

What Could UFOs Be?

Introduction to *Uninvited Visitors: A Biologist Looks at UFOs* (1967)

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HUMAN BEINGS TAKE a long time to accept anything new. Assuming that we, as human beings, evolved over some three million years and arose with an ever-increasing intelligence from a long line of less complex life forms, we have displayed, on our time scale at least, a rather slow and very hesitant progress in gaining knowledge of our environment. New concepts are few and far between, and their acceptance comes slowly.

The development of intelligence, which is nothing more than an enhanced appreciation of the realities around us, was a gradual process—and a very gradual one, at that. However, it seems that, once started, it developed by geometrical progression—slow to start but gathering momentum the longer it continued, until today knowledge is leaping ahead by the four-times-four-times-four-forever rate.

Our acceptance of any new concept always seems to pass through three phases: At first, it is declared impossible. Then, as supporting facts accumulate, their interpretation is said to be erroneous. But finally, everybody says blandly, “We knew it all the time.”

A classic example is the history of our understanding of meteorites. Since the time of the Stone Age, simple folk were convinced of the fact that not only stones but hunks of metal from time to time fell from the sky. Several of these hunks of metal were preserved and worshiped by even quite advanced peoples as manifestations of supernatural powers or forces. Iron meteorites were preserved in the temple at Ephesus in Asia Minor in ancient Greek times, and at Medina in Arabia centuries before the time of Mohammed. However, when man first tried to organize knowledge on what we call a “scientific” basis, his then current logic decreed that the idea of stones falling from the sky was to be rejected, on the seemingly logical grounds that, since there are no stones in the sky, none can fall from there!

Today, we may smile at such reasoning. But let us not forget that true knowledge only comes slowly, and our capacity to absorb it grows even more slowly. At the same time, man is a great “believer,” but unfortunately for the most part not on logical grounds, and also perhaps unfortunately for him, reality is no respecter of beliefs. Nature, life, and the universe just go evenly on, no matter what man believes at any point. Thus, when stones persisted in falling from the sky, the beliefs of many people were terribly shaken. Now, similarly, other things that in a sense may be said to “fall from the sky” have finally created a comparable situation. I am referring, of course, to the things that have now become popularly known as UFOs, or Unidentified Flying Objects.

Like meteorites, these things appear also to have been “coming down out of the sky” since time immemorial. They too were for thousands of years quite acceptable to humanity at large and were also sometimes worshiped. But they likewise were relegated to the limbo of impossibility when we started trying to patternize and formalize our environment in conformity with our beliefs, and for the same seemingly logical reasons.

Then, about twenty years ago, people started pointing out that, despite whatever beliefs anybody might have about this matter, unidentified objects continued to appear in our sky. Sciencedom (which is to say the established body of professional science and technology) was forced to accede to this fact. But most scientists made it quite clear that they felt all reports on such things were misinterpretations of other accepted facts. However, since no satisfactory explanations of these misinterpretations were forthcoming, they are finally being forced into the third phase of acceptance (“we knew it all the time”).

In this regard, the name of one man should certainly go down in history—that of Dr. J. Allen Hynek, Professor of Astronomy at Northwestern University, who, after nearly twenty years of scientific study of UFOs

on behalf of the U.S. Air Force, publicly announced before a special hearing of the House Armed Services Committee that, in his opinion, the study of UFOs has been grossly neglected by scientists, and that it not only warrants, but demands, most urgent attention. And more recently, in line with Hynek's startling expression, the Department of Defense handed the whole matter over to the scientists, with a grant for setting up a research project under the aegis of the famous physicist, Dr. Edward U. Condon.

The question is: Will the scientists led by this new organization come up with any *satisfactory* answers?

Actually, while a perfectly legitimate question, this is somewhat meaningless until certain other questions have been answered. Are the scientists going to ask themselves what these things *could* be? Or are they going to confine their inquiries to research on what already has been reported? Just how broad a view of the possibilities are they going to take?

A serious cause of doubt arises from the fact that the scientists Dr. Condon has assembled are either, like himself, physicists, or they are, of all things, human psychologists, which is to say psychologists studying *human* behavior. If, as I believe the evidence shows, this whole business of UFOs is a *biological* matter, then natural phenomena within the province of the physicist—such as plasma balls, swamp gas, hot-air inversion, and “fireballs”—automatically drop out of the picture. I believe that what the scientists are now going to investigate is basically a biological matter simply because either *some* UFOs—and please note this qualifying word—are themselves life forms, or they are all machines. If they are machines, they must have been made by a life form, though not necessarily an intelligent one, as we shall see. And this brings up some further questions.

