THE AMAZING HUGO GERNSBACK, PROPHET OF SCIENCE

# Barnum of the

by PAUL O'NEIL

Science is now so big, so flamboyant and so barnacled with politicians, press agents, generals and industrialists that Hugo Gernsback, who invented it back in 1908 (and has re-invented it, annually, since) can scarcely make himself heard above the babble of the late-comers. Although he is now 78, Gernsback is still a man of remarkable energy who raps out forecasts of future scientific wonders with the rapidity of a disintegrator gun. He believes that millions will eventually wear television eyeglasses—and has begun work on a model to speed the day. "Instant newspapers" will be printed in U.S. homes by electromagnetic waves, in his opinion, as soon as U.S. publishers wrench themselves out of the pit of stagnant thinking in which Gernsback feels they are wallowing at present. He also believes in the inevitability of teleportation—*i.e.*, reproducing a ham sandwich at a distance by electronic means, much as images are now reproduced on a television screen.

Gernsback pays absolutely no attention, while issuing such pronunciamentos, to the fact that the public is rapidly becoming inured to scientific advance and that scientists themselves may not actually stand in need of his advice and counsel. He paid as little attention to the head-tapping some of his announcements set off in the 1920s—a period in which he was often considered nuttier than Albert Einstein himself.

Gernsback, in fact, has felt himself impelled to preach the gospel of science ever since his youth in Luxembourg—not so much, apparently, for the good of science as for his own satisfaction and the delights of seeing his name in the papers. In 55 years as a self-appointed missionary, he has stiffly ignored both the cackling of the heathen and the cries of competing apostles. Moreover, as founder, owner and guiding spirit of Gernsback Publications, Inc., a New York-based publishing enterprise which has produced a succession of scientific and technical books and magazines (among them *Amazing Stories*, the first science-fiction monthly), he has not only provided himself with a method of firing endless barrages of opinion, criticism and augury but the means of making a good deal of money as well.

Neither Gernsback's instinct for the unorthodox, however, nor his unabashed sense of theater has prevented his full acceptance as a member of the scientific community. Dozens of today's top scientists were attracted to their calling by reading his magazines as boys, and a good many—including Dr. Donald H. Menzel, director of the Harvard Observatory—earned money for college tuition by writing for them. He is heralded as the "father" of modern science fiction (the statuettes which are annually awarded to its top writers are, in his honor, known as *Hugos*), but he is simultaneously a member of the American Physical Society and a lecturer before similar learned groups. The greatest inventors and scientists of the early 20th Century—among them Marconi, Edison, Tesla, Goddard, De Forest and Oberth—corresponded freely with him and came, in many cases, to admire and confide in him as well. The Space Age has caused no diminution of this cozy relationship with the great; RCA's General David Sarnoff is among his friends and pen pals, and so are former Atomic Energy Commissioner Lewis L. Strauss and President Kennedy's science adviser, Dr. Jerome Wiesner.

This admiration is solidly based. Gernsback, in his unique career, has not only done his best to prepare the public mind for the "wonders" of science but has sometimes managed to tell science itself just what wonders it was about to produce. For instance, he conceived the essential principles of radar aircraft detection in 1911—a year when the airplane itself was barely able to stagger off the ground. This early concept was so complete that Sir Robert Watson-Watt, whose radar tracking devices helped save London in the Battle of Britain, considers him the original inventor.

