

III. POINT - COUNTERPOINT

It is very difficult in a report like this to express adequately the wide variety of opinions that exist on UFOs. The range goes from the late Donald Menzel who thought there was no possibility that we are being visited by extra-terrestrial beings, to Donald Keyhoe who is certain that we are. In the middle would be someone like J. Allen Hynek who is more disposed toward the view that there is value in studying UFOs if for no other purpose than learning more about atmospheric processes, psychology, and other scientific fields.

This chapter presents some of these various views on different aspects of the UFO problem. If one were to make a spectrum with "true believers" on the left and "true nonbelievers" on the right, the four men who are the subjects of this discourse would appear in the following order: Donald Keyhoe, J. Allen Hynek, Carl Sagan, and Donald Menzel. This is, of course, only a rough estimation of where their positions lie, but will serve as a guide. Four essays are offered, and since each stands alone, they admittedly present only one side of the issue. That is the purpose of this chapter, however, so no attempt is made to balance their views.

A. PROBABLE INVALIDITY OF THE EXTRATERRESTRIAL HYPOTHESIS

Carl Sagan, an astronomer and biologist presently at Cornell University, has been a leader in the field of guessing at how many other intelligent civilizations exist in our galaxy. After a series of long computations (the nature of which have no real relevance to this report) he estimates one million other

intelligent, technical civilizations at least as advanced as ours. But Sagan also is one of the leading opponents of the extraterrestrial hypothesis for UFOs. Is this a contradiction?

To demonstrate his point, Sagan uses the "Santa Claus hypothesis" from the fable that each year, in a time span of about eight hours, an "out-sized elf" visits over a hundred million homes in the United States depositing presents. Sagan calculates that if Claus spends only one second per house, he would have to spend three years just filling stockings, not counting the time spent going from house to house.

This is an example of hypothesis testing independent of reindeer propulsion mechanisms or debates on the origin of elves. We examine the hypothesis itself, making very straightforward assumptions, and derive a result inconsistent with the hypothesis by many orders of magnitude. We would then suggest that the hypothesis is untenable. 32/

Applying this to UFOs, and considering how many "interesting places" there are in our galaxy, he then calculates the number of launches required from his one million galactic civilizations in order for Earth to be visited just once a year: each civilization would have to make 10,000 launches per year. Besides being an enormous technical feat, it would impose a large drain on material resources.

For those who argue that Earth might hold special interest for another civilization, Sagan counters that, at best, certain specialists in, for example, nuclear weapons, would want to visit us. After all, if we discovered a primitive tribe in Africa making fish nets, only anthropologists interested in fish net development would visit the tribe. He considers the idea that we are "special" to the galaxy inconsistent with the theory that there are a million other civilizations

32/ Sagan, Carl. The Cosmic Connection. Garden City, New York, Doubleday, 1973. p. 200.

in the Milky Way alone, not to mention the rest of the universe (there are approximately 10^{11} stars in the Milky Way and 10^{11} galaxies in the known universe). With that many civilizations, what could we have that is so interesting?

Sagan does not entirely dismiss the possibility that we may have been visited in the distant past or that we might be visited in the distant future. Again using the guesstimate of a million other civilizations in this galaxy, if each one launched one ship per year "and even if all of them could reach our solar system with equal facility, our system would, on the average, be visited only once every 100,000 years." 33/

He recounts the history of Sumer, which was perhaps the first civilization, using the contemporary definition of that word. There have been suggestions that they could not have learned skills such as written language, mathematics, and astronomy without a teacher, and that teacher came from another world. Referencing a theory by Drake and Clarke, Sagan adds that the extraterrestrial instructors might have left a "technology monitor beacon" to alert them once we reached a certain technological level. The monitor might measure radioactivity in the atmosphere, for example, and the instructors would know it was time for them to return. At this point Sagan refers back to his comments about the great distances involved in space, and even if speed-of-light travel were possible, it would still take hundreds of years for them to arrive: "we will have to wait until A.D. 2300 or 2400 for their response." 34/ He does not, however, accept the von Daniken theory of ancient astronauts and the relics purportedly left behind.

33/ U.S. Congress. House Committee on Science and Astronautics. Symposium on Unidentified Flying Objects, op. cit., p. 94.