Most of us, especially in this country, have an almost childish belief that there is an answer to everything, and we even more erroneously believe that there can be but one answer. But life is enormously complex and complicated. The universe is infinite; the number of universes may also be infinite. Thus, the number of possible answers to any problem may also be infinite.

Science, which the dictionary defines as the pursuit of knowledge, proceeds by three major states—the *What?*, the *How?*, and the *Why?* Put in other terms, this means that first there is a collecting stage that leads to a classification system. Second, a period of testing replicates observed facts with a view to establishing theories as to how the facts should be organized. Finally, we inevitably ask, “Why?”

There is another way of putting this that is today regarded as rather old-fashioned but which is still quite valid. It goes as follows: You can't know anything to be a fact until you have proved it. You can't prove it until you have tested it. You can't test it until you know what you are testing. You can't test anything until you have found it. And, you can't find anything until you know what you are looking for.

In other words, the pursuit of knowledge starts with *imagination*, proceeds to *search*, which should give rise to *research* upon which an *hypothesis* may be erected. From hypotheses comes *theories*, which in turn have to be tested—that is, reduplicated, on demand, by experiment—before they can be proved. Only then can any fact or body of facts be accepted with any degree of assurance. Now, you will doubtless say, and quite rightly, where does this lead us with these phenomena?

So far, in regard to UFOs, we are dealing with nothing but reports. Thus, we are still in the collecting stage, or that of the *What?* Nevertheless, this does not mean that we have nothing more to do than analyze reports. If we had waited until we “captured” an electron, we would never even have suspected that they exist. It is perfectly permissible both to apply pure imagination and to erect hypotheses about anything; and it has been our failure to do so in the case of UFOs that has held back the whole inquiry so long. Dr. Hynek rightly stated in a letter to the magazine *Science* that men of imagination must open their minds to the cosmic possibilities implied by the observation of this natural phenomenon, so that we may proceed to the vital question *How?* If we fail to do this, we will probably never even conclude the *What?* Phase of our inquiry.

A politician once made the pontifical statement that “words should convey meaning.” We all tend to endorse this pronouncement but to miss its true significance. “Emerging man”—if I may borrow a phrase—undoubtedly mumbled at his confreres in croaks and whistles, as do baboons, and communicated by hand gestures, eyelid

blinking, and other such means as are noted among other higher primates. As his awareness of his environment enlarged, however, he found a need for more complex expressions and for more refined means of transmitting these to his cohorts. Language was the result. This was a splendid innovation, but once started, led to complications. The more hominids learned, and the more they wished to communicate, the more complicated the whole business became until today we find ourselves virtually bogged down in a linguistic morass. Just consider for a moment that some 50,000 words are said to have been added to the English language between 1938 and 1948 alone. And these words just to cover scientific and technological advances!

When we are first faced with a new field of knowledge, we find ourselves literally speechless. We just don't have the vocabulary to handle it. But, being the ingenious creatures we are, we immediately set about creating a whole new lexicon. And this has already happened in the case of these phenomena of which we speak: a whole new vocabulary has been established. Moreover, it has become rather complex. We have entered an age where alphabetization—the use of abbreviation by initials—has become necessary merely to conserve paper, if for no other reason. With respect to our special subject, therefore, the current state of its special vocabulary must be put on record before we go any further.

First comes the matter of the proper title for the whole business. Unknown objects in the sky have been recorded since the inception of history, and described by a long string of varied names. The earliest civilized people who left records of these things usually referred to them either in animistic or religious terms, designating them gods or manifestations of God. Later, they were thought of as auguries or portents of one kind or another.

In what we call the Dark Ages and Middle Ages in Europe, the objects were usually referred to as omens—first of a religious nature but later as sort of sports of Nature.

In the opening phases of the modern scientific age—the eighteenth and nineteenth centuries—they were blandly listed as meteorites or fireballs. Then finally, just after the turn of this century, a remarkable man named Charles Fort took a completely new slant on the matter and rather delightfully named them OSFs—or Objects Seen Floating—in the sky. This designation is probably the best ever coined, but it never caught on popularly for the very simple reason that few people ever heard of Fort, read his works or, if they did, took them seriously.

