

UFOs

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“UFO” is the popular abbreviation for *unidentified flying object*. It refers to any object that, from a given observer’s perspective, is presumed to have floated or flown through the earth’s atmosphere or through outer space, and which is of uncertain nature and origin.

This definition implies several important points. First, what appears to be “unidentified” to an observer depends on what the observer already knows. A UFO for one observer may be an IFO—an *identified* flying object—for other observers, and the vast majority of UFOs that have been scrutinized by qualified investigators turn out to have rather mundane explanations. Often it is the case that observers simply lack one or more key pieces of information that otherwise would permit identification of the UFO.

A second important aspect of the definition of UFO is that the label applies equally well to sightings of objects on the ground, so long as the observer presumes that the object in question is or was capable of flight. In other words, it would be appropriate to refer to what appears to be a crashed flying saucer as a UFO even though it is not flying at the time.

Finally, the “UFO” label produces a residual category: It explains or gives meaning to an object only in the trivial sense of declaring that the object is *not* a member of any other category of objects previously known to the observer. Without further information, merely sighting a UFO cannot provide any validation of the *extraterrestrial hypothesis* (ETH) that UFOs provide evidence that intelligent alien beings have visited the earth.

Gallup public opinion polls in 1996 and 2001 found that between one-third and one-half of U.S. adults—as many as 100 million people in this country alone—believe UFO’s or extraterrestrials (ETs) have visited the earth in some form. Perhaps it should not be very surprising that so many of us are willing to jump to the conclusion that alien intelligence lurks behind mysterious lights in the sky. After all, it is usually impossible to disprove outright such a belief, and few people have the time, expertise and resources that would be required to solve any but the most implausible UFO mysteries. Additionally, the public generally is unaware of the great number of UFO cases that have been investigated scientifically by experts and subsequently shown to have prosaic explanations. Nevertheless, this does not explain why so many are willing to make unwarranted inferences that invoke unknown forces and alien beings.

The published literature on UFOs and related subjects is enormous, and so this relatively short examination must be highly selective. Detailed accounts and case studies of UFO sightings are readily available elsewhere (see references), and so instead of making a futile attempt to review them in any systematic way, this space is devoted to issues of particular relevance to a skeptical perspective on UFO claims.

Historical Overview

Undoubtedly, humankind has been noticing strange flying objects ever since we developed beliefs about what belongs “up there” and what does not. Recorded history is replete with stories of anomalous objects sighted in the heavens. By today’s scientific standards, however, these tales do not hold up as accurate accounts of real phenomena. It is impossible to know the nature of the underlying phenomena when many descriptions so obviously have been colored by the lenses of propaganda, popular fiction, religious fervor or folklore.

Despite the absence of any recorded UFO sightings from antiquity, some ETH proponents treat certain ancient human artifacts as evidence. For example, they claim it is impossible that the pyramids of Egypt and the Americas could have been built by humans thousands of years ago with only primitive knowledge of engineering principles. ET proponents neglect to point out that research teams of archaeologists and engineers have devised construction techniques that were available to the ancients, and that can account for the pyramids and other artifacts. The same may be said of the “mystery” of how the large stone statues at Easter Island were raised from their original prone positions. Mystery-mongers also point to the large animal shapes and “runways” scratched into the Nazca plains in Peru, asserting that such structures can only be used and appreciated by a culture with an advanced technology supporting flight. Although we cannot be certain of the reasons for the Nazca drawings, we do know that even the largest figures could still be appreciated from the ground, and that they and others like them can be reproduced with very simple techniques for scaling-up small drawings.

More recently, newspaper accounts dating back to the latter 19th and early 20th centuries have described sporadic waves of sightings of strange objects in the sky. However, observers rarely presumed that the objects came from anywhere other than earth. With the benefit of 20/20 hindsight, it appears that most of these sightings occurred under conditions that were ripe for mass delusion. An era of rapid technological development was underway and the public was primed for wondrous breakthroughs. Heavier-than-air flight was the next frontier. Periodically the mass media led the public to expect to see *something* in the skies, often by exaggerating prior sightings or by fabricating them completely. Moreover, nighttime viewing was the norm, and ambiguities produced by poor observational conditions likely added even more fuel to the collective imagination.

