



ASTOUNDING **SCIENCE FICTION**

Reg. U. S. Pat. Off.

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Editor

JOHN W. CAMPBELL, JR.





PSEUDOSCIENCE IN NAZILAND

BY WILLY LEY

The Nazis did accomplish a remarkable series of scientific advances. Willy Ley explains, in part, how come. Nazi research seems to have been strictly on the shotgun technique; if you shoot enough holes in the unknown, something's apt to drop in your lap. And the Nazis tried everything—anything, no matter how wild!

Illustrated by Tiedeman

When things get so tough that there seems to be no way out, the Russian embraces the vodka bottle, the Frenchman a woman and the American the Bible.

The German tends to resort to magic, to some nonsensical belief which he tries to validate by way of hysterics and physical force. Not every German, of course. Not even a majority, but it seems to me that the percentage of people so inclined

is higher in Germany than in other countries. It was the willingness of a noticeable proportion of the Germans to rate rhetoric above research, and intuition above knowledge, that brought to power a political party which was frankly and loudly anti-intellectual. The Nazis not only burned books they disliked, they also classified theoretical physicists with "Jews and Marxists."

Small wonder the pseudoscientists

experienced a heyday under such a régime — but it would be a mistake to believe that these pseudosciences which I am going to describe, originated with the Nazis. They existed, and to some extent even flourished, before Hitler. But then they were hemmed in by the authority of the scientists—after Hitler had become Führer it was almost the other way round.

When speaking about German pseudoscience I am not thinking so much of the usual run of astrologers, fortune tellers, theosophers and devotees to occultism. Of course there was a theosophical society—or rather a few branches hurling noncompliments at one another—there were astrological magazines and presumably astrological societies. There were struggling clairvoyants, mostly struggling among themselves by way of the printed word and resulting lawsuits—I won't judge, but I should think that they should have known the outcome—and there was an occultistic magazine vainly trying to make peace and “advance the cause.”

Representatives of all these groups existed in Germany before World War I and began to flourish during World War I. They kept flourishing during the inflationary period, received a slight setback during the few years of mild prosperity in the Twenties, and flourished again during the years leading up to Hitler. Under Hitler they did not do so well and some groups were even outlawed. If my information is correct, the astrologers found themselves among the outlawed groups, although everybody inside Germany

as well as outside knew that Hitler and Himmler had a personal astrologer, reportedly a man whose name happened to be Führer, a Dr. W. Führer who also was “Plenipotentiary for Mathematics, Astronomy and Physics.”

The pseudosciences I have in mind are not these internationally distributed permanent fads, but some which originated in Germany and, while not completely unknown elsewhere, had a special appeal to Germans, in about the same sense in which it might be said that the pyramidologists are a British prerogative.

Much of their appeal must have been based on semantic connotations; it is difficult even to translate the names of these “sciences” properly.

The most important of them were *Pendelforschung* — Pendulum Research, *Hohlweltlehre* — Hollow Earth Doctrine, and *Welteislehre*—usually abbreviated as WEL, translatable approximately as World Ice Doctrine. But before devoting any space to these more outstanding “achievements” I have to clean up a few minor but not less surprising matters.

In the days before the Nazis became important the term “Ariosophy” could be seen occasionally in some newspapers. Then, one day, there was a small ad, announcing a lecture on Ariosophy by a man whose name I forget. It was stated that he was a disciple of the founder of Ariosophy, Dr. Jörg Lanz von Liebenfels. It was also stated that

priests would not be admitted to the lecture.

The lecturer, who tried hard to look like Albrecht Dürer, the famous but long-dead German painter, began his lecture with the statement that there were several human races but that skin color is not the most important criterion for distinguishing the races. Then he launched into an explanation of the hidden importance of language, saying that figures of speech contain deep truths which, in everyday usage, are usually overlooked. People say, for example, "I can't stand that man's smell" — remember, the lecture was in German, where that figure of speech is used to express personal dislike for somebody, a dislike lacking specific rational reasons — well, that just indicates the otherwise forgotten fact that the various races have different smells, in short it expresses revulsion at the other man's race.