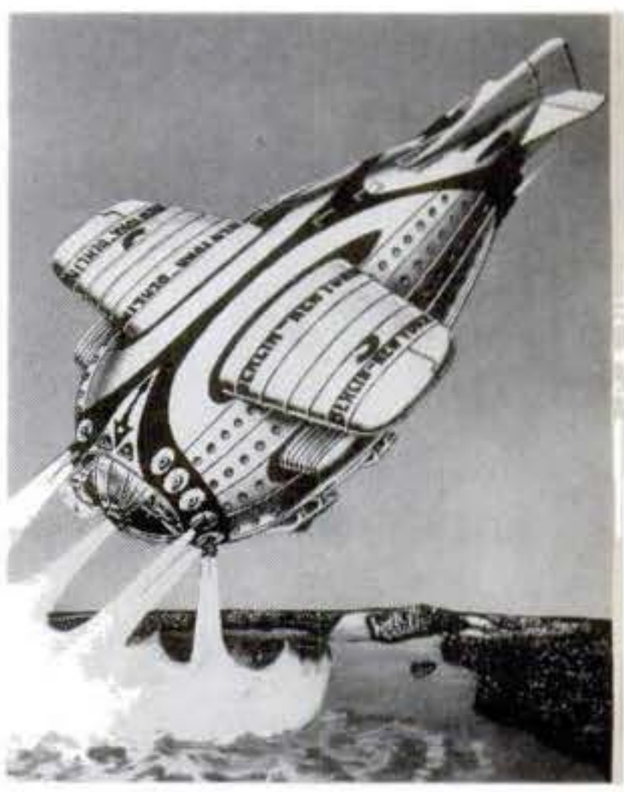
Gernsback not only coined the word "television" (he refuses to accept credit for *that* since he has discovered a Frenchman used an equivalent of the word a little earlier) but in 1928, as owner of New York's Radio Station WRNY, actually instituted daily telecasts with crude equipment. His list of successful scientific prophecies is almost endless and the perspicacity with which he has reported scientific thinking on the part of others is remarkable. In the 1920s, to make the point, he was force-feeding his readers all sorts of crazy stuff about atomic energy and about the problems of weightlessness and orbital rendezvous to be encountered in "space flying."

It is, therefore, difficult not to believe that U.S. science has been influenced in many ways as a result of Gernsback's extraordinary career in evangelism; certainly it has absorbed a flavor, unobtainable by any other means, simply through harboring him in its midst, like a peppercorn in a pudding, for a full half-century. The effect, however, would hardly have been achieved were it not for a certain duality in Gernsback's nature. While he is cuckoo for science and takes a Barnumlike joy in the bizarre (he is so proud of having invented a device for hearing through the teeth that he has listed it in *Who's Who*), he is also a man of real intellect in whose mind are mated astonishing scientific intuition, an instinct for command and a shrewd if exotic sense of business.

People who are only hazily aware of his background and accomplishments often expect to find him at a desk in a loft and dressed up like Thomas Alva Edison. They are almost uniformly taken aback when they meet him in person. Gernsback is a dude of the first order. He owns a vast collection of shirts and ties from Sulka and Charvet, uses a toilet water of splendid fragrance and wears suits reminiscent at once of Rome and Bond Street. He is an art collector, a world traveler and a connoisseur of champagnes. He not only speaks German, French, English and the patois of Luxembourg with equal facility, but does so in tones of ducal authority. He is at his most impressive in restaurants. He screws a monocle into one eye while inspecting menus and rejects wine which does not live up to his expectations as well as any food served on a plate which has not, in his opinion, been sufficiently warmed. If the subsequent offering does not please him, he sends that back, too. Gernsback's record of consecutive, one-sitting refusals now stands at three, for both food and wine.

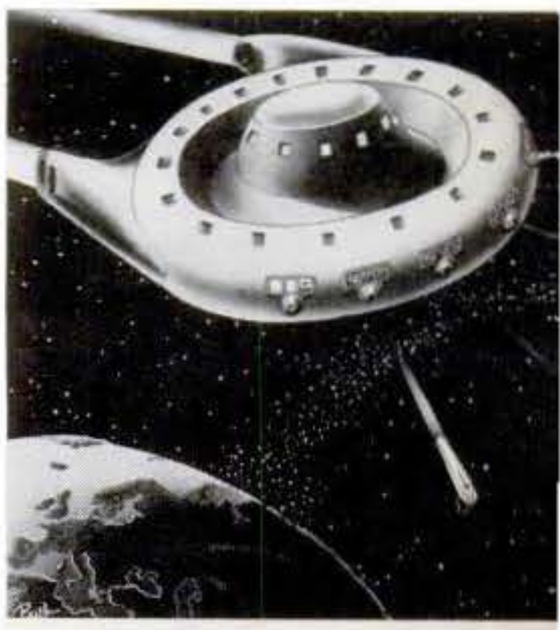
He is perfectly capable of humor—he has, in fact, a genuine sense of comedy—but he habitually wears that grave and forbidding manner which was the hallmark of big-power diplomats before World War I. His effect on a listener who is only