UFO sightings in the last half-century have a distinct character when contrasted with these earlier reports. With the benefit of 20-20 hindsight, the modern UFO era can be said to have begun on June 24th, 1947. On that date, pilot Kevin Arnold of Boise, Idaho was flying a small plane near Mt. Rainier, Washington when he noticed a flash of light and nine discs appearing to be flying in a linear formation. He later spoke to a reporter from a local newspaper in Oregon, describing the objects as flying “like a saucer would if skipped over water.” The Associated Press picked up the story, reporting the “saucer-like objects” as traveling at “incredible speed.” The “flying saucer” label stuck, and public interest has remained high ever since, fueled by a continuous flow of stories in books, magazines, newspapers, television, movies and the internet.

The most notorious UFO case in history began to unfold very soon after Arnold’s sighting. Officers at Roswell Army Air Field

issued a very unusual press announcement to local radio stations and newspapers, and it was quickly picked up by the national media. The press release stated that a flying disc landed on a ranch near Roswell, New Mexico during the first week of July, 1947. It indicated that the disc was picked up by the Intelligence Office of the 509th Bomb Group of the Eighth Air Force, Roswell Army Air Field, and subsequently loaned to higher headquarters. The events created only a short-lived public stir at the time, but achieved wide notoriety when resurrected by Charles Berlitz and William Moore's 1980 book *The Roswell Incident*.

Many books, articles and television documentaries have been written about the supposed Roswell UFO crash, most capitalizing on some combination of four interwoven claims: (1) UFOs were sighted in the vicinity of Roswell in July of 1947. (2) Prior to a restricted clean-up operation, several people witnessed a "debris field" about 75 miles from Roswell on a ranch managed by Mac Brazel. Some witnesses claim to have handled and even absconded with certain very small pieces of physical evidence from that field including a type of metallic foil, light structural members, and monofilament strands resembling fishing line. (3) There are first- and second-hand reports stating that the bodies of several alien beings were recovered from a crash site several miles from the debris field. Army officials ostensibly shipped the bodies to a secret location for examination. (4) The U.S. government has persisted in covering-up these events for many years, insisting that the debris came from a downed weather balloon.

It is unlikely that the public ever will know the whole truth about Roswell. For most people, however, *belief* in the Roswell crashed-saucer-and-dead-aliens claims depends less on what really happened than it does on the particular kinds of arguments and evidence to which one is exposed, and one's willingness to evaluate them critically. Consider the conclusions of *Roswell in Perspective* (Pflock 1994), probably the most thorough investigation of the Roswell Incident to date: (1) "We have only a highly speculative, highly tenuous link between anything seen in the sky and what was found by Mac Brazel and, possibly, elsewhere by the military (Pflock 1994:61). (2) "...it is beyond reasonable doubt that at least the great majority of what was recovered from the debris field was the remains of a Project Mogul flight." (Pflock 1994:113). Although top secret at the time, we now know that Project Mogul involved launching arrays of specially constructed balloons that carried aloft electronic equipment for detecting enemy weapons. (3) "...there is no proof...that there were bodies and that they were either alien entities or humans or other earthly creatures who had undergone something horrible. Proof must await more evidence." (Pflock 1994:95). Although the only evidence for alien bodies comes from disputable testimonies, the report's author does admit to being "personally convinced" that bodies and wreckage of some kind were removed. (4) "It also seems very likely that ...[military authorities]...instituted a cover story in what turned out to be a highly successful attempt to keep Mogul under wraps." (Pflock 1994:113). In sum, evidence for the story of a crashed saucer and dead aliens at Roswell is far poorer than one might expect based upon its contemporary portrayal in the mass media.

Media coverage of Roswell and other cases in the late 1940's paved the way for an upsurge in UFO claims with extraterrestrial overtones. By the early 1950's many UFO reports had connotations of alien involvement. This trend surely was

encouraged by several popular books published in 1950 which claimed that alien life-forms were piloting flying saucers to earth. By 1951, newspapers and national magazines all were publishing articles connecting UFOs with alien visitors. The phenomenon has continued unabated ever since.

