. I mean these things have no other purpose other than fighting. By the by, I'd be careful about making it too touchsensitive. We don't want to have his sensor array fry out just because he takes a decent strike."

"I'll keep that in mind"

"You gotta remember Frank, these bouts entertain the public, and they are a testing grounds for home helpers and munitions. These are not high forms of life. They're just metal, circuits, and servos: not flesh. Also, these things have hardly any intelligence. I've heard you say yourself: our machines aren't as bright as dogs."

"All true, but that doesn't change the fact that they experience battle and sometimes they experience pain. Since we now have the ability to know what they are experiencing, we have a responsibility. All things great and small, Grant."

"What?"

"You never heard of the line? 'He prayeth best who loveth best all things great and small." It's from Coleridge's Rime of the Ancient Mariner. He's saying that the spiritual side of humanity is revealed neither in our intelligence nor in our power over other living things but in our ability to stand for the powerless, animal or otherwise. Think of all the sports that once involved the mistreatment of animals. Bear baiting, cock fighting, dog fights all vanished because people changed not because the animals demanded it. Well, in a way they demanded it as we recognized the universality of suffering and the need to diminish it. All things Grant...all things flesh and Iron."

"Ah come on, are you saying that in the future there are going to be humane groups making raids on homeowners who mistreat their toasters?" "I don't know about that, but the protection of mechanical health won't come from machines asking for it. You know, I don't think we'll ever have truly sentient machines. Instead, it will come from our own sense of what is right and what is wrong.

Grant nodded, but he was already thinking how he could get one of the other assistants to modify the non-attack program.

Several days later Mary Quicken of Iron Ring magazine questioned Frank Hephaestus about his concerns during an interview given after Achilles had finished off the Asian Titan Tsunami.

"Dr. Hephaestus you, of all Team Achilles, have been credited with the innovation which has made him the unstoppable juggernaut he has become. What do you say to those who see you as the opener of a whole new level of the sport?"

"I wonder what level I have opened Ms. Quicken. I'm concerned about the cost of Robot Fights."

"Really? What for? Unlike the boxing matches which I understand you are an aficionado on, there is no waste of human intelligence, "

"But there is pain, Miss Quicken, far too much pain. More than I had ever dreamed there would be. Especially now that my technology has been mimicked, I see machines writhing in agony every night."

"Oh come now doctor, aren't you being melodramatic?"

"You can't hear them; you don't see the monitors. I do: if people could hear the electric screams, they'd never allow this to go on. By the way, I don't watch boxing anymore. When it was safe in history, veiled in old films, I was insulated from the pain of those boxers. Doing what I do now has changed all of that. I hear the cries from both the past and the present."

"It's a multi-million-dollar business now doctor; I doubt anyone wants to hear."

"Maybe someone should make them."

The fight of Oct 31 was billed as the greatest struggle between mechanical powers possible. For weeks, people talked about the violence and the power and precision of the battle, but most of all they talked about the horror of it all.

The two had fought for more than an hour and a half. Team Hector had been very busy over the last year. Hector was bigger, and, with a new control bulb on his back, looked as if he was a bit hunchbacked. He was also a lot bulkier. This made sense since they had added laser and flame weapons, while also making him faster However, they'd opted to keep the signals to the control team visual. Hector felt pain and immediately reported when something went wrong, but there was still the lag time needed for his controller to interpret the data from the dials and pass it on. Achilles, meanwhile, voiced his pain. A cry when the blade punctured one bicep, a groan when a shoulder relay was pressed further than it should. And as soon as it was heard Team Achilles responded with new directions and counter maneuvers.

To observers, the fight took on a surreal quality as a very human-sounding figure, who cried out when struck, but who also dodged and lashed out relentlessly, fought against what appeared to be a great, giant, and silent mechanical beast. The ground was stained as each fighter trod on the spills of red and blue hydraulic liquid and scorch marks from fire and ammo blasts. As before, each held out through all three stages of combat: swords, sorcery, and science. Finally, in the last stage, there came an empathic roar of praise when Achilles, spinning about after parlaying a heavy thrust of the buzzing power lance, brought down his own charged sword upon Hector's control bulb. But the shouts changed to cries of surprise and fear when the bulb exploded and when the smoke cleared Hector lay face down, his innards exposed at the explosion point. Achilles was also down, although still trying to rise. His metallic helm, blackened by the explosion, was shatteredm revealing a handsome, if artificial face, also broken. The lance propelled by the explosion had pierced him through the chest, and Achilles, both legs gone, pulled himself half up with one arm. The other arm, its gauntlet also blackened, still held the destroyed sword. In the silence of the auditorium, Achilles howled. He was dying in agony, but being propelled by the command to finish, he could not let go. So he tried to make his way to the final portal, crying as he struggled with his own impossible wounds. Liquid from his system was spilling everywhere, mixing with the oil from Hector. "Make him stop!" Savage yelled. Hephaestus! Turn off that sound." "I can't, not here. He's locked. I'll have to do it manually."

"He can't go down there. We weakened the non-attack program. He's like a wounded animal lashing out at anyone who comes near him."

"Yes, like an animal. But he knows and trusts me."

"Well then do it! Look at him! Look at the mess he's leaving as he tries to get to the other side."

"Do you think he could make it?" Quafer watched in horrified fascination. "We're going to end up with another draw if he doesn't."

"I don't care! Idiots! Look at the crowds! People are leaving! Frank get down there and shut him off." But Hephaestus was already gone, heavily plodding his way to the arena. The exiting public paused as they saw him approach his dying machine. He couldn't know but the broadcasters had aimed a microphone at his head as Frank had entered the arena.

"Achilles, 'Pax Victrix" At the sound of the doctor's voice, the sword fragment in the robot's hand instantly lowered and fell to the floor. For Hephaestus, kneeling had never been an easy maneuver with those mechanical legs, but it had to be done. He had to get close. Through the remains of the shining helm, Achilles' eyes, red indicating stress, stared back at him. Thank God he had not made tear ducts. Hephaestus pressed his hand against the breastplate not far from the power lance which hummed like an angry hornet.

"You've done well Achilles; I will make the pain stop. Don't cry. Just lie still." He's not howling, Hephaestus thought, those are just klaxons, just sirens. All I need to do is remove this lance and then I can get access to his manual control. But try as he would, the lance was too deep and splintered for Hephaestus to extract. He grunted with effort until he felt Achilles move and grasp a hold of the handle and pull. It's not intelligence, he told himself. The machine has just recognized the direction of his effort and assisted. So why were his eyes blurring with tears? Fortunately, Achilles' arm was still strong and the lance quickly came free from his chest. Hot hydraulic liquid was now pouring out. Taking a small pair of grapplers, Hephaestus expertly reached inside. "Almost there, Achilles, good boy, got it: '...requiem in pace." There was a crunch and the massive servos of the warrior's shoulders and back shuddered and the light in Achilles' eyes dimmed as he fell back. With all his strength Hephaestus pulled to make the body lay gently but it still went down with an awful clunk and all about him the ground was wet with red liquid. Hephaestus fell into a sitting position and wept as only a trainer might for a beloved charge, or perhaps as a father might for a child. He remembered, wondering if he would have to force himself to cry for this tableau and realized how utterly he had underestimated Achilles' pain and his own grief.

"Did you see the blood? I can't believe that they allowed that kind of thing."

"Oh yeah the blood was awful but it was the screams that I couldn't bear."

"It was hideous, to see Achilles lay there with that lance through him."

Five months later the Robot Combat Circuit Bill passed, making it illegal to inflict pain on a mechanical device for pure entertainment. Machines could have pain receptors. There was no question that they worked better that way. However, no more conflict for entertainment. Ms. Quicken was again talking with Dr. Hephaestus:

"So where is Achilleas now?"

"It's being taken apart, a lot of usable tech is still salvageable for the company."

"No, I mean it's mind. It did save itself before you shut it down; didn't it? Where's Achilleas?"

"I have his data, but it's corrupted. The sudden shutdown and the power surge. I don't know if we can ever get him, it, all back." There was a moment of silence between them.

"So doctor do you feel any remorse for bringing down your teammates, ruining their livelihoods, and ending a multi-million-dollar business?"

"I don't know what you're talking about Miss Quicken."

"I'm talking about those alterations you made to Achilles, Dr. Hephaestus."

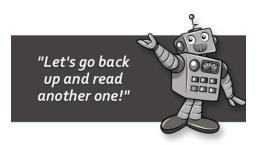
"The changes I made were demanded by the team themselves. I had suggested the pain would make the system more efficient and that the ability to verbalize it would help the team to respond to Achilles' needs."

"So you deny that you purposely sabotaged the approach to the system to employ pity. You'd said earlier that the question of rights would not be based on the intelligence of machines but on their makers' ability to empathize. Then you forced them to empathize with that spectacle."

"That's a pretty large claim to prove, Miss Quicken."

"Well let me bring up one more point: You may claim all you want, that the Achilles' ability to feel and verbalize the experience of pain helped its efficiency, making it a better fighter. Fine. But tell me, doctor, what good did it do—how did it make Achilles a better fighting machine—to change its hydraulic fluid from the blue-green it had been for years, to a new brand that is so red in color that it resembles human blood?"

THE END





SCI-FI Retrospective

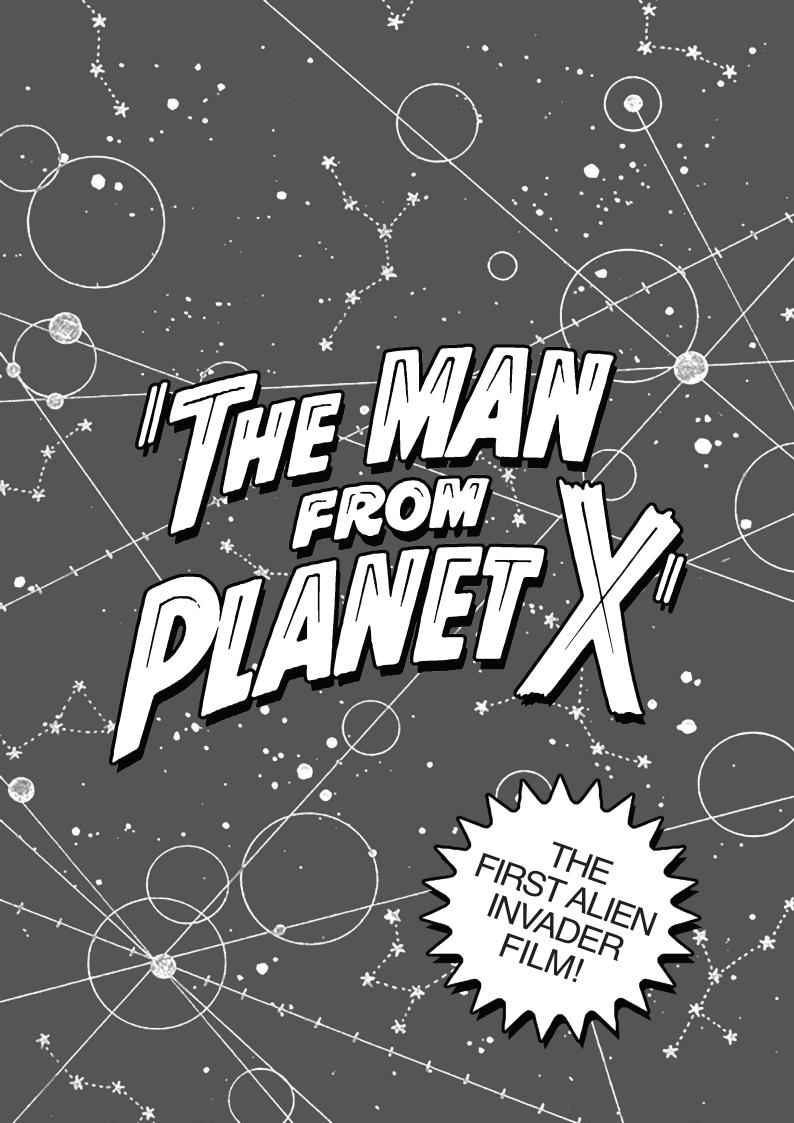
By Ghislain Barbe

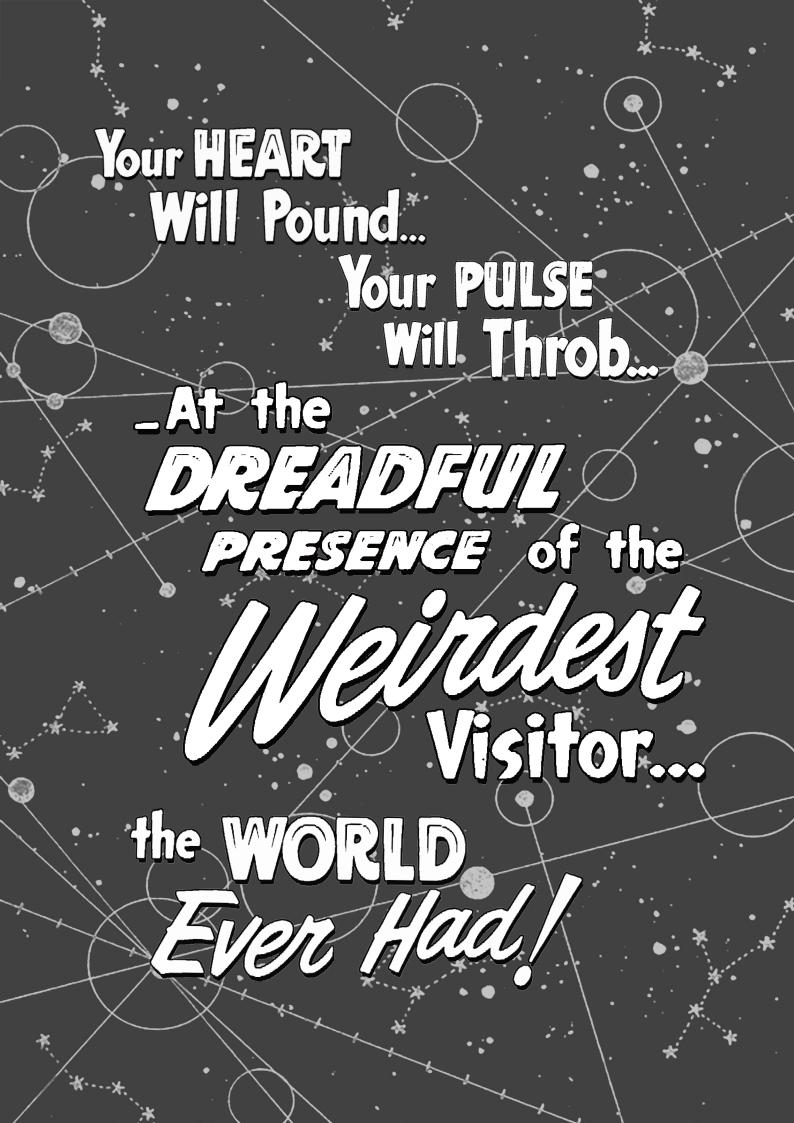
Ghislain Barbe is back with installment #2 of his column,

"Sci-Fi Retrospective."

In each issue of *The Interocitor*, Ghislain excerpts pages from his forthcoming book. He shares interesting facts about classic science fiction movies, and talks about the real-world historical events that were occurring at the time of their release.

In this issue, we continue our journey through the sci-fi films of the 1950s, with a deep dive on the movie, "The Man From Planet X."









The world is now experiencing strange astronomical phenomena. Reports are coming from all over the globe of inexplicable objects being sighted in the sky.... Strange waves, but not radar waves, have been bouncing of the Earth.

At first this phenomenon seemed to have no focal point. It appeared here and there around the world. But about six weeks ago, tremendous concentration was detected over a certain section of the Earth. In Burray, a particularly isolated area.

Dr. Robert Blaine, astronomer, University of California, Los Angeles. In The Man from Planet X⁷



The film appears to be contemporary.

Dates below are established based on the ones mentionned in the film : • Professor Elliott mentions September 13 when citing his observations of the the previous night, the night prior to the arrival of reporter John Lawrence in Burray, Scotland at the beginning of the film.

- Professor Elliott mentions the September 17 as the date when Earth and
- Planet X will be at their closest. This event happens at the end of the film. As the film starts with a narration by John Lawrence, it is assumed that
- the events take place prior to its release, The film having been release on March 9, 1951. It is assumed that the action took place in September of the previous year, 1950.

SEQUENCE OF EDENTS

The amount of report of unexplained flying phenomena increased drastically after the end of World War 2. There were more from 1947 to 1950 thand in the previous fifty years, According to Dr. Robert Blaine of the University of Californai, it peaked toward mid-July of 1950 («six weeks ago»). All seem to concentrate in the Orkney Islands in Scotland. By the start of August, Professor Elliott, a british astronomer, discovers a rogue planet on a trajectory that will bring it very close to Earth. He christens it Planet X abd establishes that the point where the two planets will be at their closest will be in Burray, one of the Orknay Island, on September 17.

Professor Elliott moves there with his daughter Enid to further his researches. He settles in one of the island's *brochs*, an old medieval observation tower, and uses it as an observatory.

He is soon joined by Dr. Mears, one of his former student who had some problems with justice some six years ago, which ed him to prison for a while and left him socially stigmatised. He offered him his help, supposedly as a way to redeem himself.

August, circa 24, Friday

Within 3 weeks of the passage of the planet, Elliott contacts his old friend American reporter John Lawrence with whom he worked during World War 2 and which he last saw 6 six ago, when Mears got into problems.

September 14, Thursday

Lawrence arrives in Burray and meet with the Elliott team. While walking outside with Enid Elliott, he discovers an strange artefact near the broch. The object looks like a probe of some sort and is made of an alien metal which «works out at one fifth the specific gravity of steel.» Mears marvels at the economic impact such an alloy could have while Elliott is awed at its scientific implications. As it's late, Enid takes the car to bring back Lawrence to his hotel at the village. On her way back, she discovers an alien spacecraft which landed in the vicinity of the tower and manages to see its alien pilot before fleeing back to the broch. She brings her father to see the ship. A they go nearit, the ship emits a beam toward them, Hit by it, Dr. Elliott's will falters, leaving him completely blank. Enid has to bring him back to the broch where, after a while, he slowly comes back to his senses.

September 15, Friday

When Dr, Elliott goes back to the ship on the next morning, with his friend John Lawrence, they discover an alien spaceman, They help it when it is in distress due to his envrionmental suit's malfuntion. Having shown their good intents, they try to communicate with it, but fail in their attempt. They leave, and the alien follows them peacefully. All their further attempts at communications remain unsuccesscience fictionul.



Dr. Mears discovers that the humanoid speaks in musical tones and take over the attempts at breaking the communication walls by using geometry and mathematic. What Elliott and Lawrence ignore is that his intents are not disinterested. Mears' plan is to get the formula for the metal used in the alien's probe to get a fortune out of it. He tries to force the metal's formula from the alien, but in vain. He shuts off the creature's breathing apparatus and leaves him for dead, telling the professor that communication was hopeless.

Soon, Lawrence discovers that the alien is gone, as is the professor's daughter, Enid.

Tommy, the seaside village's constable, reports that others are now missing as well. Lawrence takes the constable to the site where the spaceship had landed, but it is no longer there. With more villagers now missing, including Mears, and with the phone lines suddenly dead and the village in a panic, they are finally able get word to Scotland Yard by using a heliograph to contact a passing freighter just off the coast. Lawrence manages to find where the ship has moved to, elswhere on the island. The missing villagers are working around it as to fortify it.

September 17, Sunday

When an Inspector and a sergeant fly in and are briefed on the situation, it is decided that the military must destroy the spaceship. Lawrence objects that doing so will also kill the people who are now under the alien's control. With the planet due to reach its closest approach to Earth at midnight, Lawrence is given until 11:00pm to rescue them. He sneaks up to the alien ship and learns from Mears that the spaceman intends to use its ship as a wireless relay station in advance of an invasion coming from the approaching planet, which we also learn is a dying world. Lawrence orders the enthralled villagers to leave and attacks the alien, shutting off its breathing apparatus, then escapes with Enid and the professor. Mears, however, returns to the spaceship and is killed when the military opens fire and destroys it, shortly before the planet is nearest Earth. No invasion happens and the mysterious Planet X slowly exits the solar system for deep space.

Later in September

Professor Elliott travels to California to confer with doctor Blaine about Planet X. But Elliott and Lawrence agree that the events that occured in Burray should be left out of public knowedge as *«knowledge would only bring more fear in a world already filled with it»*. Lawrence and Enid look forward to be reunited again.

RANDOM NOTES

I think the creature was friendly. I wonder what would have happened if Dr. Mears hadn't frightened him.

Enid Elliott

Who knows, perhaps the greatest curse to ever befall the world or perhaps the greatest blessing.

John Lawrence

The main mystery of *The Man from Planet X* is the true motives of the alien visitor. While acting prudentely, he never comits any act that could be interpreted as overtly aggressive.

His first inteaction with a human was with Enid Elliott. when they came eye to ey through the port hole of his ship. he did not try anything and left her leave unharmed.

His second interaction took place when Enid brought her father to see the spaceship. This time, being met by a superior crowd, he used the mind control beam from his spacehip to keep Dr. Elliott at bay, and leaving Enid in charge of bringing him back home in a state of passive responsiveness.

The third interaction was his real first close encounter. When Dr. Elliott and John Lawrence meet him, he was most likely taken off guard, as he had wndered out of his ship and acted like his was surprise to be met by locals.He kept them at bay by using his handgun but never fired even a warning shot. What this weapon - if a weapon it is - actually does remains unknown. One could theorise that, like the mid control beam from the spaceship, it is not an aggressive instrument but a defensive one. That the alien's handgun be a mind control device would make much sense as it would explain how he got Enid to follow him back to his ship. It is noteworthy, at that time, that even though he had just been violently attacked and left for dead by Dr. Mears, he did no attempt to avenge himself from him.

Not only the alien did not manifest any aggressibity, but it acted quite naively, sometimes maybe too eager to communicate for his own good. When his breathing apparatus malfunctionned during his close encounter with Lawrence and Dr. Elliott, he let them help him, and after they saved his life, he let go of his weapon and did a gesture which could not be interpreted otherwise than extending a friendly hand. The two humans failed to answer him back, and after the failure of a brief attempt at clumsy sign language, they decided to do back to the broch, leaving the alien his hands still extended toward. Although they did not ask or sign him to, he took it on himself to follow them back, clearly intending to communicate with them and even let himself be taken to a room that clearly looked like a cell. The alien was clearly more proactive proactive in searching for ways to communicate than the humans, putting its safety in jeoparfy, following them and looking for ways to find common grounds.

Afterward, the used his mind control beam to gather some humans to help him build defenses around his ship. But never, even when he was attacked by the army did he use any form of violence or active retaliation.

The defenses of his spaceship were not lethal, only consisting of a wave emitter that made the human mind highly susceptible to suggestion and manipulations.

The only worlds that could lead to believe that the alien was a threat came from Dr. Mears, a man with a faulty ethical compass who tried to kill the alien and extract from him the knowledge that would allow him to make fortune out of his technological knowledge. And all the revelations he did about him were done while he was himself under the influence of the alien's paficying ray. Dr. Mears told Lawrence that the alien was trying to estalish «a wireless directional beam to his planet» so that «when his planet is the closest to our planet, an invasion will be launched» but nothing happened, even when planet X was at its closest, that could substantiate that. The whole invasion notion does not stand to the alien's behaviour.

It remains dubious that the aliens would have sent only one of their own as a scout and not attempted to invade our planet, even without a proper signal to do so if the alternative was to die in the coldness of space.

No clear sign is even given that the alien even comes from planet X. True, he arrived on Earth just before planet X was at its perihelion to it and landed at the spot on the planet that would be fully facing it, but, through its actions, nothing else seems links it to that event or the planet itself. Planet X being a wandering planet, it remains doubtful it can accomodate life, even less so a technologically advanced civilisation.

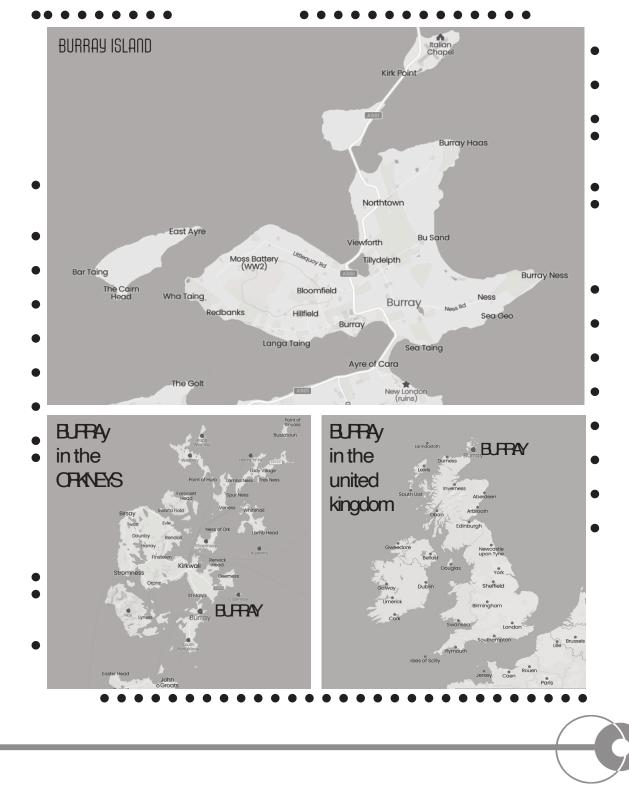
The so-called Man from Planet X could have come from somewhere else completely. His presence on our planet might only have been to study the same celestial phenomenon ad Dr. Elliott. Rather than an invader, he might have been only an observator, or a protector.

Given its benevolent nature, the alien's mission might even have been to make sure that planet X did not collide with Earth. The «degravitation» process Mears refered to might have been what the stranges emissions from the ship's cone were all about. While the ship was aiming at Planet X, it might not have been to guide it toward Earth but to keep it away from it.

Another point that remains obscure is what really happened to the Man from Planet X. His spaceship was shot at repeatedly with a bazooka - at leat ten times - apparently with no effect, but the last shot appears to have obliterated it, leaving no traces of it whatsoever. The mind control beam was active at the time, so maybe we misinterpreted what happened completely.

LOCATION - BURRAY

Burray, known as the Island of brochs, is one of the Orkney Islands in Scotland. It is linked to the Orkney Mainland by causeways running over the Churchill Barriers and across the small uninhabited islands of Glimps Holm and Lamb Holm. Brochs are iron age drystone hollow-walled round houses. They were often believed to be defensive structures. Professor Elliott moves in one of these to observe planet X.



THE MAN FROM PLANET X

The creature refered to as the *Man from Planet X* in popular culture is a five feet tall humanoid of alien origins. Although completely bald and with a larger head than humans, it seems to be otherwise externally very similarly built, possessing the same amounts of limbs and digits on them.

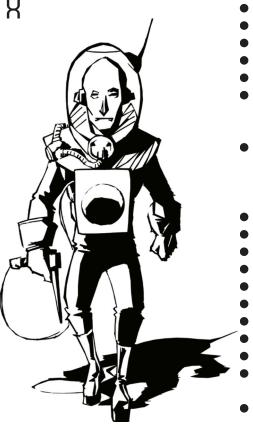
It most likely possess at least all the same senses as humans, having a pair of eyes, a nose with two nostrils, a mouth and a pair of earing organs covered by earphone-like artificial devices. The air it breathes is different than ours as it

- needs an environmental suit to survive
- in our atmosphere.

While it is referred to has a Man, it re-

- mains unknown if it is actually male or even if its species has two genders, more
- or none at all. Their method of reproduction similarly remaind unknown,





The alien that came to Earth • was prudent but curious, eager to communicate. It showed no signs of hostility toward humans until attacked, and even then, did not make use of violence, remaining defensive rather than aggressive.

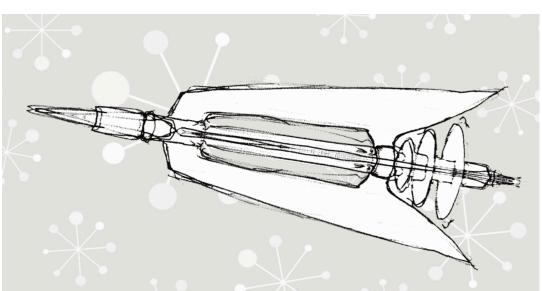
Even if we don't know if these personality traits are common to its species of not, we knwo that his kind is technologically more advanced than humankind, possessing, as of the 1950ies, mind control devices making human subject to suggestion, spaceshipbased spacefaring capacities and what we believe to be degravitation technology.

