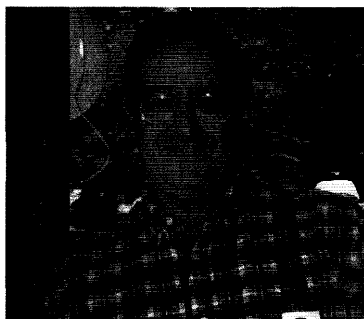


## REVIEW ARTICLE

# Ufology: What Have We Learned?

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**Abstract**—A reasonable case can be made that those of us who have dedicated a serious amount of research time to the study of ufology have learned the following:

1. That the phenomenon is a true, ongoing mystery, and is deserving of serious study;
2. How it has happened that even good (open-minded) scientists have been thrown off the subject;
3. That the "Extraterrestrial Hypothesis" (ETH) may be able to serve as a working model for what is going on but not in any simple-minded form;
4. That the field is almost impossible to study in any "conservative" (physical sciences/lab-top) type of way, barring rare cases of certain "close encounters."

There are many other historical, sociological, epistemological things that we have learned. This review will focus its remarks around the four categories mentioned above.

**Keywords:** Unidentified Flying Objects (UFOs)—Extraterrestrial Hypothesis (ETH)—J. Allen Hynek—Donald Menzel—University of Colorado Project—Sturrock-Rockefeller Workshop

## Introduction

Most people date the UFO phenomenon (many say the "modern" UFO phenomenon) from the years of World War Two and the "foo fighter"

encounters in both the European and Pacific theatres of war. There began about ten years wherein the investigation of the phenomenon was almost entirely a military and/or intelligence activity (1945–1955). Following that, the interested civilians began creating (often very active) organizations, such as: Donald Keyhoe's National Investigation Committee on Aerial Phenomena (NICAP), the Lorenzen's Aerial Phenomena Research Organization (APRO), and the flagship UFO magazine, *Flying Saucer Review* (FSR). It was these elements (and strong-willed personages) that kept serious interest in the subject alive during a time of severe attacks in the form of derisive commentary by government officials, the media, and a few scientists. NICAP, APRO, FSR, et al., persisted through all of this buttressed by what some researchers call the heyday of classic ufology: 25 years filled with a large number and variety of "Close Encounter" cases, involving high quality and multiple independent witnesses, and incidents of physical effects. Although the Air Force's Project Blue Book closed in the middle of this period, civilian organizations such as Dr. J. Allen Hynek's Center for UFO Studies (CUFOS) and the Mutual UFO Network (MUFON) arose to carry on the battle (Figure 1). During this time (1955–1980), the phenomenon seemed to shift its emphasis from metallic disks cruising across the skies and lighting up radar screens, to close encounters with "landing traces," electromagnetic interference, physiological effects, and "entity" reports. The "old-style" cases were still around but the new-style ones offered the hope that laboratory science would be able to be brought to bear on the subject at last.

But, despite insightful statistical studies, such as those by Dr. David Saunders (of the Colorado Project), Dr. Claude Poher, and our own SSE colleague, Dr. Jacques Vallee (in his Chicago/Hynek years), the UFO phenomenon could not seriously dent the world of mainstream science. Clusters of case types and analyses by people such as Ted Phillips ("physical ground traces"), and Dr. Mark Rodeghier ("vehicle interference events")<sup>2</sup> were powerful corroboration of the physical reality of the phenomenon to those already committed to the field, but still fell silently in the ears of a nonattentive scientific community (Figure 2). Doctor Hynek knew that some kind of new approach was necessary. Therefore, he founded the Center for UFO Studies not with the intent of chasing down every "good" sounding case that came to his attention, but rather to be highly selective of cases wherein some physical effect had occurred and its results were still present after the agent (the UFO) left the scene. These remanent "leavings" of the phenomenon could then be taken to the laboratories and hammered with all the science that could be brought to bear. Because most scientists were still shy on the subject and most high-tech labs were even more so, Hynek realized that he had limited social capital (and almost no economic capital) to spend on such testing and felt that one or two evidence-rich cases per year would be a reasonable goal. As it transpired, CUFOS was able to employ this strategy on exactly *one* case: the soil from the "landing trace" case of Delphos, Kansas, which had occurred in late 1971.



Fig. 1. Dr. J. Allen Hynek, longtime U. S. Air Force consultant and founder of the Center for UFO Studies. (CUFOS)

Hynek spent his social capital on this case in the years 1975–8, getting high-powered organizations like Oak Ridge and Battelle to do "midnight" gratis lab work, and finding experts, such as Dr. Hubert Lechevalier of the Institute for Microbiology at Rutgers, to give counsel on the constitution and formation of the anomalous soil ring<sup>3</sup>. If CUFOS had been the FBI (with funds, standby labs, expert on-call personnel, and multidimensional thought-through protocols), things might have been different. They certainly would have been quicker and many more analyses would have been done. Still, there were results but, still, the "trace" remained unexplained . . . and unexplained in ways several degrees less than would *require* an ET or paranormal hypothesis. The lab data on the case essentially rotted in files until the 1990s when it was collected and reanalyzed by this current author. More lab work was done by Dr. Erol Faruk<sup>4</sup> and by Phyllis Budinger<sup>5</sup>, and all of this collected together in a monograph published by the UFO Research Coalition in 2002<sup>6</sup>.

Hynek's idea was scientifically sound: do a few outstanding "physical" (testable) cases per year and build up an undeniable set of demonstrations that (a) science could be done here; and (b) the phenomenon is real, interesting, and physical (at least in some part). Then no true scientist could deny that we had an externally real phenomenon on our hands and, even if they didn't want to study it themselves, they'd at least shut up with their emotional derision and get out of the way. Who knows? Maybe they'd even cooperate occasionally.

But Delphos was the only such demonstration. Why?

Hynek's idea was sound on paper but unsound on the ground. The "administration" of a disparate and dispersed set of powerful individualists doing work on their own time (and on their own "nickel") was somewhere



Fig. 2. Ted Phillips, the quintessential UFO field researcher, and investigator of hundreds of so-called physical trace cases. (MUFON)

between inefficient and impossible. Communication in those pre-web days didn't help. The loose aggregation of the so-called "Invisible College" needed a strong leader with a polymath's ability to construct novel research protocols. Hynek was not that man. And, the Invisible College needed an SSE—some real, functional organization within which to meet, discuss, and publish. In fact, it needed an SSE-on-steroids, a working society which met to discuss research protocols, investigation teams, funding and personnel for specific project needs. None of this research infrastructure, of course, existed.

Without government or academic help, ufological amateurs had been (and still are) faced with the task of building an entire discipline and research program by themselves. It took powerful personalities like Donald Keyhoe and Coral Lorenzen merely to keep going forward in the search for and promulgation of the facts (Figures 3 and 4). The big civilian organizations had somewhat different skills. If a talented leader, or a very cleverly constructed board of leaders, could have gathered the pieces together, much more would have been able to be accomplished. That didn't happen. Powerful personalities often do not cooperate, even in their ultimate best interests.

UFO historians bemoan this passing of a golden opportunity but there was one other aspect of ufology that helped sink Hynek's great scheme: the phenomenon seemed to change. As one such historian, I get a bit nervous about this, even of writing it down, but it seems (diabolically?) that just as we began to focus on full laboratory testing of good soil trace cases, or good vehicle interference cases, or anything with a remanent effect, those cases (formerly fairly numerous) began to dry up. Hynek's administrative difficulties, the long time needed to "finish" a case (and the unsatisfactoriness of knowing that more should be done), the lack of funds and smiling workers, added to the lack of rich cases falling into one's lap conspired to doom the great idea to the trash heap. Fortunately, the French were better than we Americans and got several Hynek-

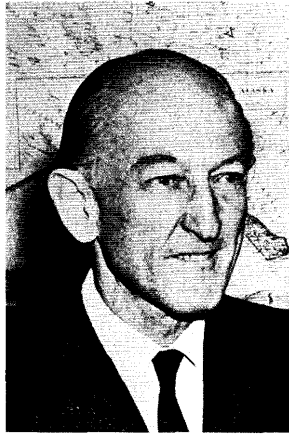


Fig. 3. Major Donald Keyhoe, the founder of the National Investigations Committee on Aerial Phenomena. (NICAP)

like analyses done under the rubric of their governmental-sponsored organization, Group d'Etude des Phénomènes Aérospatiaux Non-Identifiés (GEPAN). More about that, later.

Many powerhouse cases arose in this 1955–1980 period and, even without Hynekian or GEPANian analyses, are enough to convince the open-minded of the reality of the UFO phenomenon. The allegedly hyper-skeptical administrator of the University of Colorado Project, Robert Low, admitted that early in the Project (1967)<sup>7</sup> he felt very little work needed to be done to firmly indicate that the "objects" were indeed physical objects, external to the observers. But the array of such cases seemed to change so that once the "SSE era" (1980s and onward) dawned, the phenomenon had either "retreated" from the evidence-rich leavings cases, or had become mired in countless claims of "alien abductions." Some researchers exulted in this change ("Now we're going to be able to get inside the ships"), while some did not ("Groan. Now we're going to have to get inside the claimants' heads."). Throughout the SSE era, 1981–2006, ufology has been dominated by three main themes: (1) "abduction" claims and research; (2) attempts to document the crashed disk (Roswell) story; and (3) the construction of documented UFO history (both phenomenologically and organizationally) using Freedom of Information Act (FOIA)-released, primary documents for old cases, revisiting witnesses, and an oral history video project<sup>8</sup>. Other important things have been accomplished, of course, such as the Sturrock-Rockefeller workshop<sup>9</sup>, the *Journal for UFO Studies*<sup>10</sup>, and a few excellent books (e.g., by Jerome Clark<sup>11</sup>, Richard Haines<sup>12</sup>, Richard Hall<sup>13</sup>, etc.). The question of the rest of this review then is: Following the failure of Hynek's great plan and our entry into a new era wherein the phenomenon seems to be throwing us new curves, what have we learned?



Fig. 4. Coral Lorenzen and her husband, Jim, founders of the Aerial Phenomena Research Organization. (APRO)

### What Have We Learned? What Are We Talking About?

The question in the article's title is taken from the theme of the 2006 SSE meeting. It is a good street-talk type of question: one of those many conversational engagements we have every day, where no one really cares exactly what's being discussed, and everyone takes home their preferred selected conclusions and misperceptions. I want to try, just a little bit so as not to be tedious, to dig at this question in the hope of a little more clarity or context for the rest of this article.