Thus matters rested until 1947 when an Idaho businessman named Kenneth Arnold, who owned his own plane, happened to be flying in the region of Mt. Rainier in search of a downed military plane. There he encountered a group of aerial objects maneuvering at low altitude in bright sunlight. He reported this to the appropriate authorities, and the matter reached the ears of the press. Interviewed by reporters, he happened to remark that the method of progression of these objects through the air could be likened to that of a saucer skipped across the surface of a pond. Immediately, the ridiculous term “flying saucer” was born. Like so many other monikers, this was a complete misnomer from the first, for the objects themselves were, according to Mr. Arnold, in no way shaped like a saucer but were lens-shaped or circular ellipsoids. (Incidentally, the shapes of these objects appear to be almost, if not quite, endless, but the one shape that has never yet been reported is that of a saucer!)

Within a year after Mr. Arnold made his report, the government took cognizance of the matter and, it being an aerial affair, tossed it to the then U.S. Army Air Force. A project to study it was set up and named “Bluebook,” and somewhere along the line, the items to be studied were designated *Unidentified Flying Objects*. This gave us the alphabetized abbreviation, UFOs.

While the press and public continued to call these things “flying saucers” for many years, slowly the U.S. Air Force's term UFO was adopted generally. From that arose “ufology,” which was very early claimed as a science, and the designation “ufologist” for those seriously interested in the subject and having some training in scientific or technological methodologies that might have some bearing on the matter.

At the same time, another whole category of persons emerged. These persons claimed to know what UFOs were: UFOs were manned space craft piloted by benign space people who had contacted them. According to

these persons, the space people were here to tell us of all manner of impending disasters or utopias. These persons became known as “contactees.”

The contactees made a tremendous amount of noise, and not a little money, lecturing on their alleged experiences and spreading the gospel, despite the fact that not one of them ever produced any substantial proof that anything they said was based on reality or actuality.

Rather naturally the contactees also led the press, the public at large, and, it seems, the government to take a dim view of the whole business and to regard it as nothing more than some crackpot outburst of postwar hysteria. The actions of these people certainly confirmed the scientific establishment in its already expressed opinion that the whole field of ufology was complete nonsense. The study of these phenomena has suffered greatly as a result.

In the public mind, even serious-minded investigators were put into the general category of crackpots. These serious-minded inquirers sought neither the publicity nor the profits that the contactees did. They were mostly scientists and technologists, or writers and editors. They formed some hard-core organizations, the first of which named itself Civilian Saucer Intelligence, or CSI, of New York (now disbanded), and the longest-lasting is the Aerial Phenomena Research Organization, or APRO, of Tucson, Arizona, inspired and maintained by L. J. and Coral Lorenzen. The other most prominent in this country—and by far the most active, aggressive, and vocal—is the National Investigations Committee on Aerial Phenomena, or NICAP, of Washington, D.C. NICAP was taken over in 1954 by Major Donald E. Keyhoe, U.S. Marines, Ret., a pilot and onetime member of the Civil Aeronautics Board (CAB). There are a number of serious-minded organizations of long standing in other countries (a list of which his included in Appendix B).

All these organizations (with the exception of APRO), the world press, and most air forces continued to call *all* the aerial phenomena UFOs. However, this is almost as much a misnomer as the absurd “flying saucers,” on two counts. First, none of these objects *fly* as do birds, airplanes, or even rockets, but they do just about everything else! Second, the general term UFOs covers two quite separate things: (1) *objects*, and (2) *phenomena*.

Thus, the objects may be properly designated as UAO’s or *Unexplained Aerial Objects*. In other words, they are material things, the nature of which has not yet been explained.

On the other hand, there are reports of many phenomena—other than objects—in the sky. These phenomena range in variety from what we can only call diaphanous entities to things that manifest themselves in ways other than the visual. These may be designated as UAP’s, or *Unidentified Atmospheric Phenomena*.

In this book we are going to deal primarily with the material objects, or UAO’s, though we will find ourselves rather frequently forced to allude to UAP’s. With UAO’s we may be able to do something along current scientific lines; with UAP’s we are in much greater trouble because, although they are in many respects more amenable to investigation by the machinery at our disposal, they seem to involve forces with which we are not at this time able to cope. UAP’s are, in fact, quite another story.