PLANET X Planet X is rogue planet that was discovered in 1950 by british astronomer Dr. Elliott. It's trajectory brings it at the closest to Earth on September 1950, According to doctor Mears, it is *«a planet that is dying, it's tuning to ice. If its people do not escape the planet before it swings back along its route through space. They will be doomed... they managed to make the planet deviate from its natural orbit by scientific degravitation*», but those assertions having been made while under the effects of the alien's mind control ray while his spirit was highly receptive to any suggestion might be just theories on his part, given his *state of mind and ethical compass.*

😓 THE ALIEN PROBE

The object Lawrence and Enid found on September 14th near the broch on Burray island is about 1.5 meters long and made of a metal that is much lighter that any known metals, weighting a fifth of what a similar mass of steel would weight while being much harder.

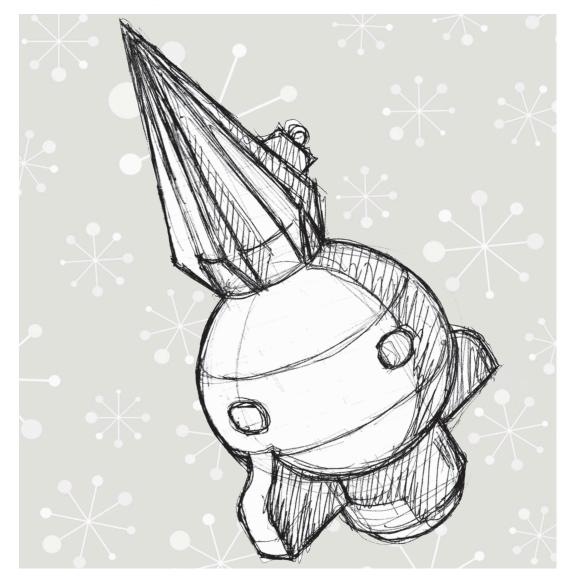
It was sent from space, presumably by the *Man from Planet X*'s ship, and was presumably used as a probe to gather data from our planet before landing on it.





The spacecraft is a 5 - 6 meters wide sphere with a conical rocket nose above it, around which extends 4 blocky fins.. The cone structure is able to emit so strange lights which are believed by Dr. Mears to be a means to estalish «a wireless directional beam to his planet» so that «when his planet is the closest to our planet, an invasion will be launched.» On both sides of the sphere extends a pair od short block wings, and under it a large tube like structure on which the ships lands, but which could be its main thurster. The ship is never seen in flight but is known to have landed somewhat silently on Earth and to have moved position without anybody noticing it.

It is made of a material that cannot be scratched by diamond but is much lighter. It has a set of portholes on his equator as well as a hatch. It has a suggestion beam emitter attached to one of its fins.



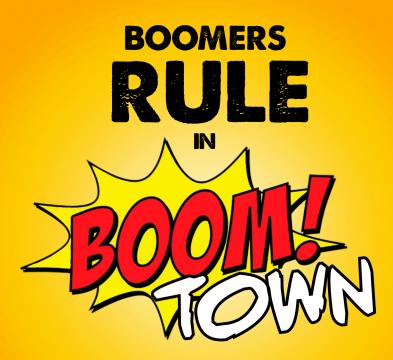
CREDITS

Director: Edgar G. Ulmer Screenwriter: Aubrey Wisberg & Jack Pollexfen Producer: Jack Pollexfen & Aubrey Wisberg Cinematography: John L. Russell Editing: Fred R. Feitshans Jr. Music: Charles Koff Distributor: United Artists Running time: 70 minutes Country: United States Language: English Budget \$51,000 (est.) Release date: March 9, 1951 (San Francisco) April 7 (NYC) April 27 (general)

Robert Clarke as John Lawrence Margaret Field as Enid Elliot Raymond Bond as Professor Elliot William Schallert as Dr. Mears Roy Engel as Tommy the Constable Charles Davis as Georgie, man at dock Gilbert Fallman as Dr. Robert Blane David Ormont as Inspector Porter

ADDITIONAL NOTES

The Man from Planet X was the first «alien invasion» film. It has been noted that the film has a mood highly reminiscent of old Universal horror films like Dracula, and even expressionist films. The Man from Planet X share with the vampire the ability to hypnotise, although it is technologically imbued. According to Ulmer, the alien was meant as an inversion of Dracula, who appeared benign and friendly at first sight but was threatening in the end; and Mears, who was the alien's tormentor, was an inversion of Reinfield who was Dracula's slave.



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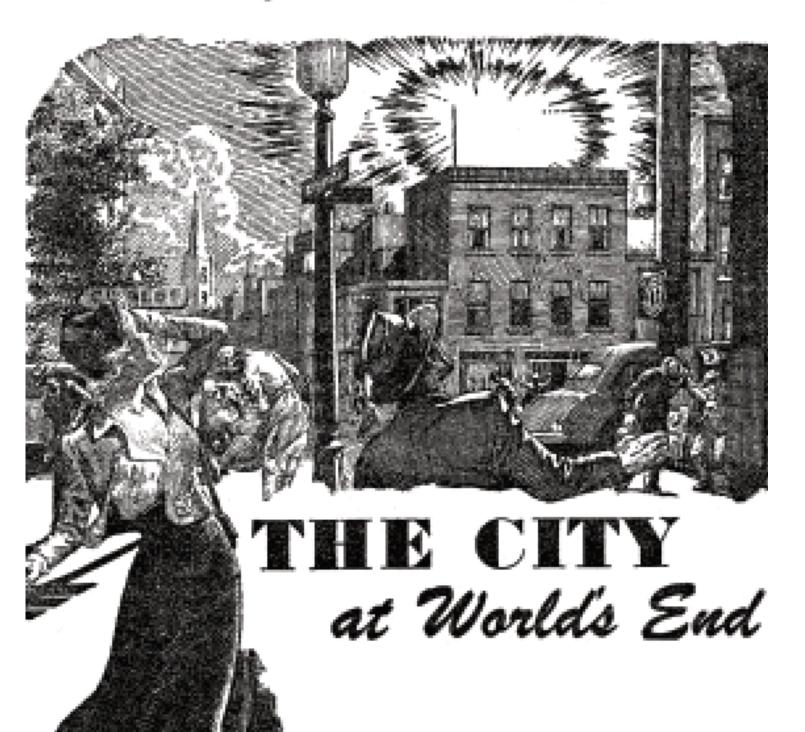


CITY AT WORLD'S END (PART ONE OF TWO) 1951 - Edmond Hamilton

A NOVEL BY EDMOND HAMILTON

At first the people of Middletown thought the superbomb a dud, but

actually it hurled their town forward a million years!



Chapter I- Cataclysm

enniston realized afterward that it was like death. You knew you were going to die someday, but you didn't believe it. He had known that there was danger of the long-dreaded atomic war beginning with a sneak punch, but he hadn't really believed it.

Not until that June morning when the missile came down on Middletown. And then there was no time for realization. You don't hear or see a thing that comes faster than sound. One moment, he was striding down Mill Street toward the plant, getting ready to speak to the policeman coming toward him. The next moment, the sky split open.

It split wide open, and above the whole town there was a burn and blaze of light so swift, so violent, that it seemed the air itself had burst into instantaneous flame. In that fraction of a second, as the sky flared and the ground heaved wildly under his feet, Kenniston knew that the surprise attack had come, and that the first of the long-feared super-atomic bombs had exploded overhead....

Shock, thought Kenniston, as his mouth crushed against the grimy sidewalk. The shock that keeps a dying man from feeling pain. He lay there, waiting for the ultimate destruction, and the first eye-blinding flare across the heavens faded and the shuddering world grew still. It was over, as quickly as that.

He ought to be dead. He thought it very probable that he was dying right now, which would explain the fading light and the ominous quiet. But in spite of that he raised his head, and then scrambled shakily to his feet,



gasping over his own wild heartbeats, fighting an animal urge to run for the mere sake of running. He looked down Mill Street. He expected to see pulverized buildings, smoking craters, fire and steam and devastation. But what he saw was more stunning than that, and in a strange way, more awful.

He saw Middletown lying unchanged and peaceful in the sunlight.

The policeman he had been going to speak to was still there ahead of him. He was getting up slowly from his hands and knees, where the quake had thrown him. His mouth hung open and his cap had fallen off. His eyes were very wide and dazed and frightened. Beyond him was an old woman with a shawl over her head. She, too, had been there before. She was clinging now to a wall, the sack of groceries she had carried split open around her feet, spilling onions and cans of soup across the walk. Cars and street-cars were still moving along the street in the distance, beginning erratically to jerk to a halt. Apart from these small things, nothing was different, nothing at all.

The policeman came up to Kenniston. He looked like a young, efficient officer. Or he would have, if his face had not gone so slack and his eyes so stunned. He asked hoarsely:

"What happened?"

Kenniston answered, and the words sounded queer and improbable as he said them. "We've been hit by a bomb— a super-atomic."

The policeman stared at him. "Are you crazy?"

"Yes," said Kenniston, "I think maybe I am. I think that's the only explanation."

His brain had begun to pound. The air felt suddenly cold and strange. The sunshine was duskier and redder and did not warm him now. The woman in the shawl was crying. Presently, still weeping, she got painfully down upon her thick old knees and Kenniston thought she was going to pray, but instead she began to gather up her onions, fumbling with them as a child does, trying to fit them into the broken paper bag.

"Look," said the policeman, "I've read stuff about those super-atomic bombs, in the papers. It said they were thousands of times more powerful than the atom-bombs they used to have. If one of them hit any place there wouldn't be anything left of it." His voice was getting stronger. He was convincing himself. "So no super-atomic bomb could have hit us. It couldn't have been that."

"You saw that terrific flash in the sky, didn't you?" said Kenniston.

"Sure I did, but—" And then the policeman's face cleared. "Say, it was a fizzle. That's what it was. This super-atomic bomb they've been scaring the world with— it turned out to be just a fizzle." He laughed noisily, in vast relief. "Isn't that rich? They tell for years what terrible things it's going to do, and then it just makes a big fizz and flash like a bad Fourth of July firecracker!"

It could be true, Kenniston thought with a wild surge of hope. It could be true.



And then he looked up and saw the Sun.

"It was maybe a bluff, all the time," the policeman's voice rattled on. "They maybe didn't really have any super-atomic bomb at all."

Kenniston, without lowering his gaze, spoke in a dry whisper. "They had them, all right. And they used one on us. And I think we're dead and don't know it yet We don't know yet that we're only ghosts and not living on Earth any more."

"Not on Earth?" said the policeman angrily. "Now, listen-"

And then his voice trailed away to silence as he followed Kenniston's staring gaze and looked up at the Sun.

It wasn't the Sun. Not the Sun they and all the generations of men had known as a golden, dazzling orb. They could look right at this Sun, without blinking. They could stare at it steadily, for it was no more than a very big, dull-glowing red ball with tiny flames writhing around its edges. It was higher in the sky now than it had been before. And the air was cold. "It's in the wrong place," said the policeman. "And it looks different." He groped in half-forgotten high-school science for an explanation. "Refraction. Dust that that fizzle-bomb stirred up—"

Kenniston didn't tell him. What was the use? What was the good of telling him what he, as a scientist, knew— that no conceivable refraction could make the Sun look like that. But he said, "Maybe you're right."



"Sure I'm right," said the policeman, loudly. He didn't look up at the sky and Sun, any more. He seemed to avoid looking at them.

Kenniston started on down Mill Street. He had been on his way to the Lab, when this happened. He kept on going now. He wanted to hear what Hubble and the others would say about this.

He laughed a little. "I am a ghost, going to talk with other ghosts about our sudden deaths." Then he told himself fiercely, "Stop that! You're a scientist. What good is your science if it cracks up in the face of an unexplained phenomenon?"

That, certainly, was an understatement. A super-atomic bomb went off over a quiet little Midwestern town of fifty thousand people, and it didn't change a thing except to put a new Sun into the sky. And you called that an unexplained phenomenon.

Kenniston walked on down the street. He walked fast, for the air was unseasonably cold. He didn't stop to talk to the bewildered-looking people he met. They were mostly men who had been on their way to work in Middletown's mills when it had happened. They stood now, discussing the sudden flash and shock. The word Kenniston heard most often was "earthquake." They didn't look too upset, these men. They looked excited and a little bit glad that something had happened to interrupt their drab daily routine. Some of them were staring up at that strange, dull-red Sun, but they seemed more perplexed than disturbed.

The air was cold and musty. And the red, dusky sunlight was queer. But

that hadn't disturbed these men too much. It was, after all, not much stranger than the chill and the lurid light that often foreshadow a Midwestern thunderstorm.

Kenniston turned in at the gate of the smoke-grimed brick structure that bore the sign, "Industrial Research Laboratories." The watchman at the gate nodded to him unperturbedly as he let him through.

Neither the watchman nor any of Middletown's fifty thousand people, except a few city officials, knew that this supposed industrial laboratory actually housed one of the key nerve centers of America's atomic defense setup.

Clever, thought Kenniston. It had been clever of those in charge of dispersal to tuck this key atomic laboratory into a prosaic little Midwestern mill town.

"But not clever enough," he thought.

No, not quite clever enough. The unknown enemy had learned the secret, and had struck the first stunning blow of his surprise attack at the hidden nerve center of Middletown.

A super-atomic, to smash that nerve center before war even started. Only, the super-atomic had fizzled. Or had it? The Sun was a different Sun. And the air was strange and cold.

Crisci met Kenniston by the entrance of the big brick building. Crisci was



the youngest of the staff, a tall, black-haired youngster— and because he was the youngest, he tried hard not to show emotion now.

"It looks like it's beginning," said Crisci, trying to smile. "Atomic Armageddon— the final fireworks." Then he quit trying to smile. "Why didn't it wipe us out, Kenniston? Why didn't it?"

Kenniston asked him, "Don't the Geigers show anything?"

"Nothing. Not a thing."

That, Kenniston thought numbly, fitted the crazy improbability of it all. He asked, "Where's Hubble?"

Crisci gestured vaguely. "Over there. He's had us trying to call Washington, but the wires are all dead and even the radio hasn't been able to get through yet."

Kenniston walked across the cluttered plant yard. Hubble, his chief, stood looking up at the dusky sky and at the red dull Sun you could stare at without blinking. He was only fifty but he looked older at the moment, his graying hair disordered and his thin face tightly drawn.

"There isn't any way yet to figure out where that missile came from," Kenniston said.

Then he realized that Hubble's thoughts weren't on that, for the other only nodded abstractedly.



"Look at those stars, Kenniston."

"Stars? Stars, in the daytime-?"

And then, looking up, Kenniston realized that you could see the stars now. You could see them as faint, glimmering points all across the strangely dusky sky, even near the dull Sun.

"They're wrong," said Hubble. "They're very wrong."

Kenniston asked, "What happened? Did their super-atomic really fizzle?"

Hubble lowered his gaze and blinked at him. "No," he said softly. "It didn't fizzle. It went off."

"But Hubble, if that super-atomic went off, why-"

Hubble ignored the question. He went on into his own office in the Lab, and began to pull down reference volumes. To Kenniston's surprise, he opened them to pages of astronomical diagrams. Then Hubble took a pencil and began to scrawl quick calculations on a pad.

Kenniston grabbed him by the shoulder. "For Christ's sake, Hubble, this is no time for scientific theorizing! The town hasn't been hit, but something big has happened, and—"

"Get the hell away from me," said Hubble, without turning.

The sheer shock of hearing Hubble swear silenced Kenniston. Hubble went on with his figures, referring often to the books. The office was as silent as though nothing had happened at all. Finally, Hubble turned. His hand shook a little as he pointed to the figures on the pad.

"See those, Ken? They're proof — proof of something that cannot be. What does a scientist do when he faces that kind of a situation?"

He could see the sick shock and fear in Hubble's gray face, and it fed his own fear. But before he could speak, Crisci came in.

He said, "We haven't been able to contact Washington yet. And we can't understand— our calls go completely unanswered, and not one station outside Middletown seems to be broadcasting."

Hubble stared at his pad. "It all fits in. Yes, it all fits in."

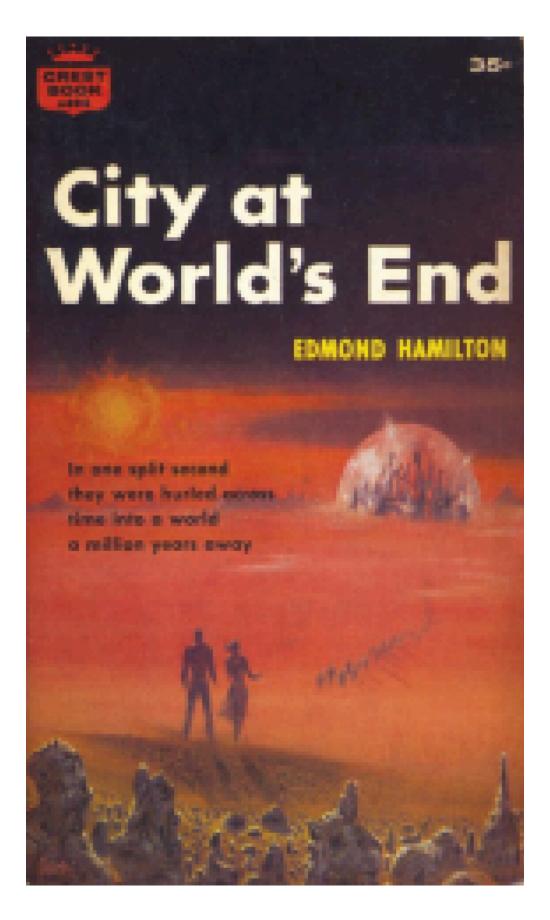
"What do you make of it, Doctor?" asked Crisci anxiously. "That bomb went off over Middletown, even though it didn't hurt us. Yet it's as though all the world outside Middletown has been silenced!"

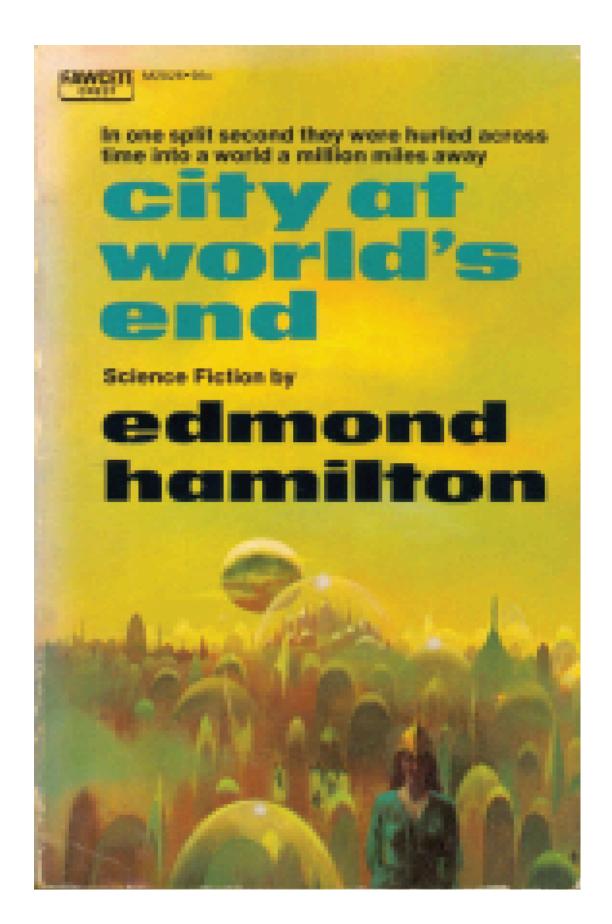
Kenniston, cold from what he had seen in Hubble's face, waited for the senior scientist to tell them what he knew or thought. But the phone rang suddenly with strident loudness.

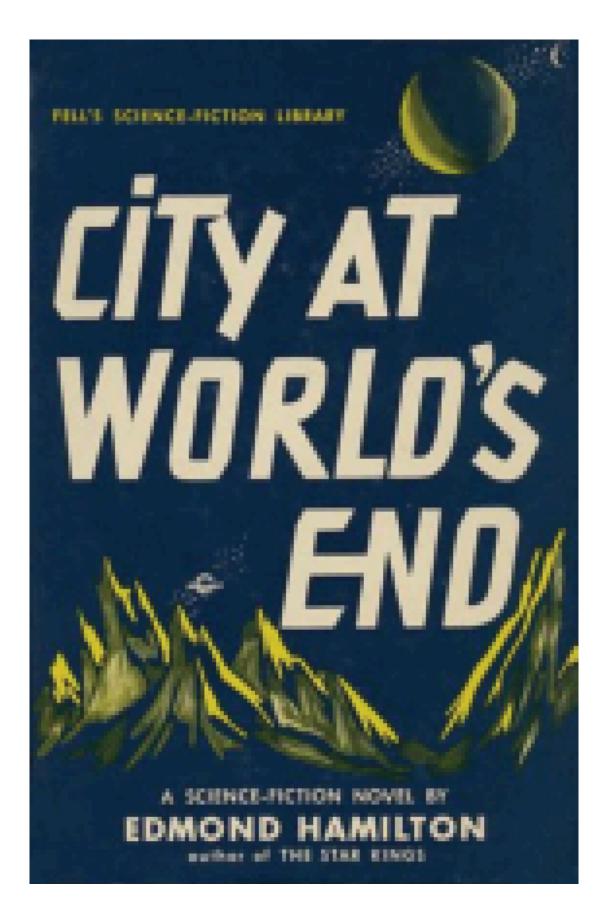
It was the intercom from the watchman at the gate. Hubble picked it up. After a minute he said, "Yes, let him come in." He hung up. "It's Johnson.

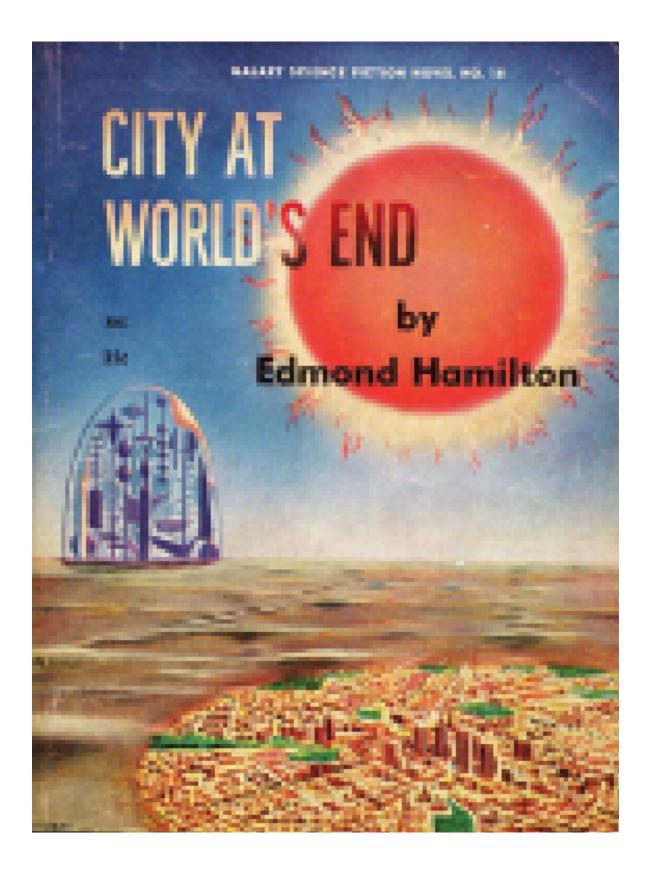


Some Original Covers From the Book









You know, the electrician who did some installations for us. He lives out on the edge of town. He told the watchman that was why he had to see me because he lives on the edge of town."

Johnson, when he came, was a man in the grip of a fear greater than Kenniston had even begun to imagine, and he was almost beyond talking. "I thought you might know," he said to Hubble. "It seems like somebody's got to tell me what's happened, or I'll lose my mind. I've got a cornfield, Mr. Hubble. It's a long field, and then there's a fence row, and my neighbor's barn beyond it."

He began to tremble, and Hubble said, "What about your cornfield?"

"Part of it's gone," said Johnson, "and the fence row, and the barn... Mr. Hubble, they're all gone, everything..."

"Blast effect," said Hubble gently. "A bomb hit here a little while ago, you see."

"No," said Johnson. "I was in London last war, I know what blast can do. This isn't destruction. It's..." He sought for a word, and could not find it. "I thought you might know what it is."

Kenniston's chill premonition, the shapeless growing terror in him, became too evil to be borne. He said, "I'm going out and take a look."

Hubble glanced at him and then nodded, and rose to his feet, slowly, as though he did not want to go but was forcing himself. He said, "We can



see everything from the water tower, I think— that's the highest point in town. You keep trying to get through, Crisci."

Kenniston walked with him out of the Lab grounds, and across Mill Street and the cluttered railroad tracks to the huge, stilt-legged water tower of Middletown. The air had grown colder. The red sunshine had no warmth in it, and when Kenniston took hold of the iron rungs of the ladder to begin the climb, they were like bars of ice. He followed Hubble upward, keeping his eyes fixed on the retreating soles of Hubble's shoes. It was a long climb. They had to stop to rest once. The wind blew harder the higher they got, and it had a dry musty taint in it that made Kenniston think of the air that blows from deep rock tombs with dust of ages in them.

They came out at last on the railed platform around the big, high tank. Kenniston looked down on the town. He saw knots of people gathered on the corners, and the tops of cars, a few of them moving slowly but most of them stopped and jamming the streets. There was a curious sort of silence.

Hubble did not bother to look at the town, except for a first brief glance that took it all in, the circumference of Middletown with all its buildings standing just as they always had, with the iron Civil War soldier still stiffly mounting guard on the Square, and the smoke still rising steadily from the stacks of the mills. Then he looked outward. He did not speak, and presently Kenniston's eyes were drawn also to look beyond the town.

He looked for a long time before it began to penetrate. His retinas relayed the image again and again, but the brain recoiled from its task of making sense out of that image, that unbelievable, impossible... No. It must be dust, or refraction, or an illusion created by the dusky red sunlight, anything but truth. There could not, by any laws known to Creation, be a truth like this one!

The whole countryside around Middletown was gone. The fields, the green, flat fields of the Middle West, and the river, and the streams, and the old scattered farms— they were all gone, and it was a completely different and utterly alien landscape that now stretched outside the town.

Rolling, ocher-yellow plains, sad and empty, lifted toward a ridge of broken hills that had never been there before. The wind blew over that barren, lifeless world, stirring the ocher weeds, lifting heavy little clouds of dust and dropping them back again to earth. The Sun peered down like a great dull eye with lashes of writhing fire, and the glimmering stars swung solemn in the sky, and all of them, the Earth, the stars, the Sun, had a look of death about them, a stillness and a waiting, a remoteness that had nothing to do with men or with anything that lived.

Kenniston gripped the rail tightly, feeling all reality crumbling away beneath him, searching frantically for an explanation, for any rational explanation, of that impossible scene.

"The bomb— did it somehow blast the countryside out there, instead of Middletown?"

"Would it take away a river, and bring instead those hills and that yellow scrub?" said Hubble. "Would any bomb-blast do that?"

"But for God's sake, then what—"

"It hit us, Kenniston. It went off right over Middletown, and it did something..." He faltered, and then said, "Nobody really knew what a super-atomic bomb would do. There were logical theories and assumptions about it, but nobody really knew anything except that the most violent concentrated force in history would be suddenly released. Well, it was released, over Middletown. And it was violent. So violent that..."

He stopped, again, as though he could not quite muster up the courage to voice the certainty that was in him. He gestured at the dusky sky.

"That's our Sun, our own Sun— but it's old now, very old. And that Earth we see out there is old too, barren and eroded and dying. And the stars.... You looked at the stars, Ken, but you didn't see them. They're different, the constellations distorted by the motions of the stars, as only millions of years could distort them."

Kenniston whispered, "Millions of years? Then you think that the bomb..." He stopped, and he knew now how Hubble had felt. How did you say a thing that had never been said before?

"Yes, the bomb," said Hubble. "A force, a violence, greater than any ever known before, too great to be confined by the ordinary boundaries of matter, too great to waste its strength on petty physical destruction. Instead of shattering buildings, it shattered space and time."

Kenniston's denial was a hoarse cry. "Hubble, no! That's madness! Time is absolute—"

Hubble said, "You know it isn't. You know from Einstein's work that there's no such thing as time by itself, that instead there is a space-time continuum. And that continuum is curved, and a great enough force could hurl matter from one part of the curve to another."

He raised a shaking hand toward the deathly, alien landscape outside the town.

"And the released force of the first super-atomic bomb did it. It blew this town into another part of the space-time curve, into another age millions of years in the future, into this dying, future Earth!"

Chapter 2— the incredible

he rest of the staff was waiting for them when they came back into the Lab grounds. A dozen men, ranging in age from Crisci to old Beitz, standing shivering in the chill red sunlight in front of the building. Johnson was with them, waiting for his answer. Hubble looked at him, and at the others. He said, "I think we'd better go inside."