What do we mean by "learned"? To acquire knowledge—to become informed—to become acquainted with—to receive intelligence—to possess the Truth. In my younger days, my learning (at least in one aspect of it) had a very definable process to it. Someone much older than I told me things, then I, in quiet circumstances, wrote those things down on my own (no peeking), and, later, that writing was turned back to me with red marks on it. Those things without red marks were deemed "learned." Allegedly, I could now be released on the world, without further adult supervision, to spout these things without much fear of contradiction. All that conspired to create certain levels of confidence, communicability, peace-of-mind, and maybe even a job. What had been placed in my head ("learned" I think) was a potpourri of concepts with rather different ontological status. These were a few of them: "America is the land of the Free and the home of the Brave," "Gravity is a force which acts on massive bodies at-a-distance," "Jesus gave us many wonderful parables of right-living, died for us, and rose on the third day after," "Harry Truman is President of the USA," "Harry Truman is not President of the USA."

Well, it's a bit of a nightmare, isn't it? The naive among us (are any SSEers that naive?) might want to restrict our definition of "learning" only to "Learning the Truth," but that approach is a total non-starter—grab books randomly from the Philosophy shelves of your library if you hesitate to believe me. Others might want to restrict our definition of learning to "facts" learned by using the "proper tools and approaches" of Science. *Hmm*. Really? What are those "proper" things? And what of historical and sociological and just plain personal observational learning?

It seems to me that we've "learned" something (even something "false," according to others), when it's gotten into our heads in a way that we immediately get the feeling that whatever it is, is real when we encounter the concept again. We may maintain that in our heads in a lukewarm way (sort of like a piece of trivia) or in an intense way (as part of our moment-to-moment motivational paradigm). Either way, we believe it is true whether others do or not and whether in the Great Cosmic Scheme it will turn out to be "really" true.

I could launch into a lengthy discussion of the "scientific method" and the ways in which properly behaving scientists apply this method and their values to the quest for Truth. That would turn this into a very long essay indeed. But, as we are the Society for Scientific Exploration, a brief nod to "Science" is in order.

We learn using many techniques but most of it reduces to a single route which is pursued with different degrees of care. The Citizen of Missouri says: Show me! Thomas-the-Doubter says that he will not believe until he puts his fingers into Christ's wounds. The scientist says: Show me, and I won't believe until I (and all my colleagues) can put my instruments into the "wounds." The scientist wants the truth to be the Truth. The scientist wants to observe "it" himself, hold "it," manipulate "it," control "it." Whatever it is, the scientific method wishes to do whatever is possible to universalize the ability of any human being to experience it in exactly the same way. "It" must not only be observable by some, but, at least in theory, testable by all.

That is a very high standard to be held to, but that is the standard of Science. The phenomenon of UFOs is rarely amenable to being tested in this way. *But*, sometimes it is, as Hynek and GEPAN knew. Those "sometimes" should have been sufficient to convince a lot more people about the reality of the phenomenon than are currently willing to admit. But "we" are not convinced.

And who is the "we" in the leading question? Is "we" the whole population of the planet, the adult population, the "educated" population, the "scientific" population, the "academic" population, the "academic" text-writing population, the "properly open-minded SSE-person" population, the "western media" population, the "pop culture" population, the "me and those like me" population? Groan. Why can't it all be a little simpler?

I'm going to give up on our street-talk question in the review that follows. What I'm going to present to you, rather, is one person's opinion (a person who has spent a very large amount of time wallowing about in this subject) about the following:

Given the work of serious scholars and field researchers over the past 25 years, what could an intelligent, open-minded, properly skeptical outsider conclude that it was reasonable to believe about the field of ufology, if he/she were willing to spend some significant time becoming educated about it?

Note that I'm not requiring a massive Paradigm Shift. I'm not requiring physical lab bench data to pass muster at the National Academy of Sciences (NAS). I'm not looking for changes in the textbooks. Some of the things I will say

I cannot "prove" to you, in most senses of what physics and chemistry, and pie-in-your-face everyday experience, try to claim that they do. But, let's give it a try anyway.

### **The UFO Phenomenon Is Real**

My personal learning that the UFO phenomenon was real took place back in 1959, when my brother and I (and several others) witnessed a UFO flyby down the Kanawha River basin near Charleston, West Virginia. So, I didn't have to wait for the post-1980 SSE era for that addition to my world view. Many other persons didn't have to wait that long either and some of this knowledge has been brought into the open, most clearly, in the historical scholarship of the 1980s and 1990s.

One doesn't argue "from authority" but awareness of what other persons, who made it their business to study the UFO mystery, have concluded, is a non-trivial data-point in deciding what is reasonable to believe about this subject. The SSE era has seen a large upgrading in our awareness of this UFO history. Germane to the point at hand, here is what we know (have documented) about studies and conclusions about UFOs<sup>14</sup>:

A. During WWII, the foo fighter experiences of our pilots were taken very seriously. Accounts of cases were presented to heavyweight scientists, such as David Griggs, Luis Alvarez, and H. P. Robertson. The phenomenon was never explained. Most of the information about the issue has never been released by military intelligence.

B. During the first American UFO wave of June–July 1947, the U.S. Air Force (USAF) (Pentagon Intelligence) took the flying disks very seriously. The number two operative in the Intelligence Collections division, Lt. Col. George Garrett, was given the task of researching them. Military pilot reports soon indicated to him that we had unknown airspace violations on our hands. Civilian cases confirmed this. Inquiries to all military advanced technology programs were returned with "they're not ours."

By late July/early August, Garrett concluded that some low-aspect (thin) disklike aerial technology which was capable of extremely advanced performance characteristics was occasionally flying about. He wasn't at all embarrassed by this conclusion. He sent it up the intelligence ladder and to General Twining at Wright-Patterson's Air Materiel Command (AMC) as well.

C. At AMC Twining put Intelligence chief, Col. Howard McCoy, to work on a second assessment. McCoy brought together the intellectual resources of Wright-Patterson to view the collected information (Figure 5). Heads of the Engineering Division, Intelligence, and the Air Institute of Technology were there. So, too, were the chiefs of several laboratories (Aircraft, Power Plants, Propellers). Their conclusion was the same as Garrett's: real technological phenomenon. "The phenomenon reported is something real and not visionary or fictitious."<sup>15</sup> They said that they could imagine construction of a flying machine which would imitate most of these characteristics but it would take a lot of development time and effort.





Fig. 5. Colonel Howard (Mack) McCoy, chief of Intelligence at Wright-Patterson Air Force Base in 1947 and 1948. (John McCoy)

D. George Garrett shifted his files to Wright-Patterson and thus began the formal USAF UFO-study project (named successively Sign, Grudge, and Blue Book). This project went forward from 1948 to 1969. During 1948 (it did not take long), the project engineers at Sign concluded that the phenomenon was not only real and technological but that it was beyond current terrestrial ability to produce. This (famous in UFO circles) Estimate of the Situation was not accepted by USAF chief of staff Hoyt Vandenberg, although it was accepted by many others at the Pentagon (Figure 6). Vandenberg's disapproval created an atmosphere of nervousness about UFOs (and opinions) which colored things thereafter<sup>16</sup>. We have on record the statements of three well-placed intelligence operatives from those days who affirm that they read this Estimate and that it did say "real" and "extraterrestrial."

E. During the second big U.S. UFO wave (1952), Pentagon intelligence operatives were again very open to thinking outside-the-box about UFOs. Chief officer of the UFO analysis desk, Maj. Dewey Fournet, collected a set of cases demonstrating properties such as advanced maneuverability and concluded that the best hypothesis for these cases was real technology, probably extraterrestrial. In that same Pentagon, USAF psychological warfare expert, Dr. Stefan Possony, went into the UFO study business worrying about Soviet mischief but, after several months of work by his Special Studies Group, decided that they were not only unidentified aerial technology of a non-Soviet origin, but tasked his assistant with projects like: "what evidence do we have for their type of propulsion?" and "how might we contact them?"<sup>17</sup> (Figures 7 and 8)

F. As time went on, Air Force thinking was that it was necessary to quash thinking like this for the good of national security. The "corporate atmosphere" fundamentally changed (although one still saw things like comments and even



Fig. 6. USAF chief of staff, General Hoyt Vandenberg. (USAF)

Air College theses speaking clearly on UFO physical reality). The open study of UFOs by civilians began, but, of course, none of them count. We need to wait (in the U.S. anyway) all the way to late 1966 to get our next "authority" data-point: the Colorado Project .

G. Being boldly immodest, I've done more "history" on the Colorado Project than anyone. "Four weeks in Philadelphia" (even) reading every page at the American Philosophical Library's collection ... perhaps that is enough to disqualify me from the Company of the Sane. Nevertheless, the reading of the records is very informative. Most of us know that the Air Force was straining to get rid of its UFO project, but had to do so in a way that people wouldn't call "Foul!" Its strategy was to allow a name academic institution to "objectively" study the UFO phenomenon and give a recommendation on how the Air Force was to dispense with its responsibilities. The lead scientist for the study, Dr. Edward Condon, and the project administrator, Robert Low, were told by private letter from the Pentagon what that recommendation was going to be (in early 1967), before the study had done more than select its personnel<sup>19</sup> (Figures 9 and 10). The recommendation must be: the Air Force should cease its UFO project function as soon as possible. A year and a half later, such was the recommendation and, shortly, such was the Air Force response. In order to make that recommendation make any sense to an intelligent reader, the project's lead scientist, Condon, felt that he had to write into his summary statements that the UFO phenomenon contained little or nothing of scientific interest and, thereby, was not in any obvious way worthy of study. The study of the project's documents tells a vastly different story. So do the specific comments of project personnel who, unlike Condon, actually worked with the real reports.

Reading through the week-by-week action of the Project, I tried to make an



Fig. 7. Major Dewey Fournet, chief of UFO analysis, USAF Pentagon, 1952. (NICAP)

honest list of who could be considered project personnel or at least significant contributors to the investigative work. Outside of Condon (who was so removed that he shouldn't even count), I identified nine primary staff members and six secondary. Of those, seven primary staff and five secondary staff members are on record saying that they believe the phenomenon is worthy of study. An eighth primary member, administrator Robert Low, could not have been more enthusiastic in his support for the reality of the phenomenon in his talk to a Cal Tech audience in late 1967<sup>20</sup>. This leaves only Roy Craig, Condon's main friend and ally throughout the project, and Michael Wertheimer, who came into the project saying that research was impossible on anything but the perceptual foibles of alleged witnesses, as naysayers to the acceptance of ufology as a respectable field of study.

Condon and Craig wrote the bulk of the Project Report<sup>21</sup>, along with an array of chapters by contracted individuals and last minute additions having very little to do with actual UFO cases. Most of the "pro" UFO staff was not allowed to contribute, or allowed to do so only in UFO-neutral mini chapters on topics such as Instrumentation, or a toss-off on the astronauts. Nevertheless, Condon's student, Dr. Frederick Seitz, headed the NAS panel which approved the report<sup>22</sup>, and wheelhorse science journals, *Nature*<sup>23</sup> and *Science* gave it their imprimatur.