34/ Shklovskii, I. and C. Sagan. Intelligent Life in the Universe. San Francisco, Holden-Day, 1966. p. 463.

He feels each object has "a variety of plausible, alternative explanations. Representations of beings with large, elongated heads, alleged to resemble space helmets, could equally well be inelegant artistic renditions, depictions of ceremonial head masks or expressions or rampant hydrocephalia." 35/

In answer to what people are seeing, Sagan draws on one of his own experiences.

Once when I was on the faculty at Harvard I gave a popular lecture on something or other, and in the question period at the end there were some questions about UFO's. I said that I felt at least a great fraction of them were misapprehended natural phenomena. For some reason that I don't understand, policemen are present at all such public gatherings, and as I walked out after the last question, two policemen outside the lecture hall were pointing up at the sky. I looked up and observed a strange brilliant light moving slowly overhead. Of course, I got out of there fast, before the crowd came out to ask me what it was. I joined some friends at a restaurant and said, 'There's something terrific outside.' Everyone went outside. They really liked it--it was great fun. There it was. It wasn't going away. It was clearly visible, slowly moving, fading and brightening, no sound attached to it. Well, I went home, got my binoculars, and returned. Through the binoculars I was able to resolve the lights; the bright white light was really two closely spaced lights, and there were two lights on either side, blinking. When the thing got brighter we could hear a mild drone; when the thing got dimmer, we couldn't hear a thing. In fact it turned out to be a NASA weather airplane.

B. ALLEGED AIR FORCE SECRECY AND COVER-UPS

When the Air Force was given responsibility for investigating the matter of UFOs in 1948, it instituted a policy of secrecy which came under attack from several directions. Donald Keyhoe, a retired Marine Corps Major, was one of the leaders in trying to expose the information he felt certain the Air Force had. Some of the Air Force reports are explained in other parts of this paper, and

35/ Sagan, Cosmic Connection, op. cit., p. 205-206.

indeed most were kept secret (the Project Sign "Estimate of the Situation," the Robertson Panel's conclusions, and most of the UFO sighting reports, for example).

As someone interested in showing the public that UFOs are for real, Keyhoe found the Air Force a major stumbling block and tried on many occasions to expose their operation. He wrote magazine articles and books, culminating in 1973 with an overview of the entire affair entitled Aliens from Space. In that book he goes through the years of Air Force secrecy and what he called "cover-ups" of incontrovertible evidence that Earth is being visited by spaceships from other worlds.

Keyhoe stated that in December 1969, when the Air Force announced that all UFO cases were solved and cancelled Project Blue Book: "At that very time, AF interceptor pilots were trying to bring down these unknown flying objects by secret orders of the Aerospace Defense Command." ^{36/} He further said that the Air Force continued to investigate incidents even after 1969, concealing their activities from everyone, including Congress.

Some of the early Air Force records were made available in 1967, and NICAP (under the leadership of Keyhoe at that time) published Blue Book Reports 1-12. Keyhoe stated, and copies of the NICAP publication bear out, that the reports were stamped SECRET or CONFIDENTIAL along with a warning statement that if the contents were transmitted to unauthorized persons, it was a crime under the Espionage Act.

Keyhoe discussed cases which do not show up in other literature, involving, for example, jet crashes. He stated that on July 1, 1954 an F-94 Starfire jet was scrambled by Griffiss AFB to intercept a UFO. As the pilot closed

^{36/} Keyhoe, Donald. Aliens from Space. New York, Doubleday, 1973. p. 3.

on the object "Abruptly a furnacelike heat filled both cockpits. Gasping for breath, the pilot jettisoned the canopy. Through a blur of heat waves he saw the radar observer bail out. Stunned, without even thinking, he ejected himself from the plane." The F-94 reportedly crashed in a town, killing four people and injuring five. Keyhoe said this report was still buried in Air Force files, classified SECRET. 37/

Keyhoe also claimed in his book that during the early fifties, the CIA wanted to take over UFO investigations from the Air Force, and they were the ones that first ordered the debunking campaign. The Robertson Panel was the first step in this process, according to Keyhoe and Major Dewey Fournet (Air Force Headquarters Intelligence Unit) was planning to "give the public the facts" but was foiled by the CIA. They ordered him to work up a "national debunking program" and make UFO reports sound like "poppycock." Keyhoe states that similar actions of secrecy and cover-up extended throughout Project Blue Book (including during the Condon study) and continued into the 1970s.