They did not ask the questions that were clamoring inside them. Silently, with the jerky awkward movements of men strung so taut that their reflex centers no longer function smoothly, they followed Hubble through the doorway. Kenniston went with them, but not all the way. He turned aside, toward his own office, and said, "I've got to find out if Carol is all right."

Hubble said sharply. "Don't tell her, Ken. Not yet."

"No," said Kenniston. "No, I won't."

He went into the small room and closed the door. The telephone was on his desk, and he reached for it, and then he drew his hand away. The fear had altered now into a kind of numbness, as though it were too large to be contained within a human body and had ebbed away, carrying with it all the substances of strength and will as water carries sand. He looked at the black, familiar instrument and thought how improbable it was that there should still be telephones, and fat books beside them with quantities of names and numbers belonging to people who had lived once in villages and nearby towns, but who were not there any more, not since— how long? An hour or so, if you figured it one way. If you figured it another...

He sat down in the chair behind the desk. He had done a lot of hard work sitting in that chair, and now all that work had ceased to matter. Quite a lot of things had ceased to matter. Plans, and ideas, and where you were going to go on your honeymoon, and exactly where you wanted to live, and in what kind of a house. Florida and California and New York were words as meaningless as "yesterday" and "tomorrow." They were gone, the times and the places, and there wasn't anything left out of them but Carol herself, and maybe even Carol wasn't left, maybe she'd been out with her aunt for a little drive in the country, and if she wasn't in Middletown when it happened she's gone, gone...

He took the phone in both hands and said a number over and over into it. The operator was quite patient with him. Everybody in Middletown seemed to be calling someone else, and over the roar and click of the exchange and the ghostly confusion of voices he heard the pounding of his own blood in his ears and he thought that he did not have any right to want Carol to be there, and he ought to be praying that she had gone somewhere, because why would he want anybody he loved to have to face what was ahead of them. And what was ahead of them? How could you guess which one, out of all the shadowy formless horrors that might be...

"Ken?" said a voice in his ear. "Ken, is that you? Hello!"

"Carol," he said. The room turned misty around him and there was nothing anywhere but that voice on the line.

"I've been trying and trying to get you, Ken! What on earth happened? The whole town is excited— I saw a terrible flash of lightning, but there wasn't any storm, and then that quake... Are you all right?"

"Sure, I'm fine..." She wasn't really frightened yet. Anxious, upset, but not frightened. A flash of lightning, and a quake. Alarming yes, but not terrifying, not the end of the world... He caught himself up, hard. He said, "I don't know yet what it was."

"Can you find out? Somebody must know." She did not guess, of course, that Kenniston was an atomic physicist. He had not been allowed to tell that to anyone, not even his fianc e. To her, he was merely a research technician in an industrial laboratory, vaguely involved with test tubes and things. She had never questioned him very closely about his work, apparently content to leave all that up to him, and he had been grateful because it had spared him the necessity of lying to her. Now he was even more grateful, because she would not dream that he might have special information. That way, he could spare her a little longer, get himself in hand before he told her. "I'll do my best," he told her. "But until we're sure, I wish you and your aunt would stay in the house, off the street. No, I don't think your bridge-luncheon will come off anyway. And you can't tell what people will do when they're frightened. Promise? Yes— yes, I'll be over as soon as I can."

He hung up, and as soon as that contact with Carol was broken, reality slipped away from him again. He looked around the office, and it became suddenly rather horrible, because it had no longer any meaning. He had an urgent wish to get out of it, yet when he rose he stood for some while with his hands on the edge of the desk, going over Hubble's words in his mind, remembering how the Sun had looked, and the stars, and the sad, alien Earth, knowing that it was all impossible but unable to deny it. The long hall of time, and a shattering force... He wanted desperately to run away, but there was no place to run to. Presently he went down the corridor to Hubble's office.

They were all there, the twelve men of the staff, and Johnson. Johnson had gone by himself into a corner. He had seen what lay out there beyond the town, and the others had not. He was trying to understand it, to understand the fact and the explanation of it he had just heard. It was not a pleasant thing, to watch him try. Kenniston glanced at the others. He had worked closely with these men. He had thought he knew them all so well, having seen them under stress, in the moments when their work succeeded and the others when it did not. Now he realized that they were all strangers, to him and to each other, alone and wary with their personal fears.

Old Beitz was saying, almost truculently, "Even if it were true, you can't

say exactly how long a time has passed. Not just from the stars."

Hubble said, "I'm not an astronomer, but anyone can figure it from the tables of known star-motions, and the change in the constellations. Not exactly, no. But as close as will ever matter."

"But if the continuum were actually shattered, if this town has actually jumped millions of years..." Beitz' voice trailed off. His mouth began to twitch and he seemed suddenly bewildered by what he was saying, and he, and all of them, stood looking at Hubble in a haunted silence.

Hubble shook his head. "You won't really believe, until you see for yourselves. I don't blame you. But in the meantime, you'll have to accept my statement as a working hypothesis."

Morrow cleared his throat and asked, "What about the people out there the town? Are you going to tell them?"

"They'll have to know at least part of it," Hubble said. "It'll get colder, very much colder, by night, and they'll have to be prepared for it. But there must not be any panic. The Mayor and the Chief of Police are on their way here now, and we'll work it out with them."

"Do they know yet, themselves?" asked Kenniston, and Hubble said, "No."

Johnson moved abruptly. He came up to Hubble and said, "I don't get all this scientific talk about space and time. What I want to know is— is my boy safe?"



Hubble stared at him. "Your boy?"

"He went out to Martinsen's farm early, to borrow a cultivator. It's two miles out the north road. What about him, Mr. Hubble— is he safe?"

That was the secret agony that had been riding him, the one he had not voiced. Hubble said gently. "I would say that you don't have to worry about him at all, Johnson."

Johnson nodded, but still looked worried. He said, "Thanks, Mr. Hubble. I'd better go back now. I left my wife in hysterics."

A minute or two after he left, Kenniston heard a siren scream outside. It swung into the Lab yard and stopped. "That," said Hubble, "would be the Mayor."

A small and infirm reed to lean upon, thought Kenniston, at a time like this. There was nothing particularly wrong about Mayor Garris. He was no more bumbling, inefficient, or venal than the average mayor of any average small city. He liked banquets and oratory, he worried about the right necktie, and he was said to be a good husband and father. But Kenniston could not, somehow, picture Bertram Garris shepherding his people safely across the end of the world. He thought so even less when Garris came in, his bones well padded with the plump pink flesh of good living, his face the perfect pattern of the successcience fictionul little man who is pleased with the world and his place in it. Just now he was considerably puzzled and upset, but also rather elated at the prospect of something important going on. Kimer, the Chief of Police, was another



























matter. He was a large angular man with a face that had seen many grimy things and had learned from them a hard kind of wisdom. Not a brilliant man, Kenniston thought, but one who could get things done. And he was worried, far more worried than the Mayor. Garris turned immediately to Hubble. It was obvious that he had a great respect for him and was proud to be on an equal footing with such an important person as one of the nation's top atomic scientists. "Is there any news yet, Doctor Hubble? We haven't been able to get a word from outside, and the wildest rumors are going around. I was afraid at first that you might have had an explosion here in the laboratory, but..."

Kimer interrupted him. "Talk is going around that an atomic bomb hit here, Doctor Hubble. Some of the people are getting scared. If enough of them get to believe it, we'll have a panic on our hands. I've got our officers on the streets soothing 'em down, but I'd like to have a straight story they'll believe."

"Atomic bomb!" said Mayor Garris. "Preposterous. We're all alive, and there's been no damage. Doctor Hubble will tell you that atomic bombs..."

For the second time he was cut short. Hubble broke in sharply. "We're not dealing with an ordinary bomb. And the rumors are true, as far as they go." He paused, and went on more slowly, making every word distinct, "A super-atomic was exploded an hour ago, for the first time in history, right here."

He let that sink in. It was a lingering and painful process, and while it was going on Kenniston looked away, up through the window at the dusky sky and the sullen red Sun, and felt the knot in his stomach tighten. We were



warned, he thought. We were all warned for years that we were playing with forces too big for us.

"It didn't destroy us," Hubble was saying. "We're lucky that way. But it did have certain— effects."

"I don't understand," said the Mayor piteously. "I simply don't— Certain effects? What?"

Hubble told him, with quiet bluntness.

The Mayor and the Chief of Police of Middletown, normal men of a normal city, adjusted to life in a normal world, listening to the incredible. Listening, trying to comprehend— trying, and failing, and rejecting it utterly.

"That's insane," said Garris angrily. "Middletown thrown into the future? Why, the very sound of it... What are you trying to do, Doctor Hubble?"

He said a great deal more than that. So did Kimer. But Hubble wore them down. Quietly, implacably, he pointed to the alien landscape around the town, the deepening cold, the red, aged Sun, the ceasing of all wire and radio communication from outside. He explained, sketchily, the nature of time and space, and how they might be shattered. His scientific points they could not understand. But those they took on faith, the faith which the people of the Twentieth Century had come to have in the interpreters of the complex sciences they themselves were unable to comprehend. The physical facts they understood well enough. Too well, once they were forced to it. It got home at last. Mayor Garris sank down into a chair, and his face was no longer pink, and the flesh sagged on it. His voice was no more than a whimper when finally he asked, "What are we going to do?"

Hubble had an answer ready, to a part of that question, at least. "We can't afford a panic. The people of Middletown will have to learn the truth slowly. That means that none of them must go outside the town yet— or they'd learn at once. I'd suggest you announce the area outside town is possibly radioactive contaminated, and forbid anyone to leave."

Police Chief Kimer grasped with pathetic eagerness at the necessity of coping with a problem he could comprehend. "I can put men and barricades at all the street-ends, to see to that."

"And our local National Guard company is assembling now at the Armory," put in Mayor Garris. His voice was shaky, his eyes still stunned.

Hubble asked, "What about the city's utilities?"

"Everything seems to be working— power, gas and water," the Mayor answered.

They would, Kenniston thought. Middletown's coal-steam electric generation plant, and its big watertower, and its artificial gas plant, had all come through time with them.

"They, and all food and fuel, must be rationed," Hubble was saying.



"Proclaim it as an emergency measure."

Mayor Garris seemed to feel a little better at being told what to do. "Yes. We'll do that at once." Then he asked, timidly, "Isn't there any way of getting in touch with the rest of the country?"

"The rest of the country," Hubble reminded him, "is some millions of years in the dead past. You'll have to keep remembering that."

"Yes— of course. I keep forgetting," said the Mayor. He shivered, and then took refuge in the task set him. "We'll get busy at once."

When the car had borne the two away, Hubble looked haggardly at his silent colleagues.

"They'll talk, of course. But if the news spreads slowly, it won't be so bad. It'll give us a chance to find out a few things first."

Crisci began to laugh, a little shrilly. "If it's true, this is a side-splitting joke! This whole town flung into the end of the world and not even knowing it yet! All these fifty thousand people, not guessing yet that their Cousin Agnes in Indianapolis has been dead and dust for millions of years!"

"And they mustn't guess," Hubble said. "Not yet. Not until we know what we face in this future Earth."

He went on, thinking aloud. "We need to see what's out there, outside the



town, before we can plan anything. Kenniston, will you get a jeep and bring it back here? Bring spare gasoline, and some warm clothing, too. We'll need it out there. And Ken— bring two guns."

Chapter 3– Dying Planet

enniston walked back down Mill Street, toward the garage where he had left his car a billion years ago when such things were still important. He knew they kept a jeep there for road service, and he knew also that they would not have any need for it now because there were no longer any roads. He wished he had a topcoat. At the rate the air was chilling off it would be below zero by nightfall.

Quite literally, he began to feel as though he were walking in a nightmare. Above him was an alien sky, and the red light of it lay strangely on the familiar walls of brick. But the walls themselves were not altered. That, he decided, was the really shocking thing— the drab everyday appearance of the town. When time and space gape open for the first time in history, and you go through into the end of the world, you expect everything to be different. Middletown did not look different, except for that eerie light.

There were a lot of people on Mill Street, but then, there always were a good many. It was the street of dingy factories and small plants that connected Middletown with the shabby South Side, and there were always buses, cars, pedestrians on it Perhaps the bumbling traffic was a bit more disorganized than usual, and the groups of pedestrians tended to clot together and chatter more excitedly, but that was all.

Kenniston knew a number of these people, by now, but he did not stop to

talk to them. He was somehow unwilling to meet their eyes. He felt guilty, to know the truth where they did not. What if he should tell them, what would they do? It was a terrible temptation, to rid himself of his secret. His tongue ached to cry it out.

There were people like old Mike Witter, the fat red-faced watchman who sat all day in his little shack at the railroad crossing, with his small ratterrier curled up by his feet. The terrier was crouching now, shivering, her eyes bright and moist with fear, as though she guessed what the humans did not, but old Mike was as placid as ever.

"Cold, for June!" he hailed Kenniston. "Coldest I ever saw. I'm going to build a fire. Never saw such a freak storm!"

There was the knot of tube-mill workers at the next corner, in front of Joe's Lunch. They were arguing, and two or three of them that Kenniston knew turned toward him.

"Hey, there's Mr. Kenniston, one of the guys at the Industrial Lab. Maybe he'd know!" Their puzzled faces, as they asked, "Has a war started? Have you guys heard anything?"

Before he could answer, one asserted loudly, "Sure it's a war. Didn't someone say an atomic bomb went off overhead and missed fire? Didn't you see the flash?"

"Hell, that was only a big lightning flash."

"Are you nuts? It nearly blinded me."

Kenniston evaded them. "Sorry, boys— I don't know much more than you. There'll be some announcement soon."

As he went on, a bewildered voice enquired, "But if a war's started, who's the enemy?"

The enemy, Kenniston thought bitterly, is a country that perished and was dust— how many millions of years ago?

There were loafers on the Mill Street bridge, staring down at the muddy bed of the river and trying to explain the sudden vanishing of its water. In the beer-parlors that cheered the grimy street, there were more men than was normal for this hour. Kenniston could hear them as he passed, their voices high, excited, a little quarrelsome, but with no edge of terror.

A woman called across the street from an upstairs flat window, to the other housewife who was sweeping the opposite front porch. "I'm missing every one of my radio stories! The radio won't get anything but the Middletown station today!"

Kenniston was glad when he got to Bud's Garage. Bud Martin, a tall thin young man with a smudge of grease on his lip, was reassembling a carburetor with energetic efficiency and criticizing his harried young helper at the same time.

"Haven't got to your car yet, Mr. Kenniston," he protested. "I said around

five, remember?"

Kenniston shook his head and told Martin what he wanted. Martin shrugged. "Sure, you can hire the jeep. I'm too busy to answer road calls today, anyway." He did not seem particularly interested in what Kenniston intended to do with the jeep. The carburetor resisted and he swore at it.

A man in a floury baker's apron stuck his head into the garage. "Hey, Bud, hear the news? The mills just shut down— all of them."

"Ah, nuts," said Martin. "I been hearing news all morning. Guys running in and out with the damnedest stories. I'm too busy to listen to 'em."

Kenniston thought that probably that was the answer to the relative calm in Middletown. The men, particularly, had been too busy. The strong habit patterns of work, a job at hand to be done, had held them steady so far.

He sighed. "Bud," he said, "I'm afraid this story is true."

Martin looked at him sharply and then groaned. "Oh, Lord, another recession! This'll ruin business— and me with the garage only half paid for!"

What was the use of telling him, Kenniston thought, that the mills had been hastily shut down to conserve precious fuel, and that they would never open again.



He filled spare gasoline cans, stacked them in the back of the jeep, and drove northward.

Topcoats were appearing on Main Street now. There were knots of people on street corners, and people waiting for buses were looking up curiously at the red Sun and dusky sky. But the stores were open, housewives carried bulging shopping-bags, kids went by on bicycles. It wasn't too changed, yet. Not yet.

Nor was quiet Walters Avenue, where he had his rooms, though the rows of maples were an odd color in the reddish light. Kenniston was glad his landlady was out, for he didn't think he could face many more puzzled questions right now.

He loaded his hunting kit— a .30-30 rifle and a 16-gauge repeating shotgun with boxes of shells— into the jeep. He put on a mackinaw, brought a leather coat for Hubble, and remembered gloves. Then, before re-entering the jeep, he ran down the street half a block to Carol Lane's house.

Her aunt met him at the door. Mrs. Adams was stout, pink and worried.

"John, I'm so glad you came! Maybe you can tell me what to do. Should I cover my flowers?" She babbled on anxiously. "It seems so silly, on a June day. But it's so much colder. And the petunias and bleeding-heart are so easily frost-bitten. And the roses—"

"I'd cover them, Mrs. Adams," he told her. "The prediction is that it will be even colder."



She threw up her hands. "The weather, these days! It never used to be like this." And she hurried away to secure covering for the flowers, the flowers that had but hours to live. It hit Kenniston with another of those sickening little shocks of realization. No more roses on Earth, after today. No more roses, ever again.

"Ken— did you find out what happened?" It was Carol's voice behind him, and he knew, even before he turned to face her, that he could not evade with her as he had with the others. She didn't know about science, and such things as time warps and shattered continuums had never entered her head. But she knew him, and she gave him no chance to temporize.

"Are they true, the stories about an atom bomb going off over Middletown?"

She had had time, since he called her, to become really alarmed. She had dark hair and dark eyes. She was slim in a sturdy fashion, and her ankles were nice, and her mouth was firm and sweet. She liked Tennyson and children and small dogs, and her ways were the ways of pleasant houses and fragrant kitchens, of quiet talk and laughter. It seemed a dreadful thing to Kenniston that she should be standing in a dying garden asking questions about atomic bombs.

"Yes," he said. "They're true." He watched the color drain out of her face, and he went on hastily, "Nobody was killed. There are no radiation effects in the city, nothing at all to be afraid of."

"There is something. I can see it in your face."

"Well, there are things we're not sure of yet. Hubble and I are going to investigate them now." He caught her hands. "I haven't time to talk, but..."

"Ken," she said. "Why you? What would you know about such terrible things?"

He saw it coming, now, the necessity he had always a little dreaded and had hoped might be forever postponed, the time when Carol had to learn about his work. With what eyes would she look on him when she knew? He was not sure, not sure at all. He was glad he could evade a little longer.

He smiled. "I'll tell you all about it when I get back. Stay in the house, Carol, promise me. Then I won't worry."

"All right," she said slowly. And then, sharply, "Ken..."

"What?"

"Nothing. Be careful."

He kissed her, and ran back toward the jeep. Thank God she wasn't the hysterical type. That would have been the last straw, right now.

He climbed in and drove to the Lab, wondering all the way what this was going to do to Carol and himself, whether they would both be alive tomorrow or the next day, and if so, what kind of a life it would be. Grim, cold thoughts, and bitter with regret. He had had it all so nicely



planned, before this nightmare happened. The loneliness would all be over, and the rootless drifting from place to place. He would have a home again, which he had not had since his parents died, and as much peace as a man was allowed in the modern world. He would have the normal things a man needed to keep him steady and give meaning to his years. And now...

Hubble was waiting for him outside the Lab, holding a Geiger counter and a clutter of other instruments. He placed them carefully in the jeep, then put on the leather coat and climbed into the seat beside Kenniston.

"All right, Ken— let's go out the south end of town. From the hills we glimpsed that way, we can see more of the lay of the land."

They found a barricade, and police on guard, at the southern edge of town. There they were delayed until the Mayor phoned through a hasty authorization for Hubble and Kenniston to go out "for inspection of the contaminated region."

The jeep rolled down a concrete road between green little suburban farms, for less than a mile. Then the road and the green farmland suddenly ended.

From this sharp demarcation, rolling ocher plains ran away endlessly to east and west. Not a tree, not a speck of green broke the monotony. Only the ocher-yellow scrub, and the dust, and the wind.

Hubble, studying his instruments, said, "Nothing. Not a thing. Keep going."



Ahead of them the low hills rose, gaunt and naked, and above was the vast bowl of the sky, a cold darkness clamped down upon the horizons. Dim Sun, dim stars, and under them no sound but the cheerless whimper of the wind.

Its motor rattling and roaring, its body lurching over the unevenness of the ocher plain, the jeep bore them out into the silence of the dead Earth.

Chapter 4- Dead City

enniston concentrated on the wheel, gripping it until his hands ached. He stared fixedly at the ground ahead, noting every rock, guiding the jeep carefully across shallow gullies, driving as though there were nothing in the universe but the mechanical act. He envied the jeep its ability to chug unemotionally over the end of the world. It struck him as so amusing that he laughed a little.

Hubble's fingers clamped his shoulder, hard enough to hurt even through the heavy coat. "Don't, Ken."

Kenniston turned his head. He saw that Hubble's face was drawn and gray, and that his eyes were almost pleading.

"I'm sorry," he said.

Hubble nodded. "I know. I'm having a hard enough time hanging on myself."



They went on across the empty plain, toward the low skeletal hills that were like bony knees thrust up from the ocher dust. Soon the jeep was climbing an easy slope, its motor clattering and roaring. Somehow, the familiar motor sound only served to emphasize the fact that around them lay the silence and red dusk of world's end. Kenniston wished that Hubble would say something, anything. But the older man did not, and Kenniston's own tongue was frozen. He was lost in a nightmare, and there was nothing to do but drive.

A sudden whistling scream came piping down the slope at them. Both men started violently. With hands slippery with cold sweat, Kenniston swung the jeep a little and saw a brown, furry shape about the size of a small horse bolting over the ridge, going with long, awkward bounds.

Kenniston slowed down until he had stopped shaking. Hubble said in a low whisper, "Then there is still animal life on Earth— of a sort. And look there—" He pointed to a deep little pit in the dusty ground with a ridge of freshly dark new soil around it. "The thing was digging there. Probably for water. The surface is arid, so it must dig to drink."

They stopped the jeep, and examined the pit and the scrub around it. There were marks of teeth on the bark of the low shrubs.

"Rodential teeth," said Hubble. "Enormously larger than anything like them occurring in our time, but still recognizable." They looked at each other, standing in the chill red light. Then Hubble turned back to the jeep. "We'll go on."



They went on, up the ridge. They saw two more of the pits made by the diggers, but these were old and crumbling. The blind red eye of the Sun watched them coldly. Kenniston thought of a frightened, furry thing loping on and on over the ocher desolation that once long ago had been the home of men.

They came up onto the low ridge, and he stopped the jeep so they could look out across the red-lit plain beyond.

Hubble stared southwest, and then his hands began to tremble a little.

"Ken, do you see it?" Kenniston looked that way, and saw.

The stunning shock of relief and joy! The wild gladness at finding that you and your people are not alone on a lifeless Earth!

Out there on the barren plain stood a city. A city of white buildings, completely enclosed and roofed and bounded by the great shimmering bubble of a transparent dome.

They looked and looked, savoring the exquisite delight of relief. They could see no movement in that domed city at this distance, but just to see it was enough.

Then, slowly, Hubble said, "There are no roads. No roads across the plain."

"Perhaps they don't need roads. Perhaps they fly." Instinctively both men



craned their necks to examine the bleak heavens, but there was nothing there but the wind and the stars and the dim Sun with its Medusa crown of flames.

"There aren't any lights, either," said Hubble.

"It's daytime," said Kenniston. "They wouldn't need lights. They'd be used to this dusk. They've had it a long time."

A sudden nervousness possessed him. He could barely perform the accustomed motions of starting the jeep again, grating the gears horribly, letting in the clutch with a lurching jerk.

"Take it easy," said Hubble. "If they're there, there's no hurry. If they're not..." His voice was not quite steady. After a moment he finished, "There's no hurry then, either."

Words. Nothing but words. It seemed to Kenniston that he could not bear the waiting. The plain stretched endlessly before him. The jeep seemed to crawl. Rocks and pits and gullies moved themselves maliciously into its path. The city mocked, and came no nearer.

Then, all at once, the domed city was full before them. It loomed in the sky like a glassy mountain out of fairy tale, for from this angle its curved surface reflected the sunlight.

Here, at last, they struck a smooth, broad road. It went straight toward a high, arched portal in the glassy wall of the city. The portal was open.



"If they domed this city to keep it warm, why should the door be open?" Hubble said.

Kenniston had no answer for that. No answer, except the one that his mind refused to accept.

They drove through the portal, were beneath the city dome. And after the emptiness of the plain, the weight of this city and its mighty shield was a crushing thing.

And it was warmer here beneath the dome. Not really warm, but the air here lacked the freezing chill of the outside.

They went down a broad avenue, going slowly now, timidly, shaken by the beating of their own hearts. And the noise of the motor was very loud in the stillness, echoed and re-echoed from many facets of stone blasphemously loud, against the silence. Dust blew heavily along the pavement, hung dun-colored veils across the open places where boulevards met. It lay in ruffled drifts in the sheltered spots, in doorways and arches and the corners of window ledges.

The buildings were tall and massive, infinitely more beautiful and simple in line than anything Kenniston had ever imagined. A city of grace and symmetry and dignity, made lovely with the soft tints and textures of plastics, the clean strength of metal and stone.

A million windows looked down upon the jeep and the two men from

another time. A million eyes dimmed with cataracts of dust, empty, blind. Some were open, some shut, but none saw.

The chill wind from the portal whispered in and out of sagging doorways, prowling up and down the streets, wandering restlessly across the wide parks that were no longer green and bright with flowers, but only wastes of scrub and drifting dust. Nowhere was there anything but the little wind that stirred. Yet Kenniston drove on. It seemed too terrible a thing to accept, that this great domed city was only a shell, an abandoned corpse, and that Middletown was alone on the face of the dying Earth.

He drove on shouting, crying out, sounding the horn in a sort of frenzy, both of them straining their eyes into the shadowy streets. Surely, somewhere in this place that men had built, there must be a human face, a human voice! Surely, in all these countless empty rooms and halls, there was space enough for life! But there was no life.

Kenniston drove more and more slowly. He ceased to sound the horn and call out. Presently he ceased even to look. He allowed the jeep to roll to a halt in a great central plaza. He cut the motor, and the silence descended upon him and Hubble like an avalanche.

He bowed his head in his hands and sat that way for a long time. He heard Hubble's voice saying, "They're all dead and gone."

Kenniston raised his head. "Yes. Dead and gone, all of them, long ago." He looked around the beautiful buildings. "You know what that means, Hubble. It means that Earth won't support human life any more. For even in this domed city they couldn't live." "But why couldn't they?" Hubble said. He pointed to a wide space of low, flat, open tanks that covered acres of the city nearby. "Those were hydroponic tanks, I think. They could raise food in them."

"If they had water. Perhaps that's what ran out on them." Hubble shook his head. "Those ratlike digging animals we saw could find water. Men could find it, too. I'm going to see." He got out of the jeep and walked toward the dusty tanks nearby. Kenniston dully watched him.

But presently he too climbed out, and began looking into the buildings around the plaza. He could see little but lofty, shadowy rooms illuminated only by the sad light that filtered through dusty windows. In some of the rooms was heavy furniture of metal, massive yet graceful. In others, nothing but the quiet dust.

A great sadness and futility came upon Kenniston as he went slowly around the silent streets. What did it matter, after all, that a town lost out of its time was facing death? Here a race had died, and the face of the Earth was barren wilderness. Kenniston was roused from his numbness by Hubble's voice. "There's still water there, Ken— big reservoirs of it under those tanks. So that isn't what ended them. It was something else."

"What difference does it make now what it was?" Kenniston said heavily.

"It makes a difference," Hubble said. "I've been thinking— But there isn't time to talk now. The night and cold are coming."



With a start, Kenniston realized that the Sun was sinking in the west, and that the shadow of the mighty buildings lay black upon the streets of the city. He shivered a little, and led the way back to the jeep. Again, its clattering roar profaned the deathly silence as they drove back to and through the portal.

"We have to get back," Hubble was saying. "They don't know yet in Middletown what they're facing."

"If we tell them of this place," Kenniston said, "if they learn that there are no more people, that they're maybe all alone on Earth, they'll go mad with panic."

The Sun was very low, a splotch of crimson that bulked huge in the western sky as the jeep whined and lurched toward the ridge. The stars were brighter, the unfamiliar stars that had done with man. The cold became more piercing by the minute, as the dusk deepened.

A horror of the dying planet's gathering night gripped both men. They uttered exclamations of shaken relief when the jeep finally topped the ridge.

For there ahead, incongruous on this nighted elder Earth, gleamed the familiar street lights of Middletown. The bright axes of Main Street and Mill Street, the fainter gridiron of the residential sections, the red neon beer signs of South Street— all shining out on the icy night of a dead world.

"I forgot about anti-freeze in the jeep's radiator," Kenniston said,



inconsequentially.

It was that cold, now. The wind had the edge of a razor of ice, and even in their heavy coats they couldn't stop shivering.

Hubble nodded. "People have to be warned about things like that. They don't know yet how cold it will be tonight."