By that time the lecture had got around to the word 'Man — in German *Mensch* — and he pointed out that there was a rare word *manschen* which means to mix—something unsavory—and with a long jump from linguistics into the Bible *manschen* and *Mensch* were connected. Humanity, it turned out, was the result of a—forbidden—mixture of angels and animals. Each person has a small percentage of angel and a large percentage of animal. The races indicate roughly what the percentages are, a "true race" consists of individuals of about the same percentage which seek each other out. Obviously any small community is apt to

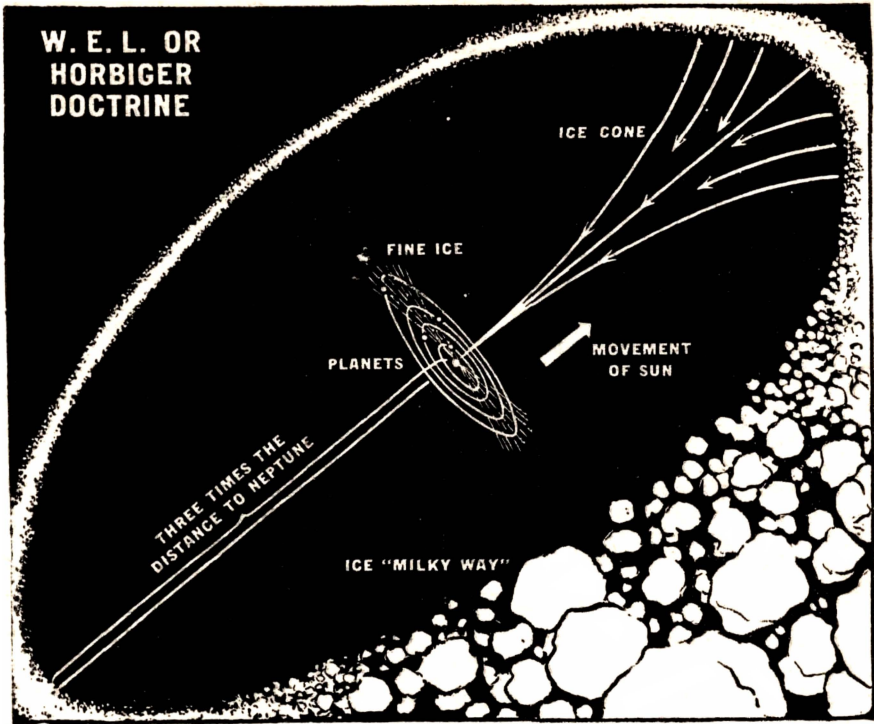
harbor individuals of about the same "race"; pure Aryans, like, for example, the inhabitants of mountain villages in Norway, may be as high as one per cent angel.

You can easily see how and where such dream-reasoning fitted into the Nzai philosophy; to my surprise no Party Group or Nazi community ever erected a statue in honor of Dr. Jörg Lanz von Liebenfels — whose real name may have been Ignaz Donnerwetter.

The Ariosophers could at least quote a few Biblical passages in support of their ideas—they stated that their founder had been a Catholic priest before "he saw the light." The next group was literally founded upon a novel. That group which I think called itself *Wahrheitsgesellschaft* — Society for Truth — and which was more or less localized in Berlin, devoted its spare time looking for *Vril*. Yes, their convictions were founded upon Bulwer-Lytton's "The Coming Race." They knew that the book was fiction, Bulwer-Lytton had used that device in order to be able to tell the truth about this "power." The subterranean humanity was nonsense, *Vril* was not. Possibly it had enabled the British, who kept it as a State secret, to amass their colonial empire. Surely the Romans had had it, inclosed in small metal balls, which guarded their homes and were referred to as *lares*. For reasons which I failed to penetrate, the secret of *Vril* could be found by contemplating the structure of an apple, sliced in halves.

No, I am not joking, that is what I was told with great solemnity and

W. E. L. OR HORBIGER DOCTRINE



secrecy. Such a group actually existed, they even got out the first issue of a magazine which was to proclaim their credo. (I wish I had kept some of these things, but I had enough books to smuggle out as it was.)

And now we are ready for *Pendelforschung*.

As translated above, the word means Pendulum Research, which sounds like a serious scientific occupation—say a branch of mechanics. What it meant was this: if you suspended a piece of gold, say a plain wedding ring, from a thread of pure silk, the pendulum would reveal “secrets.” To work it you placed both elbows on the table and placed the

fingertips of your two hands together, fingers slightly spread apart. The silk thread was put between the tips of the middle fingers and then an object, say a photograph, was placed upside down under the suspended ring. After a little while the pendulum would describe a figure, either a circle or an ellipse. The circle was male, the ellipse female. The figure corresponded to the sex of the person on the picture.