**1922** *Last word in sunny vacation spots is a floating city.*



**1931** *Transatlantic flight in 20 minutes features retro-rockets.*

**1956** *Blasting coffins into space eliminates cluttered graveyards.*





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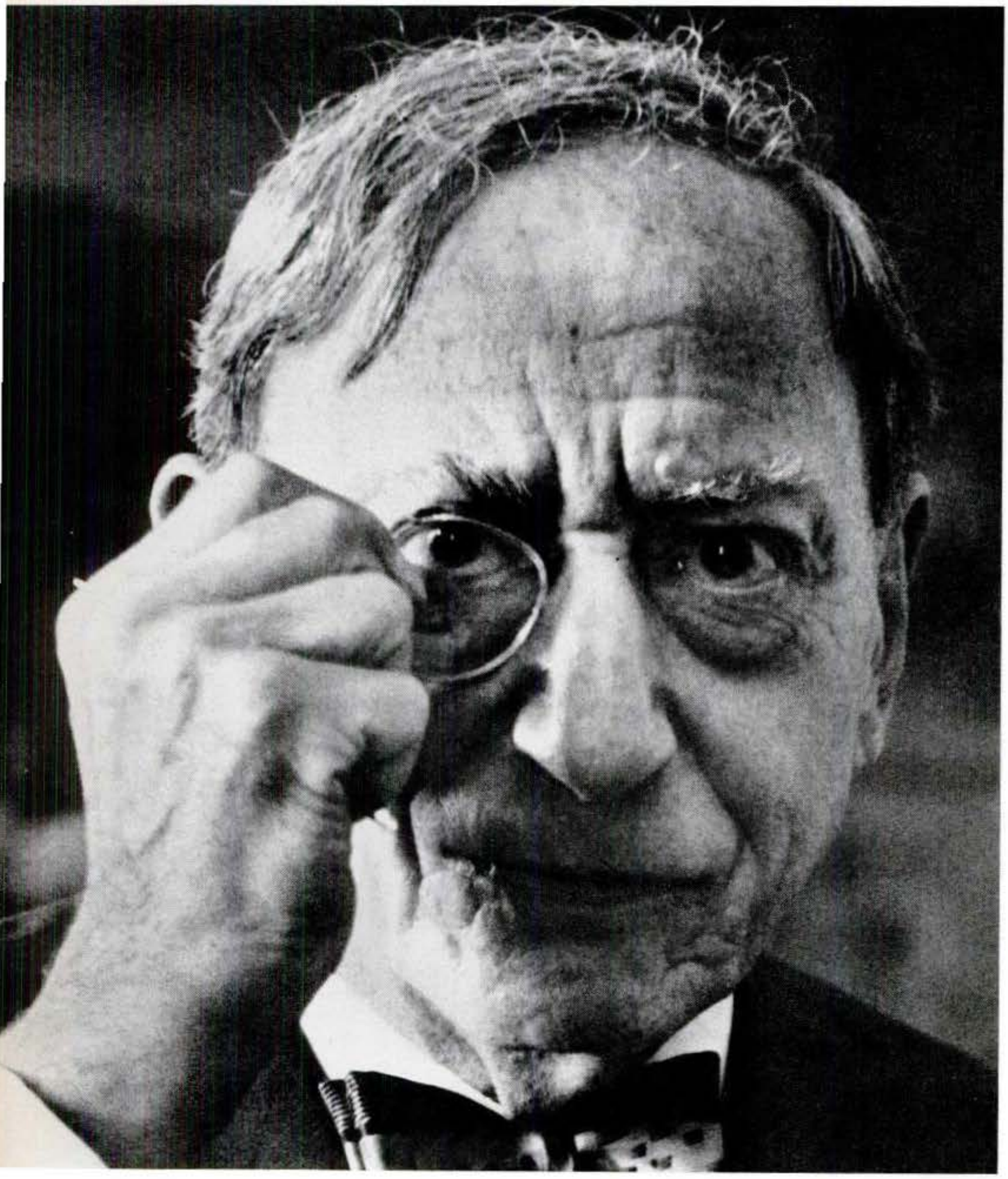
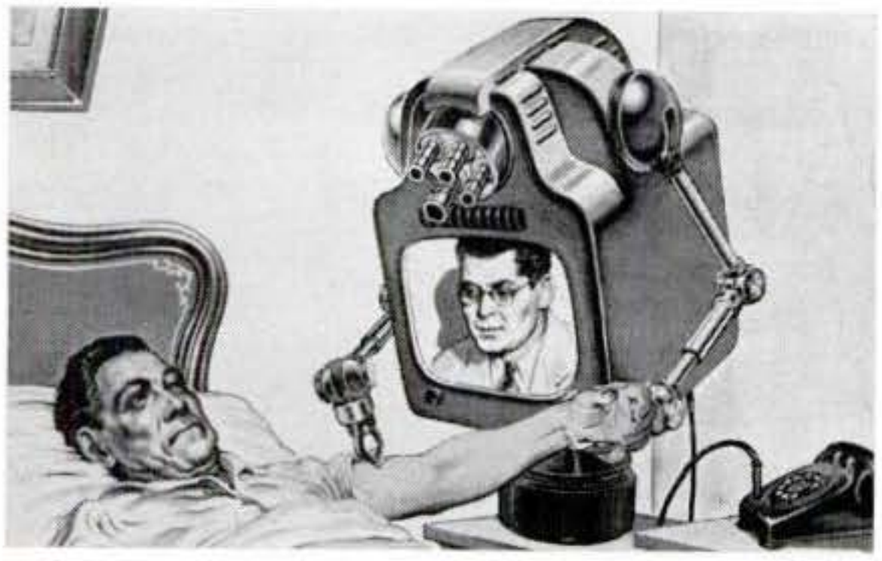
# Space Age