Several top quality scientists privately reviewed the Colorado Project report and were appalled. A few of these were motivated to write articles objecting to various aspects of the debacle. These articles were almost universally turned down by the editors of the "proper" journals. One outstanding example of this was by Peter Sturrock, astrophysicist and mathematician of Stanford University. The text shows Peter's characteristic sharp analysis and clarity. And—it was rejected—by SIX scientific journals! No one wanted to hear about this. Peter was reduced to publishing his paper as a Stanford University Institute for Plasma Research report (essentially a private, grass-roots-type publishing method). This



Fig. 8. Dr. Stefan Possony, USAF Special Studies Group, 1951–1952 era. (Wendy Connors)

experience brought home the improper sociology and hypocrisy which existed in the halls of science and led to his founding of the Society for Scientific Exploration and our journal. It was fitting that the final paper in the initial volume of the JSE was a polished up version of his rejected Condon Report analysis, 13 years later. The Colorado Project (Condon Report) had proved a powerful beast, indeed.

This example of a sociologically-understandable scientific travesty sat like an albatross on ufology's neck for decades. Then, in the SSE era, SSE president Peter Sturrock decided to do something about it. He, using preternatural (and even tricky) diplomatic powers, organized the Colorado-countering "Sturrock-Rockefeller Workshop" at the Rockefeller estate in Kykuit, New York, in 1997<sup>24</sup>. The workshop featured an array of UFO researchers delivering information to a partly-hostile and tense group of nonufological and well-known scientists (Figure 11). Peter got me there on the ufological side somewhat under false pretenses (I thought the goal of the workshop was different than it turned out to be)<sup>25</sup> but I forgive him. Despite the tensions, flubs, and misconceptions, he somehow melded all the loose lines of data and reason into a final summary, which said essentially the opposite of what Condon had asserted in 1969. One conclusion is particularly significant: "It is desirable that there be institutional support for research in this area."<sup>26</sup>

What allowed Peter and the panel of scientists to agree to this positive assessment of the potential for UFO research? A large variety of cases were trotted out during the workshop, but the big guns were *Trans-en-Provence* and *Amaranthe*. Both of these were trace cases by the French authority, GEPAN, and reported on by Jean Jacques Velasco<sup>27</sup>. These were Hynekian cases—cases with remanent effects (in both cases on plants) which were amenable to sophisticated lab testing. And, although even Jean Jacques will tell you that the GEPAN system wasn't perfect, it still *worked* to get real experts with real hi-tech labs to



Fig. 9. Dr. Edward Condon, gleefully not taking UFOs seriously and embarrassing the Colorado Project in 1967. (CUFOS)

do sophisticated testing on samples and be willing to think outside the box. GEPAN had proved that, given the right sort of case, something very like normal science could be done—if one just had the infrastructure. And, perhaps as psychologically important, the *Trans-en* and *Amaranthe* results remained anomalous and interesting after the work was done. In fact, using the concrete data of these two cases as the Bell Cows, one is hard pressed to deny that there have been whole herds of anomalous physical trace cases amenable to science across the history of the phenomenon. *And*: this was physical. This was external to the observer. This was objectively real.

There are large heaps of cases like these in the serious files of the field. Almost none made it to the labs for reasons we've alluded to. Others didn't make it because, though just as physically real, what happened wasn't amenable to "sample taking" (like the multiple independently witnessed Coyne helicopter encounter with its "tractor force pulling,"<sup>28</sup> or the myriad of instrument effects cases in airplanes<sup>29</sup>, researched by Richard Haines). There are an anvil-chorus-worth of impressive, physical cases in the files; the UFO phenomenon is real.

### How The Scientists Were Led Astray

I believe the first thing we academics should admit is that, given the great array of possible things to know something about, we don't know more than anyone else. Sure, if we're an astronomer, then ol' Joe Street Corner can't match us on astronomy knowledge or a bunch of things very closely tied to it, but I've



Fig. 10. Robert Low, the real administrator of the Colorado Project, and surprisingly open-minded about UFOs. (U. Colorado)

got a guy renovating my bathroom right now that I'll put my money on if the topic is plumbing, carpentry, electrical wiring, tiling, architecture, and a whole host of things similar (plus he's a Master's degree in elderly health care, so I could write another long list). The point is, of course, just because one claims to be a "scientist," one doesn't know everything, one doesn't know everything that's associated with "science," and one may well not have a very good handle on *everything* in the textbooks of "one's own science." And, ufology is not in anyone's curriculum of training. No one knows anything of substance about ufology who hasn't made a significant personal effort to do so. Therefore, one would think (naively) that very few "scientists" would think that they have the right to much of an opinion about ufology. But . . . *ha, ha*.

One thing that separates "scientists" (on average) from a typical Joe-on-the-street- corner is that a scientist-type is usually a very analytical-oriented mentality, whether he has any other excellent intellectual skill or not. Such a person enjoys dicing up complex-sounding puzzles, seeing something "the others" didn't, and proudly announcing the fruits of this "insight." Some scientists have enough social intelligence to handle these egocentric rushes and some are just insufferable, but a lot of "scientists" get into the habit of being "right" and liking it.

Well, that may be fine if one would stick mostly to what one knows and maintain a significant attitude of collegiality, but we all know that many of our highly educated associates (and ourselves, if we are honest) at least occasionally diverge from the ideal of objectivity, unemotionality, and tolerance of ambiguity. Many of us not only want to be right, but we really, really don't want to be wrong. Being fooled is as bad as it gets. Being an "irrational scientist," a "flaky scientist," a "pseudoscientist" — why, that's being nothing at all. And, when one adds to the absolute need to never be seen as a fool, the inculcated and welcomed self-image of being "The Answer Man," one *has* to get one's



Fig. 11. Researchers at the "Sturrock-Rockefeller Workshop", Rockefeller estate, Kykuit, New York, 1997.

opinions somewhere where one can feel protected from the foolishness, feel the shield of the Established High Priests of the Tribes around you. I have had many colleagues who have a very hard time simply saying: I don't know. But if one can't simply say that, the only option is to repeat "safe" opinions voiced by the High Priests . . . and maybe laugh or snigger a little at certain topics to quickly end the conversation. Every serious ufologist that I know has been treated to this behavior countless times. How did it happen, exactly'?

During the SSE era, some of this social history has become clear. It seems to have gone like this: In 1947 and 1948 scientists did not have to feel one way or the other about UFOs. The flying disks of 1947 had flapped in a very sharp peak (about three weeks) and were gone. The odd spectacular individual case then began to dribble in during 1948. Still, there was not enough (publicly) to require comment. In 1949, Sidney Shallet of the *Saturday Evening Post*<sup>30</sup> made the phenomenon a national conversation piece and the Air Force released a lengthy statement (almost a study) entitled "Project Saucer."<sup>31</sup> The media began to roll. It became obvious that the flying disks were not going to go quietly, and scientists (not just military and government officials) were going to be asked about them. The academics needed a High Priest. Up stepped the Director of Harvard's astronomy department, Harlow Shapley (Figure 12). What Shapley did seems astounding to us today: he *assigned* one of his faculty to debunk the flying saucers<sup>32</sup>.

Shapley was an intelligent and productive man, but he had his chinks in his armor just like all of us. One of his peculiarities was a form of paranoia which has affected all of us who are interested in anomalies of any sort. Shapley thought that there were a set of ideas "out there" in the public which were irrational—dangerously irrational. These ideas were not just wrong, not just foolish, they were likable. People were intrigued by them. Good Lord, they had the potential for gaining such a foothold in the minds of the gullible public that they could bring down the rational world of Science Itself. They threatened the Future, the Good Society. They must be nipped in the bud. (Yes, my friends,



Fig. 12. Harlow Shapley, Harvard University. (AIP)

I realize that I could be charged with sailing too close to the wind here, but judge by what the man did, and reflect on a peculiarly dogmatic organization of like-minded people named the Committee for Scientific Investigation of Claims of the Paranormal [CSICOP]).

Parapsychology was one of these areas of Pathological pseudoscience but it was difficult to stretch the Harvard astronomy department to cover it. Someone else would have to deal with *that* aberration. But Harvard could save the world from three others: Astrology (assigned to Bart Bok), Velikovskianism (assigned to Cecilia Payne-Gaposchkin), and Flying Saucers (assigned to Donald Menzel). I am not a student of the Astrology or Velikovskian Wars, so I don't know how much enthusiasm Bok and Payne-Gaposchkin put into their tasks. But I can tell you that Shapley picked a winner in Menzel. Menzel immediately put on his knight-suit and fought publicly and unrelentingly until the day he died, 26 years later. Even if one admires his cause as a worthy one, it still seems a bit excessive.

Menzel is so important to the sociology of this subject that he requires some serious comment (Figure 13). His UFO files are at the American Philosophical Library alongside the Colorado Project. I read them all. Included is an unpublished (and apparently not intended to be published) autobiography. It would be very good raw material for a study on megalomania. I'm not kidding. The pages paint a picture of a man who felt that he was the best at anything he set out to do (not just astronomy, but dancing, fistfighting, looking handsome—you name it). He was never really wrong about anything either and many other scientists only finally arrived at truths that he had at least hinted at years earlier. And, my, wasn't it fun to be the ace interpreter of codes and radars for the predecessor of NSA, and a founder of the first Playboy Club, and drinking and carousing with chief CIA scientist, H. P. Robertson, on the evening he drove off and wrecked his car—an accident from which he later died. I say all this because



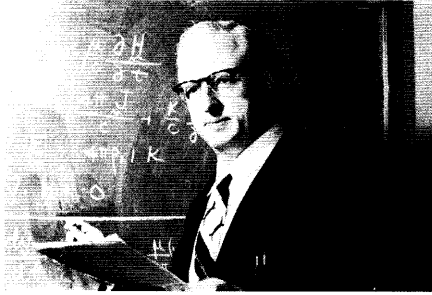


Fig. 13. Donald Menzel. (Harvard University)

Menzel lived larger than life and, as many of that ilk do, thought of himself as a bit of a law unto himself—an "end justifies the means" kind of guy. This was relevant to his UFO "work."

Menzel's introduction to ufology was, oddly, having his own UFO sighting. It happened in 1949 and consisted of some puzzling lights which appeared and vanished in the sky. He was genuinely flummoxed by this. He thought that it was important enough to write a report of the event to Pentagon authorities<sup>33</sup>. Later Menzel wrote a famous book to debunk flying saucers. It wouldn't do, of course, for a flying saucer debunker to have his own sighting, so he had to debunk that, too. But it still wasn't easy. Part of his solution was to alter some of the details of his original report. He then dreamt up a "trick reflection of the Moon"<sup>34</sup> theory to explain his observation away. He remained uncomfortable even with his manipulated and awkward hypothesis, though, and didn't mention it at all in his second anti-UFO book, and actually denied having any UFO-like experience at all until 1955, in his third. Menzel uses this sort of nonscientific behavior toward UFOs constantly in his debunking career. The end justifies the means. UFOs are dangerous bunk and anything one does to get rid of them is okay.