If it didn't, the picture either showed a very masculine woman or a very feminine man. The method could be used to establish whether two people who wanted to get married, would harmonize, whether em-

ployer and employee would get along and a thousand other things. I was informed, for example, why my wrist watch did not want to go. It was "male" too. Later, an uninitiated watchmaker also found a bent shaft.

For further development see the report by Gerard P. Kuiper on "German Astronomy During the War," published in *Popular Astronomy*, Vol. LIV, No. 6, June, 1946:

Other groups (of the German navy) including officers of flag rank, supported *Pendelforschung*: a large map of the Atlantic was spread out horizontally, with a one-inch toy battleship as test object. A pendulum, consisting of a cube of metal about one cubic centimeter and a short string, was swung above the battleship. If the pendulum reacted, it proved the presence of a true battleship at that location.

The *Hohlweltlehre*—Hollow Earth Doctrine—was invented, as far as I was able to find out, in about 1920. Its main tenet was: the Earth is real, everything else is an optical illusion. The Earth was a spherical bubble, of the same dimensions which "orthodox geography" ascribes to it, in an infinity of solid rock. Humanity lived on the inside of that bubble which was precisely like an "orthodox globe," but seen from the inside. Three bodies moved near the center of that empty bubble, the Sun, the Moon, and the "phantom Universe," a dark-blue sphere with little lights on it, mistaken for the fixed stars. Night was caused by the phantom Universe obscuring the Sun for a part of the Earth; eclipses by the shadow of the phantom Universe falling upon the Moon.

The "wrong impression" which we have about the Universe is caused

by the mistake of thinking that light rays are straight. All rays are always curved, their radius of curvature being on the order of $\frac{1}{4}$ of the Earth's radius. Because of the curved rays we see distorted projections of things which result in the "astronomical universe" because we always straightened the light rays out. More distortions result from the fact that violet rays have a stronger curvature than red rays.

And now a direct quote — from memory — from the final chapter of the treatise I saw: "Old folk tales often speak of the time when God still walked on Earth. We know that the Earth-Universe expands, even Einstein admits that. What is more logical then, than to take the old folk tales at face value and assume that they refer to a time when the Earth-Universe was smaller and the distance from the central luminosities to the surface less than it is now?"

For further developments here is an excerpt from Gerard P. Kuiper's report:

Certain German naval circles believed in the *Hohlwelttheorie*. They considered it helpful to locate the British fleet, because the curvature of the Earth would not obstruct observation. Visual rays were not suitable because of refraction; but infrared rays had less refraction. Accordingly a party of about ten men under the scientific leadership of Dr. Heinz Fischer, an infrared expert, was sent out from Berlin to the isle of Rügen to photograph the British fleet with infrared equipment at an upward angle of some forty-five degrees.

The remaining phenomenon of German pseudoscience, the *Welteislehre* or WEL is in many respects