**1924** *Gernsback's Martian stresses adaptation to environment.*

**1929** *Flying saucer takes home Woolworth Building as souvenir.*

**1951** *Electronic mating analyzes course of true love in advance.*



**1954** *Teledoctoring replaces inefficient house calls.*

Surrounded by spectacular byproducts of his restless mind, most of which look a lot less far-fetched today than when he thought of them, Hugo Gernsback glares through his monocle with the penetrating stare of a man who can truly see into the future. The drawings, which illustrated articles in Gernsback's science magazines, are notable for their foresightedness—his 1931 spacecraft, for instance, used retro-rockets for descent. Their attention to scientific detail is scrupulous—the fanciful Martian's bizarre physique is thoughtfully adapted to the thin air and low gravity of his planet.

# A deep concern for sex and funerals

## GERNSBACK

CONTINUED

gradually becoming aware of his dearer interests can be fascinating. Gernsback devotes a good deal of thought to sex (he publishes, among other works, a magazine entitled *Sexology*, which aims to present a scientific view of problems inherent in the reproductive processes). He also broods about funerals; he is against them, feels the world is gradually being converted into one huge graveyard, and has a plan for freezing corpses and firing them into space at speeds calculated to remove them, once and for all, from our planetary system. Gernsback delivers such monologues with epic gravity and assurance—with exactly the air, one cannot but suspect, which Bismarck wore in directing the Congress of Berlin.

Gernsback is a firm believer in the effects of environment and conditioning and feels that both his personality and his career were firmly shaped in early childhood. He was as bald as an egg until he was five years old and his father, a wealthy wholesaler of wines, hustled him all over Europe indignantly seeking a cure for this peculiarity. Gernsback eventually sprouted hair on his own, apparently out of simple boredom with travel, but not before concluding that he was, obviously, a very unusual fellow.

He was introduced to electricity, and thus, in a sense, to science at the same early age; his father's superintendent, one Jean Pierre Gögen, gave him a Leclanché wet battery, a piece of wire and an electric bell and showed him how to hook them up. When the bell began ringing amid a shower of "wonderful green sparks," Hugo instantly decided that he stood on the threshold of a career worthy of his mettle.

He wasted not a single moment in launching it. The boy sent off to Paris for battery-actuated telephones and six-volt light bulbs and, after electrifying the family estate to his satisfaction, began contracting for similar jobs in the neighborhood. Business success led, as it sometimes does, to vice; he carried every newly earned handful of francs to a poker game at Luxembourg's Grand Café and was cleaned out by his elders every time.

This involvement with the gaming tables ended, however, as soon as he read *Mars* by the American astronomer, Percival Lowell—a book which suggested that Earth's sister planet supported green vegetation and perhaps even higher forms of life. The prospect of sudden material gain, he discovered, was not half so exciting as the idea that creatures like himself might inhabit distant worlds.