Menzel's entry into UFO debunking occurred when he volunteered for a spot on Edward R. Murrow's CBS program, *The Case of the Flying Saucer*, in April 1950. His flat rejection of flying disks was based on observers' mistakes: things like reflections off planes, weather balloons, and even pieces of flying paper. Since such explanations were obviously not going to hold any credibility for the more sophisticated cases, Menzel shortly abandoned that approach and invented a large array of optical distortion, radar ducting, and plasma explanations, which were esoteric enough to put off almost anyone, and which sounded like they must be good science. Since the number of U.S. physicists who wanted to analyze Menzel's concepts (and come out in public rejection of them) numbered zero, these ideas had a free pass in the media and became Science's Statement on UFOs.

Behind closed doors, however, persons interested in trying to cope with the flying disks mystery had a different opinion. Menzel came to the Pentagon in 1952 with a proposal for the USAF which he said would completely debunk all

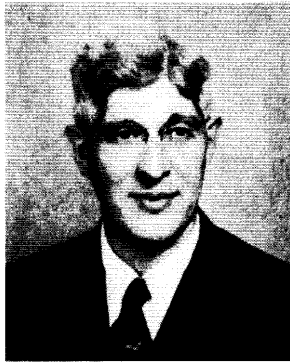


Fig. 14. Joseph Kaplan, UCLA physicist and main USAF Consultant on plasmas, fireballs, etc., in 1949–1952 era. (CUFOS).

the more confusing UFO sightings<sup>15</sup>. The Air Force team which met with him (Brigadier General Garland, Dr. Stephen Possony, Col. Frank Dunn, Capt. Edward Ruppelt) were all very knowledgeable about the problem and they were very skeptical of what Menzel claimed to be able to do. Menzel was irritated by their skepticism and would have been more so if he had known that they would submit his ideas to Scientific Advisory Board member, Dr. Joseph Kaplan, and Possony's science advisor, Fr. Francis Hayden, astronomer of Georgetown (Figure 14). Both Kaplan and Hayden viewed Menzel's project as amateurish and at about the level of high school lab demonstrations.

The year of this meeting, 1952, was the year that set the Position of Science on UFOs for the ages. The UFOs were in their second huge flap in the United States and urgently needed attention. Menzel began writing articles for popular magazines like *Look*<sup>36</sup> and *Time*<sup>37</sup> which claimed that all saucer sightings were explainable using simple home experiments one could do oneself and, moreover, that the Air Force agreed with him. He was apparently impervious to how thoroughly that attitude was irritating to the professionals in the Air Force who were studying these things and knew better. To think that they were so dense as to not have thought of these "explanations" before was bad enough, but the arrogance of claiming to the public that his solutions had Air Force sanction stretched their patience. General Garland pointedly told him off on a few things but Colonel Dunn was the diplomat. He said that if Menzel wanted to send them his data underlying his proposal, they'd look at it. Menzel claimed that all he wanted was to be of service, and to serve as a facilitator between the Air Force and a private engineering firm which could do the project demonstrations.

He then did something surprising (to this naive West Virginia boy, at least). He wrote his friend, Winfield Salisbury, who ran a one-man moonlight engineering consultancy business outside of his job as a real physical scientist, and



Fig. 15. Winfield Salisbury. (VARO)

told him that the time was ripe to hit the Air Force with a lucrative contract proposal<sup>38</sup> (Figure 15). Menzel said that he and Salisbury could handle the work, with one or two well-known names as advisors. Menzel would collect a healthy consultancy fee. Salisbury later sent in a proposal without mentioning Menzel's paid role. The Air Force wasn't quite that naive after all and the proposal hit the trash bin. Maybe all this should be considered just standard operating procedure in trying to milk the government, or maybe just naughty boys with their games, but, for me, it says something about the character of this guy that's not conducive to a lot of trust.

Throughout that critical year, "scientific" evaluations of the UFO phenomenon were all over the press. A typical set of comments was Menzel and Shapley, or Menzel and Liddel, or Menzel and Bridgeman. Often the "other guy" would allude to Menzel's ideas, either by name or not. When the ignorant scientist read about Flying Saucers, he paid attention to two things: Menzel and comments by the military. Menzel and all-those-other-guys-we-heard-from-once gave a nice, authoritarian, nonfoolish answer: the UFOs were unusual natural effects, which only we scientists would not be fooled by. Or they were even worse: Harlow Shapley occasionally would chime in with a remark like: "No evidence that flying saucers are other than a natural neurotic phenomena has been received at the Harvard Observatory."<sup>39</sup> And all this was coming down from Harvard, the Highest Temple of the Astronomy High Priests.

The Menzel and Shapley Crusade was immensely successful. The pseudo-science applied to generic categories of cases was effective even at getting other debunkers in line behind a uniform message. The most vocal debunker next to Menzel was Chief of the Nuclear desk at the Office of Naval Research, Urner Liddel. Liddel was a friend of both Menzel and the later-to-be-Chief of the University of Colorado Project, Ed Condon. Liddel had hit the headlines in 1951 with a press release and an article which claimed that all the really unusual UFO cases were due to sightings of Top Secret U.S. Navy balloon projects run by General Mills<sup>40</sup>. The fact that several of these unsolved UFO cases were reported by those same General Mills scientists while running the

balloon flights was a little detail that eluded him, or was too inconvenient to mention. Liddel then accepted an invitation by the Optical Society of America, alongside Menzel and J. Allen Hynek, to talk about what UFOs really were. (Science speaks!) Menzel did his thing and Hynek whimpered around talking about "nocturnal meandering lights" and natural phenomena. Liddel had by this time "gone Shapley," and talked about almost nothing but "mass hysteria," "fear psychosis," and "sensation-seeking." All speakers were asked to contribute articles for the *Journal of the Optical Society of America* and Liddel altered again to feature not only all these disreputable human foibles ("dishonesty and greed" and "pathological science" now joined the litany), but included much of Menzel's optical effects as well<sup>41</sup>. During the fall and winter of 1952–3, scientists were lining up around the globe in support of the Accepted Conclusion:

The 200 scientists from 12 countries gathered here for the third International Astronautical Congress agreed almost unanimously that the "saucers" aren't men from Mars or any other body out in space.

The experts also said they did not believe the reported flying discs were a new weapon—but they did not rule out that possibility completely.

Most of the scientists at the congress said, however, they felt the illusion theory probably was correct<sup>42</sup>.

The fact that those people who best knew that "the illusion theory" *didn't* fit the cases (the USAF Project personnel and their consultants) had good reasons not to encourage enthusiasm in the public for UFOs, all worked nicely together to give Menzelianism an unchallenged field.

Menzel then went about attempting to mop up dissent within the tribe. He began pressuring scientists who had admitted to personal UFO sightings, or even those who had spoken open-mindedly on the mystery, to publicly recant their words. He gave Clyde Tombaugh (an observer, not a physicist) some cock-and-bull about seeing an odd reflection phenomenon (despite it crossing the sky at zenith and behaving in an optically correct, vis-a-vis foreshortening, way as it did so)<sup>43</sup>. Tombaugh was really concerned. Years later, Jim McDonald (of the University of Arizona) heard about this, looked up the meteorological conditions for the date, and found that Menzel had made up the whole explanation out of nothing. Dr. Hynek also suspected that Menzel was doing this all the time. Example after example which Menzel fed him were of optical experiences claimed by Menzel which were so convenient to the exact point of a case and often things Hynek had never heard anyone else claim to have had<sup>44</sup>.

Another astronomer Menzel tried to bully was Seymour Hess<sup>45</sup>. Didn't Hess know that the UFO kooks were using his case to buttress their agendas? Did Hess want to contribute to this dangerous foolishness? Hess essentially told Menzel to bug off, as he knew what he saw. However it all played out, persons like radio astronomer Otto Struve, who had spoken open-mindedly about UFOs earlier, publicly recanted by the end of 1952<sup>46</sup>, and astronomers all over were publicly behaving like those whom Allen Hynek interviewed<sup>47</sup>—open to



Fig. 16. Dr. Ronald Bracewell, Stanford University: promoter of the extraterrestrial probe hypothesis. (Cosmic Search)

discussion or even admission of seeing a UFO themselves, if it was private one-on-one; but no positive sympathy if there was a group (or a microphone). Allen said that he almost couldn't contain himself from chuckling during and anti-UFO tirade by Gerard Kuiper in a roomful of his astronomy group, at least two of which had told Hynek privately that they'd seen a UFO<sup>48</sup>. There is lots more, like the gossipy smearing of dissenters in letters to other scientists but maybe this is enough to set the "intellectual" scene. By the end of 1952-3, the Scientific Answer, and its correlative attitude, was in—all that was necessary from then on was reinforcement.

Reinforcement was easy. No scientist wanted to get publicly involved. Only Menzel wrote "scientific" books. The military had settled into an entirely negative stance as to public pronouncements (by direct nationwide order)<sup>49</sup>. UFOs had their independent phenomenon-driven moments but (in the U.S.) were relatively quiet—until the great extended wave of the mid-1960s.

The ufologically-quiet period in the United States between 1958 and 1964 featured, almost paradoxically, the rise of academic interest in the Search for Extraterrestrial Intelligence (SETI)<sup>50</sup>. Since SETI is analogous to ufology-at-a-distance, this movement was bound to create trouble. Perhaps *because* the UFOs were relatively quiet, the SETIian academics made bolder and bolder statements. People like Ronald Bracewell of Stanford began talking about civilizations sending out probe vessels to explore planets around other stars<sup>51</sup>—a possible model of a UFO if ever one was stated by the "establishment" (Figure 16). People not of a SETIian bent, but interested in UFOs, took every one of these optimistic SETIian pronouncements as support for the reality of UFOs, here and now. Menzel was moved by the intellectual climate to produce his second debunking book in 1963<sup>52</sup>. He remained the same guy. In a letter to his coauthor, Mrs. Lyle Boyd, he discussed the 1953 CIA panel, chaired by H. P. Robertson, which had concluded that public belief in UFOs constituted an emotional



Fig. 17. Donald Menzel ready to go to war against James McDonald, while innocent bystander (William Powell, a pilot) gets caught in the middle. (NICAP)

weakness in our society, which could be exploited by an enemy, and therefore this belief must be quashed. Speaking of his friend Robertson, he said that "Bob" had always been hostile to the idea of UFOs well before chairing the panel "but perhaps we better not mention that point" in the book<sup>53</sup>.