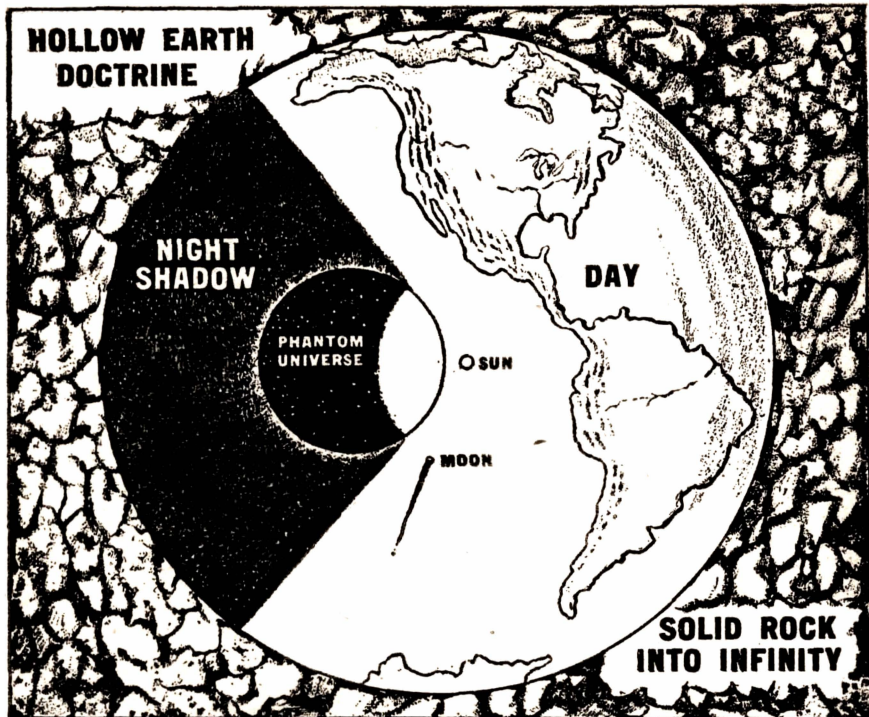
the most remarkable. It had literally millions of fanatical supporters who would interrupt educational meetings with concerted yelling, "Out With Astronomical Orthodoxy, Give Us Hörbiger," it owned and maintained an Information Bureau in Vienna, it maintained a monthly magazine—*The Key to World Events*—of large circulation, it produces three or four "scientific," close to forty "popular" books and several dozen throw-away pamphlets. The leaders of the WEL wrote openly threatening letters; I once saw one—not addressed to me—in which the director of a government institute was told "once we have won, you and your kind will go begging." And the founder of it all, Hanns Hörbiger, with whom I was in correspondence about rockets for some time, bared the WEL's chief doctrine once in a letter in which he wrote: "either you believe me and learn, or you must be treated as an enemy." And I know of a minor businessman who hired help only if the prospective employee, to use his own words, "had assured him that he or she felt friendly about the World Ice."

It was in 1913 that one Philipp Fauth, school teacher and amateur astronomer—with some reputation as a Moon specialist—published a book of about eight hundred pages, about the size and weight of one volume of the *Britannica*. It was entitled *Hörbiger's Glazial-Kosmogonie*. Much of it had actually been written by Hörbiger, an Austrian mining engineer who at first said very politely that he had tried to solve the riddles of the Universe,

especially the formation of planets, geological history and meteorology with engineering principles. Later on he claimed that recognition had been denied him because he was an engineer and not an astronomical theorist. I may add that both his publications and his letters revealed clearly that he was not even a good engineer.

The outbreak of World War I killed interest in this first publication which was later referred to as the Main Work. After the first World War Hanns Hörbiger, equipped with a long white beard and a handwriting which was calculated to impress amateur graphologers, appeared on the scene like a political party, with leaflets and posters, publicity machinery and everything. If anybody doubted him he shouted: "Instead of trusting me you trust equations! How long will you need to learn that mathematics is valueless and deceptive?" The "practical engineer" Hörbiger never calculated anything, it was his loudest and proudest claim.

One of his pupils, an architect, told awed and large audiences that Hörbiger's information about the true state of the Universe was based entirely on intuition. As a boy, he said, the Master had a small telescope with which he looked at the Moon. Then, suddenly, he realized that what he saw was ice, cold ice, the whole Moon was made of ice. He glanced at blinding Venus which was still in the sky; Venus too was cold and brilliant ice. Years later, Hörbiger was asleep, dreaming about astronomy. He saw the Earth as a pendulum suspended from a lumi-



nous thread and saw it swing, in longer and longer swings. It swung to Jupiter, and to Saturn and beyond, but when it swung to three times the distance of Neptune the string broke. Hörbiger awakened and realized that the Sun's attraction stops at that distance.

When I asked Hörbiger by mail whether these claims were true, he replied modestly saying, "Yes, that way the truth was revealed to me, but the clue factor was when, as a young engineer, I saw molten iron run over waterlogged earth with patches of snow on it and observed that the wet lumps of soil exploded with a delay and with great violence."

What did Hörbiger actually say? Here is his tale:

Many millions of years ago there existed in the constellation Columba a super giant sun, millions of times as large and heavy as our sun. Near that sun there was a gigantic planet, many times as heavy as Jupiter, covered by layers of ice hundreds of miles thick and water-logged all through. This planet fell into its sun and settled at a depth corresponding to its specific gravity. Its water and ice was changed into super-heated steam, but nothing happened for more millions of years. Then the equilibrium was disturbed for some reason, and the super-

heated steam blew the old planet and the layers of sun material above it into space, as a whirling mass. This was the birth of our sun and our solar system. Much of the original planet mass had been metal oxides, the heat released the oxygen and the oxygen combined with the thin atmosphere of hydrogen which fills all space into water which then froze.