Kenniston said hopelessly, "But after tonight— when the fuel and food are gone, what then? Is there any use struggling?"

"Why, no, if you look at it that way, there's no use," Hubble said. "Stop the jeep, and we'll lie down beside it and freeze to death quickly and comfortably."

Kenniston drove in silence for a moment. Then he said, "You're right."

"It isn't completely hopeless," Hubble said. "There may be other domed cities on Earth that aren't dead. People, help, companionship. But we have to hang on, until we find them. That's what I've been thinking about how to hang on." He added, as they neared the town, "Drive to City Hall first."

The barricade at the end of Jefferson Street had a leaping bonfire beside it now. The police guards, and a little knot of uniformed National Guardsmen, had been staring out into the gathering darkness. They greeted the jeep excitedly, asking eager questions, their breath steaming on the frosty air. Hubble steadily refused answers. There would be



announcements soon.

But the terrier-like little police captain who cleared the way through the group for them had his own questions before they left him. "They're talking stuff around City Hall about the whole Earth being dead. What's there to this story about falling through time?"

Hubble evaded. "We're not sure of anything yet. It'll take time to find out."

The police captain asked shrewdly, "What did you find out there? Any sign of life?"

"Why, yes, there's life out there," Hubble said. "We didn't meet any people yet, but there's life."

Furred and furtive life timidly searching for its scant food, Kenniston thought. The last life, the poor last creatures who were the inheritors of Earth.

Swept by an icy wind, South Street was as empty-looking as on a February night. But the red beer signs beckoned clamorously, and the bars seemed crowded.

Bundled-up children were hanging about the pond in Mill Street Park. Kenniston realized the reason for their whooping excitement when he saw the thin ice that already sheeted the pond. The cold was already driving the crowd off Main Street. Yet puzzled-looking people still clotted at



corners, gesturing, arguing.

Hubble said suddenly, "They have to be told, Ken. Now. Unless they know the truth, we'll never get them to do the things that must be done."

"They won't believe," Kenniston said. "Or if they do, it'll likely start a panic."

"Perhaps. We'll have to risk that. I'll get the Mayor to make the announcement over the radio station."

When Kenniston started to follow Hubble out of the jeep at City Hall, the other stopped him.

"I won't need you right now, Ken. And I know you're worried about Carol. Go on and see she's all right."

Kenniston drove north through streets already almost deserted. The cold was deepening, and the green leaves of trees and shrubs hung strangely limp and lifeless. He stopped at his lodgings. His landlady's torrent of questions he answered with a reference to a forthcoming announcement that sent her hurrying to her radio. He went up to his rooms and dug out a bottle of Scotch and drank off half a tumbler straight. Then he went to Carol's house.

From its chimney, as from all the chimneys along the street, smoke was curling up. He found Carol and her aunt beside a fireplace blaze.



"It won't be enough," Kenniston told them. "We'll need the furnace going. And the storm windows up."

"In June?" wailed Mrs. Adams, shocked again by the crazy vagaries of weather.

Carol came and stood before him. "You know a lot you're not telling us, Ken. Maybe you think you're being kind, to spare us, but— I want to know."

"As soon as I get the house fixed up," said Kenniston heavily, "I'll tell you what I can. Turn the radio on, Mrs. Adams, and keep it going."

It seemed strange to him that the end of the world meant fussing with furnace-shakers and ashes in a cold basement, hauling out storm windows and swearing at catches that wouldn't catch. He worked outside in almost total darkness, his hands stiff with the frigid chill.

As though she could no longer endure the waiting, Carol came out as Kenniston finished with the windows. He heard her low, startled cry and turned, alert for any danger. But she was standing still, looking at the eastern sky. An enormous dull-copper shield was rising there. The Moon but a Moon many times magnified, swollen to monstrous size, its glaring craters and plains and mountain chains frighteningly clear to the unaided eye. Kenniston had a moment of vertigo, a feeling that that unnatural bulk was about to topple forward and crush them, and then Carol had him by the arms in such a painful grip that he forgot about the Moon.

"What is it, what's happening?" she cried, and for the first time her voice

had a shrill edge of hysteria.

Mrs. Adams called from the doorway to come quickly. "It's the Mayor. He's going to make an important announcement."

Kenniston followed them inside. Yes, an important announcement, he thought. The most important ever.

World's end should be announced by a voice of thunder speaking from the sky. By the trumpets of the archangels. Not by the scared, hesitating voice of Mayor Bertram Garris.

Even now, politician-like, Mayor Garris tried to shift responsibility a little. He told what he had to tell, but he prefixed it by, "Doctor Hubble and his associates are of the opinion that—" and, "It would appear from scientific evidence that—" But he told it. And the silence that followed in the living room of Mrs. Adams' comfortable house was, Kenniston knew, only a part of the stunned silence that whelmed all Middletown.

Later, he knew, would come the outburst. But now they could not speak, they could only look at him with terrified faces pleading for a reassurance that he could not give.

Chapter 5- In the Red Dawn



enniston was aroused next morning by the sharp summons of the telephone. He awoke with chill, stiff limbs on the sofa where he had dozed fitfully during the night. He had fired the coal furnace half a dozen times, but the house was cold and white frost was thick on the storm windows. He stood up, heavy with sleep, oppressed with a sense of evil things but still mercifully vague, and stumbled mechanically toward the phone. It was not until he heard Hubble's voice on the wire that his mind cleared and he remembered yesterday.

Hubble's message was brief. "Will you get over here, Ken? The Keystone coal yard. I'm afraid there's going to be trouble." Kenniston said, "Right away." He hung up and stood where he was for a moment, painfully adjusting himself to the realization of how different today was from all the other days of his life. His hands and feet were numb, and his breath steamed faintly in the room. Presently he stirred himself, going hastily to the cellar, where he dug into the dwindling dregs of last winter's coal.

Carol was there when he went back up. She wore her fur coat over her night things, and her eyes were heavy and shadowed, as though she had not slept much. "The phone woke me," she said. "Is it...?"

She did not finish. It was ridiculous to inquire whether the call had brought bad news. They were all existing in a horror dream in which everything was bad.

He only told her that Hubble wanted him for a while. Then, a little hesitantly, he put his arms around her. "You're all right now?" he asked.

"Yes. Ken. I'm all right." But her voice was remote and tired, and had no

life in it.

Kenniston did not refer to the night before, to the time after the Mayor's apocalpytic announcement. Of all the bad moments he had had that day, that one had been the worst. Mrs. Adams did the expected things, which he could cope with by means of brandy and ammonia capsules, but Carol did not. She sat quite still, looking at him in a way that he had never seen before. The Mayor had told the full truth about the Industrial Research Laboratory. It had been necessary, to explain why Hubbies' statements were authoritative. Kenniston wished that he had told Carol about it himself. It seemed an unimportant thing in the face of the world's end, and yet he felt that to her it was not unimportant at all. He could not talk it out with her then, with Mrs. Adams' hysterics dominating everything, and she had not come out to him later, and now, facing her again this morning, Kenniston felt unsure of himself and of her for the first time since he had met her.

"Stay inside and keep the furnace going," he said. "I'll be back as soon as I can." He kissed her, and she stood there in the circle of his arms, neither yielding nor resisting. He said, almost desperately, "Don't give up, Carol. We'll find an answer to it all, somehow."

She nodded and said, "Yes. Be careful," and turned away. Kenniston went out alone, into the bitter morning.

It was still half dark, for the sullen Sun had not quite risen, sprawling in the east like some bloated monster heavy with blood. He refilled the jeep's radiator, which he had drained the night before. It was very still, he noticed. The mill whistles, the delivery trucks, the peremptory voices of



locomotives quarrelling at the Junction— all were gone. Even the children were silent now, afraid of the red, cold dawn. The roses all were dead, and the frost had blackened the summer shrubs and trees. The streets seemed empty as Kenniston drove the jeep down Main Street. Middletown had taken on, overnight, the aspect of a tomb. Smoke arose from every chimney, in the houses where the people crouched indoors, peering sometimes with pale faces framed in frost-rimed glass as the jeep went clattering by in the silence. From every church he passed came sounds of hymns and praying. The bars, too, were noisy, having apparently defied law to remain open all night.

Kenniston realized that this town was dying as it stood. Fuel would run out fast, and without it life could not survive these bitter nights. A feeling of utter hopelessness swept over him. It seemed ironic that Middletown should have come safely through the most staggering cataclysm in history, only to perish miserably of cold.

Dimly, in the back of his mind, a thought began to form. It tempered his hopelessness a little, but before he could get it clear, he had made the turn into Vine Street, and the Keystone coal yard lay before him. And at that place in this still and deathly city, there was life and noise enough.

Policemen and National Guardsmen formed a cordon around the yard and its great black heaps of coal. They faced a crowd— an ugly crowd, still only muttering, but bound for trouble. Kenniston saw people he knew in that crowd, people who sat on their front porches in the warm summer nights and talked with neighbors and laughed. Mill hands, merchants, housewives— solid, decent folk, but turned wolfish now with the cold and the fear of dying. Hubble met him inside the yard. A worried police sergeant was with him, and Borchard, who owned the yard.

"They were starting to loot the coal piles," Hubble said. "Poor devils, it was summer and they didn't have much fuel. Some of them burned their furniture last night to keep alive."

Borchard said anxiously, "We don't want to have to kill anyone. And right now, they'll believe you scientists before anyone else."

Hubble nodded. "You talk to them, Ken. You've gotten to know them better than I have, and they'll trust you more."

Kenniston said, "The hell they will. And anyway, what'll I say to them? 'Go home and freeze to death quietly, like gentlefolk, and let's not have any nasty scenes.' They'll love that."

"Maybe they don't have to freeze," said Hubble. "Maybe there's an answer to that."

The half-formed thought in the back of Kenniston's mind leaped forward. He looked at Hubble, and he knew that the older man had had that same thought, but sooner and clearer. A small flicker of hope began to stir again in Kenniston.

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"The domed city," he said.
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Hubble nodded. "Yes. It retains heat to a considerable degree, at night. We saw that. That's why the dome was built— how long ago? No matter. It's our only half-warm refuge. We have to go there, Ken, all of us. And soon! We can't go through many more nights here!"

"But will they go? And if they do, what'll happen when they see that city and realize Earth is a dead world?"

Hubble made an impatient gesture. "We'll have to take care of that when it comes. The thing now is to give these people some hope. Tell them to wait in their homes, that soon they'll be safe. Tell them anything you like, but make them go!"

Kenniston scrambled up a black ridge of coal, to stand above the crowd. From outside the cordon they snarled at him when he began. But he shouted them down, calling out the names of the ones he knew, ordering them to listen— being masterful, while his heart pounded with the same dread that drove the men and women in the street.

"Don't talk to us about law when it's the end of the world!" yelled a hardfaced woman.

"It's the end of nothing unless you lose your heads," Kenniston hammered. "The Mayor is arranging now to give you what you want— an answer to how you're going to live and be safe. Your lives and the lives of your families depend on how you cooperate. Go home to your radios and wait for the orders."

"Will they give us coal?" shouted a burly millhand.

"Coal, food, everything you need. Nobody's going to cheat anyone. We're all in the same boat. We'll stay in, or get out, together. Now go home and keep your families together and wait."

He called suddenly to the men on guard, "You, too! Get out of here and report back to your headquarters! The orders coming up are more important than this coal!"

He climbed back down from the black heap, wondering whether his feeble attempt at psychology would work. Borchard started angry remonstrance about dismissal of the guards, but Hubble shut him up.

"It worked," he said. "Look, they're going." As the crowd dispersed, Chief of Police Kimer arrived. His unshaven face was gray from lack of sleep, his eyes red-rimmed. He did not seem to be much excited by the trouble at the coal yard.

"We've had a lot more than this on our hands, during the night," he said.

Kenniston learned then what had gone on in Middletown since the Mayor had finished speaking— the deaths from shock, the scattering of suicides, the outbreaks of looting in the downtown streets, quickly checked. A dozen people, mostly drunks, had died of cold.

"But the barricades at the edge of town were the worst," Kimer said tiredly. "You know, a good number of people from outside Middletown were trapped here by this thing. They, and some of our own people gone



panicky, tried to stampede out of town." He added, as he turned back to his car, "They tell me more than two thousand people were baptized last night."

"We'll go with you to City Hall," Hubble told him. "Yes, you too, Ken. I'll need your help with the Mayor."

It seemed impossible that the pudgy little Mayor could be a problem. He had been so docile, so pathetically eager to take advice and follow orders. But when, in City Hall, Hubble confronted him with the plan to evacuate Middletown, Mayor Garris' face took on a mulish look.

"It's crazy," he said. "Take up a whole city of fifty thousand people and transport them to another place we don't know anything about? It's insane!"

"There are enough cars, buses and trucks to transport the population and supplies. There's enough gasoline to run them."

"But this other city— what do we know about it? Nothing. There might be any kind of danger there. No. I was born in Middletown. I've lived here all my life. I've worked hard to get where I am. I just spent five thousand dollars to redecorate my house, and I'm not going to leave it."

He glared at them, and his plump body trembled. Hubble said gently, "We're all afraid, Mr. Garris. It's a hard thing to do. People have their roots, and they can't break them easily all at once. But we must go. We must seek shelter, or die."



The Mayor shook his head. "My wife and daughter— they've been hysterical all night, pleading with me to do something, to make things go as they always have. This has been an awful shock to them. I don't think they could stand any more."

"Slap their faces, Mr. Garris," Hubble said brutally. "This has been a shock to all of us. Now what are you going to do? Will you call in the City Council or won't you?"

"I can't, not on that proposal." Garris' face crinkled like that of a child about to cry. "Honestly, gentlemen, I can't."

Kenniston thought of Carol shivering in her fur coat, struggling with the last shovels of coal, and the thought made him grasp Garris savagely by the shirtfront.

"All right, don't," he snapped. "The people are waiting for an announcement from you, but I'll make one myself. I'll tell them that there's a way to save them, but that Mayor Garris won't hear of it. I'll tell them they must die of cold because their Mayor won't give up his big fine house with its cellarful of coal. Would you like me to tell them that, Mr. Garris?"

Kenniston thought he had never seen a man turn so white. "They'd tear me to pieces," whispered Garris. "No. No, don't." He looked piteously from one to the other, and then he said, "I'll call in the Council."



The men of the Council reacted, at first, very much as the Mayor had done. Kenniston did not entirely blame them. The difficulties of uprooting a population of fifty thousand and moving it bodily in a short space of time to a place it had never seen nor heard of were enough to daunt anybody. But Hubble's arguments were unanswerable. It was move or die, and they knew it, and in the end the decision was made. A crushed, frightened little man, Mayor Garris went to make his announcement.

On the way to the broadcasting station, Kenniston looked at Middletown. The big houses, standing lordly on the North Side. The little houses, in close-set rows, with their tiny gardens. It was going to be hard, very hard. The people who lived in those houses would not want to leave them.

In a low, tired voice, bereft now of pomposity and guile, the Mayor spoke to the people of Middletown.

"So we must leave Middletown, temporarily," he concluded. And he repeated the word. "Temporarily. The domed city out there will be a little cold too, but not so cold as unprotected Middletown. We can live there, until— until things clear up. Stay by your radios. You will be given instructions. Please cooperate, to save all our lives. Please—"

Chapter 6- Caravan into Tomorrow

enniston lost track of his own emotions very quickly in the rush of urgent tasks. City Hall became the nerve center of the evacuation. The police and National Guard officers were already there, and other men were called in— the wholesale grocers, the warehouse men, the heads of trucking and bus and van lines. McLain, the big rawboned manager of the largest trucking company, proved a tower of strength. He had been a transport officer in the last war, and knew something about moving men and supplies.

"You'll have a traffic madhouse, and won't get these people out for weeks," he said crisply. "It's got to be organized by wards. There have to be quarters in your domed city assigned for each ward, so they can go into their own streets when they get there."

Hubble nodded. "I can get a crew of twenty men ready to handle that."

"Good. I figure the move will take three days. A third of the population is about all we can handle safely at one time. Civilian populations are the devil and all! Now, there'll have to be a squad assigned to distribute fuel to the ones who have to wait here in Middletown, and to quarter them so as to conserve that fuel. Also..."

Hubble sighed. "You take a big load off my mind, McLain. Will you organize the march? Kenniston can lead the first contingent, when you're ready."

McLain nodded brusquely, sat down at someone else's desk, and began to fire orders. Hubble departed with his twenty picked men, well armed, to set up a base in the domed city.

The radio chattered incessantly now, urging, soothing, cajoling, issuing instructions. Police and Guardsmen were dispatched to each ward, with a responsible man heading each squad. They were ordered to take the streets house by house, to assure complete evacuation, and also to ascertain how many private cars could be counted on for transportation. The city buses could carry only a fraction of the evacuees.

McLain was the one who thought of the patients in the Middletown hospitals, and set men to collecting ambulances, hearses, whatever would carry the sick comfortably. The police patrol wagons and a few big army trucks from the Armory he assigned to move the prisoners in the jail who could not safely be released. Both they and the sick would be left until the last day, to ensure proper quarters for their reception.

Fleets of trucks were started to the warehouses, with hasty lists of the food and other emergency supplies that must go with them. "We can run a truck line back to Middletown for more supplies later," McLain told Kenniston. "But this stuff we'll need right away."

The First and Second Wards were to go first, and that meant that Carol and her aunt would be in the first day's evacuation. Kenniston managed to get away long enough to see them.

He was sorry he went. Mrs. Adams sat weeping in the living room, and Carol struggled alone with blankets and mattresses and suitcases, in a bitter, stonyfaced mood that Kenniston could not quite understand. He stayed longer than he should have done to help them pack, trying earnestly to penetrate Carol's tight-lipped silence.

"I know it's hard to leave your home," he said, "but it's hard for everybody. And after all, we'll have shelter and warmth, and can stay alive."



"Shelter and warmth?" said Carol. She looked around at the starched white curtains, the polished furniture, the pictures on the walls and the bits of fine china that were so lovingly placed, and she said bitterly, "We had those. We had them for generations, until we had to have scientific progress too."

"I'll admit you have a point there," said Kenniston heavily, "but it's too late to argue now."

"Yes," she said. "Too late." Suddenly she began to cry, in a slow, painful way that was not in the least like Mrs. Adams' whimpering. "Oh, Ken, my house and all the things I loved..." He had wit enough to know that it was not for glass and china that she wept, but for a way of life that was gone and could never possibly return. He felt a terrible pity for her, which almost smothered his irritation at the inability of the female mind to grapple with the essentials of a situation.

"It won't be so bad," he said reassuringly. "And I'll be leading tomorrow's first evacuation, and won't be far from you at any time."

It was before nine o'clock the next morning when Kenniston left City Hall with McLain, to check the progress of preparations. Under the cold red eye of the Sun, Middletown seethed with an excited activity that centered in the First and Second Wards.

Cars were being hastily loaded, piled high on roofs and fenders. Children were being called together, barking dogs being caught and leashed, families gathering in excited haste. Roar of motors filled the wintry air. Motors of great trucks rumbling to and from the warehouse, motors of



police cars dashing with sirens screaming, sputtering motors of old cars being agonizedly coaxed to life.

The people on the streets, the people hurrying with bundles and children and dogs, looked more dazed than frightened. Some of them were laughing, a false merriment edged with excitement. Only a few women were sobbing.

McLain and Kenniston rode down in the jeep to the center of town, the Square. This was the down town First Ward of Middletown.

"The First and Second Ward will move out in that order," McLain told Kenniston. "You take charge of the First, since you're to lead the way."

Police and National Guardsmen were already forming up cars on South Jefferson Street. Cadillacs, Buicks, Fords, ancient Hupmobiles. City and school buses were crowded with those who had no cars, and piled high with their belongings. Policemen on motorcycles roared past.

McLain boomed rapid orders. "Get sidecars on those motorcycles— they won't make it without them, over rough ground.

"Divide up the garage tow-trucks as they come in— divide them evenly between the wards, so they can haul any car that conks out!"

And, to a worried National Guard officer, "No! What the devil use would we have for your fieldguns? Leave 'em in the Armory and bring cots, blankets, camp equipment, instead!"



Then McLain commandeered a car, jumped in, and shouted back to Kenniston, "Have 'em ready to move out by noon! I'll have the Tube Mill whistle sounded, for a starting signal!"

And he was gone, racing off to the other ward gathering point. Kenniston found himself faced by police, Guardsmen, deputies, officials, all clamoring for orders.

"What are we going to do with these cars? Half of them are so overloaded they'll never get anywhere!"

Kenniston saw that. The arriving cars were piled not only with bedding and other essentials, but with radios, musical instruments, big framed family portraits, hobby-horses, every sort of possession.

"Go along and tear some of that junk off," he ordered. "Form up all the way down South Jefferson— but only two abreast, for some of those South Side streets are narrow."

As he sweated to marshal the gathering cars, he watched for Carol's blue coupe. When she came, driving with pale self-possession while her aunt looked scaredly at the jam, he got her as near the front of the form-up as he could, and then raced back to the Square.

The squad leaders rapidly reported in on their assigned streets. "Everybody's out of Adams Street! Everybody's out of Perry Street! Lincoln Avenue—"



But— "We haven't got 'em all out of North Street, Mr. Kenniston! Some of those old people just won't go!"

Kenniston swore, and then jumped back into the jeep and drove around to North Street. It was the street of shabby ancient brick houses only two blocks off Main Street. And the first person he saw there was a grimlooking, shawled old woman standing with folded arms on her front porch.

"I'm not leaving my home," she snapped to Kenniston before he could speak. "I've lived in this house all my life, and my mother before me. I'll not leave it now." She sniffed scornfully. "The idea of the whole town taking up and running away just because it's got a little cold!"

Kenniston, baffled, saw a little girl of six peering at him from inside the window of the house.

"That your granddaughter?" he asked. "Listen. She'll be dead in a few days. Stone, frozen dead. Unless you bring her and your warm clothes and blankets along now."

The shawled old woman stared at him. Then, her voice suddenly dull, she asked, "Where do I go?"

He hastened on along the street. A peppery old man was being carried out in a wheelchair by two squad men, and was viciously striking at them with his cane.



"God-damned foolishness!" he was swearing. They got them into the waiting buses, and hastily loaded on their belongings. Then Kenniston raced back to the Square. His watch said eleven-ten, and he knew how far they were from ready.

On the Square, under the big sycamore tree, a gaunt, tall man with burning eyes was brandishing a Bible and shouting, to no one, "End of the world— punishment for sin—"

Lauber, the truck dispatcher whom McLain had left in charge of the First Ward caravan under Kenniston, came running up to him when he reached South Jefferson.

"These people are crazy!" he panted. "The ones already here want to start right now— and they don't even know the way!"

Kenniston saw that the police had drawn a barricade of big trucks across the street some blocks southward. Cars were surging against it, motors roaring, drivers shouting, horns sounding in a deafening chorus.

Panic! He knew it was in the air. He, all of them, had known there was danger of it when the Mayor had made his broadcast. They had had to risk it, for only real fear could make people leave their lifelong homes. But if it got out of hand—

He rode along the line, shouting, "Form up! Form in line! If you jam the street, you'll be left behind!"

He couldn't even be heard. Limousines, trucks, jalopies— they crowded each other, banged fenders, bumped and recoiled and pressed forward again. And the horns never stopped their shrieking cacophony.

Kenniston, sweating now despite the frozen chill of the air, prayed that the gathering panic would not burst into violence. At the front of the surging, roaring mass, he found Mayor Garris. And the Mayor's pallid face showed that panic had infected him too.

"Shouldn't we go?" he shouted to Kenniston over the uproar of horns and motors. "Everyone seems ready here!"

"McLain's running the traffic movement, and we've got to stick to his orders!" he shouted back.

"But if these people break loose—" the Mayor began. He stopped. Over the shrieking horns and thundering motors, a new sound was rising. A distant, banshee wail, a faraway scream that swelled into a hoarse, giant howl. The auto horns, the shouting voices from the cars, fell silent. Only the sound of motors was background to that unending scream that wailed across Middletown like a requiem.

"That's the Tube Mill whistle!" cried Lauber. "That's the signal!"

Kenniston sent the jeep jumping ahead. "Okay, let those trucks roll! But keep people in line, back of them! No stampeding!"

The big Diesels that barricaded the way began to snort and rumble, and

then started to move out, as ponderously as elephants. Kenniston's jeep swung in front. But almost at once, cars behind pressed to get around them.

"Run the trucks three abreast, in front!" he shouted to Lauber. "It'll keep them from getting around!"

Down Jefferson Street, down over the muddy bed of the vanished river, past the old houses with their doors carefully shut and locked, past the playground that looked as forlorn as though it knew the children were going, never to return.

Past Home Street, past the silent mills, past the beer signs of South Street, where from an upstairs window a drunken man shouted and waved a bottle at them. Past the last rows of drab frame houses, the last brave little yards whose flowers were blackened now by frost.

Kenniston saw ahead of them the line of demarcation, the boundary between the past and what was now Earth. They reached it, passed it—

And then the rolling, ocher-yellow plains were all about them, barren and drab beneath the great, firelashed red eye of the Sun. The cold wind whooped around them, as they started to climb the easy slope toward the ridge. Behind his jeep, Diesels, jalopies, buses, shiny station wagons rolled with roaring, sputtering, purring motors.

Kenniston looked back down the slope at them. Already the other Ward was moving out, and he rode at the head of a huge caravan of vehicles crawling endlessly out of Middletown— a caravan out of the Earth that was gone forever, into this unguessable tomorrow.

Chapter 7- Under the Dome

When they came up over the ridge, and for the first time had view of the distant domed city that shimmered in the wan light far out on the desolate plain, Kenniston could sense the shock of doubt and fear that ran through all of this host who were seeing it for the first time. He could see it in all their peering faces, pale and strained in the red light of the dying Sun.

Even he, seeing it for only the second time, felt an inner recoiling. With his mind still filled with every sight and sound and smell of the old town they had left, the alien, solemn, deathly city of the dome seemed to him impossible as a refuge. He choked down that feeling, he had to choke it down; it was go on or die.

"Keep moving!" he shouted, sounding the jeep's horn to command attention, gesturing authoritatively forward. "Keep going!"

He conquered that brief pause of recoil, got them moving over the ridge, skidding and sliding down the other slope, in clouds of heavy dust.

He glimpsed Mayor Garris staring ahead, his plump face shocked and pallid. He wondered what Carol was thinking, as she looked out at the lonely shining bubble in the sad wastes.

The endless caravan, shrouded in dust, was halfway down the long slope

when Kenniston heard a raging of horns and looked back. An old sedan had stopped squarely in the middle of the narrow track the trucks had beaten down across a shallow gully. Cars were pulling out around it, wallowing in soft earth, jamming their low-hung frames against the banks, getting inextricably tangled. Behind them, the line was damming up.

Kenniston yelled to Lauber to keep the head of the caravan moving on toward the distant dome, and then sent his jeep snorting back along the line. A knot of people had collected now around the offending sedan. Kenniston hastily shouldered his way through them.

"What the hell's going on here?" he demanded. "Whose car is this?"

A weatherbeaten, middle-aged man turned to him, half-scared, halfapologetic. "Mine— my car. I'm John Borzak." He gestured to the back seat of the old sedan. "My wife, she's having a baby in there." He added, as an afterthought, "My fifth."

"Oh, Christ, that's all we needed!" Kenniston cried. Borzak looked instantly guilty. He looked so sad that Kenniston began to laugh. Suddenly all of them were laughing, in sheer relief from nervous tension.

He set men scurrying to get a doctor and ambulance out of the procession, and meanwhile willing hands carefully rolled the old sedan a little aside.

The dammed-up lines of cars began to roll again. But the pause, the waiting, the minutes spent in staring at the drear landscape, had been too much for some of those in line. Kenniston saw cars, only a few of them as yet, curving out of line and scrambling on the slope to swing back toward



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Middletown.

He'd feared that, above all things. People— people of a 20th Century Middlewestern town— could take only so much of the unknown. But he had to stop them, or panic would spread like fire that nobody could stop. He bucketed the jeep after them, got ahead of them by the advantage of his four-wheel drive, and then blocked their way back and stood up in the jeep and shouted at them and pointed ahead.

A man who looked like an aging carpenter, with a knobby face sheet-pale now, cursed Kenniston out of the depths of his fear.

"We're not going out to die in this damned desert! We're going back home!"

"You'll never even get near it!" Kenniston warned. "There are special guards who won't let anyone back into Middletown! Get it into your heads that the place is a death trap, will you!"

"Oh, Hugh, maybe we'd better go on!" whimpered the shapeless woman beside the man.

"Like hell we will! I'm a free American and this isn't any dictatorship!"

Kenniston found the only argument that could sway these people who were recoiling from the deathliness of the desert.