Kinds of UFO Claims

Writers and researchers have offered a variety of UFO typologies. The best known is the simple set of "close encounter" categories devised by astronomer J. Allen Hyneck. (See also Vallee 1990:appendix.) A *close encounter of the first kind* (CE-I) is a basic UFO sighting with no physical evidence left behind. Most UFO sightings fall into this category. *Close encounters of the second kind* (CE-II) would involve physical evidence or some form of interaction with the UFO. The debris field in the Roswell case is believed by many to be evidence of such an encounter. Finally, a *close encounter of the third kind* (CE-III) would entail sighting or interacting with occupants of the UFO. This could include seeing aliens through portholes in their mother ship, witnessing their bodies at a saucer crash site, or being subjected to a physical examination by them following abduction into their craft by a paralyzing beam of light.

Within each of the above categories there is a vast array of claims of highly variable detail and quality. Most CE-I sightings involve a moving, featureless bright object against a dark sky. Countless such cases have been captured in photographs, films and videos. The problem with all of them, however, is that they carry insufficient information to determine their true size, distance and velocity. A dramatic example of this size-distance error is a video shot from a NASA Space Shuttle in 1991 which has been broadcast nationally many times on a number of different television programs. The tape clearly shows a small bright object moving slowly through the field of view. It then suddenly changes direction and zips out of the picture. UFO proponents have declared the object to be an alien craft of considerable size, moving at high speed, piloted by intelligent beings. NASA officials have a much simpler explanation: The object is an ice crystal drifting near the video camera., its video image "blooming" brightly in the direct sunlight. The change of direction was caused by the brief automated firing of a small rocket thruster, its flash readily visible in the corner of the video image.

Many CE-I claims are far more elaborate and detailed than mere blobs of light. Philip J. Klass devotes a chapter of his book *UFOs: The Public Deceived* to a particular type of UFO described by observers using a dizzying array of adjectives, ranging from "like a giant jellyfish" to a seamless, silvery object with several tiers of windows and flashing multicolored lights. Credible witnesses have been plentiful and include pilots and other highly educated observers. Here is an excellent example of how a key piece of information, such as a view from another vantage point, could have transformed UFOs into IFOs: Klass' chapter is about advertising airplanes and helicopters seen at night from oblique angles that prevent observers from reading the messages suspended in lights below them. Hundreds of these aircraft are in use in the U.S., and they account for a remarkable number of UFO reports.

Most proponents of the ETH recognize that the great majority of UFO reports are attributable to mundane objects such as advertising signs. Upon investigation, other causes of UFO sightings include unusual cloud formations, the planet Venus,

weather balloons, conventional aircraft, orbiting satellites, meteors and space-junk burning up on re-entry. Venus in particular has produced a number of fascinating UFO stories. Especially on a moonless night, our sister planet can glow with a surprising luminosity that casts shadows on earth. Seen through the trees from a moving automobile, for example, it may appear as a beacon from a space ship tracking your vehicle on a parallel course.

CE-II claims would go a long way toward establishing the extraterrestrial origins of UFOs—if the physical evidence were truly compelling. Jacques Vallee is a central figure among UFO investigators, known for his detailed and meticulous investigations. In his book *Confrontations* he describes a number of his investigations in various parts of the world, many of which involved the analysis of some kind of physical evidence left in the wake of a UFO sighting. On the surface, Vallee appears to approach his subject skeptically and meticulously, time and again recognizing that his evidence fails to offer proof of extraterrestrial origins either for UFOs or for the ostensive artifacts some claim they have left behind. However, his lack of proof does not stop Vallee (1990) from making wild speculations that apparently he has come to believe. He suggests that “we are dealing with a yet unrecognized level of consciousness independent of man but closely linked to earth” (p. 99). Moreover, in the same paragraph in which he warns against jumping to the conclusion that UFO’s represent advanced spacecraft from another planet, he assures us that “they promise to be much more: a challenge to many of our concepts in physics, perhaps a clue to the existence of unknown dimensions beyond space-time.” In other words, even while the physical evidence fails to demonstrate extraterrestrial origins, Vallee preserves the ETH via a conclusion that requires an even greater leap of faith.

Hundreds of CE-III claims were cataloged by Robert E. Bartholomew and George S. Howard in their book *UFOs and Alien Contact*. These encounters fall into two major categories: alien contacts and alien abductions. Contactees believe that aliens have communicated with them, sometimes telepathically, sometimes through personal visits. Messages that contactees claim to have received from aliens tend to sound like lines from bad science fiction movies. Sometimes they are threatening (“Appear here tomorrow or we will take your family!”), other times they are kindly (“I come in peace.”). Never have the aliens left behind artifacts, forwarding addresses, technological insights or other information that would provide evidence of their extraterrestrial origins.