SETI enthusiasm ploughed forward but now the UFOs were flapping again. Nineteen sixty-five and 1966 were dense UFO years and during them a very young and naive SETIian made a blunder. In the spring 1966 meeting of the American Astronautical Society, Carl Sagan, then of Harvard (no less), stole the show by stating that spacemen "may have visited Earth thousands of times in the past few billions of years" and, worse than that, "at least one of these visits may have occurred in historical times."<sup>54</sup> *Hmm*. Sort of sounds like UFOs. Some of Sagan's colleagues thought so, too. People like Menzel and Condon remarked about Sagan in letters: was he dependable, solid, in his thinking?<sup>55</sup> Did he have kookish tendencies like Allen Hynek or Jim McDonald, those renegades who thought something important existed in the phenomenon? (Figure 17) Condon wondered whether Sagan's softness on this was reason for excluding him from the honor of belonging to the elite Cosmos Club in D.C., an honor he hoped had already been denied to Allen Hynek. It took the headstrong young Sagan a while to get completely into line but once he did, he blossomed into the second most effective public scientist debunking UFOs (behind Menzel). One wonders: did *Cosmos* parlay into Cosmos Club?

As the flap roared on, a major television network decided that it had to address all this silliness. CBS, with the Face That Told the Truth, Walter Cronkite, produced a UFO special: *UFOs: Friend, Foe or Fantasy?* It aired in May 1966 and, of course, featured Donald Menzel. Covertly, it also featured something else. Somehow, CBS had chosen as scientific advisor to the program a man named Thornton Page. This was the same Doctor Page, who was an intelligence community scientist during the forties and fifties, and who had served on the Robertson (CIA) Panel in 1953, as mentioned above (Figure 18). That panel had made specific, media-strategic recommendations on how to make UFOs appear empty of content, and even foolish. After the CBS broadcast, Page wrote to the

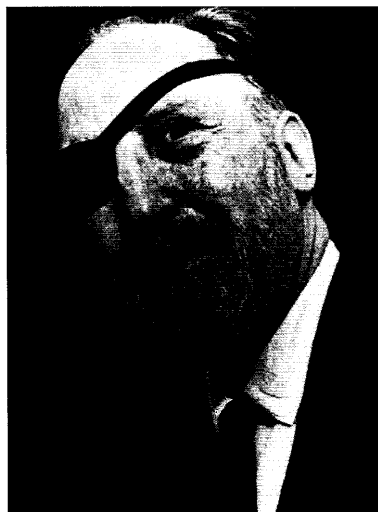


Fig. 18. Dr. Thornton Page, an intelligence community scientist and member of the CIA's Robertson panel. (Wesleyan University)

Robertson Panel secretary, Fred Durant, to tell him that he had organized Cronkite's special "along Robertson lines."<sup>56</sup> One CBS episode, the brutal bashing of a British engineer's views on an alleged UFO film, is line-for-line out of the Robertson Panel recommendations. It was gloriously effective. And no one, maybe not even our trusted truth-sayer, Walter, knew.

The outcry about UFOs, how they were being handled by the Air Force, and the Air Force's desperate needs to publicly dump the Project coalesced into the government contract for the University of Colorado to "scientifically" study UFOs. Ed Condon accepted the post as chief scientist. As three of his closer scientific associates were H. P. Robertson, Urner Liddel, and Donald Menzel, the Project was in good hands. Condon was happy to get the Air Force's confidential statement of what the final conclusions must be early in the game<sup>57</sup>. The Pentagon's Hippler even said in the fateful letter, if you need more time to reach a proper conclusion, ask for more money (which they later did). I've mentioned this travesty earlier and won't belabor it here. It is worth mentioning Menzel's role, however. He tried to meddle with the project and to block the civilian UFO organization, NICAP, from having any significant function in terms of case submission or consultancy<sup>58</sup>. His own meeting was the only "consultancy" kept secret from the press or the UFO organizations. But as the Project scientists studied cases and Menzel's ideas, it became obvious to them that he had very little that was useful to say. At the aforementioned JPL lecture at Cal Tech, administrator Robert Low (hardly a "UFO nut") stated that he and the project scientists did not consider Menzel's books a serious study<sup>59</sup>. Of course, since neither Low nor any project scientist (other than Condon's friend



Fig. 19. Dr. Frederick Seitz of the National Academy of Sciences. (NAS)

Craig) were allowed to write chapters in the final report, such revelations remained unrevealed.

I've mentioned (a bit of) how the report was written and its outrageous deviation from the facts, and from the views of its own staff. Still, upon its emergence, the Tribal Elders pulled together around it. As stated earlier, it was Condon's own student, Frederick Seitz, who headed the National Academy of Sciences panel which approved it<sup>60</sup> (Figure 19). The Air Force applauded wildly the conclusions they so much wanted (demanded) to hear. Nature, in many ways the most extreme "scientific" guard dog on the planet, raucously entitled their review: "A Sledgehammer for Nuts."<sup>61</sup> Donald Menzel's colleague, Fred Whipple, immediately praised Condon for his fine job, while Robertson Panel secretary Fred Durant (now with the Smithsonian's Air and Space Museum) said the report was the "Gravestone for UFOs."<sup>62</sup> Most disgustingly, SETIan patriarch Philip Morrison said that the report would stand forever as a monument to the scientific method!<sup>63</sup> I don't like to use too many exclamation points, but that deserves at least one.

Once again, Science had allegedly spoken, and UFOs were slammed safely back into their worm can. Menzel continued meddling until his death and his final (third) debunking book was full of deceptive manipulations of Colorado Report cases<sup>64</sup> which had been left unidentified. He was sweeping up the trash all the way to the end. With no more Air Force project to focus official attention and no effective research organization (à la France's GEPAN), maintaining the kook status of UFOs in the minds of the academics was light work. An occasional dismissive appearance by the charismatic and right-thinking Carl Sagan, with just the correct amount of a chuckle, and Shapley's nightmare of UFO-believing irrationalists was just a bad dream. Our own knightly colleague, Peter Sturrock, successfully put a small-but-useful dent in this unscientific horror story but we have a very long way to go.



### The Extraterrestrial Hypothesis Can Serve

Science is pretty good at answering the question "How?"—giving accurate and often "lawful" descriptions of the observable behavior of things in the world. It's not so good at "Why?"—what are the underlying causes of these behaviors? When we are dealing with a physics-or-chemistry-like problem and we can peel away a layer of material reality to probe into what's below, we often think that we find the "why" or cause of a behavior, but soon we see that we've just observed another "how" and our thinking about "then why *that?*" is shoved one step deeper. The "whys" seem to cascade down the chain of being toward some hoped for Theory-of-Everything wherein "it" will all become clear at last. Well, even in physics there are many who have their doubts. When one begins hypothesizing on more complex systems, like ecologies, intelligences, societies, the *causal* nature of such behaviors sets the mind spinning and should, at least, produce profound humility. Human mental agendas are hard to suss. Societal intricacies are at least as hard. And so, how good are we at pontificating about extraterrestrial, ultraterrestrial, or parallel-realities entities and why they would do things? This is especially true since we (thankfully) are unable to turn them over to the artful skills of national security operatives, or (sadly) to the humane inquiries of Oprah or Bill Moyers. The Extraterrestrial, or any other, Hypothesis (which employs intelligent actors) has questions and demands which accompany it, which broach into this arena of "if, then Why?" When we hit those questions we need to loosen up on our preconceptions.

As I've written earlier, the flying disks in the early days were greeted, almost immediately, with speculations (and even conclusions) about their extraterrestrial origin. And why not? Given that the military, and many others, saw in a large number of encounters an entity which to every commonsense view seemed like a metallic, technological aerial device which had performance capabilities well beyond our own devices, left us with an almost forced view of "not earthly." When you add to that an astronomy community which was rapidly changing its mind about the commonness of planetary formation around extra-solar systems<sup>65</sup>, it seemed that those "other guys" were surely out there (even Shapley<sup>66</sup> and Menzel<sup>67</sup> were saying that much).

As far as the extraterrestrials being able to travel to Earth was concerned, in 1952 the possibilities that they would have only to go from home civilizations on Mars or Venus ("short trips") were not yet eliminated. But, even if our neighboring planets were considered as very low probability sources for the UFOs, and our focus necessarily shifted to origins in deep, interstellar space, this shift of perspective would not have put off the military the way it did the astronomers. The Air Force is not like the academic community. They have an engineering mentality, not a theoretical-deductive one. They tend not to think that you *can't* do something. Give us the money and the personnel and then watch us fly. Don't talk to me about how hard it is—talk to me about how hard you want it. Allen Hynek or Donald Menzel could lecture all they wanted about BB-sized Earths and

basketball-sized stars, and how far one would have to be able to travel between basketballs, and an engineer or a pilot will shrug and say, "So what? I know what I saw."

We actually have an expression of the ETH from an intelligence officer in the Pentagon in the 1952 era. His name was Col. William C. Odell and we know very little about him other than he wrote an article (probably in late 1952) which was handed to Maj. Donald Keyhoe to take to his editors at *True* magazine for publication<sup>68</sup>. *True* wouldn't do it because Odell was not allowed by the Pentagon censors to publish using his rank and Air Force affiliation. So, the rest of us never saw the article. Except Keyhoe made extensive notes, which I have transcribed. In part, Odell writes this:

In our solar system, one of the nine planets has intelligent life. If this ratio holds elsewhere, there would be many havens in our galaxy. The same conditions that created Earth must have occurred elsewhere. New suns and new worlds are still being created. Some suitable orbiting planets in other solar systems may be older, some younger. And, even if other life would not be found in our own galaxy, it is probable elsewhere. There is almost a mathematical certainty that somewhere in space, Earth has a twin.

Earth's twin will not be an identical one, in the sense of its being born at the same time, but rather in the sense that conditions for life have developed there and that life is present and evolving. In fact, our Earth could be one of a family of life-supporting planets in the Universe. Some of our sister planets, capable of sustaining life, would be older than ours. Others would be younger. There may be enough of this breed of planet that one could see life forms developing through all the stages that occurred here. Some planets may be on the doorstep of human development. Others may be further along, as we are today. Still others will be much older, so much further advanced that they are on the verge of exodus from their planet, as it approaches that stage of its inevitable destruction. These beings may have attained space travel. They may have already explored their own stellar system. They may overcome the technical and practical restrictions and are preparing for the abandonment of their planet. They may be seeking a younger, more suitable planet on which to live and perpetuate their race.

Recent reports of unusual phenomena in our atmosphere (UFOs) have reopened the suspicion that travelers from outer space may be reconnoitering Earth. Numerous men of scientific background have flatly opened their technical reputations to censure by stating that these uncommon sightings are of extraterrestrial origin. These include engineers and scientists from all fields and all nations.