"If you go back, if you do get into Middletown and stay there, you'll soon



be all alone there! You and the few like you— all alone, here at the end of the world, with the night and the cold!"

That got to them, replacing their fear with a greater dread, the dread of aloneness in this lonely world. The knobby-faced man looked sick and trapped, but he finally turned his car around, and the other cars followed him back into line.

Kenniston's squad cars had come up but they weren't needed. He told them, "Watch the line close! Don't let one start to turn again— not one."

He fought the jeep back up along the line, choking on dust and exhaust fumes, hanging precariously to the wheel, deafened by the continuous roar of motors.

At the head of the caravan he was at least out of the dust, and could look ahead at the distant city. It was still only a shimmering, tiny bubble on the horizon, only a glittering point lost and drowned in the vast indifference of the ocher-colored wastes that stretched— how far? Clear around the world, over the beds of dried-up oceans and the sites of vanished cities? Was the bottom of the Atlantic like this, was New York, was Paris, were the Poles?

He had to forget that and keep his mind on the city ahead, on the job of getting these thousands of people to it, for if he didn't the weight of the whole dying world would come down upon him like an avalanche and he would cease to struggle. The world couldn't all be like this, there must be green valleys and people somewhere yet. But there wasn't time to think of it now, they had hit the road that led to the portal and the dome of man's last refuge was towering, colossal, in front of them.

He saw that Hubble's men had closed the portal. That would be the first step, of course, to conserve what warmth there was and keep out the frigid wind. It opened now to receive them, and an armed man waved and smiled, and then clung on to the side of the jeep.

"Straight up this boulevard, and then turn. I'll show you. Yeah, we got the section ready. No, no sign of anything. I don't think even a mouse lives here anymore." A pause. "I'm sure glad you people have got here. This place is so damned quiet it would scare you."

The tall, white silent towers watched them, the long, long line of dusty cars and trucks and buses that crept along the empty boulevards. The noise of motors greatly magnified echoed and rebounded from the walls and was repeated faintly from the dome, and the very shocking loudness of the sound made Kenniston shiver.

Apart from that mechanical racket, a curious hush had come over the Middletowners. All down the lines heads were thrust forth out of car windows, looking, peering, savoring the height of buildings whose tops they could not see, staring at the lines and colors that were alien to all they knew, listening to the emptiness. Kenniston knew how they felt. It was too big, and too strange. Even a native New Yorker would have found awe among these mighty towers, and to the folk of Middletown, used to the little slate-roofed houses and the squat buildings of dingy brick, they were overpowering, crushing, with something in them of dread because they were all deserted. The head of the caravan reached a section that was barred off with ropes. The ropes were laid aside, and the cars went in.

Hubble's advance squad was ready. Without them the assignment of nearly seventeen thousand people to improvised quarters would have been impossible. With them, it was a scrambling chaos, carried out strangely without much noise. Men and women moved with a sort of stunned docility, glancing sidelong into the dust and the shadows, peering at the blank windows and the tall strange rooms, afraid to raise their voices. Gradually the sound of motors died, and the streets were ghastly in their silence, and it was a silence so great that the scuffling of many feet and the murmur of many voices and the labor of unpacking trucks and cars did not disturb it, but were merely lost. Even the dogs were cowed.

Kenniston made his report to Hubble and then went in search of Carol. Here and there people still sat in their cars, refusing to move from their one last familiar reality, and he passed a woman who crouched in the dust of the street and wept, with her arms full of blankets. Something of the same feeling of despair infected Kenniston. It was not going to work, it was not going to work at all, and he dreaded to talk to Carol. But he plodded on until he found her.

There was a great vaulted room on the street level, smelling dismally of the dust and desertion of ages. Very tall windows let in what light they could, but still it was dusky. There were twenty women in the room, of all sorts and ages, milling about with suitcases and loads of bedding, uttering vague wails and words of complaint, struggling with rolled-up-mattresses. Carol and her aunt were two of the twenty.



Characteristically, they had managed to get off in a corner as much by themselves as possible. Mrs. Adams had collapsed onto her improvised bed, and Carol was making what order she could of their scanty belongings.

"Are you all right?" he asked her anxiously, and she nodded. From the nested blankets on the floor Mrs. Adams whimpered, "Why did they bring us here, to this dreadful place? Why couldn't they have let us stay at home?" Carol hushed her as she would a fretful child.

Two sniffling, mouse-faced girls had crept up to ask Kenniston questions. Behind them a short, thick, middle-aged woman was stamping up and down along the walls, banging open the doors that pierced them. "Where's the bathrooms?" she was demanding belligerently.

Kenniston took Carol to the doorway and a little beyond it, where if there was no more privacy they were at least not beseiged. He said, "I know it's rough as hell now, but it's only for a little while— this bunking together, I mean. There's room enough for everybody here, and you can pick out a place you like, all to yourselves. I can fetch anything you want from your house, your books and things, even furniture..."

She cut him short. "No! I don't want anything touched there. I want to know it's all just as I left it, so I can at least think about it, and maybe..." She shook her head, and then went on, "Ken, old Mr. Peters from our street had another stroke when we got here. They took him away on a stretcher. He was dying, and I saw his face. He was looking up at these awful buildings, so puzzled and afraid. He was trying to understand, and he couldn't." She shivered. "Dying isn't good anywhere you do it," he said. "But we're young and strong and we aren't going to die." He added, before he left her, "There was a baby born on the march. Think of the baby, Carol, instead of the old man."

He went away, depressed and worried. Carol seemed different, and he didn't think it was just her tiredness. Perhaps she had roots too deep, not just in Middletown but in the pattern, the state of mind. Well, the pattern was smashed forever now, and she, and all of them, had to adjust.

Kenniston had gone two of the long squares, sunk in his disturbed thoughts, before he realized that a change had come into the streets. He tried to think what it was. People were more in the buildings now, and less in the cars, but that was not all of it. There was something...

The streets had suddenly come alive.

The children had done it. Overawed at first by the strangeness and the silence and the behavior of their elders, it had slowly dawned upon them that here was a whole great city lying ready to their hands— fabulous empty buildings full of mysteries and treasures, new streets, new narrow ways behind them, all virgin territory to be explored. By twos and threes the venturesome spirits had started out and taken others with them. And now the lofty hallways rang with shouts and running feet, small figures scudded to and fro across the pavement, the shadows teemed with motion, with screams and squeals and the voices of parental anger. One bulllunged urchin had discovered that he could make echoes. Another, intoxicated by blank expanses of white, unsullied wall, stood with a stub of pencil in his hand writing in ever-enlarging letters. Kenniston thought, The irreverent little bastards! But his step quickened, and quite suddenly, he felt that it was going to work out after all. The human race was tough.

He had further evidence of that in the next two days. The great waves of the migration poured down across the dusty ridge and in through the portal, the clamorous thousands of wheels and motors, the countless faces and peering eyes. And for those who came on the second day and on the third, it was not so bad as it had been for those who came first. The seventeen thousand pioneers had lifted the curse of the empty stillness. Community kitchens, working on oil and gasoline ranges, filled the air with the homely, cheering smell of coffee. There was hot food, and the excitement of searching out friends and comparing notes. Indefatigable housewives busied themselves with brooms and drove their husbands to cleaning windows and whacked their unruly children. And the cars piled up in lines along the streets and boulevards, the Plymouths and Nashes and Chevrolets and Fords, incongruous in this dreamlike city of an elder Earth.

On the third day they brought the sick and put them in the hospital. They brought the prisoners from the jail and locked them away in another building. A great structure on the central plaza became the City Hall. And by that third night, not a soul was left in Middletown. All were here under the great dome of the alien city.

"We'll call this place New Middletown," Mayor Garris had proclaimed. "Makes it seem more like home."

Kenniston walked with Carol that night down one of the dark main avenues of the domed city. There was candlelight and lamplight from



doorways and tall windows. A baby wailed from inside a dark doorway and was hastily soothed. Dogs barked defiance to alien ghosts. A tinny phonograph sang somewhere:

"I can't give you anything but love, baby!"

Kenniston thought that the streets of tall white buildings looked down with their windows as with eyes— amazed, bewildered. This city beneath the shimmering starlit dome had had silence for a long, long time. Silence, and the slow swing of the cold red Sun and the farther stars.

Could a city remember, Kenniston wondered? Did this one remember the old days of its builders, the lovers who had walked its ways and the children who had known its nooks and corners? Was it glad that men had come again, or did it regret the agelong silence and peace?

Carol shivered a little and buttoned her topcoat. "It's getting colder."

Kenniston nodded. "But not bitterly so— only like an October night, back in our own time. We can stand that."

She looked up at him, her eyes dark in the white blur of her face. "But how will we live here, Ken? I mean, when the food from Middletown's warehouses runs out?"

He and Hubble had known the question would come up, and had the answer for it. Not a perfect answer, but the only one.



"There are big hydroponic tanks farther over in the city, Carol. The people here raised their food in them. We can do the same. There are plenty of seeds in Middletown."

"But water?"

"Lots of it," he answered promptly. "Big underground reservoirs, that must tap deep water-bearing strata. Hubble had it tested, and it's perfectly safe."

They walked on to the edge of the plaza. Now the Moon was rising, that copper-colored, unreally big Moon that was so much nearer Earth than in the old times. Its coppery light poured through the dome upon the city. The white towers dreamed. The chill deepened.

The whole mighty past of dead Earth seemed to crush down upon Kenniston. Millions of years, trillions of lives full of pain and hope and struggle, and all for what? For this?

Carol felt it too, for she pressed closer to him. "Are they all dead, Ken? All the human race, but ourselves?"

He and Hubble had the answer for that, too, the answer they would have to give to everyone.

"There's no reason to assume that. There may be other cities that are still inhabited. If so, we'll soon contact them."



She shook her head. "Words, Ken. You don't even believe them yourself." She drew away from him. "We're alone," she said. "Everything we had is gone, our world, our whole life, and we're quite alone."

He put his arms around her. He would have said something to comfort her, but she stood stiff and quivering, and suddenly she said,

"Ken, there are times when I can't help hating you."

Utterly shocked, and too bewildered to be angry yet, he let her go. He said, "Carol, you're wrought up- hysterical-"

Her voice was low and harsh, the words came fast as though they could no longer be held back. "Am I? Maybe. But I can't help remembering that if you and men like you hadn't come to Middletown with that secret laboratory, fifty thousand people wouldn't have had to suffer for it. You brought this on us..."

He began to understand now all that had been behind Carol's taut manner and unfriendly silences, all the blind resentment that had focused upon himself.

He was for the moment furiously indignant, the more so because what she had said stung him on a sensitive nerve. He stood, almost glaring at her, and then his anger washed away, and he took her by the shoulders and said,

"Carol, you're not making sense, and you know it! You're bitter because



you've lost your home, your way of life, your world, and you're making me a scapegoat for that. You can't! We need each other more than ever, and we're not going to lose each other."

She stared at him rigidly, then started to sob, and clung to him crying.

"Oh, Ken, don't let me be a fool! I'm so mixed up, I don't know my own mind any more."

"All of us feel like that," he said. "But it'll all come right. Forget about it, Carol."

But as he held her and soothed her and looked up past her at the alien towers and the face of the alien Moon, he knew that she could not completely forget, that that deep resentment would not die easily, and that he would have to fight it. And it would be hard to fight, for there had been the sting of truth in her words, only a partial truth but one he had not wanted ever to face.

Chapter 8- Middletown Calling!

hen Kenniston awoke, he lay for some time in his blankets looking around the great room, with the same feeling of unreality that he felt now each morning.

It was quite a large room, with graceful curving walls and ceiling of softtextured, ivory plastic. But it was not as large as it looked, for the builders of the city had known how to use daringly jutting mezzanines to give two floor levels the spaciousness and loftiness of one.

He looked up at the tall, dusty windows, and wondered what this room had once been. It was part of a big structure on the plaza, for Mayor Garris had insisted that the whole Lab staff be quartered near City Hall. It had obviously been a public building, but except for a few massive tables it had been quite empty, and there was no clue to its function.

He looked around at the others on the row of mattresses. Hubble was still sleeping calmly. So was Beitz, with the slight, groaning stirrings of slumbering age. But Crisci lay wide awake and unmoving, looking up at the ceiling.

Kenniston remembered something, with a sudden pang, something that he had completely forgotten in the rush of events. He went over to Crisci, and whispered, "I'm sorry, Louis. I never thought until now about your girl."

"Why would you think about that?" Crisci's low voice was toneless. "Why would you, when all this has happened?" He went on, as tonelessly, "Besides, it was all over a long time ago. For millions of years now, she's been dead."

Kenniston lingered a moment, seeking something to say, remembering now Crisci's eager talk of the girl he was soon to marry— the girl who lived fifty miles away from Middletown. He could find nothing to say. Crisci's tragedy had been repeated many times among these people— the mother whose son had gone to California, the wife whose husband had been upstate on a business trip, the lovers, the families, the friends, divided forever by the great gulf of time. He felt again a great thankfulness that Carol had come through with him, and a renewed determination to hold her against anything.

Kenniston was lighting his morning cigarette, when the others rose. He paused suddenly, and said, "I just thought—"

Hubble grinned at him. "Yes, I know. You just thought about tobacco. You, and a lot of people, will soon have to do without."

As they went out to get their breakfast at the nearest community kitchen, Hubble told him what was going forward.

"McLain's going back to Middletown to bring gasoline engines and pumps. We have to get water flowing in the city's system at once, and it may be a long time before we can figure out its pumping power. They seem to be atomic engines of some sort, but I'm not sure."

"What about food rationing?"

"Food and medicine will all go into guarded warerooms. Ration tickets will be printed at once. Use of cars is forbidden, of course. Everybody is restricted to their own Ward district temporarily, to prevent accidents in exploration. We've already organized crews to explore the city."

Kenniston nodded. He drew the last drags of a cigarette suddenly precious, before he spoke.

"That's all good. But the main problem will be morale, Hubble." He



thought of Carol, as he added, "I don't believe these people can take it, if they find out they're the last humans left." Hubble looked worried. "I know. But there must be people left somewhere. This city wasn't abandoned because of sudden disaster. They may just have gone to other, better cities."

"There wasn't a whisper on the radio from outside Middletown," Kenniston reminded.

"No. But I believe they used something different from our radio system. That's what I want you for this morning, Ken. Beitz last night found a communication system in a building near here. It has big apparatus that he thinks was for televisor communication. That's more in your field than ours."

Kenniston felt a sharp interest, the interest of the technician that not even world's end could completely kill. "I'd like to see that."

As they walked through the cold red morning, Kenniston was surprised by the unexpectedly everyday appearance of this alien city beneath the dome.

Families were trooping toward the community kitchens, with the air of going on picnic. A little band of children whooped down the nearest street, a small, woolly dog racing beside them with frantic barking. A bald, red-faced man in undershirt and trousers smoked his pipe and looked down the mighty street with mild curiosity. Two plump women, one of whom was buttoning a reluctant small boy into his jacket, called to each other from neighboring doorways.



"— and they say that Mrs. Biler's feeling better now, but her husband's still poorly—"

"Human beings," said Hubble, "are adaptable. Thank God for that."

"But if they're the last? They won't be able to adapt to that."

Hubble shook his head. "No. I'm afraid not."

After breakfast, Beitz led them to a big square building two blocks off the plaza. Inside was a large, shadowy hall, in which bulked a row of tall, square blocks of apparatus. They were, obviously, televisor instruments. Each had a square screen, a microphone grating, and beneath that a panel of control switches, pointer dials, and other less identifiable instruments.

Kenniston found and opened a service panel in the back of one. Brief examination of the tangled apparatus inside discouraged him badly.

"They were televisor communication instruments, yes. But the principles on which they worked are baffling. They didn't even use vacuum tubes they'd apparently got beyond the vacuum tube."

"Could you start one of them transmitting again?"

Kenniston shook his head. "The video system is absolutely beyond me. No resemblance at all to our primitive television apparatus."

Hubble asked, "Would it be possible then to use just the audio system-



use one of them as a straight sound-radio transmitter?"

Kenniston hesitated. "That might be done. It'd be mostly groping in the dark. But there are some familiar bits of design—" He pondered, then said, "The power leads come from outside. See anything around here that looks like a power station?"

Old Beitz nodded. "Only a block away. Big, shielded atomic turbines of some kind, coupled to generators."

"We might spend years trying to learn how to operate their atomic machinery," Kenniston said.

"We could couple gasoline engines to those generators," Hubble suggested. "It'd furnish power enough to try one of these transmitters."

Kenniston looked at him. "To call to the other people still left on Earth?"

"Yes. If there are any of them, they'd not hear our kind of radio calls. But this is their own communication setup. They'd hear it."

Kenniston said finally, "All right Give me power, and I'll try."

In the next few days, Kenniston was so immersed in the overmastering fascination of the technical problem set him, that he saw little of how Middletown's people were adapting to New Middletown. He could hear the trucks rumbling constantly under the dome, as McLain indefatigably pushed the work of bringing supplies from the deserted town beyond the



ridge.

They brought the gasoline engines needed, not only to pump water from the great reservoirs but also to turn one of the generators in the power station. Once he had power, Kenniston began to experiment. Realizing the futility of trying to fathom the principles of the strange super-radio transmitters, he tried merely to deduce the ordinary method of operating them.

The trucks brought other things— more food, clothing, furniture, hospital equipment, books. McLain began to talk of organizing a motor expedition to explore the surrounding country. And meanwhile, the crews already organized to explore New Middletown itself were searching every block and building. Already, they had made two surprising discoveries.

Hubble took Kenniston away from his work to see one of these. He led down through a chain of corridors and catacombs underneath the city.

"You know that it's a few degrees warmer here in New Middletown than the Sun's retained heat can account for," Hubble said. "We found big conduits that seem to bring that slightly wanner air up into the city, so I had the men trace the conduits down to their source."

Kenniston felt sudden excitement. "The source? A big artificial heating plant?"

"No, not that," Hubble said. "But here we are now. Have a look for yourself."



They had suddenly emerged onto a railed gallery in a vast underground chamber. The narrow gallery was the brink of an abysmal pit— a great, circular shaft that dropped into unplumbed blackness. Kenniston stared puzzledly. He saw that big conduits led upward out of the pit, and then diverged in all directions. "The slightly warmer air comes up from this shaft," Hubble said, nodding toward the pit. He added, "I know it sounds impossible, to our engineering experience. But I believe this shaft goes downward many, many miles. I believe it goes down into Earth's core."

"But Earth's core is incredibly hot!" Kenniston objected. "It was hot, millions of years ago," Hubble corrected. "And as it grew cooler, as the surface grew cold, they built this domed city and maybe others like it and sank a great shaft downward to bring up heat from the core. But Earth's core is even cooler now, almost cold. And now there is only a trifle of heat from it to warm the city a little."

"So that's why they couldn't live here any more— it was the Earth heat they depended on, and that ran out," said Kenniston, a little hopelessly.

The second discovery was made by Jennings, a young auto salesman who headed one of the exploration crews. He brought news of it to the scientists, and Kenniston went with Beitz and Crisci to see it.

It was simply a big, semicircular meeting hall in one of the larger buildings, with tiers of several hundred seats.

"A council room, or lecture hall, maybe," said Beitz. "But what's unusual about it?"



"Look at those seats in the second tier," said Jennings. They saw then what he meant. The seats in that tier were not ordinary metal chairs like the others. They were different— different from the chairs, and different from each other. Some of them hardly looked like seats at all. One row of them were very wide and flat and low, with broad backs that flared in a little inward. Another row were very narrow seats, that had no backs at all. Still others looked a little like curved lounging chairs, but the curve was an impossibly deep one.

"If they're seats," said Jennings, "they weren't intended for ordinary human people to sit in."

Kenniston and the others looked at each other, startled. He had a sudden grotesque vision of this hall crowded with an audience, an audience partly human, and partly— what? Had humanity, in the last ages, shared the Earth with other races that were not human?

"We are all jumping to conclusions." Beitz' voice broke the spell. "They may not be seats at all." But he added to Jennings as they left, "Better not tell the people about this. It might upset them."

What the other exploration crews had found was summarized in a short speech by Hubble at the big town meeting of Middletown's people held in the plaza on Sunday afternoon.

There had been church services that morning— services without bells or organs or stained glass, but held in lofty, shadowy rooms of cathedral solemnity. The first town meeting of New Middletown followed. Loudspeakers had been set up so that all in the big plaza might hear, and Mayor Garris, an older-looking, humbled Mayor Garris, spoke to them. He was stumblingly encouraging.

The ration system was working well, he told them. There was no danger of starvation, for hydroponic farming would soon be started. They could live in New Middletown indefinitely, if necessary.

"Doctor Hubble," he added, "will tell you of what has been found in New Middletown by the exploring crews."

Hubble was concise. He emphasized first that the original inhabitants of New Middletown had apparently left it deliberately.

"They took their personal belongings, their books, their clothing, their smaller apparatus, instruments, and furnishings. What they left were things too massive for easy transportation. That includes certain machinery which we think was atomically powered, but which must be studied with great care before attempts at operation can be made. We feel sure that in time, study will make it possible to use all such equipment."

Mayor Garris rose to add eagerly, "And at least one piece of equipment is now ready to use! Mr. Kenniston has got one of the radio transmitters here going, and will now start calling to contact the other people of the Earth."

A great cheering rose instantly from the gathered Middletowners. Kenniston, after the gathering broke up, found himself besieged by excited questioners. Yes, they would start calling, right away. He was worried when he got a moment alone with Hubble. "Garris shouldn't have announced that! These people are dead sure now that we'll soon be talking to other, peopled cities!"

Hubble looked worried too. "They're so sure there are other people— that it's only a matter of contacting them."

Kenniston looked at him. "Do you believe there are any others? I'm beginning to doubt it, Hubble. If they couldn't live in this city, they couldn't anywhere."

"Perhaps," Hubble admitted uneasily. "But we can't be sure of anything. We have to try, and keep trying."

Kenniston started the transmitter that night, using it for only ten minutes each hour, to conserve gasoline as much as possible. "Middletown calling!" he spoke into the microphone, "Middletown calling!"

No use of adding more— they could not yet operate a receiver to hear an answer. They could only call to make known their presence, and wait and hope that any others left on dying Earth would hear and come.

Crowds watched from outside the door, as he called. They were there through the night, when Beitz took over, and there again the next day, and the next. They were quite silent, but the hope in their faces made Kenniston sick. He felt, as another day and another passed, the mockery of the words he kept repeating.



"Middletown calling!"

Calling to what? To an Earth dying, devoid of human life, to a cold and arid sphere that had done with humanity long ago? Yet he had to keep sending it out, the cry of man lost in the ages and seeking his kind, the cry that he felt there were no ears on Earth to hear.

"Middletown calling— calling—"

Chapter 9- Out of the Silence

o answer. Weeks had gone by, while Kenniston and Beitz called and called, and out of the silence of the dying Earth had come no reply. Every hour they had spoken the words that had become meaningless. And between calls, they had fumbled with the strange receivers that they did not know how to tune. And nothing at all had happened.

Kenniston came to dread the times when he must leave the building and walk through the little crowd of hopeful Middletowners who were always gathered outside.

"No, not yet," he had to say, always trying to look confident. "But maybe soon—"

"And maybe never," Carol said to him hopelessly, when they were alone.



"If anybody had heard, they could have got here from any part of Earth, in these weeks you've been calling."

"Perhaps they don't have airplanes," he reminded her.

"If they had complicated radio receivers to hear our call, they'd have planes too, wouldn't they?"

Her logic was unanswerable. For a moment Kenniston was silent. Then, "Please don't say that to anyone else, Carol. All these people— it's what keeps them going, I think, their hope of finding other people. They wouldn't feel so lost, then." He sighed. "We'll keep calling. It's all we can do. And maybe McLain and Crisci will find someone out there. They should be back soon."

McLain had succeeded in organizing his motor expedition to explore the surrounding country. It had taken weeks of preparation, of marshalling tank-trucks from Middletown to use as gasoline caches at carefully selected points, of laying out tentative routes to follow. Two weeks before, the little caravan of jeeps and half-tracs had started out, and its return was due.

And as it searched the dusty wastes out there, as Kenniston and Beitz again and again voiced the unanswered call, work and life and death had marched forward in New Middletown.

Hubble had helped lay out the schedule of necessary work. The hydroponic tanks had to be got ready. The whole city had to be cleaned of drifted dust. The supplies brought from old Middletown had to be inventoried.

A board of elected officials had assigned men to their work. Every man had his job, his schedule of hours, his pay in ration tickets. The schools had been set up again. Courts and law functioned once more, thought all except serious offenders were liberated on probation.

Babies were born in New Middletown each day. And the death toll was heavy at first, most of its victims among the old who could not stand the shock of uprooting. A space of land outside the dome had been carefully fenced in as a cemetery.

But underneath all the bustle of new activities, it was a waiting city. A city, waiting with terrible eagerness for an answer to that call that went hourly out into the silence.

Kenniston felt his helplessness. He could not even understand completely the transmitters he used. He had, in these weeks, completely disassembled one of them without being able to puzzle out its circuits. He was sure that it employed radio frequencies far outside the electro-magnetic spectrum of twentieth-century science. But parts of the design were baffling. The words stamped on the apparatus meant nothing— they were in the same completely unknown language as all the city's inscriptions. He could only keep sending out the same questioning, hopeful message into the unknown. "Middletown calling!"

Finally, McLain's exploring expedition returned. Carol came running to Kenniston with the news. He went with her to the portal, where thousands of Middletowners were already anxiously gathering. "They've had a hard time," said Kenniston, as the jeeps and half-tracs rolled through the portal and came to a halt. McLain, Crisci and the others were unshaven, dust-smeared, exhausted-looking. Some of them sagged in their seats.

McLain's voice boomed to the eager questioners. "Tell you all about it later! Right now, we're pretty beat up."

Crisci's tired voice cut in. "Why not tell them now? They'll have to know." He faced the wondering crowd and said, "We found something, yes. We found a city, two hundred miles west of here. A domed city, just like New Middletown."

Bertram Garris asked the question that was in everyone's mind. "Well? Were there people in that other city?"

Crisci answered softly, "No. There was nobody there. Not a soul. It was dead, and it had been dead a long time."

McLain added, "It's true. We saw no sign of life anywhere, except a few little animals on the plains."

Carol turned a pale face toward Kenniston. "Then there's no one else? Then we are the last?"

A sick silence had fallen on the crowd. They looked at each other numbly. And then Bertram Garris displayed unsuspected capacities of leadership.



He got up on one of the half-tracs and spoke cheerfully.

"Now, folks, no use to let this news get you down! McLain's party only covered a few hundred miles, and Earth is a mighty big place. Remember that Mr. Kenniston's radio calls are going out, every hour." He rattled on with loud heartiness. "We've all been working hard, and we need some recreation. So tonight we're going to have a big get-together in the plaza a town party. Tell everybody to come!"

The crowd of Middletowners brightened a little. But as they went away, Kenniston saw that most of them still looked back soberly. He told Garris, "That was a good idea, to take their minds off things."

The Mayor looked pleased. "Sure. They're just too impatient. They don't realize it may take the other people a good while to answer those calls of yours."

Kenniston realized that Garris' confidence had not been assumed. Despite the shattering new revelation, the Mayor still had faith that there were other people.

But Hubble was somber when he heard the news. "Another dead city? Then there's no further doubt in my mind. Earth must be lifeless."

"Shall I keep sending out the radio call?" Hubble hesitated. "Yes, Ken— for a while. We don't want to spoil their party tonight."

The town party in the plaza that night had the unusual luxury of electric



lights, powered by a portable generator. There was a swing band on a platform, and a big space had been roped off for dancing. Kenniston threaded through the crowd with Carol, for Beitz had offered to stand his trick. Everyone knew him now and greeted him, but he noticed a significant difference in the greetings. They did not ask him now whether his calls had had an answer.

"They're giving up hope," he said to Carol. "They're afraid there are no other people, and they don't want to think about it."

Yet the party went well, until Mayor Garris blundered. He had been cheerily backslapping his way through the crowd all evening, admiring babies, exchanging familiar greetings, obviously enjoying this relapse into the arts of politicianship. Flushed and happy, he got up on the band platform and called through the loudspeaker to the crowd.

"Come on, folks, how about a little community singing? I'll lead you with my famous tenor. How about 'Let Me Call You Sweetheart'?"

They laughed, and sang, as the band struck up the tune and the pudgy Mayor cheerfully waved his hand like a conductor. The old songs not heard on Earth for millions of years echoed off the tall white buildings and the great shimmering dome overhead.

But as they sang, as they sang "Banks of the Wabash" and "Old Kentucky Home," voices and faces lost their brightness. Kenniston saw the haunting yearning that came into the gathered thousands of faces, and the mistiness in Carol's eyes. The swell of voices dropped a little. The singers seemed to hesitate. And then with an hysterical cry, a woman in the crowd sank sobbing to the ground.