Gernsback was subjected to rigorous bouts of education; he attended a French grammar school in Luxembourg, moved on to a Brussels boarding school for instruction in languages and then studied mathematics and electrical engineering for three years at the Technikum in Bingen, Germany. He found time, nevertheless, to invent the "most powerful dry cell battery in the world"—a stack of zinc and carbon plates packaged in sal-ammoniac jelly which produced 375 amperes and would melt a piece of metal as thick as a pencil. He read Mark Twain too, listened to the music of John Philip Sousa and pored over comic books about the American "Wild West" which were popular in Germany at the time. In the process he fell in love with the U.S. and determined to invade and conquer it as soon as possible.

When his term of study at Bingen was done, he bought a first class ticket to Hoboken on the Hamburg American liner *Pennsylvania*, got himself a set of calling cards which identified him as "Huck" Gernsback, bundled up two models of the most powerful battery in the world, made a touch of $100—his last—on the family exchequer and set out to seek his fortune in the new world. The year was 1904. He was 19. He spent $20 for a silk hat on arrival in New York and, thus equipped, was able to discover that the big city, as he had anticipated, was an absolute pushover for a bright young man. He launched himself in business by remodeling his dry cell and talking the Packard Motor Car Co. into buying it for the ignition systems of their horseless carriages. In the meantime he founded a little mail-order house, the Electro Importing Company, and in three days of hard work designed a wireless sending and receiving set (the world's first home radio), which sold for just $7.50 and caught the public fancy in a matter of months.

He was able to afford Victor Herbert musicals and dinners at Delmonico's from the beginning, and by 1910 needed 60 workmen and a factory on Fulton Street to satisfy the demand for his radio set and the wide variety of condensers, spark coils, tuners and other accessories his firm offered the amateur wireless telegrapher. When the U.S. government banned amateur transmission during World War I, he was stranded with $100,000 worth of useless tools and useless parts, but extricated himself from financial disaster by an inspired blend of craftiness and constructive thought. He dashed off a handbook of heady information on How To Make an Electric Fish ("One of the most mysterious tricks you can perform!") and How To Build a Wireless Telephone ("Show 'Ma' and 'Pa' how you can actually talk through a brick wall!") and with this publication on hand divided his heaps of contraband into "electric experimental kits" for boys. The kits sold like hot cakes at $5 a throw—and made a profit of 400%.

This ability to dominate outrageous circumstance served to confirm a suspicion which Gernsback still nurses—that nothing could be "easier than becoming a millionaire many times over." Mere money-making bored him, however, and with honor satisfied and capital retrieved he sold the Electro Importing Company and launched himself wholeheartedly and for life as self-appointed front man, director, scenarist and prompter for the unfolding drama of science and invention.

It was a day when the physicist, the mathematician and even the astronomer went almost completely unsung; Gernsback was motivated, in the main, by a medicine-show barker's compulsion to yank them all out into the lamplight to the accompaniment of banjo music, whether they liked it or not, and to hold them up—not without certain mugging and cuff-shooting on his own part—before the wondering world.

He was well prepared to do so. His instinct for center stage and his bent for evangelism had already prompted him to found a little monthly magazine called *Modern Electrics* and he used it for a decade to thwack civilization onward toward destiny. Gernsback, for instance, was the first man to conclude that the power and wavelengths of radio stations would have to be regulated by the government to prevent anarchy on the airwaves. Thanks to the vigor with which he called this idea to congressional attention, one of his editorials on the subject was adopted, almost word for word, as the Wireless Act of 1912, thus initiating the whole present body of federal legislation on radio transmission. Also, and more significantly by far, he wrote a serial for *Modern Electrics* entitled *Ralph 124C 41+, Thrilling Adventures in the Year 2660.*

*Ralph*, which has been printed, reprinted and then translated into French, German and Russian during its 52 years, is still regarded with awe, and in some cases with active loathing, by science fiction writers, editors and fans. It is Gernsback's contention and that of his followers that genuine science fiction (it was Gernsback who coined the term) must be scientifically

CONTINUED

# An orbiting mirror to fry the enemy

## GERNSBACK
CONTINUED

feasible in all regards or else it is mere fantasy. By this yardstick *Ralph* was the first major work of science fiction, and all that went before and a great deal which has followed is to be considered mere crabgrass in the lawn of verity. This stiff-necked insistence on scientific validity is known among dissenters in the trade as the "Gernsback Delusion."