So what are UAO’s?

The best way to begin is by rephrasing the initial question—“What are they?”—and asking instead, “What *could* they be?” Now, this being a question of possibility, it could, presumably, be debated forever. It is, however, an ontological question; and so the best way to tackle it is along the old, tried and true principle of dichotomy—that is, by asking ourselves a number of simple, alternate questions, such as:

“Could these things be dead or alive?” “Could they be natural or artificial?” and so forth.

Any such questioning becomes hopelessly involved unless you put it down on paper in the form of a simple chart.

Here is such a chart of: *What Could They Be?*

*I. INANIMATE**A. Natural*

1. Nonmaterial — energy packets, as in bolides
2. Nonsolid — gaseous, as in clouds
3. Solid — like meteorites

B. Artificial

1. Self-contained items — like artificial satellites
2. Transports — like freighters
3. Auxiliary devices (manned) — like airplanes
4. Auxiliary devices (robotic) — like space probes
5. Missiles — like bullets and ICBM's

*II. ANIMATE**A. Natural*

1. Life-forms indigenous to space
2. Life-forms indigenous to atmospheres
3. Life-forms indigenous to solid bodies

B. Artificial

1. Domesticated natural life-forms
2. Genetically created life-forms
3. Biochemically created life-forms

(For a fuller classification of the myriad possibilities of UAO's and UFOs see Appendix A.)

We may define “natural” objects as things that have not been made deliberately by other things—and thus are not what we call constructions. What is more, we cannot, it must be understood, assume that things or entities that “make” things must be “intelligent.” This need not be the case at all, because mere tentacled blobs of jelly “manufacture” beautiful corals, and amorphous miniscule globs of protein create the most exquisite, geometrical perfections that we call Foraminifera, Radiolarians, and such. Are, in fact, these corals and the shells of protozoan animals artificial?

If some UAO's are natural (not manufactured by other entities), then they are of no concern whatsoever to us. If they are bolides (exploding meteors), funny clouds, meteors, meteorites, ball lightning, hot-air inversions, mirages, or swamp gas, they are *not* UAO's, but what Dr. Hynek and others have so rightly called **IFO's**, or *Identified Flying Objects*. We are not concerned with astronomical, meteorological, chemical, or optical phenomena. Thus we may be done with the entire lot classified as Inanimate-Natural in the preceding chart.

The second category of inanimate objects, which are classed as artificial, present us, on the other hand, with quite different problems. The very concept of their being “manufactured” implies that some life-form, and probably one with what we call intelligence, was involved in their creation. The five types of such independent or “discrete” objects that could come into our atmosphere are listed in the chart under Inanimate-Artificial.

Now, it will be noted that we terrestrial humans have already devised prototypes of all these in the forms noted in that chart. If we have been able to do all this in the mere half-century since we launched the first heavier-than-air machine, other intelligent entities could have done the same—and at any time that they first reached the present level of our own development. The fact that we have these prototypes has mightily clouded the whole problem of UAO's because we, in our overbearing self-esteem, have until recently assumed that we are God's only effort in the department of intelligence and ingenuity and that, therefore, we alone could have achieved so much. Thus, if a report of an alleged UAO could not be identified as some natural inanimate object, it was almost invariably explained away as a case of mistaken identity—which is to say, a simple failure to

identify one of our own devices of the Inanimate-Artificial category. But this, be it noted, is nonetheless already the second stage of acceptance of anything new.

When we turn to Category II — that is animate, or “alive” — we encounter something else again. This is a totally different concept and one that is quite alien to the Western mind of materialism, engineering, and gadgetry. It is the biological world — the world of life. And, this is a world that we are only just beginning to probe and fathom. Life, and especially intelligent life, is, to the mechanistic world, an oddity; in some ways an anachronism, and in many ways a pest. It does not subscribe to the neat little laws and principles of physics, and its chemistry is at first sight all awry. It has its own mechanics, and it tails off into the hazy and, to a physicist, illogical netherworld of mentality where there appear to be quite different sets of rules. This is most disturbing even to most biologists. The very idea of an animated machine or of a mechanical animal is impossible to conceive by the average person. Even the mathematician stands aghast at some of the things that life does.