The singing and the music stopped, and there was nothing but the racking sobs of the woman, whom a man vainly tried to comfort. Kenniston heard her crying out, "It's all gone forever— our whole world and all its people! There's only us, alone on a dead world!"

"Let's not get downhearted, folks!" pleaded the Mayor, but it was too late for that. The spell was broken. The people of Middletown were at last confronted with their awful aloneness.

The party was over. The crowd silently dispersed, not speaking to each other, each man going back to his own home, his own thoughts. Kenniston tried to find words of comfort for Carol when he left her, but he could not. There was no comfort for anyone, not now. They all had to face it, the certainty that they were the last on Earth.

He walked slowly back through the silent, empty streets, to relieve Beitz. The Moon had risen now, and through the great dome it poured coppery light upon the deserted plaza. Then, suddenly, he stopped and turned as he heard a voice and running feet pursuing him.

"Hey! Hey, Mr. Kenniston!"

He recognized Bud Martin, who had owned the garage in old Middletown. Bud's lean young face was excited, and the words came tumbling out of him so fast as to be almost incoherent.



"Mr. Kenniston, I thought I just saw a plane going over the dome, high up! Only it looked more like a big submarine than a plane. But I saw it, I know I did!"

Kenniston thought that he might have expected this. In their reaction of bitter disappointment, many of the Middletowners might be expected now to "see" the other people they so longed to see.

He said, "I didn't hear anything, Bud."

"Neither did I. It went quiet and fast, high up there. I got just a glimpse of it."

Kenniston looked up with him. They stared for moments, but the moonlit sky was cold and empty. He lowered his gaze. "It must have been a cloud shadow, Bud. There's nothing there."

Bud Martin swore, and then said earnestly, "Listen, Mr. Kenniston, I'm not an hysterical woman. I saw something."

It gave Kenniston pause. For a moment, his heart quickened. Was it possible..? He stared again, for long minutes. The sky remained empty, and yet his throb of excitement persisted.

He said abruptly, "We'll get Hubble. But don't say anything to anyone else. Stirring up false hopes now would be disastrous."



Hubble was with McLain and Crisci in a candlelit room, listening to their account of that other dead city they had found. He heard Bud Martin's eager tale, and then looked at Kenniston.

"I saw nothing," Kenniston admitted. "But through the dome, anything would be hard to see except when it was dead overhead."

Hubble rose. "Perhaps we'd better have a look from outside. Get your coats on."

Heavily wrapped, the five of them went along the silent streets to the portal, and through it into the outer night. They walked a hundred yards out from the portal, along the sand-drifted highway, and then stopped and scanned the sky. The cold was intense. The big Moon shone with a hard, coppery brilliance that washed the looming dome of New Middletown with light.

Kenniston's gaze swept the blazing chains of stars. The old groups were much changed by the ages but a few he could still vaguely recognize— the time-distorted Great Bear warding the north, the warped and altered star-pattern of the Lyre. And individual stars still burned in unmistakable splendor— the blue-white, flaring beacon of Vega, the somber, smoky red magnificence of Antares, the throbbing gold of Altair.

"People are going to be seeing plenty of things," said McLain skeptically. "We might as well..."

"Listen!" said Hubble sharply, holding up his hand. Kenniston heard only the whisper of the bitter wind. Then, faintly, he caught a thrumming sound that rose and fell and rose again.

"It's from the north," Crisci said suddenly. "And it's coming back around toward us."

All five of them were suddenly rigid, held in the grip of an emotion too big for utterance, as they peered at the starry sky. The thrumming deepened.

"That's no plane motor!" McLain exclaimed.

It wasn't, Kenniston knew. It was neither the staccato roar of combustion engines nor the scream of jets, but a deep bass humming that seemed to fill the sky. He was aware that his heart was pounding.

Crisci shouted and flung up his hand. They saw it almost at once, an elongated black mass cutting rapidly down across the stars.

Bud Martin yelled. "It's coming right down on us!"

The thing, in a heartbeat, had become an enormous dark bulk rushing down upon them, looming like a thundercloud. They ran back toward the portal, their feet slipping on the loose sand.

"Look!" cried Crisci. "Look at it!"

They turned, there at the portal. And Kenniston saw now that the downward rush of the black visitant upon them had been only an illusion



born of its bigness. For the thing, whatever it was, humming like a million tops, was settling upon the plain a half-mile from New Middletown. Sand spumed up wildly to veil the giant bulk, then fell away and disclosed it resting on the plain.

It was, Kenniston saw instantly, a ship. Bud Martin's description had been accurate. The thing looked for all the world like a gigantic submarine without a conning tower, that had come down out of the sky to land upon the plain.

The deep bass thrumming had stopped. The thing lay there in the moonlight, big, dark, silent. They stared rigidly.

"A ship from another world?" Kenniston whispered. "A spaceship?"

"It must be. But there were no rocketjets. It uses some other kind of power."

"Why don't they come out of it, now they've landed?"

"What did they come here for? Who are they?"

The bulky enigma out there brooded, silent, unchanged. Then Kenniston heard a calling of voices, a rising uproar in the city behind him. Others had seen, and called the news. The uproar of voices and running feet increased. All the thousands in New Middletown were beginning to stream in wild excitement toward the portal.



Mayor Garris' pudgy figure ran toward them. "Have they really come?" Have the other people come?"

Hubble's voice crackled. "Keep the people back! They mustn't go outside yet. Something has come, we don't know what. Until we do know, we've got to be careful."

Into Kenniston's mind suddenly flashed the remembrance of that big meeting hall that Jennings had found, with its special section of queer seats that no ordinary human man or woman could have used. He felt a chill along his nerves. What manner of beings were in the looming, monstrous mass out there?

Garris sounded a little scared. "Why— why, I never thought that if people came, they might be enemies."

He started to shout to the police and National Guardsmen already on hand. "Get those people back! And get your guns!"

Presently the crowd had been forced back into the adjacent streets. And a score of armed police and Guardsmen waited with Hubble and Kenniston and the others, just inside the portal. The Mayor, his teeth chattering in the cold, said, "Shall we go out to them?"

Hubble shook his head. "No, we're not sure of anything. We'll wait."

They waited, shivering in the cold wind, and as they waited, Kenniston's mind rioted with speculation. This great vessel from outer space— whence

had it come to dying Earth? From the farther stars? Why had it come? And what was going on inside it now? What eyes were watching them?

They waited. All New Middletown waited, and watched, as the Moon swung lordly across the zenith and the stars shifted and the cold deepened. And nothing happened. The monster metal bulk out there lay lightless and without sound.

The stars dimmed. Bleak gray light crept up the eastern sky. To Kenniston, chafing half-frozen hands, the mighty vessel out on the plain seemed unreal and dreamlike.

McLain swore. "If they're not coming to see us, we might as well go out to see them."

"Wait," said Hubble.

"But we've waited for hours, and-"

"Wait," said Hubble again. "They're coming now."

Kenniston saw. A dark opening had appeared, low in the side of the distant, looming hull. Figures that were vaguely unreal in the dawn light were emerging from that opening, and moving slowly toward New Middletown.

Chapter 10- From the Stars

enniston watched them come, the four vague figures walking slowly through the dawn, toward New Middletown. His heart pounded and his mouth was dry, and he was strangely afraid.

Perhaps it was the manner of their coming that made him so— the brooding, enigmatic bulk of that unknown ship, that long and cautious silence. It came to him that they, too, were doubtful.

The three leading figures resolved themselves gradually into men, clad in slacks and jackets against the biting cold. The fourth member of the party trudged along some distance behind them, a stocky form veiled in the blowing dust.

Mayor Garris said, wonderingly, "They look just like us. I guess people haven't changed much after all, in a billion years."

Kenniston nodded. For some reason, the cold knot in the pit of his stomach would not relax. There was something overpowering in this incredible meeting of two epochs.

He glanced at the others. Their faces were white and tense. There was a fooling of excitement verging almost on hysteria.

The strangers were close enough now to distinguish features. The stocky laggard remained indistinct, but of the three who came before, Kenniston saw now that only two were men. The third was a blue-eyed woman, tall and lithe, with hair the color of pale gold smooth-coiled about her head.



Kenniston was struck by her. He had seen more beautiful women, but he had seldom seen one who carried herself with such grace and authority, and who looked at the world with such a direct, intelligent gaze. Almost instantly he resented her, for no more reason than that she made him instantly conscious of vast horizons of knowledge and experience which were far beyond his present ken. And yet her mouth was friendly, quite a strong mouth, but ready to smile.

The younger of the two men was broad and hard and healthy, with sorrel hair and one of those frank, jovial faces that is built over flint. Like the woman's, his attitude was of alert, half-cautious reserve.

The other man was thin and untidy and very human. He had none of the cool reserve of his companions. He was excited, and showed it, blinking eagerly at the Middletowners. Kenniston warmed to him at once.

There was a strange silence, and the woman and two men stopped. They looked at the Middletowners, and the Middletowners stared at them. Then the woman said something to her companions in a rapid, unfamiliar tongue. The younger man nodded silently, and the thin eager man poured out a tumbling flood of words.

Mayor Garris stepped forward hesitantly, a paradox of pompous humility.

"I..." he said, and stopped. The small word vanished away on the wind, and he could seem to find nothing to replace it. The blond woman regarded him with her bright gaze, intent and faintly amused.

The thin man stepped forward toward them. Forming the words very

carefully, he said, "Middletown calling." And again, "Middletown-calling!"

Kenniston was shaken by a great amazement. Relief and understanding made him almost giddy for the moment, and he heard again his own tired voice speaking those two hopeless, pleading words into a silence that neither heard nor answered. But it had heard. It had answered, from somewhere. From where? Another world, another star? Not from anywhere on Earth, surely. That great ship had never stooped to make such a paltry journey.

He heard Mayor Garris utter a squeaking, strangled cry. A wave of shock, audible in the indrawn breath of every man there, swept the tight-packed group. Kenniston's wandering thoughts came back with a start.

The fourth member of the party had come up and joined the other three. And Kenniston himself was appalled at what he saw.

The fourth of the newcomers was not human. Manlike, yes— but not a man.

He was tall, his body enormously strong and massive, his thick arms ending in hands like heavy paws. He was clothed in his own shaggy fur, supplemented by a harness-like garment. His head was flattened, its muzzle protruding in the fashion of a beast, his round and tufted ears alert. And his eyes... It was the eyes that were most shocking. They met Kenniston's, large, and dark and full of a quick, penetrating intelligence. Good-natured eyes, curious, smiling...



The Mayor had backed away. His face was quite white. He cried out shrilly, "Why, it isn't human!"

The furry one looked puzzled by this outburst. He glanced at the woman and the two men, and they all looked at Garris, frowning, as though at a loss to understand his fright.

The creature moved toward Garris a step or two, his pawlike hands outstretched. He spoke in a slow, rumbling voice and smiled, showing a row of great teeth that glistened sharp as sabres in the light.

Garris shrieked. And Kenniston saw panic on the faces of the other men, and saw the guns come up.

"Wait!" he yelled, and darted forward, thrusting the Mayor aside. "For God's sake, wait, you fools!" He faced them, standing so that his body shielded the alien one. He had, himself, a revulsion from that creature that was both beastlike and manlike. But the furry one had looked at him, and had smiled...

"Don't shoot!" he cried. "It's intelligent, it's one of them!"

"Stand aside, Kenniston," shouted the Mayor, his voice high with panic. "The brute looks dangerous!"

The guns he faced swung sharply away from Kenniston. He turned and saw that the four newcomers had suddenly stepped a little to one side. And abruptly, the scene ended. The woman raised her hand in a swift



gesture. From the ship out on the plain came a flash of white light. It struck like a snake, at all the crowd of Middletowners in the portal. It struck, and was gone in an instant.

Kenniston had been in its path, too. He felt a stunning shock in every nerve of his body. There was only a split second of pain, and then a numbed paralysis as from an electric shock. He saw Garris and Hubble and the others stagger, their faces white and shaken. The guns dropped from nerveless hands.

Then the furry one trudged toward Kenniston. Again, his dark eyes smiled. He made reassuring rumbling sounds, and his big pawlike hands kneaded into Kenniston's neck with expert deftness. The paralysis of Kenniston's nerves began to fade.

The sorrel-haired younger man had stepped forward and picked up one of the fallen guns. Incredulity came into his eyes as he examined it. He said something in a sharp voice to the others. They looked the gun over and over. Then, puzzled and startled, they stared at Kenniston and at the other Middletowners who now seemed returning to normal.

"They've got a death ray or something!" choked Bertram Garris. "They can kill us!"

Hubble said savagely, "Shut up. You're making an ass of yourself. That weapon was only a nonlethal means of defense that you forced them to use."

The woman called excitedly to the furry one. "Gorr Holl!" It was,

obviously, his name. And Gorr Holl rejoined the other three. He too uttered sounds of bewilderment as he looked at the gun.

Kenniston spoke to Hubble, ignoring Garris and the dazed police. "I think they've just begun to suspect where we came from."

The excitement of the four newcomers was obvious. It was the woman, Kenniston noticed, who first recovered from that bewilderment. She spoke quickly to the thin, blinking man, the one who had so happily repeated, "Middletown calling!" From her repeated use of the name, Kenniston guessed the man was called Piers Eglin. And Piers Eglin looked the most staggered of all the four— and the most joyful.

He came back to Kenniston. He almost devoured him with those blinking eyes. "Middletown," he said. And then, after a moment, "Friends."

Kenniston seized on that. "Friends? Then you speak English?" The word "English" set Piers Eglin off into a new paroxysm of excitement. He began to babble to the others, but the woman cut him short. He swung back to Kenniston. "English— language," he almost panted. "You— speak— English— language." Kenniston simply nodded.

A look of awe crept into Piers Eglin's blinking eyes as he asked, "Who-No!" He began again. "Where- do you- come from?"

"From the past," Kenniston answered, and felt the full unreality of it as he said it. "From far in the past." "How far?"

Kenniston realized that twentieth-century dates would mean little, after all these epochs. He thought a moment. Then he said, "Very far in the past. In our lifetime, atomic power was first released."

"So far?" whispered Piers Eglin numbly. "But how? How?" Kenniston shrugged helplessly. "There was an atomic explosion over our city. We found our whole city in this age. That's all."

The thin man feverishly translated for the others. The woman showed deep interest. But it was Gorr Holl, the furry one, who made the longest comment in his rumbling voice.

Piers Eglin swung back to Kenniston, but Kenniston stemmed the other's eager questions by a question of his own. "Where do you come from?"

The thin one pointed up at the dawnlit sky. "From—" he seemed trying to remember the ancient name. Then, "— from Vega."

It was Kenniston's turn to be staggered. "But you're Earth-men!" He pointed to Gorr Holl's furry figure. "And what about him?"

Again, Piers Eglin seemed to search his memory for a name. Then he said it. "Capella. Gorr Holl is from Capella."

There was a silence, in which the four looked at the men of Middletown. Kenniston's mind was a chaotic whirl, out of which one thing stood clear.



The televisor-radio of this domed city had indeed been far outside his comprehension. That radio had been designed for interstellar distances. That was where the call had gone, and whence it had been answered from Vega, from Capella, from the stars!

"But you speak our old language!" he cried incredulously.

Piers Eglin stumblingly explained. "I am an— historian, specializing in the pre-atomic Earth civilization. I learned its language from the old records. That is why I asked leave to accompany this party to Earth."

The woman interrupted. She was shivering a little, and she spoke now in a low, rapid voice. Piers Eglin told them, "She is Varn Allan, the Administrator of this— this sector. Here—" nodding to the sorrel-haired younger man—"is Norden Lund, the Sub-Administrator." The words were hard for him to remember, harder still to shape. He added, "Varn Allan asks that we— we talk inside the city, where it is not so cold."

Kenniston had guessed that the woman held authority in the group. He was not surprised. Her vibrant forcefulness was striking.

Mayor Garris, who was half frozen himself, was only too happy to accede to that request. He turned toward the portal, behind which all the thousands of New Middletown were being held with difficulty. Their massed faces showed as a pale blur through the glass of the dome.

"Make way, there!" Garris ordered, in his most important tone. He gestured at the sweating guardsmen and police who held the line. "Clear a way there, now, we're coming in." He raised his voice, speaking to the people beyond. "Stand back, will you? Everything's fine, the other people have come at last, and they want to see our city. So let them through, let them through!"

The crowd, with painful reluctance, made a narrow lane through itself, which was widened by the efforts of the guardsmen. Leading the way for the star-folk, the Mayor's dignity was somewhat injured by the uneasiness that caused him to skip hastily ahead with nervous backward glances at Gorr Holl's towering figure. But he kept up his jovial front as leader of his people, shouting to them that all was well, that there was nothing to fear, and begging them to keep back and refrain from pushing.

Varn Allan was the first one to follow Garris through the portal. She hesitated, just an instant, as she and the jostling eager crowd caught sight of one another, and the crowd sent up a wild-throated roar of cheering that shook the dome. Behind her, Norden Lund grinned and shook his head, as a man might at the bad manners of children. Then Varn Allan smiled at the people and went on, and the edges of the crowd swayed and buckled inward and the guardsmen swore, and some irreverent soul whistled appreciatively at the tall, lithe woman with the golden hair. They shouted questions at her, a thousand all at once, and the half-hysterical greetings of people who have waited so long that they have lost hope and then find it suddenly fulfilled, and Kenniston hoped that they would not do anything violent, like carrying her and Norden Lund on their shoulders.

He went in right beside Gorr Holl. The people had not seen him yet, except as a vague, dark figure beyond the wall of curving glass. When they did, their voice dropped dead still for a moment and then took up again on a rising note of incredulity and alarm. Women who had shoved and clawed to get in the first row now tried to scramble back out of harm's way, and the edges of the crowd drew sharply apart. Kenniston walked close to the big furry Capellan, his hand resting on one mighty shoulder, to show the crowd that they had nothing to fear. And the people stared and stared.

"What the devil is it? A pet?"

"Look, it's got clothes on! Don't tell me it's one of them!"

"Keep it away from me! It's showing its teeth..." Kenniston shouted explanations, and under his palm the dark thick fur was hot and alien, and he was almost as much afraid of Gorr Holl as they were. And then, from out of the crowd, a tiny girl came toddling directly into their path. Her eyes shining with childish glee, she ran toward Gorr Holl's mighty, furry form. "Teddy-bear!" she shrieked joyfully. "Teddy-bear!" And she flung her arms around his leg.

Gorr Holl uttered a rumbling laugh. He reached down his great paw to pat her head, and other children came running, breaking away from fearful mothers, clustering eagerly around the big Capellan as he trudged along. The little girl he hoisted to his shoulder and she rode there clinging to his ears, and after that it was impossible for anyone to fear him. The tension of the crowd relaxed and they grinned at each other and laughed.

"Sure, it's a pet! Hey, how do you like that? Walking on his hind legs, just like a man! Smart, ain't he? Why, you'd almost think he was trying to talk!" Piers Eglin, who must have caught at least a part of this, peered sidelong at Gorr Holl, but he did not offer to translate.

The crowd became a fluid mass flowing along the boulevards, following the strangers. Help and hope and companionship had come at last to New Middletown, and the relief and joy in the faces of the people were wonderful to see. But Kenniston watched the faces of the blue-eyed woman and the man Norden Lund, seeing their expressions change from incredulity to a startled acceptance.

Pier Eglin was beside himself. A woman's fur coat entranced him— quite ordinary cheap fur, but from a species of animal that Kenniston realized must have been extinct for millions of years. Cloth and leather became treasures unimaginable in his eyes. He talked incessantly, feverishly, pointing out this wonder and that to his companions, lapsing occasionally into his painful English to ask Kenniston some question. And when he saw an automobile he became perfectly hysterical with excitement.

The automobile was of interest to them all. Varn Allan and Norden Lund stopped to examine it, and Gorr Holl, gently disengaging himself from his burden of children, joined them, The furry one's quick eye apparently divined where the motive power was hidden away, and he made signs to Kenniston that he wanted to see inside. Kenniston lifted the hood. Immediately all four bent over to inspect the motor, and the crowd of Middletowners laughed to see the big tame pet animal imitating its masters. The star-folk talked, in their swift unfamiliar tongue, and Norden Lund pointed to the engine assembly with the same half mocking wonder that a man of Kenniston's day might have felt toward an oxcart. Gorr Holl spoke to Piers Eglin, and the little man turned to Kenniston. "So beautiful, so primitive," he whispered, and clasped his hands. "They ask you make it— make it...." He was stumped for a word, but Kenniston got his meaning. The keys were in the lock. He started the motor. Gorr Holl was fascinated. There was a good bit of talking and then the last cupful of gas in the tank ran out, and the motor died. The star-folk looked at each other, and nodded, and went on.

Mayor Garris was now in his finest form. He had lost his terror of Gorr Holl in his pride and his excitement. He showed the strangers from the stars the means by which New Middletown had been made livable, he babbled about it government, its schools and courts, the distribution of food. How much of it the strangers got through Pier Eglin's stumbling translations, Kenniston could not know. But an unreasoning resentment was growing in him.

For he and all the folk of Middletown shared Garris' pride. They had had a hard time, but they had taken this alien city and with their own hands and ingenuity they had made a functioning decent habitation out of it, and they were proud of that. And all the while they were being proud, the strangers peered at the gasoline pumps and the improvised water system and the precious electric lights that had cost such labor, and were appalled at the crudity and ignorance of these things. They did not need to say so. It was plain in their faces.

Presently they stopped and conferred at some length among themselves. Evidently they reached a decision, for Piers Eglin turned and spoke.

"We have seen enough for this time," he said. "Later-" and here he

trembled with eagerness and his eyes shone moistly, like a hound's— "later we will wish to see the old city, which you say still stands. But now Varn Allan says we will return to the ship, to report what we have found to Government Center."

"Listen!" said Kenniston urgently. "We need help. We need power, and our fuel is running low."

Hubble, who had been nearby through all the visit of the strangers, nodded and said, "If you could start up some of the atomic generators here..."

Piers Eglin turned at once to consult Varn Allan, who glanced at Kenniston and Hubble and nodded. Piers Eglin said, "Of course. She says you should be made as comfortable as possible while you are still here. The crew of the Thanis will help. They will work under Gorr Holl, who is our chief atomic technician."

The Mayor gasped. "That furry brute a technician?"

Piers Eglin cleared his throat. "There will be— others, among the crew. They will be strange to you. But they are also friends. You had better assure your people."

Garris gulped, and said, "I'll attend to it."

"I will act as— yes, interpreter. And now there is much to be done. I will return shortly, with the crew and the necessary— uh— objects."



The star-folk left then, going back as they had come, though the portal and out across the dusty plain. And as they went Mayor Garris gave the news to the crowd— power, more water, more lights, perhaps even heat. The wild, jubilant cheering startled the still heights of the towers and the dome rang with it and underneath that cry of joy, Hubble said to Kenniston, "What did he mean— while we are still here?" Kenniston shook his head. A cold doubt was in him, almost a foreboding, and it was based on nothing that had been said or done, but simply on the realization of the abyss that separated the civilization of old Middletown from civilization that had gone out among the stars so far and so long ago that Earth was almost forgotten.

He wondered how well those two incredibly disparate cultures were going to understand each other. He stood for a long while, wondering, watching the crowd disperse, and even the thought that soon the big generators would be humming again could not dispel his worry.

Chapter 11- Revelation

he Crew of the Thanis came into New Middletown that afternoon, and Kenniston and Carol, and all the rest of the city's thousands, watched them come.

There were two score of them— a hard-handed, alert, capable breed no different from all the sailors Kenniston had ever seen, though their seas were the incalculable deeps of outer space and their faces were darkened by the rays of alien Suns. Across the blowing dust of this world that had bred and lost them they came, and with them were the others Piers Eglin



had spoken of - the strange children of other stars.

Kenniston had explained about these aliens to Carol, who had seen no more than the tips of Gorr Holl's furry ears and had supposed, like the others, that he was only a peculiar kind of pet. He didn't think that she had really understood him, any more than the people of New Middletown had really understood the Mayor's similar explanation.

"From Vega," Carol had said, and shivered, looking toward the dim sky where the stars showed even in daylight. "They can't be like us, Ken. No human being could ever go out there, and still be like us."

Kenniston was startled to hear his own thoughts repeated in her voice, but he said reassuringly. "They can't have changed too much. And the others, the humanoids— they may look queer, but they're our friends."

It was what Mayor Garris had told his people. "Whatever these newcomers are like, they've got to be treated right, and there's a jail cell waiting for anyone who makes trouble with them. Do you all get that? No matter what they look like, act as though they're people!"

Hearing is one thing, seeing another. And now Carol's fingers closed tight on Kenniston's hand and her body shrank against his, and the crowd who had gathered to watch this second entrance of the incredible into their midst, stared and whispered and moved uneasily.

One of these aliens was big and bulky, walking stodgily on massive legs. His wrinkled gray skin hung in heavy folds. His face was broad and flat and featureless, with little, wise old eyes that glanced with shrewd understanding at the staring, silent crowd.

Two were lean and dark, moving like conspirators wrapped in black cloaks. Their narrow heads were hairless, and their glance was bright and full of madcap humor. Kenniston realized with a shock that the cloaks they wore were wings, folded close around their bodies.

There was another, who had peculiar gliding grace that hinted of unguessed strength and speed, and whose bearing was very cool and proud. He was handsome, with a mane of snow-white fur sweeping back from his brow, and there was only a faint touch of cruelty in his broad cheekbones and straight, smiling mouth.

These four, and Gorr Holl were manlike but not men, children of far worlds walking with easy confidence on old Earth.

"They're horrible," whispered Carol, drawing away. "Unholy! How can you stand to be near them?"

Kenniston was fighting down much the same reaction. The Middletowners gaped and muttered and drew back, partly from a creeping fear of the unnatural, partly from sheer racial resentment. It was hard enough to accept the fact that such nonhuman people existed at all. It was harder still to accept them as equals. Beast was beast and man was man, and there was no middle ground...

But not to Middletown's children. They ignored the bronzed spacemen and clustered in droves around the humanoids. They had none of their elders' preconceptions. These were creatures out of fairy tales come alive, and the children loved them.

Piers Eglin came up to Kenniston. Kenniston said. "Hubble has the main generator rooms opened up. He's waiting for us there. I'll take you."

Eglin sighed. "Thank you," he said. He seemed desperately unhappy. Kenniston said a hasty goodbye to Carol, and fell in beside the little historian.

"What's wrong?" he said.

"My orders," said Piers Eglin. "I am to interpret, and to teach some of you our language." He shook his head dismally. "It will take days, and that old city of yours— I should be in it every moment."

Kenniston smiled. "I'll try to learn fast," he said.

He led the way to where Hubble was waiting by the generators, and behind him he heard the eerie footfalls of the creatures who were not human, and it was incredible to him that he was going to have to work beside these weird beings who gave him a cold shiver every time he came near them. Surely they could not behave like men!

They went into the building, into an enormous room filled with the towering, dusty shapes of armored mechanisms that he and Hubble had not been able to make head nor tail of. The senior scientist joined them, looking askance at the humanoids.



Kenniston said, "We supposed that these were the main generators." He spoke to Pier Eglin, since Eglin must do the translating, but he was facing Gorr Holl and the four others who stood beside him. "If they can really repair and start them, we..."

His voice trailed off. The five pairs of alien eyes regarded him, the five alien bodies breathed and stirred, and the crest of white fur on the proud one's skull lifted in a way so beastlike that it was impossible for Kenniston to pretend any longer to accept them as human. Doubt, distrust, and just a hint of fear crept into his face. Piers Eglin frowned a little, and started to speak.

With the suddenness of a bat darting out in the evening, one of the lean dark brothers whipped wide his wings and made a little spring at Kenniston, uttering a cry that sounded very much like "Boo!"

Kenniston leaped backward, startled almost out of his skin. And the lean one promptly doubled up with laughter, which was echoed by the others. Even the large grey creature smiled. They all looked at Kenniston and laughed, and presently Hubble got it and began to laugh too, and after that there was nothing for Kenniston to do but join in. The joke was on him, at that. They had known perfectly well how he felt about them, and the lean one had paid him back in his own coin, but with humor and not malice.

And somehow, after they had laughed together, the tension was gone. Laughter is a human sort of thing. Kenniston mumbled something, and Gorr Holl slapped his shoulder, nearly putting him on his face. But when he approached the dusty generators, Gorr Holl changed abruptly from a shambling, good-natured creature into a highly efficient technician. He operated hidden catches, and had a shield panel off one of the big mechanisms before Kenniston saw how he did it. He drew a flat pocket flash from a pouch on his harness, and used it for light as he poked his hairy bullet-shaped head inside the machine. His low, rumbling comments came out of the bowels of the generator. Finally Gorr Holl withdrew his head from the machine, and spoke disgustedly.