To describe the book as a novel is stretching the definition of that word to the screech-point. It begins with the hero, Ralph 124C41+ (who possesses one of 10 gigantic minds on Planet Earth) rescuing beautiful Alice 212B423 from an avalanche, simply by turning up the juice in his Manhattan power mast and melting the Alpine snows with long-distance heat waves. The book's tone and dialogue are reminiscent of *Tom Swift and His Electric Runabout*, its plot is illogical and the level of writing to be encountered in it is, to quote the author himself, "simply awful."

All this, however, is only critical niggling. *Ralph 124C 41+* was whacked together simply as a vehicle for scientific prediction, and as such it is an astonishing performance. Gernsback's description of radar is probably the book's most brilliant stroke, but it also accurately prophesied advances in dozens of other new fields: fluorescent lighting, sky writing, plastics, automatic packaging machines, tape recorders, liquid fertilizer, stainless steel, loudspeakers, night baseball, microfilm, synthetic fabrics and even flying saucers.

A great many attitudes about science which were held in the U.S. during the 1920s, '30s, '40s and even throughout the early 1950s stemmed, if only subconsciously, from science fiction and it is difficult not to feel that they all had their beginnings in *Ralph 124C 41+* and in Gernsback's unbridled enthusiasm for the medium. It would doubtless be incorrect to suggest that Buck Rogers, motion picture space queens and box-top disintegrator guns would not have evolved without him, but all of them in fact germinated in a thick mulch of Martians, space ships, galactic empires and robots which Gernsback troweled into his early magazines.

In his decades of attempting to gauge the public temper and captivate, instruct and occasionally browbeat the public mind, Gernsback has never hesitated to kill going magazines and to found new ones. Over the years, as a result, he has published literally dozens of them—including, at one point, a monthly called *Coocoo-Nuts* devoted to translating well-known sayings and clichés into funny illustrations. Most of his publications, however, have been technical by nature. In the beginning he leavened them continually with tales of space ships and distant worlds. But in 1926 he founded *Amazing Stories*, the first magazine devoted entirely to what he then described as "scientifiction" and the one which—simply by succeeding and fostering imitators—popularized the form and thus, in its own hyperthyroid fashion, forecast the fantastic realities of the Space Age.

It is doubtful that any single scientific work has so influenced science fiction—although this was not Gernsback's purpose in buying and publishing it—as a three-part article entitled "The Problems of Space Flying" which he ran in *Science Wonder Stories* in 1929. Very few Americans are aware, even today, that basic concepts of space travel now being applied by the U.S. and the Soviet Union were worked out in detail by a German scientist named Hermann Oberth during the 1920s. Gernsback, as a prodigious reader of German scientific publications, followed his career with vast excitement and managed to talk one of the physicist's disciples into writing a long dissertation on the master's concepts.

"The Problems of Space Flying" begins with a discussion of weightlessness—assuring the reader that humans can endure it for long periods, though at the risk of atrophy of important muscle systems in the body. It describes the behavior of liquids during free fall and suggests—since water escaping from a bottle would float about in spherical form—that food and drink be served in squeeze packages. It discusses orbital rendezvous, methods of building a space station and giving it an artificial gravity, the need of reflective surface painting to heat and cool space vehicles, and the means of generating electricity from solar heat. It describes space suits, problems of re-entry into the earth's atmosphere, methods of celestial navigation, time tables for trips to the nearer planets (Venus, 146 days; Mars, 235), and the advantages to be derived from placing fuel depots and launching stations on the moon.

It does not overlook the civil and military benefits which could accrue to a nation with a strong position in space. Oberth strongly advocated construction of an orbital mirror 60 miles in diameter.

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This device, with a surface composed of thousands of movable, shutterlike panels, would by his calculations have needed 15 years of work and the expenditure of $750 million for development. But the nation which owned it, he predicted, could control sunlight, and therefore weather, could eliminate night over big areas of countryside and also, with a few quick adjustments, burn its enemies to a crisp.

Gernsback dealt severely in his own articles with those who he felt were scientific pretenders. He looked with doubt on famed H. Grindell Matthews for "claiming" to have invented a death ray, noting acidly that "the possibility of Matthews having discovered a ray not known to the editor of this magazine is *very slight*." On the other hand, he allowed his imagination, and that of others, full swing, if he felt there was the slightest basis in fact to support a scientific premise. He was delighted, in 1920, to quote England's Sir Oliver Lodge on the "prodigious forces" inherent in the atom—"there is enough energy in one ounce of coal to raise the German fleet from the bottom of Scapa Flow and pile it on the Scottish mountains." He was, and still is, fascinated by the idea of gravity-nullifying devices and ran a flamboyant full-page drawing of a "city the size of New York" floating, apparently on a large platter, high above the earth "where the air is purer and free of disease-carrying bacteria."