C. HOAXES AND WITNESS CREDIBILITY

The late Donald Menzel, an astrophysicist at Harvard, opposed the UFO "myth" from the early 1950s until his death in 1976. Among the many other problems facing investigators of unfamiliar aerial phenomena are the deliberate hoaxes perpetrated for publicity purposes, and the teen-age pranks. Twenty years ago, Menzel discussed the hoaxes, and explained their origin this way:

The Arnold story was scarcely 24 hours old before the hoaxers, jokers, and publicity seekers of the Nation moved in. The subject matter lent itself admirably to such activities. People had seen saucers in the sky. People wanted to see more. And so the jokers started tossing wheelshaped objects of all sorts and descriptions

37/ Ibid., p. 28.

from the tops of tallest buildings. These activities produced the desired result. The women screamed, as they were supposed to do on such occasions. The men--at least after they realized that the object would not explode--bravely picked it up and showed its true nature. 38/

The most popular hoax seems to be the photograph, for it is considered hard evidence by UFO investigators, although the number of fakes reduces the believability of such "evidence." Menzel discussed the Trindade incident which took place in 1958, wherein the claim was made that the crew of a Brazilian ship had seen a UFO, and a civilian aboard the ship had photographed it. As it turned out, no crew member had seen the UFO, only the photographs of it, and the pictures were considered fraudulent. The three witnesses who had seen the UFO all reported that it was brilliant, but the photos showed only a gray shape. In the one picture that suggested a shape, the mountains in the foreground were quite clear, whereas the UFO was just a dark line with an "indistinct beginning and end, with a faint suggestion of rounding at top and bottom." The photographer was found to have no connection with the Brazilian Navy and was indeed a professional photographer specializing in trick photography. 39/

The pranks add to the noise in the UFO problem, and Menzel provided an excellent example of one, for it also relates to witness credibility. In January 1968, 12 witnesses saw a UFO in Castle Rock, Colorado, a small town 30 miles south of Denver. Their descriptions ranged from "all of a sudden about a dozen lights shined on me, all the color of car headlights that had mud on them"; "a big, real bright light. Not a brilliant light, but a bright one" which moved at different speeds and seemed about 600 feet high and at least 25 feet in

38/ Menzel, Donald and Lyle Boyd. The World of Flying Saucers: A Scientific Examination of a Major Myth of the Space Age. Garden City, New York, Doubleday, 1963. p. 206-216.

39/ Ibid.

diameter; and an egg-shaped bubble about 50 feet long, 20 feet wide and 20 feet deep. Two days later a "slightly embarrassed" mother came forward to explain that her sons had built the UFO from a clear plastic dry-cleaning bag. 40/

The "ludicrously long" size estimates are part of a fault existing in many UFO reports, according to Menzel, and in addition are perceptual problems common to most observers of a strange, sudden phenomenon. Menzel addressed himself to sensory difficulties both in a statement for the 1968 House Science and Astronautics hearings, and at the 1969 AAAS symposium. He gave the following example: A child gets up to go to the bathroom in the middle of the night and turns on a light. One of his parents awakens, is blinded by the sudden illumination, the light goes off, and the parent happens to glance out the window.

He is startled to see a peculiar spot of light floating over the trees and making irregular, jerky motions. He watches the UFO for a minute or two until it finally disappears.

He cannot be blamed for failing to realize that the erratic and often rapid movement of his UFO are those of the after-image, drifting with the similar movements of his own eye. 41/

Among the many mundane objects that are reported as UFOs, Menzel listed birds, kites, hats, paper, plastic sacks, feathers, spider webs and seed pods. He commented that "If you want to see flying saucers just look up."

D. POSSIBLE BENEFITS TO SCIENCE FROM A UFO STUDY

Dr. J. Allen Hynek has had a long association with UFOs. As an astronomer at Ohio State University, he was asked by the Air Force to determine which UFO reports came from known astronomical objects. When Project Blue Book was formed,

40/ Menzel, David. UFOs: The Modern Myth. In Sagan and Page, op. cit., p. 132-3.