Alien abduction stories have become the most prevalent type of CE-III claim (sometimes given their own CE-IV classification), fueled by public fascination and accommodating mass media. (See the entry on “Alien Abductions” for a more extensive treatment.) Typically, the abductee recalls having been taken aboard an alien spacecraft and subjected to a sinister and highly invasive examination. Mysteriously, the aliens always manage to eliminate all evidence of incisions or other intrusions. The best known of these cases also assert that the aliens wiped out the abductee’s conscious memories of the event, and so the entire experience is suppressed until much later when it emerges under hypnosis. If proponents are to be believed, then abduction by aliens must be declared a world-wide public health problem because they claim that literally millions have been abducted and mistreated, had their memories suppressed, and so remain inexplicably traumatized by their experience.

Factors that make alien abduction stories so convincing to believers fall well short of the sort of evidence that would be scientifically compelling. First, with no other physical evidence upon which to rely, the burden of proof rests on the individual testimonies of those who claim to have been abducted. This is immediately problematic because extensive research has shown that eyewitness testimony—especially under emotionally charged conditions—is highly unreliable. Second, the hypnotic state has proven to be highly conducive to elaborate fantasizing, combining elements from prior experiences (such as watching a science fiction movie) with cues from the hypnotist. The misconception is that hypnosis reveals suppressed memories when in fact it helps to create false ones. Third, proponents point out that there is an eerie sameness in the description of aliens across cases. This is far from the truth, especially in light of the wide variety of alien drawings that abductees have produced over the years. Even if it were true, it should not be too surprising that images such as a large-eyed, small-mouthed, 4-foot humanoid alien should appear in many drawings when such an image already has previously entered the public’s consciousness through the mass media. Finally, there are alternative explanations for many abduction experiences, especially those cases that occurred at night, which do not invoke mysterious forces and entities. For instance, it turns out that a common condition known as sleep paralysis—a kind of dreamy, semi-conscious state—can account for virtually all of the features of the alien abduction experience (Blackmore 1998).

From the standpoint of mainstream science, the lack of adequate evidence is a devastating problem for close encounter claims. However, there are several additional issues pertaining to the ETH that have not been addressed to the satisfaction of skeptics. Addressed below, these include problems caused by (1) logical flaws of some UFO arguments; (2) limitations imposed by the physics of space travel; and (3) human physiological and perceptual limitations. Following this we will consider some of the social factors that can contribute to the creation and maintenance of false beliefs.

Logic of UFO Arguments

Earlier it was noted that “UFO” is a residual category. People sometimes forget that just because you call something a UFO does not mean you possess any information about the object beyond the mere fact of its non-identification. You still do not know what the object actually *is*, tempting though it may be to take that logical leap and infer extraterrestrial intelligence.

UFO supporters sometimes point to the fact that even the most comprehensive UFO investigations fail to provide satisfactory explanations for all UFO sightings. This unexplained residual is then treated as adding support to the ETH, despite this also being an unwarranted logical leap. History shows that, rather than being the first true UFO of extraterrestrial origin, it is far more likely that some crucial piece of information is missing, or that existing information was misinterpreted.

One of the hallmarks of the scientific approach is the doctrine of falsifiability. Simply put, if it is not possible in principle to test and disprove a claim, then the claim is not scientific. There are a number of respected UFO investigators who are known for their detailed and thorough analyses of the available evidence, and yet despite finding clear support for the ETH, express their support for it nonetheless. Vallee, for instance, failing to find any physical evidence to support the ETH, argues that “we are

dealing with a yet unrecognized level of consciousness.” Perhaps, except that there is no more evidence for this than for the alternative explanation that UFOs are the psychic projections of playful farm animals.

Another way to keep alive the ETH in spite of scant supportive evidence is by presuming that UFOs are “shy.” Sheaffer (1998) has noted facetiously “their ability to select, on those rare occasions when they ‘permit’ a clear and detailed photograph to be taken, areas where there is *one and only one photographer* ready to snap their picture.” He points out that in 1972 an unexpected, short-lived genuine object from space appeared over areas of the western U.S. and Canada. Despite the sparse population in the viewing area, there was nevertheless an extensive body of photographic and motion picture evidence from different vantage points allowing the object to be identified—as a meteor. One also has to wonder why aliens would ever care to expend so much effort on staying just at the fringes of human and technological discernability.