As boggling as this was to Keyhoe, it is a handy example of how naturally, and pervasively, the ETH arrived on the scene. One way of expressing it is in the three elements below:

(1) Extraterrestrial Intelligences (ETI) have arisen elsewhere in the universe, probably many times in many places in our galaxy alone. (2) Some form of technological civilization has advanced to the point at which interstellar travel is possible (again, probably many times). (3) Such travelers, or at least their contrivances, have arrived here and are pursuing their mission in a somewhat covert fashion.

Point #1 of the ETH has been the bailiwick of the SETI community and those who might be called the Cosmic Evolutionists. Arising with great energy from

about 1959 onwards, the SETI community has used the brilliant device of Frank Drake's Equation for estimating the probable number of other civilizations in the Milky Way to focus all the knowledge and intuitions of many sciences to construct an eminently believable argument for the commonness of extraterrestrial intelligence. Typical astronomers, and especially SETIans, want to stop right there and in the previous segment of this paper we have seen some of the reasons why. There is much more to this rejection, apparently, when one contemplates astronomical powers like Otto Struve<sup>69</sup> and Zdenek Kopal<sup>70</sup> becoming paralyzed at the thought of ET-visitations and saying things like, "if ET phones, don't pick it up!" This fear of the superior civilization being too close is surprisingly, tangibly, real for some of these guys but that story is beyond my current ability to tell. I would just remind Otto and Zdenek, and George Wald, and their ilk<sup>71</sup>: Buck up, boys, we've had these things for over 50 years and they haven't put the hammer down yet.

Point #2 is the first wall of the astronomers' fortress against ET. Thank the Light Years! They can't get here. Oddly, some of the publications which diverged from the established cant were by members of the SETI community. Ronald Bracewell and his ET-probes has been mentioned. Such probes were taken seriously as an alternative hypothesis ("The Cosmic Repeater") to explain the mystery of long-delayed radio echoes<sup>72</sup>. And our super-SETIian, Carl Sagan, published a mathematical scenario, showing how an advanced (but not *very*) technological civilization could have colonized the entire galaxy, using only "slow-boats," in much less than galactic-available time<sup>71</sup>. Bracewell and Sagan were thinking in a reasonable world of models of spacecraft driven by nuclear power or electromagnetic beams. The engineering-like minds who were devising these engines-of-desire knew that they were stretching the techniques that we already knew—but that was the big revelation: even as ignorant as we are now, we can see the outlines of several ways of getting out there. What astonishing discoveries lay just beneath the next rock we kick over? *But*, the astronomers complain, Einstein *still* won't let you go *really* fast! And the historian of science remembers Aristotle and Ptolemy and Kepler and Galileo and Newton and LaPlace and Kelvin, and shakes his head. Unyielding Iron for All Time and All Circumstances, *eh?* Well, it will be the first time that nothing new can be found.

The two initial parameters of the ETH tell another minor academic story. If we place them in a pundit square, we can see it:

No ETs

Lots of ETs

There are people in the upper left box who believe that we're the only intelligent life in the galaxy and that interstellar travel is impossible. They are out-of-step with general "expert" belief in both areas and doubtless have their own

philosophical reasons for being so. The SETIans in the upper right feel that the universe swarms with ETI, but they can't get here. They are out-of-step with the engineering and spacecraft designers (e.g., See Robert Forward's array of concepts<sup>74</sup>) and have their prejudices as we've seen. The School of One in the lower left box believe the engineers, but not the SETIans. They want the galaxy clean of other rival intelligences so that we can star trek our way to some Ultimate Grand Human destiny (e.g., see Frank Tipler<sup>75</sup>). But, for people who study all the literature, the *consensus* position would be the lower right: ETI is common *and* it could get here. But that's just too much (to admit, anyway), so we shouldn't really talk about it in polite ("scientific") company. But I have no such politeness, so on to point #3 of the ETH. Are "they" here?

They're here. They've been here in some force at least since World War Two. Whatever they're doing, it's a confusing amalgam of covert and overt behavior. There's lots of it, whatever it is. And, no, neither I nor my colleagues in the field jest.

Segment number one of this article gave you the barest glimpse of why we believe—no, that's not nearly strong enough—we *know* that this phenomenon is real, external, physical. But that and all the unspoken rest of the cases and studies do not add up to an uncritical acceptance of the extraterrestrial hypothesis by the best ufologists. People outside the field do not realize how intensely (unmercifully? viciously?) we critique our own pet ideas. Sure, people hold onto their babies in the face of this, people refuse to budge even in the face of James McDonald, Allen Hynek, or Jacques Vallee. People in short act like people. Still, the ideas are hacked and shredded. The ETH has been one of those.

Though surely not the first, the young Richard Hall, one of the lifelong supporters of (mainly) nuts-and-bolts ETH ufology, was musing about the "Hypothesis of Extraterrestrial Visitors" in the (rare) UFO newsletter, *UFO—Critical Bulletin*, in 1959<sup>76</sup> (Figure 20). He reflected on the typical occupants being reported. Did these humanoid forms make sense? Could not the ufonauts be from vastly different environments, even aqueous? Were some of the encounters, those of blobs of light, perhaps not machines but the entities themselves? Might not there be more than one kind of intelligence behind UFO experiences? Well, pretty good, my friend—especially for the time.

As the middle years of the sixties arrived, the ETH and its relation to UFO encounters came under scrutiny (and attack), directly and indirectly, from many quarters. Establishment biology spoke of the unreasonableness of humanoid form by way of evolutionist and accidentalist theory giant, George Gaylord Simpson<sup>77</sup>. Robert Bieri replied to the contrary (both in 1964), using intuitions based in the fledgling school-of-thought of convergent evolution<sup>78</sup>. Simpson and his descendants (including Carl Sagan and Steven Gould) naturally held the field. In 1965 this established victory had already transferred itself into the minds of UFO-interested persons. Martin Shapiro who had an office near Hynek in the Sputnik era at Harvard College Observatory wrote him in that year<sup>79</sup>:



Fig. 20. Richard Hall, UFO Civilian research history personified. (NICAP)

We have read reports by reliable persons who have seen manlike figures associated with UFOs. The policeman in New Mexico last year and a minister in Australia about 1959 are good examples. I know that the law of probability says that some place in the infinite universe there are solar systems with planets similar to ours. I also know that in an infinite situation that a manlike creature could exist, but I find it too much to hope for, to have our first contact with intelligence from another source, to be with a manlike creature. I'm better prepared to meet with an octopus wearing a silk hat bearing an antenna. If reliable witnesses have seen manlike creatures, I believe that they are men from Earth and if our own country is not the source of these fantastic vehicles, our Air Force intelligence had better find out who is.

Across the ocean, France's best, Aime Michel, was doubting, as well (Figure 21). The humanoid form was one sticking point. Adaptation to our Earth's environment was another. Michel (in 1966) saves the ETH, by making the humanoids and the numerous disk-craft the recent products of a powerful extraterrestrial monitoring device put in place centuries ago by advanced ETs to monitor Earth's goings-on. The ufonauts would not be true ETs but biological modifications made by the Monitor using gene-engineering tricks<sup>50</sup>.

Treat Michel's 1966 model as you like, but it's a good example to warn knee-jerk naysayers of the poverty of their imaginations. One should predict the agendas and behaviors of extraterrestrials with the profoundest humility. At this same time, the flagship UFO journal, *Flying Saucer Review*, was becoming inundated with strange UFO(?) encounter cases and, perhaps, stranger concepts to account for them. Editor Charles Bowen's lifelong buddy (and assistant), Gordon Creighton, had a propensity for interpreting most anomalous events in paranormal, spiritualistic, and alternative-realities terms, and those concepts received lots of pages in the magazine. We launched into an era wherein the

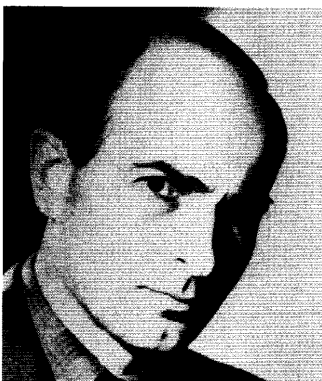


Fig. 21. Aime Michel, perhaps the most influential non-U.S. UFO researcher in history. (MUFON)

almost-anything-goes ideas of John Keel<sup>81</sup> and Creighton became arrayed against old-fashioned ufologists and their old-fashioned ETH. The nuts-and-bolts ETHers were horrified. Ufology was always Flypaper-for-the-Absurd. Now it was a full force invasion and the chances for UFOs to find acceptance within conservative academic circles was heading toward zero. The Colorado Project Report hammered another nail in. Allen Hynek tried to round up the wagons by establishing CUFOS. ETH-ufologists latched onto the Betty and Barney Hill onboard experience as a foundation stone. The related claim of the "Zeta Reticuli Star Map" became a hoped-for trump card for the ETH<sup>82</sup>.

But even ufology's Big Wheels were in full doubt by the mid-1970s. Why? High Strangeness. Some of the things which seemed to be associated with clusters of UFO encounters were just too weird. What were these weirdnesses? They are too numerous to mention but some of them are "instant appearance and disappearance," "huge (apparent) objects traveling without affecting the air," "merging objects," "comical bizarre displays," and stuff smelling suspiciously like Olde Folklore Entity stories. Jacques Vallee wrote *Passport to Magonia* in 1969<sup>83</sup>, comparing certain aspects of UFO encounters to traditional faery stories, and began a lot of people wondering if UFOs weren't ET at all, but, in a sense, "just next door." He and Allen Hynek wrote *The Edge of Reality*<sup>84</sup>, a dialogue on the possibility that UFOs were paranormal and founded in some form of meta-reality rather than ordinary Space-Time. Hynek, in the late seventies, was answering inquiries about what was going on with this:

I am more inclined to think in terms of something metaterrestrial, a sort of parallel reality . . . I am very much afraid that UFOs are related to certain psychic phenomena. And if I say "I am very much afraid," this is because in our Center at Evanston we are trying to study this problem from the angle of the physical sciences . . . But it would be absurd to follow up only one path to the exclusion of all others.<sup>85</sup>

Well said, Allen. Ufology is a large and complicated beast.

In France, Aime Michel was abandoning the ETH entirely, due to experiences like the "Doctor X" case, where objects seemed to defy all physics and merge<sup>86</sup>. His friend, Pierre Guerin, attempted to haul him back from the brink with notions of advanced ETs with technologies that could seem like magic<sup>87</sup>. Michel seemed to waver between a very advanced Guerin-like ETH and some more profoundly, paranormally "alien" something-or-other at the end of his ufological career. Back in the states, though, both Jacques Vallee and Allen Hynek were formally making arguments against the ETH<sup>88,89</sup>.