Eglin translated, "He says this old installation is badly designed and in poor condition. He says he would like to get his hands on the technician who would do a job like this."

Kenniston laughed again. The big, furry Capellan sounded like a blood brother to every repair technician on old Earth. While Gorr Holl examined the other generators, Piers Eglin fastened onto Hubble and Kenniston, deluging them with questions about their own remote time. They managed at last to ask a question of their own, one that was big in their minds but that they'd had no chance to ask before.

"Why is Earth lifeless now? What happened to all its people?"

Piers Eglin said, "Long ago, Earth's people went out to other worlds. Not so much to the other planets of this System— the outer ones were cold, and watery Venus had too small a land surface— but to the worlds of other stars, across the galaxy."

"But surely some of them would have stayed on Earth?" said Kenniston.



Eglin shrugged. "They did, until it grew so cold that even in these domed cities life was difficult. Then the last of them went, to the worlds of warmer Suns."

Kenniston said, "In our day, we hadn't even reached the Moon." He felt a little dazed by it all. "...to the worlds of other stars, across the galaxy..."

Gorr Holl finally came back to them and rumbled lengthily. Eglin translated, "He thinks they can get the generators going. But it'll take time, and he'll need materials— copper, magnesium, some platinum—"

They listened carefully, and Hubble nodded and said, "We can get all those for you in old Middletown."

"The old city?" cried Piers Eglin eagerly. "I will go with you! Let us start at once!"

The little historian was afire for a look at the old town. He fidgeted until he and Hubble and Kenniston, in a jeep; were driving across the cold ocher wasteland.

"I shall see, with my own eyes, a town of the pre-atomic age!" he exulted.

It was strange to come upon old Middletown, standing so silent in the midst of desolation. The houses were as he had last seen them, the doors locked, the empty porch swings rocking in the cold wind. The streets were drifted thick with dust. The trees were bare, and the last small blade of grass had died.



Kenniston saw that Hubble's eyes were misted, and his own heart contracted with a terrible pang of longing. He wished that he had not come. Back in that other city, absorbed in the effort to survive, one could almost forget that there had been a life before.

He drove the jeep through those deathly streets, and memory spoke to him strongly of lost summers— girls in bright frocks, catalpa trees heavy with blossom, the quarreling of wrens, and the lights and sounds of human voices in the drowsy evening. Piers Eglin was speechless with joy, lost in a historian's dream as he walked the streets and looked into shops and houses.

"It must be preserved," Eglin whispered. "It is too precious. I will have them build a dome and seal it all— the signs, the artifacts, the beautiful scraps of paper!"

Hubble said abruptly, "There's someone here ahead of us." Kenniston saw the small bullet-shaped car that stood outside the old Lab. Out of the building came Norden Lund and Varn Allan.

She spoke to Eglin, and he translated, "They have been gathering data for her report to Government Center."

Kenniston saw the distaste in the woman's clearcut face as her blue eyes rested on the panorama of grimy mills, the towering stacks black with forgotten smokes, the rustling rails of the sidings, the drab little houses huddled along the narrow streets. He resented it, and said defiantly. "Ask her what she thinks of our little city?"



Eglin did, and Varn Allan answered incisively. The little historian looked uneasy when Kenniston asked him to interpret.

"Varn Allan says that it is unbelievable people could live in a place so pitiful and sordid."

Lund laughed. Kenniston flushed hot, and for a moment he detested this woman for her cool, imperious superiority. She looked at old Middletown as one might look at an unclean apes' den.

Hubble saw his face, and laid a hand on his arm. "Come on, Ken. We have work to do."

He followed the older man into the Lab, Piers Eglin trailing along. He said, "Why the hell would they put a haughty blonde in authority?"

Hubble said, "Presumably because she is competent to fill the job. Don't tell me old-fashioned masculine vanity is bothering you?"

Piers Eglin had understood what they were saying, for he chuckled. "That's not such an old-fashioned feeling. Norden Lund doesn't much like being Sub for a girl."

When they came out of the building with the materials Gorr Holl had requested, Varn Allan and Lund were gone.

They found, upon their return to New Middletown, that Gorr Holl and



his crew were already at work disassembling the generators. Bellowing orders, thundering deep-chested Capellan profanity, attacking each generator as though it were a personal enemy, Gorr Holl drove his hardhanded spacemen into performing miracles of effort.

Kenniston, in the days that followed, forgot all sense of strangeness in the intense technical interest of the work. Laboring as he could, eating and sleeping with these star-worlders though the long days and nights, he began to pick up the language with amazing speed. Piers Eglin was eager to help him, and after Kenniston discovered that the basic structure of the tongue was that of his own English, things went more easily.

He discovered one day that he was working beside the humanoids as naturally as though he had always done it. It no longer seemed strange that Magro, the handsome white-furred Spican, was an electronics expert whose easy unerring work left Kenniston staring.

The brothers, Ban and Bal, were masters at refitting. Kenniston envied their deftness with outworn parts, the swift ease with which their wiry bodies flitted batlike among the upper levels of the towering machines, where it was hard for men to go.

And Lal'lor, the old grey stodgy one of the massive body, who spoke little but saw much from wise little eyes, had an amazing mathematical genius. Kenniston discovered it when Lal'lor went with him and Hubble and Piers Eglin to look at the big heat shaft that seemed to go down to the bowels of Earth.

The historian nodded comprehendingly as he looked at the great shaft and



its conduits. It descended, he said, to Earth's inmost core.

"It was a great work. It and others like it, in these domed cities, kept Earth habitable ages longer than would otherwise have been the case. But there is no more heat in Earth's core to tap, now." He sighed. "The doom of all planets, sooner or later. Even after their Sun has waned they can live while their interior heat keeps them warm. But when that interior planetary heat dies the planet must be abandoned."

Lal'lor spoke in his throaty, husky voice. "But Jon Arnol, as you know, claims that a dead, cold planet can be revived. And his equations seem unassailable."

And the bulk gray Miran— for that star had bred him, Kenniston had learned— repeated a staggering series of equations that Kenniston could not even begin to follow.

Piers Eglin, for some reason, looked oddly uncomfortable. He seemed to avoid Lal'lor's gaze as he said hastily, "Jon Arnol is an enthusiast, a fanatic theorist. You know what happened when he tried a test."

As soon as Kenniston could make himself understood in the new tongue, Piers Eglin considered that his duty was done and he departed for Old Middletown, to shiver and freeze and root joyfully among the archaic treasures that abounded in every block. Left alone with the star-worlders, Kenniston found himself more and more forgetting differences of time and culture and race as he worked with them to force life back into the veins of the city.



They had New Middletown's water system in full operation again, and the luxury of opening one of the curious taps and seeing water gush forth in endless quantities was a wonderful thing. Many of the great atomic generators were functioning now, including a tremendous auxiliary heating system which made the air inside the dome several degrees warmer. And Gorr Holl and Margo had been working hard on the last miracle of all.

There came a night when the big Capellan called Kenniston into one of the main generator rooms. Magro and a number of the crewmen were there, smeared with dust and grease but grinning the happy grins of men who have just seen the last of a hard job. Gorr Holl pointed to a window.

"Stand over there," he said to Kenniston, "and watch." Kenniston looked out, over the dark city. There was no moon, and the towers were cloaked in shadow, the black canyons of the streets below them pricked here and there with the feeble glints of candles and the few electric bulbs that shone around the City Hall. Gorr Holl strode across the room behind him, to a huge control panel half the height of the wall. He grunted. There was a click and a snap as the master switch went home, and suddenly, over that nighted city under the dome, there burst a brilliant flood of light.

The shadowy towers lit to a soaring glow. The streets became rivers of white radiance, soft and clear, and above it all there was an new night sky— the wondrous luminescence of the dome, like a vast bowl fashioned out of moonbeams and many-colored clouds, crowning the gleaming towers with a glory of its own. It was so strange and beautiful, after the long darkness and the shadows, that Kenniston stood without moving, looking at the miracle of light, and was aware only later that there were tears in his eyes. The sleeping city woke. The people poured out into the shining streets, and the sound of their voices rose and became one long shout of joy. Kenniston turned to Gorr Holl and Magro and the others. He wanted to say something, but he could not find any words. Finally he laughed, and they laughed with him, and they went out together into the streets.

Mayor Garris met them almost at once, having run all the way from City Hall. Hubble was with him, and most of the men from the old Lab, and a crowd of Middletowners. There was no making any sense out of anything that was said, but the people hoisted Gorr Holl and Magro and the crewmen to their shoulders and rode them in a triumphal procession around the plaza, and the shouts and cheers were deafening. More than water, more than heat, the people treasured this gift of light. And on that night they accepted the humanoids as brothers.

A little later, a breathless and jubilant group gathered in City Hall— Gorr Holl and Magro, Kenniston, Hubble, and the Mayor. Bertram Garris wrung the big Capellan's mighty paw and beamed at Magro, trying to express his thanks for all that they and the others had done, and Gorr Holl listened, grinning.

"What's he saying?" he asked Kenniston, who now occupied the position of interpreter.

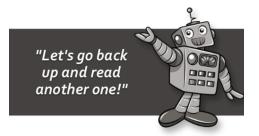
Kenniston laughed. "He wants to know what he can do to show his appreciation— like giving you the city or his daughter in marriage, or a few pints of his blood. Seriously, Gorr, we are all mighty grateful. You people have made the city live again, and— well, is there anything we can do to



show you we mean it?"

Gorr Holl considered. He looked at Magro, and Magro nodded solemnly. Gorr Holl said, "Well, being primitives— we could use a drink!"

Continued in Issue 04.





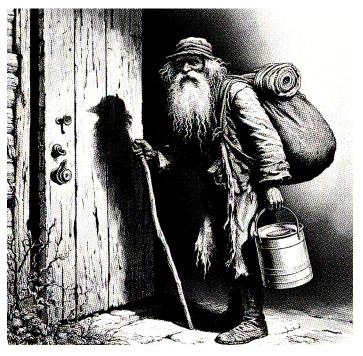


'No one took Old Arch seriously; he was just an Ancient, broken-down wanderer who went about seeking Alms and spreading tales of the great Outside. But Sometimes children are curious and believing when Adults are cynical and doubting.... `

here have always been the touched, the blessés, God's poor. Such a one was Old Arch. Archer Jakes, the Wanderer of the Plains.

They say he was born on Earth in 3042 and taken to Mazzeppa as a child.

That he learned pilotage and mining. But that he was injured in a



cave-in on Hurretni in 3068 or thereabouts, and then his wife died in a landing accident and his child was taken from him and adopted by people he never could find.

Those things are too far distant in time and space to be verified now. But it is a fact that by 4000, when my grandfather Hockington Hammer was growing up in New Oshkosh, Old Arch was a familiar figure in all the Domed Cities of the Plains. He looked ancient then, with his deformed back that people touched for luck, and his wild hair and beard, and ragged castoff clothing. On his back he carried a roll of cloth he called his bed, though it looked like no bed any City man had ever seen. In his right hand he carried a staff of wood, unless someone bought it from him and gave him a plastic rod in its place. And in his left he carried what he called a billy can, which was a food container with a loop of wire across the top for a handle, and the bottom blackened by what he said was fire.

It would have been like no fire any City man had ever seen. Even the water in the can would be poison to a City man. When he came in the airlocks the guards would make him throw it away.

"Why the lock?" he'd demand, coming into a City. "Why the lock and why the plastic bubble over all and why the guards? There's no pollution. Am I not alive?"

The guards would touch his hump and make circular motions at the sides of their heads and raise their eyebrows as if to say, "Yes, you're alive. But are you not crazy?"

Still they would admit him, the only nonresident to walk between the Domed Cities of the Plains and enter all of them; the only man to pass unharmed through the camps of the Outsiders who lived in the open on the Plains at the heart of the North American Continent of Earth.

And Old Arch would go to the residence buildings and he'd knock on someone's door--any door, chosen at random--and he'd say, "Have you seen the sky and do you know it's blue? Have you felt the soft kiss of the breezes? I can show you where to breathe fresh air."



Maybe the people would say, "Phew! Does it smell like you, this fresh air?" and slam the door in his face.

Or maybe they'd say, "Come on around to the back, Old Man, and we'll find you something to eat."

Then Old Arch would shoulder his bed and pick up his billy can and his staff and walk down the stairs and go around to the back and walk up the stairs to the rear door.

It might be an hour before he appeared there--it might be two. When he did, the people would ask, "Why didn't you say something? You should have known they wouldn't let you in the elevator! And twenty flights down and twenty flights up again is too much for a man of your years."

Then, the next time he came they would do the same thing again.

In the kitchen he would refuse all the pills and potions and shots, and insist on bulky foods. These he would eat neatly, holding aside the long white hair around his mouth and brushing the crumbs from it often. What he couldn't eat right away would go into his blackened billy can.

The children would come before he finished--those of the household, and neighbor kids too. First they'd stand shyly and watch him from a doorway. Then they'd press closer. By the time he got through they'd be fighting to sit on his lap.

The winner would climb up and sit there proudly. One of the losers, trying to prove he hadn't lost much, might wrinkle up his nose and say, "What's that awful stink, Old Man?"

And Arch would answer mildly, "It's only wood smoke, son."

Then the children would ask, "What's wood, please? And what's smoke?"

And he would tell them.

He would tell of the wind and the rain and the snow; of the cattalo herds that roamed to the west and the cities that lay to the east and the stars and the Moon that they never had seen. He would claim to have been in the endless forests and on the treeless plains and to have tasted the salt ocean and drunk of the freshwater lakes and rivers.

The children would have heard, in their lessons and from their elders, enough to know what he was talking about. Sometimes they would tire of it, and ask him to tell of the distant planets and their far-off suns. But this he would not do.

"You already hear too much about them," he'd say. "I want you to know Earth. Your own country. The one planet on which these plastic-covered cities are unnecessary, where you can actually go out and roll on the grass."

Then the children might ask, "What's grass?"

But their fathers would pointedly say, "What about the radioactivity, Old Man?"

"I'm alive," he'd reply. "There's no radioactivity out there."

But they'd say, "How can we be sure? There are individual differences

of susceptibility. Probably you are unhurt by dosages that would kill any normal person."

And the mothers would say, "Eat some more, Old Man. Eat--and go. Bring

our babies dreams, if you like, but don't try to tempt them Outside. Even if it isn't radioactive there, you've admitted it gets hot and it gets cold and the wind blows fiercely hard. Our babies were born under shelter, and under shelter they must stay, like us and our parents before us."

So Old Arch would brush off his whiskers one last time and maybe put on an old shirt the father dug up for him and then go out the back way. In spite of what might have been said, he would have to walk the twenty flights down to the ground because he wouldn't be invited to walk through the apartment to the front hall where the elevator was.

Sometimes people were hostile when he spoke to their children, and they would have him arrested. He was then bathed and barbered in the jail, and was given all new clothes. But they'd always burn his bed, and he'd have trouble getting a new one. And sometimes a jailor might covet the pocketknife he carried, or take away his billy can. On the whole I think he preferred not to go to jail except perhaps in winter, when it was cold outside the City.

There were always those ready to talk of asylums, and the need to put him away for his own good. But nobody was sure where his legal residence was, so he wasn't really eligible for public hospitalization.

He kept to his rounds. My grandfather remembers standing in his mother's kitchen listening to Old Arch. It was like meeting one of Joseph's brethren and being told exactly what the coat looked like. Something exciting out of a dream from the remote past, when all the worlds had on them those bright moist diamonds Arch described as morning dew.

My grandfather wanted to see the morning dew, though he knew better than to say so.

Old Arch understood. He tried to make the thing possible. But an opportunity to see the morning dew was something he just couldn't give to my grandfather or anybody else.

So he decided to sell it.

He persuaded a charitable lithographer to make him a batch of stock certificates. They looked very authentic. Each said plainly it was good for one share of blue sky, though the fat half-draped woman portrayed in three colors stood outside a Domed City pointing not at the sky but at a distant river with forested hills behind it.

Arch sold his certificates for a stiff price; ten dollars apiece. He could do it because by this time his wanderings followed a fairly definite route. The people who hated or feared or despised him were pretty well eliminated from it, and most of his calls were at apartments where he was known and expected and even respected a little.

My grandfather's was one of these--or rather, my great-grandfather's. When Arch first brought his stock certificates my grandfather was a little fellow everybody called Ham, maybe seven years old. He had a sister named Annie who was five. He's given me a mental picture of the two of them standing close together for reassurance, and from an open



doorway shyly watching the old man eat and listening to him talk.

When my great-grandfather bought a ten dollar stock certificate in my grandfather's name, my grandfather took it as a promise. And his little sister Annie was so jealous that the next time Old Arch came around my great-grandfather had to buy a share for her.

* * * * *

As they grew to be nine, ten, eleven, twelve, every winter when Old Arch would come around, my grandfather and his sister Annie would ask, "When are you going to take us to see the sky, Arch?" And he would say, "When you're older. When your folks say you can go." And, "When it's summer, and not too cold for these old bones."

But when my grandfather was fourteen he followed Old Arch out and down

the stairs after the old man had paid his annual call, and he stopped him on a landing to ask, "Arch, have you ever taken anyone Outside?"

"No," Arch said, sighing. "People won't go."

"I'll go," said my grandfather, "and so will my sister Annie."

Arch looked at him and put a hand on him and said, "I don't want to come between any boy and his parents."

"Well," said my grandfather, "you sold them a share of sky for each of us. Do you really want us to have that, or do you just want to talk about it?"



"Of course I want you to. But I can't take you Outside, boy."

My grandfather was disgusted. "There isn't any sky," he said sadly. "It's all talk. The certificates were just for begging."

"No," said Arch. "It's not all talk and I'm not a beggar. I'm a guide. But it's hard to see the sky right now because it's winter, and there are clouds all over."

"Let's see the clouds, then," my grandfather said stubbornly. "I've never seen a cloud."

The old man sat down on the stairs to consider the matter.

"I can't do this thing to your parents," he said at last.

"But you can do it to me and my sister," my grandfather charged wildly. "You can come to the house year after year after year, and tell us about the sky and the wind and the moon and the dew and the grass and the sun. You can even take money for our share of them. But when it comes time to produce--when we're old enough to go where these things are supposed to be--you think of excuses.

"I don't believe there are any such things," he shouted. "I think you're a liar. I think you ought to be arrested for gypping my dad on the stock deal, and I'm going to turn you in."

"Don't do that, boy," Arch said mildly.

"Then take us Outside--today!"

"It's winter, my boy. We'd freeze."

"You've said it's pretty in winter! You took the money for the certificate."

"I suppose you'll grow away from your parents soon anyhow; I suppose you have to.... Get your warmest clothes and meet me at emergency exit four."

My grandfather talked it over with his sister Annie and of course they didn't have any warm clothes, but they'd heard so often from Old Arch about the cold that they put on two sets of tights apiece, and two pairs of sox, and then they hunted for the emergency exit.

They'd never been there before. They didn't know anyone who had. The signs pointing to it were all worn and defaced.

And it was a long way to go. After a while Annie began to hang back.

"How do we know the exit will work?" she asked. "And how will we get back in if we ever do get out?"

"You don't have to come," my grandfather said. "But you'll have to find your own way home from here."

"I'll bet I could," she said. "But I'm not going to. I don't think Old Arch will even be at the exit."

But he was.

He looked at them carefully to see how they were dressed. "You mean

trouble for me, girl," he told Annie. "They'll think I took you along to make love to."

She had just reached that betwixt and between stage where she was beginning to look like a woman but didn't yet think like one. "Pooh!" she said. "I can run faster and hit harder than you can, Arch. You don't worry me a bit."

Old Arch sighed and led them through the lock. They stepped out into a raging snowstorm, which soon draped a cloak of invisibility over them.

Neither my grandfather nor Annie had ever smelled fresh air before. It threatened to make them drunk. Their nostrils tingled and their eyes misted over and their breath steamed up like bathwater. For the first time in their lives, they shivered.

When the City was out of sight in the storm, they stopped for a moment in the ankle-deep snow and just listened. They held their breaths and heard silence for the first time in their lives.

Old Arch reached down and picked up some soft snow and threw it at them. They pelted him back, and then, because he was so old, attacked each other instead, shouting and throwing snowballs and running aimlessly.

Old Arch soon checked them. "Don't get lost," he said. "We're walking down hill. Don't forget that. We're going into a draw where there are some trees."

He coughed and drew his rags about him. "The city is up hill," he said. "If you keep walking around it you'll find a way in."



His tone was frightening. Annie clung to my grandfather and made him walk close to the old man. It was clear the old man didn't have enough clothes on. He staggered and leaned hard on my grandfather.

They kept moving down the slight grade. They saw no sky and little of anything else. The snow was like a miniature of the City's Dome, except that this dome floated over them as they walked. Its edges were only about fifty yards off.

"Where are the Outsiders?" my grandfather asked. "Aren't there people here?"

"They're miles away," Arch told him. "And indoors. Only fools and youngsters are out in this blizzard."

"Fools is right," Annie said tartly. "There was supposed to be sky. And there isn't."

Old Arch staggered again. To my grandfather he said, "Could--could you carry my pack?"

My grandfather took it and they went on, stumbling blindly through knee-deep drifts, getting more and more chilled and less and less comfortable, 'til they came to a small clump of trees with a solidly frozen creek running through it.

Here Old Arch made a lean-to shelter of windfallen limbs. Annie and my grandfather helped as soon as they understood the design. Arch spread part of his bed over the lean-to, breaking the force of the wind, and put the rest inside. Just outside, on a place scraped bare of snow, he



built the first wood fire my grandfather and Annie had ever seen.

He chipped ice from the creek and put it in his billy can and hung the can by its bail over the fire, and in due course they had a little hot tea.

The youngsters felt cold but happy. The old man shivered and coughed.

He'd kept moving till the tea was made. He sat still to drink it, and couldn't get up.

"Go to bed," Annie told him. "Ham will get on one side of you and I'll get on the other. We'll keep you warm."

Old Arch tried to protest but was almost beyond speech. The youngsters didn't know enough to brush the snow off him or themselves. They helped him roll up in his bedding and crawled under the lean-to after him. There they all lay in a heap, getting colder and damper and more miserable, till finally my grandfather couldn't stand it any more.

He got up and looked around. The inverted cup of visibility was smaller. Darkness fell like a dye-stuff, turning the white snow to gray, to black.

It was a bitter night. The first he'd ever had outdoors. It was the first Annie'd ever had. The first either had ever spent at the futile task of holding off death.

They knew Old Arch was dying. As the night wore on he sank into semi-consciousness. They hugged him and rubbed his lean old limbs.



Just before morning the snow stopped. The old man roused a little, became gradually aware of his surroundings.

"Go look at the sun," he murmured. "Go see the sunrise."

They went out to look. Neither had ever seen a sunrise before. It was mauve first, then red, then gold, then blue. Venus led the way, and the sun followed. The moon, deep in the west, was like a tombstone to the dead night.

A bird chirruped. A clot of snow fell from a tree with a soft ruffle of cottony drums.

My grandfather held his sister's hand and looked and sniffed at the great Earth from which he'd been separated by the fear-inspired plastic over his City, so near, now, in the clear morning light. He climbed with Annie up the side of the draw and looked out over snow-covered plains stretching to a horizon farther away than the longest distance he'd ever imagined.

He went back and took Old Arch's head up on his knees and said, "Is it like this every day?"

And the old man said, "No, each day is different."

And my grandfather said, "Well, I've seen one, anyhow."

"That's what I've lived for," said Old Arch. And he smiled and stopped living.

Annie and my grandfather left him there and went back to the City and

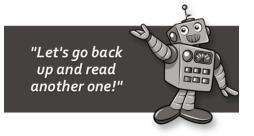
told the guards and their family. A burial party was sent out; guards, in their helmeted spacesuits.

People heard about it and followed. Everyone was curious because they'd all seen Old Arch and wondered about him.

Hundreds of people went out the gate--so many, the guards couldn't stop them. They saw the lean-to and the open fire and the woods and the snow and the frozen creek. They smelled the air and the smoke. They heard a bird. They tossed snowballs.

And then they went back and flung rocks through their City's Dome.

THE END







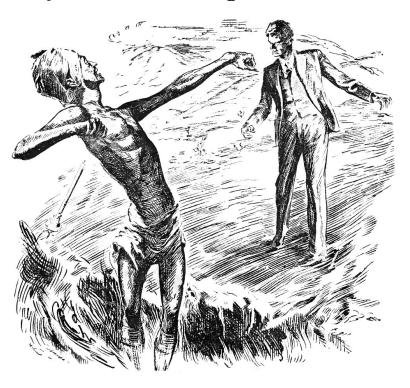
Out of the Future emerge the Robot and Tharn — while James Kelvin fights them blindly, knowing not friend from foe!

his is the way the story ended:

James Kelvin concentrated very hard on the thought of the

chemist with the red mustache who had promised him a million dollars. It was simply a matter of tuning in on the man's brain, establishing a rapport. He had done it before. Now it was more important than ever that he do it this one last time. He pressed the button on the gadget the robot had given him, and thought hard.

Far off, across limitless distances, he found the rapport.



He clamped on the mental tight beam.

He rode it....

The red-mustached man looked up, gaped, and grinned delightedly.

"So there you are!" he said. "I didn't hear you come in. Good grief, I've been trying to find you for two weeks."

"Tell me one thing quick," Kelvin said. "What's your name?"

"George Bailey. Incidentally, what's yours?"

But Kelvin didn't answer. He had suddenly remembered the other thing the

robot had told him about that gadget which established rapport when he pressed the button. He pressed it now—and nothing happened. The gadget had gone dead. Its task was finished, which obviously meant he had at last achieved health, fame and fortune. The robot had warned him, of course. The thing was set to do one specialized job. Once he got what he wanted, it would work no more.

So Kelvin got the million dollars.

And he lived happily ever after

* * * * *

his is the middle of the story: As he pushed aside the canvas curtain something—a carelessly hung rope—swung down at his face, knocking the horn-rimmed glasses askew. Simultaneously a vivid bluish light blazed into his unprotected eyes. He felt a curious, sharp sense of disorientation, a shifting motion that was almost instantly gone. Things steadied before him. He let the curtain fall back into place, making legible again the painted inscription: horoscopes—learn your future—and he stood staring at the remarkable horomancer.

It was a-oh, impossible!

The robot said in a flat, precise voice, "You are James Kelvin. You are a reporter. You are thirty years old, unmarried, and you came to Los Angeles from Chicago today on the advice of your physician. Is that correct?"

* * * * *

I n his astonishment Kelvin called on the Deity. Then he settled his glasses more firmly and tried to remember an exposé of charlatans he had

once written. There was some obvious way they worked things like this, miraculous as it sounded.

The robot looked at him impassively out of its faceted eye.

"On reading your mind," it continued in the pedantic voice, "I find this is the year Nineteen Forty-nine. My plans will have to be revised. I had meant to arrive in the year Nineteen Seventy. I will ask you to assist me."

Kelvin put his hands in his pockets and grinned.

"With money, naturally," he said. "You had me going for a minute. How do



you do it, anyhow? Mirrors? Or like Maelzel's chess player?"

"I am not a machine operated by a dwarf, nor am I an optical illusion," the robot assured him. "I am an artificially created living organism, originating at a period far in your future."

"And I'm not the sucker you take me for," Kelvin remarked pleasantly. "I came in here to—"

"You lost your baggage checks," the robot said. "While wondering what to do about it, you had a few drinks and took the Wilshire bus at exactly—exactly eight-thirty-five post meridian."

"Lay off the mind-reading," Kelvin said. "And don't tell me you've been running this joint very long with a line like that. The cops would be after you. 'If' you're a real robot, ha, ha."

"I have been running this joint," the robot said, "for approximately five minutes. My predecessor is unconscious behind that chest in the corner. Your arrival here was sheer coincidence." It paused very briefly, and Kelvin had the curious impression that it was watching to see if the story so far had gone over well.

The impression was curious because Kelvin had no feeling at all that there was a man in the large, jointed figure before him. If such a thing as a robot were possible, he would have believed implicitly that he confronted a genuine specimen. Such things being impossible, he waited to see what the gimmick would be.

"My arrival here was also accidental," the robot informed him. "This being the case, my equipment will have to be altered slightly. I will require certain substitute mechanisms. For that, I gather as I read your mind, I will have to engage in your peculiar barter system of economics. In a word, coinage or gold or silver certificates will be necessary. Thus I am—temporarily—a horomancer."

"Sure, sure," Kelvin said. "Why not a simple mugging? If you're a robot, you could do a super-mugging job with a quick twist of the gears."

"It would attract attention. Above all, I require secrecy. As a matter of fact, I am—" The robot paused, searched Kelvin's brain for the right phrase, and said, "—on the lam. In my era, time-traveling is strictly forbidden, even by accident, unless government-sponsored."