Several other logical issues also bear mention. First, when it comes to evidence, it is never the case that quantity may substitute for quality. This is why, it matters little how many eyewitness testimonies are gathered by proponents. There are simply too many ways that eyewitnesses are known to err, and this throws into question all such accounts. Second, proponents of the ETH have been known to use cite particular cases as supporting evidence long after they have been soundly debunked. This is an obvious misuse of evidence. Third, many UFO cases invoke a variety of mysterious correlated phenomena presumed to be caused by the UFO. These have included deaths of animals or people, power failures, stalled vehicles, and other UFO sightings. However, with no prior constraint on what would constitute a mysterious correlates, there almost always will be *something* that one could dig up. Lacking evidence to tie such events to the flying object, however, the correlation provides absolutely no added weight to the ETH. Finally, by the logic of the theory of evolution by natural selection, there is only a vanishingly slight chances that the most-sighted species of aliens would have evolved independently into forms that so closely resembles humans.

Physical Barriers

Some UFO claims, if they are true, would violate the laws of physics. Such laws forbid the kind of electromagnetic propulsion system that some have suggested explain the stunning feats of which UFOs are said to be capable. Scientists also point out that to reach the earth from anywhere outside our solar system would require either many thousands of years, or else vehicles capable of near light-speed. Such spacecraft would require prohibitive quantities of fuel to reach such speeds, even with the technology to convert fuel into energy with perfect efficiency. Many other problems would need to be solved, however, such as how to protect the space craft from the otherwise catastrophic effect of a high-speed collisions with dust particles.

A “true believer” might argue that aliens would have devised ways to circumscribe laws that only appear to be immutable to earth-bound scientists. Some scientists have speculated that objects entering “wormholes” in space could travel immense distances instantaneously. This assumes that one could first find a conveniently located wormhole, that one’s vehicle could withstand its tremendous gravitational and tidal forces, and that once could know in advance where in the universe one would

emerge. For now, wormholes exist only in the realm of theory and so, lacking any actual evidence, cannot serve to bolster the extraterrestrial hypothesis for the origins of UFOs.

Perception and Psychology

Perception is a complex multi-stage process, most of which transpires unconsciously. Vision is the sensory mode that is most relevant to UFO-related beliefs, and a large body of scientific research attests to the feats and the foibles of the human sense of sight. The bottom-line in this research is that, despite the fact that we have remarkable visual capabilities, there still are a great many ways that visual perceptions can mislead. The problem with misperceptions is that rarely do we know when we are having them. Therefore, especially when viewing unfamiliar objects under less-than-ideal conditions, our confidence in what we have observed is not a reliable indicator of the underlying facts. Seeing may be believing, but that does not make it true.

The size-distance error mentioned previously is but one of many potential sources of misperception. Among the many others is the *autokinetic effect*, whereby a stationary point of light against a dark background is seen to drift or dart about. The apparent motion looks absolutely real, but in fact it is due to unconscious eye movements. We see the *movement parallax effect* when looking at objects at different distances while we are in motion. Driving down the road, telephone poles seem to move rapidly in the direction opposite our car’s motion, while the moon seems to match our speed exactly. A surprising number of UFO cases involve the claim of being “chased” by Venus and other objects that appear to track the observer’s motion because of movement parallax. The *full moon illusion* accounts for the apparent but illusory size differences of the moon at the horizon versus the moon high in the sky. The same effect can make the bright disk of a planet appear unexpectedly large when “floating” low in the sky, shining its “beam” through the trees.

Perception and psychology are closely related in the sense that all of our conscious perceptions are based upon interpretations of the sensations that we experience. As one prominent skeptic pointed out,

The great failure of the pro-UFO movement has been its unwillingness to accept the fact that human perception and memory are not only unreliable under a variety of conditions (and these conditions are exactly those under which most UFOs are reported) but that perception and memory are also *constructive*. That is, perception is a function not only of the actual sensory stimulation that is picked up by the eye or ear but also a function a what we know and believe about the world, even if that knowledge and belief are wrong. [Hines 1988:167-8]

The fact that we are so adept at inferring patterns serves us well in most situations. However, an *expectancy effect* occurs when the anticipation of a certain pattern leads us to perceive it whether or not it actually exists. That is why some early astronomers believed they saw canals on mars, or why observers may feel certain that they saw windows on UFOs later determined to be weather balloons or clouds, or why “UFO” and “ET” may seem inextricably linked.