His childhood enchantment with Mars left him with an enormous, sentimental regard for that planet and he has felt a constant compulsion to get in touch with it. As early as 1909 he advocated hooking all the wireless stations in the U.S. to one central key located in Lincoln, Neb. and sending a super signal to alert the Martians—a race of beings he seemed to feel ought to exist even if they didn't—to Earth's interest in them. Eleven years later he published the details of another plan: blinking code messages into space with a battery of 1,000 powerful searchlights. He also invented a Martian—a tall, skinny, birdlike creature—who has been copied by cartoonists and illustrators ever since.

Gernsback's Martian has long since served his purpose—to startle and stir people who thought of Mars only as a remote point of red light in the eastern sky—and now he must be considered as extinct as the moon maidens and long-bearded Venusian seers who were his companions on the pages of forgotten pulp magazines. Time has eroded the stuff of many another Gernsback prophecy and has taken many a scientist whose career he tracked and dramatized. Lee De Forest, who shopped at the Electro Importing Company for materials with which he developed the vacuum tube, is long gone. So is the great Nikola Tesla, who gave the world alternating current and wore shoes with wooden pegs because of his fear of it. The death mask of Tesla which Gernsback commissioned and now keeps in his office is the sole monument raised to the electrical genius in the U.S. Dr. Alfred C. Kinsey, with whom Gernsback collaborated and broke bread in the early 1950s, is, too, only a name.

The considerable list of Gernsback's own inventions sounds quaint and archaic—the "Radiotrola" (first radio console with a loop aerial), the "Staccotone" (a radio piano), several obscure types of electronic circuitry and the "Osophone" (his bone-conduction hearing aid—which unfortunately helped only those willing to walk around with a microphone in one hand and a hard rubber mouthpiece between their teeth).

The tele-numbed 1960s make his laborious, excited and splendidly bull-headed 1928 telecasting seem more archaic yet. The device by which Station WRNY emitted its primitive video signals—a whirling, perforated "scanning disc" hooked to a set of photoelectric cells—produced a picture only one and a half inches square. Programs simply showed the head and shoulders of a singer, a speaker or a doll which was sometimes used as a substitute subject. They could be received in all New York by only a dozen or so rabid "experimenters" who had built similar disc machines from instructions in one of Gernsback's own magazines, *Radio News*. But those telecasts dramatized his own tenacity more pointedly than the process dramatized the inevitability of images by wireless.

Television constitutes but one stream in the flood of innovation which recently has threatened to wash Gernsback out of existence; the whole of science, in fact, has risen and gone roaring past him since the discovery of nuclear fission and the beginnings of the space race, and the placid little backwaters which he breasted as a young man have been lost forever beneath the torrent. He seems delighted by the whole phenomenon. "My only reaction is this," he says—"What took them so long?" But he still works at his self-appointed

CONTINUED

## A lifelong love affair with Mars

# His latest scheme: mining the moon

## GERNSBACK
**CONTINUED**

mission as intently as a prospector seeking the mother lode.

Food and wine are his only non-scientific interests, and the only hours of real relaxation he allows himself are spent at the most posh Manhattan restaurants. He arrives at his spacious, old-fashioned office in New York's Greenwich Village, dressed to the nines, by 8:30 every morning, and he sits up late in his handsome apartment overlooking the Hudson River reading piles of scientific publications. He goes over them with a beady eye, alert for the stuff of new predictions. Error—even if he chances to detect it in so lowly a medium as a comic strip—fills him with indignation. On finding a comic-page character floating in the infinite without a space suit recently, he cried, "Wrong! His internal pressure would exceed the external pressure. His eyes would pop out! His belly would swell out! He would blow up!"

He has abandoned all involvement with science fiction, now so overshadowed by fantastic reality, and publishes, with his book list, but two magazines: *Radio Electronics*, the "bible" of television repair men, and the curious little monthly, *Sexology*. Gernsback supports *Sexology* fiercely; with physics and the delights of space travel now being pawed over by armies of newcomers, he feels that sex offers a last, unexplored, scientific frontier.