There was a fallacy there somewhere, Kelvin thought, but he couldn't quite spot it. He blinked at the robot intently. It looked pretty unconvincing.

"What proof do you need?" the creature asked. "I read your brain the minute you came in, didn't I? You must have felt the temporary amnesia as I drew out the knowledge and then replaced it."

"So that's what happened," Kelvin said. He took a cautious step backward. "Well, I think I'll be getting along."

"Wait," the robot commanded. "I see you have begun to distrust me. Apparently you now regret having suggested a mugging job. You fear I may act on the suggestion. Allow me to reassure you. It is true that I could take your money and assure secrecy by killing you, but I am not permitted to kill humans. The alternative is to engage in the barter system. I can offer you something valuable in return for a small amount of gold. Let me see." The faceted gaze swept around the tent, dwelt piercingly for a moment on Kelvin. "A horoscope," the robot said. "It is supposed to help you achieve health, fame and fortune. Astrology, however, is out of my line. I can merely offer a logical scientific method of attaining the same results."

"Uh-huh," Kelvin said skeptically. "How much? And why haven't 'you' used that method?"

"I have other ambitions," the robot said in a cryptic manner. "Take this." There was a brief clicking. A panel opened in the metallic chest. The robot extracted a small, flat case and handed it to Kelvin, who automatically closed his fingers on the cold metal.

"Be careful. Don't push that button until-"

But Kelvin had pushed it

* * * * *

H e was driving a figurative car that had got out of control. There was somebody else inside his head. There was a schizophrenic, double-tracked locomotive that was running wild and his hand on the throttle couldn't slow it down an instant. His mental steering-wheel had snapped.

Somebody else was thinking for him!

Not quite a human being. Not quite sane, probably, from Kelvin's standards. But awfully sane from his own. Sane enough to have mastered the most intricate principles of non-Euclidean geometry in the nursery.



The senses get synthesized in the brain into a sort of common language, a master-tongue. Part of it was auditory, part pictorial, and there were smells and tastes and tactile sensations that were sometimes familiar and sometimes spiced with the absolutely alien. And it was chaotic.

Something like this, perhaps....

"—Big Lizards getting too numerous this season—tame threvvars have the same eyes not on Callisto though—vacation soon—preferably galactic—solar system claustrophobic—byanding tomorrow if square rootola and upsliding three—"

But that was merely the word-symbolism. Subjectively, it was far more detailed and very frightening. Luckily, reflex had lifted Kelvin's finger from the button almost instantly, and he stood there motionless, shivering slightly.

He was afraid now.

The robot said, "You should not have begun the rapport until I instructed you. Now there will be danger. Wait." His eye changed color. "Yes ... there is ... Tharn, yes. Beware of Tharn."

"I don't want any part of it," Kelvin said quickly. "Here, take this thing back."

"Then you will be unprotected against Tharn. Keep the device. It will, as I promised, ensure your health, fame and fortune, far more effectively than a—a horoscope."

"No, thanks. I don't know how you managed that trick-sub-sonics,



```
maybe,
but I don't—"
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"Wait," the robot said. "When you pressed that button, you were in the mind of someone who exists very far in the future. It created a temporal rapport. You can bring about that rapport any time you press the button."

"Heaven forfend," Kelvin said, still sweating a little.

"Consider the opportunities. Suppose a troglodyte of the far past had access to your brain? He could achieve anything he wanted."

It had become important, somehow, to find a logical rebuttal to the robot's arguments. "Like St. Anthony—or was it Luther?—arguing with the devil?" Kelvin thought dizzily. His headache was worse, and he suspected he had drunk more than was good for him. But he merely said:

"How could a troglodyte understand what's in my brain? He couldn't apply the knowledge without the same conditioning I've had."

"Have you ever had sudden and apparently illogical ideas? Compulsions? So that you seem forced to think of certain things, count up to certain numbers, work out particular problems? Well, the man in the future on whom my device is focused doesn't know he's en rapport with you, Kelvin. But he's vulnerable to compulsions. All you have to do is concentrate on a problem and then press the button. Your rapport will be compelled—illogically, from his viewpoint—to solve that problem. And you'll be reading his brain. You'll find out how it works. There are limitations, you'll learn those too. And the device will ensure health, wealth and fame for you." "It would ensure anything, if it really worked that way. I could do anything. That's why I'm not buying!"

"I said there were limitations. As soon as you've successcience fictionully achieved

health, fame, and fortune, the device will become useless. I've taken care of that. But meanwhile you can use it to solve all your problems by tapping the brain of the more intelligent specimen in the future. The important point is to concentrate on your problems 'before' you press the button. Otherwise you may get more than Tharn on your track."

"Tharn? What—"

"I think an—an android," the robot said, looking at nothing. "An artificial human ... However, let us consider my own problem. I need a small amount of gold."

"So that's the kicker," Kelvin said, feeling oddly relieved. He said, "I haven't got any."

"Your watch."

* * * * *

elvin jerked his arm so that his wrist-watch showed. "Oh, no. That watch cost plenty."

"All I need is the gold-plating," the robot said, shooting out a reddish ray from its eye. "Thank you." The watch was now dull gray metal. "Hey!" Kelvin cried.

"If you use the rapport device, your health, fame and fortune will be assured," the robot said rapidly. "You will be as happy as any man of this era can be. It will solve all your problems—including Tharn. Wait a minute." The creature took a backward step and disappeared behind a hanging Oriental rug that had never been east of Peoria.

There was silence.

Kelvin looked from his altered watch to the flat, enigmatic object in his palm. It was about two inches by two inches, and no thicker than a woman's vanity-case, and there was a sunken push-button on its side.

He dropped it into his pocket and took a few steps forward. He looked behind the pseudo-Oriental rug, to find nothing except emptiness and a flapping slit cut in the canvas wall of the booth. The robot, it seemed, had taken a powder. Kelvin peered out through the slit. There was the light and sound of Ocean Park amusement pier, that was all. And the silvered, moving blackness of the Pacific Ocean, stretching to where small lights showed Malibu far up the invisible curve of the coastal cliffs.

So he came back inside the booth and looked around. A fat man in a swami's costume was unconscious behind the carved chest the robot had indicated. His breath, plus a process of deduction, told Kelvin that the man had been drinking.

Not knowing what else to do, Kelvin called on the Deity again. He found suddenly that he was thinking about someone or something called Tharn, who was an android.



Horomancy ... time ... rapport ... 'no!' Protective disbelief slid like plate armor around his mind. A practical robot couldn't be made. He knew that. He'd have heard—he was a reporter, wasn't he?

Sure he was.

Desiring noise and company, he went along to the shooting gallery and knocked down a few ducks. The flat case burned in his pocket. The dully burnished metal of his wrist-watch burned in his memory. The remembrance of that drainage from his brain, and the immediate replacement burned in his mind. Presently has whichey burned in his storage

his mind. Presently bar whiskey burned in his stomach.

He'd left Chicago because of sinusitis, recurrent and annoying. Ordinary sinusitis. Not schizophrenia or hallucinations or accusing voices coming from the walls. Not because he had been seeing bats or robots. That thing hadn't really been a robot. It all had a perfectly natural explanation. Oh, sure.

Health, fame and fortune. And if-

`THARN!`

The thought crashed with thunderbolt impact into his head.

And then another thought: I `am` going nuts!

A silent voice began to mutter insistently, over and over. "Tharn—Tharn—Tharn—Tharn—"



And another voice, the voice of sanity and safety, answered it and drowned it out. Half aloud, Kelvin muttered:

"I'm James Noel Kelvin. I'm a reporter—special features, leg work, rewrite. I'm thirty years old, unmarried, and I came to Los Angeles today and lost my baggage checks and—and I'm going to have another drink and find a hotel. Anyhow, the climate seems to be curing my sinusitis."

'Tharn', the muffled drum-beat said almost below the threshold of realization. 'Tharn, Tharn.'

`Tharn.`

He ordered another drink and reached in his pocket for a coin. His hand touched the metal case. And simultaneously he felt a light pressure on his shoulder.

Instinctively he glanced around. It was a seven-fingered, spidery hand tightening—hairless, without nails—and white as smooth ivory.

The one, overwhelming necessity that sprang into Kelvin's mind was a simple longing to place as much space as possible between himself and the owner of that disgusting hand. It was a vital requirement, but one difficult of fulfilment, a problem that excluded everything else from Kelvin's thoughts. He knew, vaguely, that he was gripping the flat case in his pocket as though that could save him, but all he was thinking was:

I've got to get away from here.



The monstrous, alien thoughts of someone in the future spun him insanely along their current. It could not have taken a moment while that skilled, competent, trained mind, wise in the lore of an unthinkable future, solved the random problem that had come so suddenly, with such curious compulsion.

* * * * *

hree methods of transportation were simultaneously clear to Kelvin. Two

he discarded; motorplats were obviously inventions yet to come, and

quirling—involving, as it did, a sensory coil-helmet—was beyond him. But the third method—

Already the memory was fading. And that hand was still tightening on his shoulder. He clutched at the vanishing ideas and desperately made his brain and his muscles move along the unlikely direction the future-man had visualized.

And he was out in the open, a cold night wind blowing on him, still in a sitting position, but with nothing but empty air between his spine and the sidewalk.

He sat down suddenly.

Passersby on the corner of Hollywood Boulevard and Cahuenga were not much surprised at the sight of a dark, lanky man sitting by the curb. Only one woman had noticed Kelvin's actual arrival, and she knew when she was well off. She went right on home.



Kelvin got up laughing with soft hysteria. "Teleportation," he said. "How did I work it? It's gone ... Hard to remember afterward, eh? I'll have to start carrying a notebook again."

And then-"But what about Tharn?"

He looked around, frightened. Reassurance came only after half an hour had passed without additional miracles. Kelvin walked along the Boulevard, keeping a sharp lookout. No Tharn, though.

Occasionally he slid a hand into his pocket and touched the cold metal of the case. Health, wealth and fortune. Why, he could—

But he did not press the button. Too vivid was the memory of that shocking, alien disorientation he had felt. The mind, the experiences, the habit-patterns of the far future were uncomfortably strong.

He would use the little case again—oh, yes. But there was no hurry. First, he'd have to work out a few angles.

His disbelief was completely gone

Tharn showed up the next night and scared the daylights out of Kelvin again. Prior to that, the reporter had failed to find his baggage tickets, and was only consoled by the two hundred bucks in his wallet. He took a room—paying in advance—at a medium-good hotel, and began wondering how he might apply his pipe-line to the future. Very sensibly, he decided to continue a normal life until something developed. At any rate, he'd have to make a few connections. He tried the 'Times', the 'Examiner', the 'News', and some others. But these things develop slowly, except in the movies. That night Kelvin was in his hotel room



when his unwelcome guest appeared.

It was, of course, Tharn.

He wore a very large white turban, approximately twice the size of his head. He had a dapper black mustache, waxed downward at the tips like the mustache of a mandarin, or a catfish. He stared urgently at Kelvin out of the bathroom mirror.

Kelvin had been wondering whether or not he needed a shave before going out to dinner. He was rubbing his chin thoughtfully at the moment Tharn put in an appearance, and there was a perceptible mental lag between occurrence and perception, so that to Kelvin it seemed that he himself had mysteriously sprouted a long moustache. He reached for his upper lip. It was smooth. But in the glass the black waxed hairs quivered as Tharn pushed his face up against the surface of the mirror.

It was so shockingly disorienting, somehow, that Kelvin was quite unable to think at all. He took a quick step backward. The edge of the bathtub caught him behind the knees and distracted him momentarily, fortunately for his sanity. When he looked again there was only his own appalled face reflected above the wash-bowl. But after a second or two the face seemed to develop a cloud of white turban, and mandarin-like whiskers began to form sketchily.

Kelvin clapped a hand to his eyes and spun away. In about fifteen seconds he spread his fingers enough to peep through them at the glass. He kept his palm pressed desperately to his upper lip, in some wild hope of inhibiting the sudden sprouting of a moustache. What peeped back at him from the mirror looked like himself. At least, it had no turban, and it did not wear horn-rimmed glasses. He risked snatching his hand away for a quick look, and clapped it in place again just in time to prevent Tharn from taking shape in the glass.

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S till shielding his face, he went unsteadily into the bedroom and took the flat case out of his coat pocket. But he didn't press the button that would close a mental synapse between two incongruous eras. He didn't want to do that again, he realized. More horrible, somehow, than what was happening now was the thought of reentering that `alien` brain.

He was standing before the bureau, and in the mirror one eye looked out at him between reflected fingers. It was a wild eye behind the gleaming spectacle-lens, but it seemed to be his own. Tentatively he took his hand away....

This mirror showed more of Tharn. Kelvin wished it hadn't. Tharn was wearing white knee-boots of some glittering plastic. Between them and the turban he wore nothing whatever except a minimum of loin-cloth, also glittering plastic. Tharn was very thin, but he looked active. He looked quite active enough to spring right into the hotel room. His skin was whiter than his turban, and his hands had seven fingers each, all right.

Kelvin abruptly turned away, but Tharn was resourceful. The dark window

made enough of a reflecting surface to show a lean, loin-clothed figure. The feet showed bare, and they were less normal than Tharn's hands. And the polished brass of a lamp-base gave back the picture of a small, distorted face not Kelvin's own.

Kelvin found a corner without reflecting surfaces and pushed into it,



his hands shielding his face. He was still holding the flat case.

Oh, fine, he thought bitterly. Everything's got a string on it. What good will this rapport gadget do me if Tharn's going to show up every day? Maybe I'm only crazy. I hope so.

Something would have to be done unless Kelvin was prepared to go through life with his face buried in his hands. The worst of it was that Tharn had a haunting look of familiarity. Kelvin discarded a dozen possibilities, from reincarnation to the `déjà vu` phenomenon, but—

He peeped through his hands, in time to see Tharn raising a cylindrical gadget of some sort and leveling it like a gun. That gesture formed Kelvin's decision. He'd 'have' to do something, and fast. So, concentrating on the problem—'I want out!'—he pressed the button in the surface of the flat case.

And instantly the teleportation method he had forgotten was perfectly clear to him. Other matters, however, were obscure. The smells—someone was thinking—were adding up to a—there was no word for that, only a shocking visio-auditory ideation that was simply dizzying. Someone named

Three Million and Ninety Pink had written a new flatch. And there was the physical sensation of licking a twenty-four-dollar stamp and sticking it on a postcard.

But, most important, the man in the future had had—or would have—a compulsion to think about the teleportation method, and as Kelvin snapped back into his own mind and time, he instantly used that method....

He was falling.

Icy water smacked him hard. Miraculously he kept his grip on the flat case. He had a whirling vision of stars in a night sky, and the phosphorescent sheen of silvery light on a dark sea. Then brine stung his nostrils.

Kelvin had never learned how to swim.

As he went down for the last time, bubbling a scream, he literally clutched at the proverbial straw he was holding. His finger pushed the button down again. There was no need to concentrate on the problem; he couldn't think of anything else.

Mental chaos, fantastic images—and the answer.

It took concentration, and there wasn't much time left. Bubbles streamed up past his face. He felt them, but he couldn't see them. All around, pressing in avidly, was the horrible coldness of the salt water....

But he did know the method now, and he knew how it worked. He thought along the lines the future mind had indicated. Something happened. Radiation—that was the nearest familiar term—poured out of his brain and did peculiar things to his lung-tissue. His blood cells adapted themselves....

He was breathing water, and it was no longer strangling him.

But Kelvin had also learned that this emergency adaptation could not be



maintained for very long. Teleportation was the answer to that. And surely he could remember the method now. He had actually used it to escape from Tharn only a few minutes ago.

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et he could not remember. The memory was expunged cleanly from his mind. So there was nothing else to do but press the button again, and

Kelvin did that, most reluctantly.

Dripping wet, he was standing on an unfamiliar street. It was no street he knew, but apparently it was in his own time and on his own planet. Luckily, teleportation seemed to have limitations. The wind was cold. Kelvin stood in a puddle that grew rapidly around his feet. He stared around.

He picked out a sign up the street that offered Turkish Baths, and headed moistly in that direction. His thoughts were mostly profane....

He was in New Orleans, of all places. Presently he was drunk in New Orleans. His thoughts kept going around in circles, and Scotch was a fine palliative, an excellent brake. He needed to get control again. He had an almost miraculous power, and he wanted to be able to use it effectively before the unexpected happened again. Tharn....

He sat in a hotel room and swigged Scotch. Gotta be logical!

He sneezed.

The trouble was, of course, that there were so few points of contact between his own mind and that of the future-man. Moreover, he'd got the rapport only in times of crisis. Like having access to the Alexandrian Library, five seconds a day. In five seconds you couldn't even start translating....

Health, fame and fortune. He sneezed again. The robot had been a liar. His health seemed to be going fast. What about that robot? How had he got involved, anyway? He said he'd fallen into this era from the future, but robots are notorious liars. Gotta be logical....

Apparently the future was peopled by creatures not unlike the cast of a Frankenstein picture. Androids, robots, so-called men whose minds were shockingly different.... 'Sneeze.' Another drink.

The robot had said that the case would lose its power after Kelvin had achieved health, fame and fortune. Which was a distressing thought. Suppose he attained those enviable goals, found the little push-button useless, and `then` Tharn showed up? Oh, no. That called for another shot.

Sobriety was the wrong condition in which to approach a matter that in itself was as wild as delirium tremens, even though, Kelvin knew, the science he had stumbled on was all theoretically quite possible. But not in this day and age. Sneeze.

The trick would be to pose the right problem and use the case at some time when you weren't drowning or being menaced by that bewhiskered android with his seven-fingered hands and his ominous rod-like weapon. Find the problem. But that future-mind was hideous.

And suddenly, with drunken clarity, Kelvin realized that he was profoundly drawn to that dim, shadowy world of the future.

He could not see its complete pattern, but he sensed it somehow. He knew that it was `right`, a far better world and time than this. If he could be that unknown man who dwelt there, all would go well.

Man must needs love the highest, he thought wryly. Oh, well. He shook the bottle. How much had he absorbed? He felt fine.

Gotta be logical.

Outside the window street-lights blinked off and on. Neons traced goblin languages against the night. It seemed rather alien, too, but so did Kelvin's own body. He started to laugh, but a sneeze choked that off.

All I want, he thought, is health, fame and fortune. Then I'll settle down and live happily ever after, without a care or worry. I won't need this enchanted case after that. Happy ending.

On impulse he took out the box and examined it. He tried to pry it open and failed. His finger hovered over the button.

"How can I—" he thought, and his finger moved half an inch....

It wasn't so alien now that he was drunk. The future man's name was Quarra Vee. Odd he had never realized that before, but how often does a man think of his own name? Quarra Vee was playing some sort of game



vaguely reminiscent of chess, but his opponent was on a planet of Sirius, some distance away. The chessmen were all unfamiliar. Complicated, dizzying space-time gambits flashed through Quarra Vee's mind as Kelvin listened in. Then Kelvin's problem thrust through, the compulsion hit Quarra Vee, and—

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t was all mixed up. There were two problems, really. How to cure a cold—coryza. And how to become healthy, rich and famous in a practically prehistoric era—for Quarra Vee.

A small problem, however, to Quarra Vee. He solved it and went back to his game with the Sirian.

Kelvin was back in the hotel room in New Orleans.

He was very drunk or he wouldn't have risked it. The method involved using his brain to tune in on another brain in this present twentieth century that had exactly the wave-length he required. All sorts of factors would build up to the sum total of that wave-length—experience, opportunity, position, knowledge, imagination, honesty—but he found it at last, after hesitating among three totals that were all nearly right. Still, one was righter, to three decimal points. Still drunk as a lord, Kelvin clamped on a mental tight beam, turned on the teleportation, and rode the beam across America to a well-equipped laboratory where a man sat reading.

The man was bald and had a bristling red moustache. He looked up sharply

at some sound Kelvin made.

"Hey!" he said. "How did you get in here?"

"Ask Quarra Vee," Kelvin said.

"Who? 'What?'" The man put down his book.

Kelvin called on his memory. It seemed to be slipping. He used the rapport case for an instant, and refreshed his mind. Not so unpleasant this time, either. He was beginning to understand Quarra Vee's world a little. He liked it. However, he supposed he'd forget that too.

"An improvement on Woodward's protein analogues," he told the red-moustached man. "Simple synthesis will do it."

"Who the devil are you?"

"Call me Jim," Kelvin said simply. "And shut up and listen." He began to explain, as to a small, stupid child. (The man before him was one of America's foremost chemists.) "Proteins are made of amino acids. There are about thirty-three amino acids—"

"There aren't."

"There are. Shut up. Their molecules can be arranged in lots of ways. So we get an almost infinite variety of proteins. And all living things are forms of protein. The absolute synthesis involves a chain of amino acids long enough to recognize clearly as a protein molecule. That's been the trouble."

The man with the red moustache seemed quite interested. "Fischer



assembled a chain of eighteen," he said, blinking. "Abderhalden got up to nineteen, and Woodward, of course, has made chains ten thousand units

long. But as for testing-"

"The complete protein molecule consists of complete sets of sequences. But if you can test only one or two sections of an analogue you can't be sure of the others. Wait a minute." Kelvin used the rapport case again. "Now I know. Well, you can make almost anything out of synthesized protein. Silk, wool, hair—but the main thing, of course," he said, sneezing, "is a cure for coryza."

"Now look—" said the red-moustached man.

"Some of the viruses are chains of amino acids, aren't they? Well, modify their structure. Make 'em harmless. Bacteria too. And synthesize antibiotics."

"I wish I could. However, Mr.-"

"Just call me Jim."

"Yes. However, all this is old stuff."

"Grab your pencil," Kelvin said. "From now on it'll be solid, with riffs. The method of synthesizing and testing is as follows—"

He explained, very thoroughly and clearly. He had to use the rapport case only twice. And when he had finished, the man with the red moustache laid down his pencil and stared.



"This is incredible," he said. "If it works-"

"I want health, fame and fortune," Kelvin said stubbornly. "It'll work."

"Yes, but-my good man-"

However, Kelvin insisted. Luckily for himself, the mental testing of the red-moustached man had included briefing for honesty and opportunity, and it ended with the chemist agreeing to sign partnership papers with Kelvin. The commercial possibilities of the process were unbounded. Dupont or GM would be glad to buy it.

"I want lots of money. A fortune."

"You'll make a million dollars," the red-moustached man said patiently.

"Then I want a receipt. Have to have this in black and white. Unless you want to give me my million now."

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rowning, the chemist shook his head. "I can't do that. I'll have to run tests, open negotiations—but don't worry about that. Your discovery is certainly worth a million. You'll be famous, too."

"And healthy?"

"There won't be any more disease, after a while," the chemist said quietly. "That's the real miracle."

"Write it down," Kelvin clamored.

"All right. We can have partnership papers drawn up tomorrow. This will do temporarily. Understand, the actual credit belongs to you."

"It's got to be in ink. A pencil won't do."

"Just a minute, then," the red-moustached man said, and went away in search of ink. Kelvin looked around the laboratory, beaming happily.

Tharn materialized three feet away. Tharn was holding the rod-weapon. He

lifted it.

Kelvin instantly used the rapport case. Then he thumbed his nose at Tharn and teleported himself far away.

He was immediately in a cornfield, somewhere, but undistilled corn was not what Kelvin wanted. He tried again. This time he reached Seattle.

That was the beginning of Kelvin's monumental two-week combination binge and chase.

His thoughts weren't pleasant.

He had a frightful hangover, ten cents in his pocket, and an overdue hotel bill. A fortnight of keeping one jump ahead of Tharn, via teleportation, had frazzled his nerves so unendurably that only liquor had kept him going. Now even that stimulus was failing. The drink died in him and left what felt like a corpse.



Kelvin groaned and blinked miserably. He took off his glasses and cleaned them, but that didn't help.

What a fool.

He didn't even know the name of that chemist!

There was health, wealth and fame waiting for him just around the corner, but what corner? Some day he'd find out, probably, when the news of the new protein synthesis was publicized, but when would that be? In the meantime, what about Tharn?

Moreover, the chemist couldn't locate him, either. The man knew Kelvin only as Jim. Which had somehow seemed a good idea at the time, but not now.

Kelvin took out the rapport case and stared at it with red eyes. Quarra Vee, eh? He rather liked Quarra Vee now. Trouble was, a half hour after his rapport, at most, he would forget all the details.

This time he used the push-button almost as Tharn snapped into bodily existence a few feet away.

The teleportation angle again. He was sitting in the middle of a desert. Cactus and Joshua trees were all the scenery. There was a purple range of mountains far away.

No Tharn, though.

Kelvin began to be thirsty. Suppose the case stopped working now? Oh, this couldn't go on. A decision hanging fire for a week finally

crystallized into a conclusion so obvious he felt like kicking himself. Perfectly obvious!

Why hadn't he thought of it at the very beginning?

He concentrated on the problem: How can I get rid of Tharn? He pushed the button....

And, a moment later, he knew the answer. It would be simple, really.

The pressing urgency was gone suddenly. That seemed to release a fresh flow of thought. Everything became quite clear.

He waited for Tharn.

He did not have to wait long. There was a tremor in the shimmering air, and the turbaned, pallid figure sprang into tangible reality.

The rod-weapon was poised.

Taking no chances, Kelvin posed his problem again, pressed the button, and instantly reassured himself as to the method. He simply thought in a very special and peculiar way—the way Quarra Vee had indicated.

Tharn was flung back a few feet. The moustached mouth gaped open as he uttered a cry.

"Don't!" the android cried. "I've been trying to—"

Kelvin focused harder on his thought. Mental energy, he felt, was pouring out toward the android.



Tharn croaked, "Trying—you didn't—give me—chance—"

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A nd then Tharn was lying motionless on the hot sand, staring blindly up. The seven-fingered hands twitched once and were still. The artificial life that had animated the android was gone. It would not return.

Kelvin turned his back and drew a long, shuddering breath. He was safe. He closed his mind to all thoughts but one, all problems but one.

How can I find the red-moustached man?

He pressed the button.

* * * * *

his is the way the story starts:

Quarra Vee sat in the temporal warp with his android Tharn, and made sure everything was under control.

"How do I look?" he asked.

"You'll pass," Tharn said. "Nobody will be suspicious in the era you're going to. It didn't take long to synthesize the equipment."

"Not long. Clothes-they look enough like real wool and linen, I



suppose. Wrist watch, money—everything in order. Wrist watch—that's odd, isn't it? Imagine people who need machinery to tell time!"

"Don't forget the spectacles," Tharn said.

Quarra Vee put them on. "Ugh. But I suppose-"

"It'll be safer. The optical properties in the lenses are a guard you may need against dangerous mental radiations. Don't take them off, or the robot may try some tricks."

"He'd better not," Quarra Vee said. "That so-and-so runaway robot! What's he up to, anyway, I wonder? He always was a malcontent, but at least he knew his place. I'm sorry I ever had him made. No telling what he'll do, loose in a semi-prehistoric world, if we don't catch him and bring him home."

"He's in that horomancy booth," Tharn said, leaning out of the time-warp. "Just arrived. You'll have to catch him by surprise. And you'll need your wits about you, too. Try not to go off into any more of those deep-thought compulsions you've been having. They could be dangerous. That robot will use some of his tricks if he gets the chance. I don't know what powers he's developed by himself, but I do know he's an expert at hypnosis and memory erasure already. If you aren't careful he'll snap your memory-track and substitute a false brain-pattern. Keep those glasses on. If anything should go wrong, I'll use the rehabilitation ray on you, eh?" And he held up a small rod-like projector.

Quarra Vee nodded.

"Don't worry. I'll be back before you know it. I have an appointment with that Sirian to finish our game this evening."

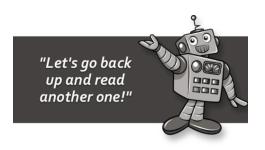
It was an appointment he never kept.

Quarra Vee stepped out of the temporal warp and strolled along the boardwalk toward the booth. The clothing he wore felt tight, uncomfortable, rough. He wriggled a little in it. The booth stood before him now, with its painted sign.

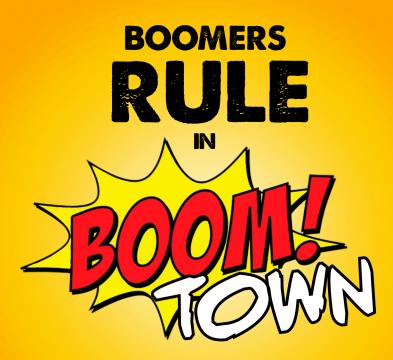
He pushed aside the canvas curtain and something—a carelessly hung rope—swung down at his face, knocking the horn-rimmed glasses askew. Simultaneously a vivid bluish light blazed into his unprotected eyes. He felt a curious, sharp sensation of disorientation, a shifting motion that almost instantly was gone.

The robot said, "You are James Kelvin."

THE END







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