Hines noted that memory also is constructive, and this fact is borne out by a large body of research on the unreliability of eyewitness testimonies. The longer the lag between the perception and the recollection, the greater the opportunity for the memory to become embellished or otherwise altered.

Consider the implications of this for the Roswell alien corpse witnesses who waited some three decades before going public.

Social Psychological Factors

People have a profound effect on one another's behaviors and beliefs, making *social influence* another potential source of belief in the ETH. Social psychologists have studied a variety of kinds of influence such as obedience, persuasion and conformity, any of which has the potential to induce a belief in the absence of any direct experience or evidence. In short, one may believe that ETs have visited the earth because we perceive that others believe this. Research on paranormal beliefs has shown how readily this can happen (Markovsky and Thye 2001). When the situation is such that the judgment is not clear-cut—often the case with UFO sightings—one stranger expressing the view that a paranormal event occurred is sufficient to influence others. The effect is even stronger when the influencer is believed to be some type of expert or high-status person, even if the influencer has no special skill relevant to *this* particular type of situation.

We cannot know for certain, but variations on the kind of *passive* social influence described above probably are a significant source of popular belief in the ETH. Seeing that others believe without reservation will be sufficient to influence those who otherwise may be indifferent. However, more *active* forms of social influence undoubtedly have an even greater impact. Television documentaries, tabloid news stories, magazine articles, popular books, even personal acquaintances seldom are interested merely in reporting unadorned facts about UFOs. More often they aim to *persuade* the viewer/reader/listener that something extraordinary has occurred.

Whether the attempt to persuade is person-to-person or on a mass scale, among the most common techniques are *sharpening* and *leveling*. Sharpening means emphasizing the gist of the message; leveling means leaving out information that seems inessential. The effect often is to radically alter the impression of the event that others receive. Facts that could serve as the key to unlocking the mystery are leveled because the person retelling them found them uninteresting, while sharpening may enhance the mysteriousness of the claim. Both phenomena are evident in television programs on UFOs where the evidence from classic cases is carefully sharpened through editing, and investigations that would have provided mundane explanations are leveled.

Finally, it is also worth noting how emotional factors can play a role in the spread of UFO-related beliefs. For many, the prospect of being visited by alien beings carries with it a sense of wonder and exhilaration—expressions of which were captured with great effect in films such as *ET* and *Close Encounters of the Third Kind*. This emotional component is important for at least two reasons. First, rightly or wrongly (often wrongly) we use emotions to supplement or even to supplant rational judgment. That is, rather than suspending judgment when evidence is lacking, people will frequently use their emotions as a guide. If it feels good to believe, then believe we shall. Second, emotions are contagious and compelling. When a witness expresses emotions—apprehension, excitement, awe—while relating a close encounter experience, members of the “audience” not only will perceive the story as more truthful, but to some extent also will share the same emotional experiences. This same contagion effect also underlies the UFO panics reported in the 19th and early 20th centuries.

Organizational Involvement

As the reference to panics implies, the UFO phenomenon is much more than individual observers pondering lights in the sky. However, whereas a social panic is relatively unorganized and short-lived, there are aspects of popular interest in UFOs that are far more structured and enduring. We find all the makings of a social movement, complete with organizations ranging from informal clubs to government-sponsored investigatory panels to national associations. With some important exceptions, these organizations presume that UFOs are guided by intelligent ETs, or at least that it is highly likely this is so. The broader societal effects of having organized interest groups include increasing the legitimacy of the ETH, disseminating UFO claims more widely throughout the culture, and establishing mechanisms to make it easier for anyone to feel more personally connected with the search for evidence.

In just the U.S., local, state and national groups and affiliates interested in UFO investigations number in the hundreds. The UFOINFO.com website includes listings in forty additional countries. Hundreds more UFO-related sites can be found by perusing the links available on these organizations' web pages. Only a small number of organizations have achieved prominence, however, usually based upon longevity, size, and the involvement of researchers with scientific credentials.

Formed in 1952, the Aerial Phenomena Research Organization (APRO) was the first significant UFO interest group in the U.S. Its members included a stable of academic consultants in a variety of disciplines. Founders Coral and James Lorenzen, were quite convinced that UFOs were conducting mapping projects, and APRO pioneered the dissemination of stories of alien sightings. The organization closed down in 1988.