On something as complex as the ETH can be, the specific arguments can go on into a very long list, so I'm not going to do that. Instead I'm going to take a much shorter, but commonly heard, number of objections, and make a few comments to each. Then it will be your job to decide for yourself whether the ETH will serve.

*Objection Type #1.* There's something wrong about these UFOs as Spacecraft. They have too far to come; they don't look spaceworthy; and we don't pick them up coming in from Deep Space.

I categorize thinking like this as the "Model-T-Ford" set of imagination-deficient comments, which old astronomers might make (Allen Hynek made all of them). Even in versions of the ETH where there's an original (huge) slow-sailing colony ship, nobody's imagining these little runabouts of 30-foot diameter as space cruisers. Almost all persons who give some credence to the ETH say that (a) we're almost surely *not* dealing with "slow-boaters" and consequently (b) the crowd we *are* dealing with must have some jazzed-up worm-hole or space-windowing Entry-and-Exit technique that gets you not only between the stars, but doesn't require you to cruise leisurely into our atmosphere from Deep Space. It is very difficult to sustain the ETH unless you believe that it is possible that such a—call it hyperspatial, or whatever—technology exists.

*Objection Type #2.* The objects seen, and particularly the entities encountered, just don't behave properly. They should be more serious, more advanced, more disciplined, more like *I'd* be if *I* were exploring another planet (or examining a human on a round table under involuntary circumstances).

This is "Model-T" Thinking, as well. The best thought that Jerry Clark ever put in my head was that certain persons who were motivated to debunk encounter cases of any kind often did their dirty work by "inventing a personality" for the reporter of the event, and then objecting that the reporter didn't behave properly (not what *I* or *anyone else* would have done) and so the whole case was bogus. Well, we're in danger of doing that (on a macroscale) here: these "aliens" aren't behaving like *we'd* behave, so they're bogus. It comes down to your preconceptions of what sort of an agenda these critters could be about. Here is a very short list of options:

1. ET as well-behaved scientific explorer with a neutral attitude toward us and our future;
2. ET as an explorer of some kind, but Lord Knows of exactly what;

3. ET as a covert displayer, perhaps as part of some serious strategic, or even trivial, game;
4. ET as an immensely clever and patient paradigm manipulator, aimed at some kind of conversion;
5. ET as a desperate race of immortals, anxious to (mostly) covertly and vicariously live in our emotions; and
6. ET, yes; but also other entities as imitators, who have been with us a very long time.

So, which ET do you want? Which one have we got? Have we only got one? Now, wait a minute, you say. I am having enough trouble swallowing one tribe of ET and now you want me to take two? Well, if you meditate on it a bit, I believe you will admit that if one ET has the travel technology to be here, then imagining more is not that difficult. But come on. Here at Earth? What are the odds? I am not asking anyone to buy multiple ETs, but let me tell a little story.

Once upon a time . . . there you are, Adm. Athelstan Gork, at the helm of the starship ZGKWLPSC (translation: Enterprise) entering the star system Tau Ceti. You, your computers, and your science officer, Peter Sturrock, figure out all the astrophysics, chemistry, and geology of the place in five minutes. But wait. Planet 3 (or 2, 4, whatever) is in the Continuously Habitable Zone, and it is evolving Life. Good! Biochemistry, cell structure, reproduction, et al.: another five minutes. Let's come back in a billion years or so, say what? Put a little monitor in somewhere . . . *hmm*, an asteroid belt<sup>60</sup> . . . good choice. A billion years later you return (you've been exercising regularly and getting enough roughage)<sup>91</sup>. Ah, a full-blown ecology: another ten, maybe fifteen, minutes. Whoa! Advanced Intelligence! Culture! Social systems! Religion! Politics! This is going to take a while. Especially because these Tau Cetians are freewilling unpredictable. Well, let's settle in and do our stuff.

How many of the Advanced Hi-Tech Space-Warpers might have visited Tau Ceti, and set up their monitors, in those billion or so years? Carl Sagan, speaking of only one space-cruising civilization, estimated 10,000 visits<sup>62</sup>. What if it were 10,000 visitors? Am I claiming this? No. What I am saying is that Hi-Tech space travelers arising all over the galaxy would have plenty of time to zero in on Sol as an interesting star because it had a planet on its way to advanced intelligent culture-creating life. That sort of evolutionary leading edge is interesting once you've categorized everything else in 25 minutes. It is an idea which should not be casually tossed away.

And, reflecting on the list, some civilizations could have utterly different agendas than others: ordinary explorers like you and Peter in the story, or psychic or spiritualist or some other arcane investigators, or games-players, either trivially or desperately entertaining themselves, or . . . I really could go on for a long list, and so, too, could you, once you let your imagination out of jail. The last item on the list is a tribute to W. Y. Evans-Wentz<sup>93</sup>, Jacques Vallee<sup>94</sup>, and my Irish ancestors. What if there is something to the entities of our folklore—and not just Celtic folklore, but that of the "nature spirits," "djinn," "geow-lud-mo-sis-eg," et al.<sup>95</sup>, from all over our world? They have a wonderful



reputation for imitation, and trickstering, and coming and going in the most amazing ways. Our esteemed colleague, Jacques, has leaned at times toward moving the whole UFO phenomenon away from the ETH and toward a reality "parallel" to our own—what some called The Middle Kingdom<sup>96</sup>. My Irish soul does not blanch at that thought, but wonders rather whether the ETH is still just fine but, maybe, with a dash of Green Trickstering tossed in here and there.

The point of all that romance above is that when faced with a highly complicated (due to extreme phenomenological diversity) and pattern-resistant (for the most part) subject, one might easily be dealing with more than one causal agent. And, my friends, please don't tell me that you are in slavish devotion to William of Occam. His dictum might possibly be a good guide when a problem is well-defined and almost solved but, in the world of anomalies, you can cut your throat with Occam's Razor<sup>97</sup>.

*Objection Type #3.* There are just too many UFO cases and just too many close encounters.

Unless one subscribes to the small research colony ship of the slow-boaters, or believes that the human race is going fantasy-prone insane due to high stress and organic pollution, I don't get this one at all. There *are* an awful lot of UFO cases and an awful lot of close encounters. You've got that "problem" whether it is caused by ET, ETs, faery, other "parallel" entities, Jungian tulpa projections, angels, demons, or Zeegax from the 18th dimension. When I look at that list, I ask myself which hypothesis stretches the current paradigm the least. *Hmm.* ET: they're out there, they can get here, they are terribly advanced, why couldn't they be terribly active? Don't ask why they *need* to be so active. *That's* an agenda question and, hopefully, we've agreed not to assume we can read alien minds.

But, as we've alluded to in the paragraphs about folkloric entities, there's an open question about what, or who, is causing anomalistic events and, therefore, where should one draw a box within which we have the "UFO Phenomenon" and without which we do not? If you're stumbling around the world and trip over something, you can probably decide pretty quickly whether the offending entity should be studied by a biologist or a geologist (maybe a psychologist). But with UFOs it "ain't that easy." What's in the field, and what's *out*? Presumably we *have* a field of study but perhaps we have found the chink in our armor.

To bring this to this current discussion, imagine that you had a very large sheet of paper marked off with little boxes in a grid. Every experience goes in one box and experiences which seem like one another go in contiguous boxes. As you fill in the experiential grid, you come to a cluster of cases we'll call "Kenneth Arnold-like"<sup>m</sup>—nice, well-behaved, metallic disks zooming across the sky. As we spread out from that cluster, we get objects which are seen by eye and by radar simultaneously, objects which "land" and leave traces, objects which conk out motor vehicle engines and headlights and make compasses react. Further from that are cases with silhouettes in the windows, guys on the poop decks or nearby on the ground. Then there are instant appearances and vanishments, environmental silencers, paralyzers-at-a-distance, close-up entities, and "abductions."

And what of weird entities without UFOs, Bigfoot *with* UFOs, Fatima Spinning Suns, Fairy Light Balls, Mothmen, Black-haired Red-eyed Dogs, Nighttime Demons, Channeling, and di-methyltryptamine (DMT) hallucinations, or is it visions? If one sees a witch on a broomstick is she a UFO? What if she has landing lights? (I haven't heard that last case yet but, knowing this field, I'm sure it is on the way.)

The issue is: what's in and what's out? The point is: depending upon where an hypothesizer draws the border on that gridded sheet of paper, it is extremely easy to make the ETH serve, or it is increasingly difficult. What very few theorizers do when talking about the strength or weakness of the ETH is to define the borderline of the experiential array to which they insist on applying it. What's in and what's out. They then of course do not *defend* the inclusion or exclusion of certain crucial individual cases (e.g., Roswell, Fatima, Dr. X) or certain clusters of cases (e.g., abductions, leprechauns, channelers) so that one understands why we're focusing on some but not all of the anomalistic Cosmos. Then there is no (needed) analytical discussion of the "bridge" cases—those, usually few, instances where something generally agreed to be characteristic of ufology also contains a nongenerally agreed upon element (e.g., a UFO making a crop circle). Until the borders of the phenomenon are either well consented to, or at least well-defined and discussed enough that scholars of different persuasions can at least understand the basis for the other guy's argument, the objections to whether the ETH applies well to "It" are rather difficult to assess.

*And:* the exercise with the grid has indicated very strongly to me and my UFO buddies who discuss this sort of thing weekly in my resource room, that assuming that one must apply *one* causal agency across the whole grid is almost certainly wrong. *Somewhere* in all those anomalous encounters, ufology surely ends and some other things begin. Some of the bridges we create to bind clusters together are surely our own creative imaginations. Some of the bridges are probably based on bogus cases, poor reporting, preconceptions. And some may even be based on mischievous, folklore-honored Tricksters. Whatever is true, I do not believe that the *number* of cases (that can be defended as reasonably likely to have occurred as reported) are a bar to the ETH.

*Objection Type #4.* The ufonauts are too much like us. They *are* humanoid. They seem to be okay in our atmosphere and in our gravity. So, they must be bogus.

I am not going to take much time with this one. Many members of the SSE realize that I have spent a significant amount of my scholarship showing that it is at least feasible to think that humanoid form is a natural end point for large, land-living life forms (if they are "animals"—i.e., mobile predators), and that any technological civilization is required to go through the stage of controlled fire technology, which implies a narrow range of planetary atmospheres<sup>98</sup>. I took this task on because people like Carl Sagan were using such counter-arguments to debunk all UFO occupant cases a priori. With the successful rise of the biological school of convergent evolution, I am happy to

state that these views are no longer the domain of isolated weirdos in Kalamazoo, Michigan, but are becoming much more widely accepted. One of the leaders of the Convergent Evolutionists, Prof. Simon Conway Morris, told me that he very much liked my contributions (despite them being in the anomalies literature, including our JSE) and would have been happy to have noted them in his famous, recent book<sup>99</sup>. Yes, I am shamelessly bragging but the point here is not that. It is that the idea of a physics, chemistry, and geometry-channeled set of physical and physiological attributes in life forms (everywhere) is no longer considered an unthinkable. In fact, it looks like it is to be the establishment view.