41/ U.S. Congress. House. Committee on Science and Astronautics. Symposium on Unidentified Flying Objects, op. cit., p. 202.

Captain Ruppelt formally contracted Hynek to continue that work. His views on the subject have changed during his many years of UFO investigation, and many would now classify him a believer. One of his strongest arguments has been that regardless of whether UFOs are alien spacecraft, the study of UFOs could lead to a greater understanding of other fields of science, such as psychology and physics.

As a scientist himself, Hynek is aware of the methodology needed to deal with the subject and he is also aware of the variety of views of the scientific community. In the latter area, he distinguishes between two classes of scientists who work with the UFO problem:

(1) those scientists who treat the UFO phenomenon with ridicule and contempt, refusing even to examine it, denouncing the subject out of hand; and (2) those scientists who maintain--or might come to believe after examination--that there is a strong possibility that UFOs are purely psychological phenomena, that is, generated wholly by individual or group mental activity. (No scientist who examines the subject objectively can claim for long that UFOs are solely the product of simple misidentification of normal objects and events). 42/

He feels the latter group's views are entitled to discussion and debate, although the views of the former group are not, since they have not examined the data.

Paucity of data is another concern for Hynek. He feels some of this lack of hard core information is due to the investigator not asking questions that would draw such information from the witness. There is also the "signal-to-noise" problem in which the investigator has to separate real UFO reports (the signal) from hoaxes and misidentifications (the noise). But Hynek points out that astronomers are well accustomed to such problems, for they have instrumental errors and atmospheric distortion to contend with.

42/ Hynek, J. Allen. The UFO Experience: A Scientific Inquiry, op. cit., p. 7.

That so many of the UFO reports are interpreted as extraterrestrial vehicles, Hynek feels is "obviously unwarranted without a detailed study of the content of reports of unidentified sightings. . . . For, the 'U' in UFO simply means unidentified, and may cover a wide range of unrelated causes." 43/

Throughout his writings, Hynek refers back to some of the great scientific discoveries in the history of our planet, and how unlikely they seemed at the time. For example, the discovery of radium by Mme. Curie.

Let us suppose that . . . there had been a rumor--an old wives' tale, or an alchemist's story--that there existed a miraculous unknown element which could be used in the transmutation of elements, and which had miraculous healing powers and other exotic properties. Would any scientist, . . . have done what Mme. Curie did to lift the signal out of the noise of tons of pitchblende? Hardly, Mme. Curie knew that there was a signal--it wasn't a rumor. 44/

In hearings before the House Science and Astronautics Committee, Hynek asked, "Can we afford not to look toward the UFO skies; can we afford to overlook a potential breakthrough of great significance?" and later added that even though he can only draw conclusions from reliable data, he is allowed a hunch, and that hunch tells him that "there is scientific paydirt in the UFO phenomenon--possibly extremely valuable paydirt--and that therefore a scientific effort on a much larger scale than any heretofore should be mounted for a frontal attack on this problem." 45/

As to which discipline the effort belongs, Hynek suggested an interdisciplinary approach. He found the field more akin to astronomy than physics in that the data are mostly observational, not experimental, and one cannot predict

43/ Hynek, J. Allen. The Emerging Picture of the UFO Problem. Presented to AIAA 13th Aerospace Science Meeting, Pasadena, Calif., Jan. 20-22, 1975. New York, American Institute of Aeronautics and Astronautics, 1975. p. 3.

44/ Ibid., p. 2.

45/ U.S. Congress. House. Committee on Science and Astronautics. Symposium on Unidentified Flying Objects, op. cit., p. 6 and 14.

when something will occur. He suggested that if UFOs do turn out to be extra-terrestrial, the behavioral sciences would certainly prove valuable. He asked for an international effort to establish world-wide trends, stating that if definite patterns are established "the probability that such correlations happened by chance . . . would be vanishingly small. The probability, therefore, that the UFO represents something truly new in science--new empirical observations--would be a virtual certainty. 46/

46/ Hynek, UFO Experience, op. cit., p. 227.