Gernsback is fully prepared, even anxious, to answer the slavering critic who accuses him of prurience. Sex, he feels, is a "cultural subject" and as such should not be "relegated to back rooms" but discussed openly—even its more peripheral phases. He finds the "nonscientific attitude" about it "appalling, abysmal stupidity. . . . Let me tell you something very few people realize," he says. "Even physicians are not taught anything about sex in college! A horrifying situation!"

Sex has not distracted him in the slightest, however, from his lifelong interest in electronic gadgetry and in the new horizons being opened by the advance of more orthodox scientific knowledge. Neither has it inhibited his bent for invention on those occasions when he feels that duty and circumstance demand it—although he now invents only in broad outline, leaving the actual mechanics of the thing to others. His television eyeglasses—a device for which he feels millions yearn—constitute a case in point.

When the idea for this handy, pocket-size portable TV set occurred to him in 1936, he was forced to dismiss it as impractical. But a few weeks ago, feeling that the electronics industry was catching up with his New Deal-era concepts, he ordered some of his employes to build a mock-up.

"It is now perfectly possible to make thin, inch-square cathode tubes," he says, "and to run them with low-voltage current from very small batteries with no danger at all of electrocuting the wearer. Sound can be carried to the ear just as in a hearing aid. Television eyeglasses should weigh only about five ounces. Since there will be a picture for each eye, the glasses will make a stereoptical view possible and since they will be masked—like goggles—they can be used in bright sunlight. The user can take them out of his pocket anywhere, slip them on, flip a switch and turn to his favorite station." A V-type aerial protrudes from the top of Gernsback's mock-up of the TV glasses. He likes the effect—which can only be described as neo-Martian.

Amidst these preoccupations Gernsback also plans, writes, edits and makes up a gaudily illustrated pocket-size booklet called *Forecast*, which he mails out annually at Christmas to 9,000 people—a great proportion of them newspaper and periodical editors and writers, scientists and executives in electronics industries—who may not necessarily have availed themselves of the opportunity to follow his thinking during the year. A certain amount of publicity accrues to him because of *Forecast*, which is now in its 29th year, but more importantly it allows him to keep the minds of influential men and women properly adjusted to the Gernsback view—something no human alive is capable of achieving without assistance from Gernsback.

Each issue of this little annual contains references to his past and his more spectacular predictions—into which certain overtones of self-congratulation sometimes creep—so that even the newest reader is not left in doubt as to its publisher's identity and place in the scheme of things. *Forecast*'s major function, however, is the dissemination of Gernsback's latest predictions, and his latest and most vehement opinions on the state of science and of civilization.

He feels certain, for instance, that the "doctor shortage" is nonsense—or could be quickly solved, at any rate, if only patients were equipped with "medi-wrist radio transmitters," which would send temperature, pulse rate, respiration and other clues as to their condition to a central monitoring station.

Neither the size, cost nor the impressive achievements of the U.S. space program prevent his giving NASA occasional advice. It is his opinion that the U.S. should immediately cease this "senseless" orbiting of the earth with manned space capsules—since the Russians, in effect, have already done it for us—and get on to the moon with all dispatch. In a recent issue he worked out plans for the transport of metals from the moon after it is explored and after mining camps have been set up there to exploit its "fantastic mineral riches." Two-way traffic will, in his view, be unnecessary. Moon colonists, if they are wise, will simply construct 50-foot, spherical, unmanned, one-way space ships of valuable beryllium, load them with 300 tons of gold and lob them into one of earth's oceans. Since each beryllium ship would float, it could easily be retrieved and, after removal of the gold, be melted down for use on earth. Total profit per ship-trip: $606 million.

Gernsback does not arrive at the sum of the year's augury for *Forecast* without steady, month-by-month cerebration. He is not, in fact, above wishing that the electronic-brain-with-memory-cells which he recently forecast were already in being to give him occasional assistance. His expression, in its absence, is habitually grim. "Mr. Gernsback," says a merchant on Manhattan's West 14th Street who has watched the prophet heading for his office every morning for years, "always looks as though he is carrying the world on his shoulders." The statement needs only minor editing. For complete accuracy delete "always looks as though" and replace "world" with "our planetary system."

Gernsback shows off a pair of "teleyeglasses," an idea he first dreamed up in 1936, for which he feels the world is now ready.