Through many successive stages our solar system evolved, with more than thirty planets. Surrounding the system at about right angles there is a mighty ring of blocks of cosmic ice, hovering a little beyond three times the distance of Neptune. It is this ring of ice blocks which astronomers believe to be the Milky Way because a few normal stars like our sun shine through the ice ring. Actually the Milky Way has never been and will never be resolved in a telescope; photographs claiming to show the individual stars of the Milky Way are fakes. Because of the resistance of the hydrogen in space a number of these ice blocks is sufficiently retarded to be caught in the Sun's gravitational field and finally to fall into the Sun. Each such ice block impact causes a sunspot—even astronomers admit that the sunspots are cooler than their surroundings—and the sunspots have an eleven-year cycle because of Jupiter who needs the same time to circle the Sun.

Of planets there are two types, the Heliodes or inner planets, mostly metal and metal compounds, and the Neptodes or outer planets, consisting almost entirely of ice. Hence their low specific gravity, which is

about that of ice.* If an ice block on its way to the Sun happens to hit Earth, we get a devastating hailstorm, as proved by the fact that hailstorms often move in straight lines. But the ice block which fell into the Sun does not stay there, it evaporates and is blown out through the funnel of the sunspot as a jet of hot-water vapor which freezes in space and forms the Fine Ice. Both Mercury and Venus, being so close to the Sun, are completely covered with it. When it hits Earth, the Fine Ice produces those very high cirrus clouds, in fact the diameter of Earth would grow by about six inches every year because of Fine Ice if water did not disappear in the Earth's interior at the same rate.

Earth's position is unique, not only because of that lucky balance. * If it were closer to the Sun, it would be covered by Fine Ice like Venus. If it were farther out, it would be hit more often by ice blocks and be covered by an ice ocean several miles deep like Mars. The continents of Mars are merely permanent ice continents, the canals are cracks in the ice. Our Moon is covered with ice like Mars, being originally an independent planet which has been captured. Because of the resistance of the hydrogen in space, the Moon will ultimately crash on Earth; that will be the end of all life. Several smaller moons preceded our Moon, fortunately they were too small to kill all

* I asked Hörbiger about Saturn whose average density is less than that of water. Hörbiger replied that "orthodox astronomers" would probably say that they don't know the height of the atmosphere, but that he would explain later why Saturn is in a gravitational shadow.

life; their masses formed what we now call geological deposits.

The most recent Moon cataclysm was witnessed by primitive Man; the Norse legends about Götterdämmerung and the apocalyptic visions represent attempts to describe this event. They were written after the present moon had been captured—its capture caused Atlantis to sink—and the people who wrote them knew that the experience of the past was also a prophecy of the future.

To pick flaws in this theory is about as easy—and as pleasant—as gathering Japanese beetles from an infested flowerbed. At first German scientists amused themselves by compiling long lists of Hörbigerian impossibilities. But they grew serious and even alarmed when the WEL suddenly assumed the proportions of a powerful popular movement in pseudo-intellectual circles. And after Hitler had come to power, the WEL adherents declared threateningly that now everybody **MUST** believe Hörbiger, or else. "Our Nordic ancestors grew strong in ice and snow; belief in the World Ice is consequently the natural heritage of Nordic Man." "Just as it needed a child

of Austrian culture—Hitler!—to put the Jewish politicians in their place, so it needed an Austrian to cleanse the world of Jewish science." "The Führer, by his very life, has proved how much a so-called 'amateur' can be superior to self-styled professionals; it needed another 'amateur' to give us complete understanding of the universe."

Maybe Hitler did not like the term "amateur," at any event the WEL people did not find the going as easy as they had hoped. The Propaganda Ministry even stated once that "one can be a good National Socialist without believing in the WEL." The astronomer Robert Henseling continued to struggle against the WEL, universities continued to teach "orthodox astronomy," but the WEL remained popular to the bitter end. The WEL claimed that its principles permitted reliable "general"—as distinct from local—weather forecasts for months and even years in advance. Their organization did publish such forecasts, and a good number of young meteorologists toyed with the World Ice. But they failed to foresee that winter which broke Hitler's back on the Russian plains.

THE END.