When the average person is asked to contemplate “life,” he immediately thinks of an animal, and of life as being an estate in which entities exist as we do. As one highly intelligent, literary man with solid scientific training put it to me when discussing exobiology, “Oh, you mean born like we are, and all that.” The average person hardly considers even plants as being “alive,” and the much vaster world of protozoans and protogeans is to them as “dead” or inanimate as are rocks and crystals. Yet life is everywhere and there is even more than a hint that everything may be alive — even electrons, our planet, and the universe itself.

To define life today is well-nigh impossible, and it may be the only true and ultimate impossibility. There are viruses that are animate in one generation and inanimate in the next. There are highly complex organisms distantly related to spiders that can be desiccated to crystallization and then “come back to life” — and at our wish — simply by being doused with water. There is even evidence that every “thing” has some degree of “volition” — an attribute that we had until recently thought to be the prerogative only of life-forms. The variety of life-forms found even on this, our own, tiny, insignificant planet is so great that mere contemplation of some of them is almost more than a biologist can stand. What forms life could take elsewhere is quite beyond the grasp of our materialist outlook, because their variety is probably infinite.

When, then, all the excitement over the mild suggestion that there could be life-forms indigenous to what we call space, or to the upper, more rarified atmospheres of planets and other astronomical bodies, including our own? The idea may make physicists, chemists, engineers, an even biologists uneasy, but there is nothing illogical, irrational, or even improbable about it. In fact, it is so probable that it must be given first rank in consideration of the question, “What could UAO’s be?” And this brings us to the troublesome thought of unknown life-forms indigenous to our Earth.

This is, frankly, a point that I would have preferred to dispense with entirely. However, on the grounds of mere honesty, let alone consistency and logic, it must at least be considered. It falls into two parts, one more weird than the other. The two suggestions are — and they have been made repeatedly throughout history, and by all manner of people — that hidden, unseen, or seldom-seen creatures that can soar into the sky dwell either (1) under the earth, in natural or constructed caves, and/or (2) on the bottoms of seas and oceans.

The former notion involves wild, esoteric beliefs in lost subterranean civilizations with outlets to the surface of the earth by various “Open Sesame”-type doors; with trolls, witches, and little creatures called Deros who are supposed to live deep inside the earth; with fairies, pixies, and pookas who can walk into solid hills. This is a world of myth and belief in which you can lose your mind, and is, for that very reason, a serious menace to any proper investigation of the UAO problem.

The other suggestion, that of a submarine origin for UAO’s, is of quite another ilk. At first it sounds equally wacky, but there is a really surprising amount of “evidence” — and from many different sources, some of them strictly scientific — that forces one to at least consider the suggestion quite seriously. The degree of possibility here is really rather high, for there is an unexpectedly large number of mariners and others intimately connected

with the sea who have asserted that objects of an unidentified nature not only dwell in the oceans but are seen to enter them from, and rise from them into, the atmosphere.

Finally, we come to classification II-B, or Animate-Artificial. This is the category that almost everybody gags on, and not only because of the efforts of the science-fiction writers with their clanking robots and indestructible androids. The idea of animated machines and/or mechanical “animals” is almost too much to ask even a sophisticated biologist to consider. But, I would point out that, what with the computer designers on the one hand, and the biochemists who are investigating the chemistry of genetics on the other, we are on the threshold of just such a world if we are not already in it. Let us shed some of our traditional beliefs and sit down to contemplate seriously and try to understand this, to us, fantastic world. Now the stage is set for our inquiry.

But, this setting is probably quite other than that which you expected for, instead of launching upon a voyage into the outer world of cosmology, physics, mechanics, and space-travel, we find that we are already searching in the even more complex world of *life*. In fact, since Inanimate Natural objects are of no interest or concern to us, our whole inquiry becomes of a *biological* nature, for even artificial inanimate objects — that is, machines and other constructions — are an expression of life, and are quite meaningless of themselves except as gadgets used by other life-forms. And this, I personally contend, is the crux of the *whole* ufological problem, because many UAP's as well as the UAO's seem to display features of animation, volition, and control by intelligence. Today, not only are we on our first (physical) leg into space, we are about to learn our first true lesson about life. Thus, by asking the simple question, “What could UFOs be?” we find that we have opened a sort of Pandora's box of further questions, each of which will be taken up in the subsequent chapters.