In 1956 the National Investigations Committee on Aerial Phenomena (NICAP) was established. This UFO research organization and for a time was the largest such organization in the country with numerous chapters around the country. The group dissolved in the 1970's.

Ground Saucer Watch (GSW) was founded in 1957 by brothers William H. and J.A. Spaulding. Although now apparently inactive, this small group made a splash in 1977 when it filed a suit under the Freedom of Information Act against the Central Intelligence Agency. The group was convinced that the CIA was withholding secret information on government UFO investigations. The CIA complied as fully as possible under constraints imposed by national security concerns, and nothing at all extraordinary was revealed. Klass (1983) makes a strong case that those concerns have nothing to do with the ETH, but rather with the fear that “the USSR, with its growing fleet of long-range bombers and its newly acquired atomic bombs, could conceivably exploit UFO-mania within the U.S. to stage a surprise attack. The first eyewitness reports of approaching enemy bombers could too easily be dismissed as prosaic UFO reports, until the first atomic weapons begin to explode” (p. 21). Because a small amount of information remained classified, however, conspiracy theorists have remained unconvinced.

Two groups that now dominate the UFO cultural scene are the Mutual UFO Network (MUFON) founded in 1969, and the Center for UFO Studies (CUFOS) begun in 1973 by astronomer J. Allen Hynek. MUFON rose as NICAP fell apart and key disaffected members switched allegiance. CUFOS has sought to elevate UFO investigation by limiting membership to established researchers, however Sheaffer (1996:769) asserts that “Since

Hynek's death [in 1985], the scientific community has shown virtually no interest in the study of UFO reports.

Not surprisingly, the arm of the federal government most involved in UFO research has been the Air Force. Beginning in 1947 and for the next two decades, the USAF gathered data on thousands of UFO reports, these activities conducted under the headings of Project Sign, Project Grudge and Project Blue Book. Under strong political pressure from influential UFO proponents, they awarded a grant to the University of Colorado for a "Scientific Study of Unidentified Flying Objects," to be conducted by a panel of experts headed by physicist Edward U. Condon. Neither the Air Force nor the independent Condon Report published in 1969 found any positive evidence in support of the ETH. (Project Blue Book files were released to the public in 1976 under the Freedom of Information Act.) Nevertheless, several hundred cases remained unexplained for lack of adequate information. To those individuals and groups willing to take the logical leap, these unexplained cases are sufficient to fuel continued belief in the ETH and in government cover-ups.

UFO Culture

Beyond particular organizations formed around interest in UFOs, a case could be made that the extraterrestrial hypothesis has found a stable niche in the ecology of public awareness. It is "locked-in" in the sense that there is a critical mass of believers and promoters, sufficient to recruit new adherents and to sustain interest over time. Sociologist Erich Goode sees paranormalism and science as alternative cultures with fundamental differences in the way members view reality. Paranormalists take a common-sense approach to understanding phenomena such as UFOs. That is, the evidence of one's own impressions and inferences is taken as sufficient to form a belief: If it *seems* to be true, then it is true (for me, at least). Whereas such thinking functions well in day-to-day situations, science recognizes that common-sense fails under certain conditions, and UFO sightings, stories about UFO sightings, and the UFO-ETH connection tend to fall neatly within those conditions. In a culture where common-sense thinking is the norm and scientific thinking the exception, it should come as no surprise that such a large proportion of U.S. adults professes belief in alien visitations to earth.

Both the scientific and the paranormal orientations have wide-spread bases of cultural support in this country. Scientific literacy and paranormal beliefs fluctuate decade to decade, but neither is going to go away in our lifetimes. Because science views common-sense thinking as flawed, and because those who practice common-sense do not feel a need for any higher standards of evidence, UFOs are likely to persist as a cultural phenomenon even if proponents can amass no better evidence than what exists today.

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Selected Web Resources

- Center for UFO Studies, <http://www.cufos.org>
- Condon Report, <http://www.ncas.org/condon>
- Fund for UFO Research, <http://www.fufo.com>
- Phillip Klass <http://www.csicop.org/klassfiles>
- Mutual UFO Network, <http://www.mufon.com>
- Robert Sheaffer <http://www.debunker.com/ufo.html>