*Objection Type #5.* High Strangeness, especially in the behavior of the "crafts"; *too* high a strangeness to be acceptable as having anything to do with material objects present in our Space Time.

Here is where I believe the real source of the heavy objections to the ETH lay. A craft appears and vanishes as you look at it. A "window" seems to open in the sky or on a mountainside. An object flies directly into the ground or the sea. Some forms of strangeness are a real wow but maybe not as impossible as one would think: a craft emits a light beam which is chopped off at a certain distance (ask Hal Puthoff and he'll tell you how to do it). But other things: an object splits into two identical ones, then remerges. It seems to be acting more like an image than a massy object. Well, perhaps it is. A mile-wide disk takes off like a missile in the Yukon without sucking half the river valley along with it<sup>100</sup>. An image? Maybe. The point here is: if some cases behave in violation of normal physical laws for material objects, maybe we do not have to immediately go to Elfland for the explanation (although, as I have said, as a good Irishman I'll be happy to leave Elfland "in play" in all of this).

But why would we be dealing with some physical objects (e.g., radar, landing traces, electromagnetic interference) and some not? Why not? The UFO phenomenon has a large number of incidents which are *obviously* "displays" for the benefit of the observers<sup>101</sup>. Every long-term case researcher has files chock full of cases where "the object was dead center between the trees and flew right at us," or "the object cruised along and drew a perfect circle around the Moon [from our point of view]," to say nothing of "something seemed to tell me to look and there it was!" If some aspect of the phenomenon involves obvious displays, why do all those displays have to be made by massy objects? Again, you may ask "why displays?", just don't kid yourself that there's a good reason to guess the answer. We've *got* displays. Live with it.

Some people do not like sudden appearance or vanishment. I rather do. To me, it is a possible data point to support the model of an extremely hi-tech space manipulator with the necessary Entry and Exit technology. More puzzling to me is the OZ Effect<sup>102</sup>. This is the thing nicknamed by British ufologist, Jennie Randles, to label cases where everything suddenly goes very silent, no other cars appear on a busy road, time flow rate may alter, and some things in the environment just are not quite right (Figure 22). There are great levels of



Fig. 22. Jennie Randles, often regarded as the UK's finest UFO researcher. (MUFON)

intensity (strangeness) in these cases: some seem like briefly entering an abnormal zone and passing out; some seem like there is briefly an overlay of two nearly-but-not-quite-identical realities, which then disjunct, and the percipient is back walking or driving along their normal way; and some seem like (briefly) the whole normal environment has faded away. One might object that all this is "mental." If so, it is often multiwitnessed "mental" while driving a car (safely) down the highway. It is also rather concretely-detailed, like the house or store or railroad track that was, and now isn't, there. I would happily hand it over to Bob Jahn and Dean Radin, but there are too many UFOs simultaneously flying about. As Ed Ruppelt said in 1952, "Why don't the d things swim, so we could give them to the Navy?"

The OZ Factor, that feeling that one has passed through a boundary layer into some manipulated zone which includes mainly elements of our normal world but other abnormal elements as well, could be a key to understanding much of the highest strangeness involved with this phenomenon, if we could get a better handle on it. Assuming that we don't, I cannot see a better candidate for that sort of spatial manipulation and reality-overlay game-playing than the ETH. But, I welcome your polite dissent.

Objection Type #6. These sorts of encounters have been going on for millennia. They have been part of our culture and our planet's history for a very long time.

To that I would respectfully respond: who says? I have read a very large amount of "ancient astronaut" type material and find it extremely unconvincing<sup>103</sup>. Biblical references (Ezekiel, Star of Bethlehem, Jacob's Ladder, et al.) are huge deductive leaps, as well as Vimanas, the Quetzalcoatl Legend, and Triptolemus. I have conversed many times with the awesomely well-read



Fig. 23. The young Jerry Clark sets sail on a life dedicated to research on anomalies. (CUFOS)

folklorist and ufologist, Dr. T. Edward Bullard. Eddie, how many really old stories, legends, reports have you been able to locate that are at all convincing that they are referring to the UFO phenomenon? Hardly any, Mike—Roboziero in 1663 and maybe a few others. Nothing really old. Jerry Clark has made a pointed effort of looking at all these old "legends" to evaluate what we really have there<sup>104</sup> (Figure 23). So far his best guess is: nothing. But let's not pay any attention to Bullard and Clark, two of the best historical scholars we have ever had in this field and say UFOs have popped in and out of Earth culture awareness continually in historical times. How does that put any dent in the ETH, especially if we stretch our imagination beyond the crude slow-boaters and include multiple, monitoring civilizations?

I am perfectly happy to buy some alternative hypotheses. When my friends and I discuss the subject we have a ladder of concepts (roughly in ascending paradigm-violation levels from uninteresting stuff like secret black aircraft and new forms of plasma balls to the wild and woolly arenas of Elfland and Demonic incursions). We read a case and ponder. Does it fit into what we think constitutes ufology? Can it be reconciled with a form of the ETH? Does it feel more like Olde Folklore Encounters, etc.? In the end we are left with our "feelings," our intuitions, our clusters of similar cases. But, we still feel that the vast majority of the cases which have been well documented by UFO case researchers can be, even easily, fit into a form of the advanced ETH.

I can recall giving my talk on the prevalence of humanoid form and oxygen-atmosphere-breathing to the SSE meeting in Santa Fe in 1993. My talk followed very "physical" talks by Richard Haines and Don Johnson (on electromagnetic and instrument effects) and by Don Schmitt (on Roswell's crashed disk). After my talk was over, a member of the audience (a guy I generally like, and like

what he is trying to do researchwise, as well) said with an air of august dismissiveness: Thanks, Mike, for the entertainment, but we all know that the extraterrestrial hypothesis has proven a complete failure. Well. How generous. And how open-minded and creative. This, thankfully, is not typical SSE behavior. We saw our better side in the fine dialogue that Jacques Vallee and Robert Wood had in this very journal on this topic<sup>105</sup>.

### Sometimes, It's Science

Is ufology a science? Is biology? Is geology? This way of talking about things seems like a lot of what we all do—throw words together (and at one another) which have a vague meaning to ourselves and a different vague meaning to the persons we are talking to. If we had a Big Book of Biology, there are probably things in there that we, and most people, would call "scientific," and things that we wouldn't. And there might not be universal agreement about what is and what is not.

Let's imagine that some biologists claim that once upon a time there was a thing called an ivory-billed woodpecker. Is that a "scientific fact"? Well, they say they have evidence: lots of folks who said they saw lots of them in the old days; paintings, etc., of them; and some dried-up old husks that are claimed to have been them. Upon surveying the literature, we have difficulty coming up with any controlled-variable laboratory testing of the alleged woodpeckers but some alleged audio-recordings are said to exist. But no one seems particularly emotional about their alleged existence and so the statement that they used to exist is stated as a comfortable, scientific fact: it is Science. Now, it's also stated that they are now extinct. Is *that* a scientific fact? *Hmm*. It's stated with the same comfortable assurance and almost the same sentence structure, right alongside. But is it "Science"? It claims, and seems, to have to do with biology, that's clear enough, but . . . ? No physical lab-top experiment has been done to "prove" that there are no more ivory-bills and one could never cover the globe to do so, so what's the theoretical status of that biological "fact"? And what if some folks down South claim that they *have* seen one? And what if they say that they've got a (poor) picture and an audio-recording? Does their witnessing bear upon the "scientific" nature of this biological claim? Does their photography? Does their audiotape? Are their reports, photography, and audiotapes the first elements of a "scientific investigation" or are they nothing to do with science at all? And what if someone takes the photograph and applies technology to do an image analysis and comparison to known images of ivory-bills from the past? Is any of that "doing Science"? And what if someone does a sound analysis and compares it to all currently known birds (and finds no matches except a class similarity to certain other woodpecker types)? Was that person doing science? Even if he or she didn't have a biology degree? And, if a witness brought in a sample of bird poop that he said dropped from an ivory-bill and a biochemist did lab tests on it, was there Science involved?

I believe that in all of that there was a lot of "scientific attitude, behavior, activity" involved, whether we had credentialed investigators or whether we achieved clear, positive results. In the Big Book of Biology there are all kinds of sentences. Some of them are firmly and fairly completely based in such scientific attitude and activity, and some of them are not. What allows them all to be in the Book is that they are all referring to something having to do with Bios—Life, but not necessarily "scientifically demonstrated facts" about Life. In short, some things in biology are science and some things may not be. And, there is enough room for "attitude" and argument that there are large gray areas.

So, ufology is not equal to Science. But so what? Sometimes, the way that the pursuit of the truth is engaged *is* the way of the scientist. Allen Hynek wanted CUFOS to test two or so "physical evidence" cases per year. He knew that we could "do Science" on such cases. GEPAN wanted to test every physical remanent case that was reported to them. They did. They "did Science." When Phyllis Budinger applies her extensive chemical analysis talents to a claim today, she does science<sup>106</sup>. When Jacques Vallee or David Saunders began computer logging of cases in search of accurate characterization of the bulk data, and searched for patterns, they were doing Science. When R.M.L. Baker, William Hartmann, Bruce Maccabee, or Richard Haines<sup>107</sup> applied their skills to photo analysis, they were doing Science. What is all this baloney about not being able to be "scientific" if one works on UFO reports? Being "scientific" doesn't mean that you're working on something *easy*. It doesn't mean that you have to get the final answer by Friday. What it means is that you have the correct attitude about your work and apply whatever helpful techniques you have available to make the results as universally accessible (i.e., objective and, in theory, checkable by "the other guy") as possible. Many UFO researchers have acted as scientists when the cases allowed them the opportunity. Just because they cannot hold up an alien in their hand (or a leprechaun, psychic apport, or novel plasma ball) for everyone's inspection doesn't disqualify them. If so, please kick out of the Academy all SETIans, String Theorists, Dark Energiers, or Black Holers, Asteroid Extinctors, or Psychologists, for that matter. In ufology, *sometimes*, it is Science.

Of course, people will argue that nothing is "scientifically verified." If one means "verified by the micro society known as the established academic community"—a sort of social verification—that's correct. If one means verified by the scholars of the UFO community, very often that is wrong. But, in honor of the power of social factors, I would like to offer the following tale:

### The Australian

[I would like to state firmly up front, in case there are any SSE members teetering on the brink of fantasy-proneness, that the following story is fiction. I made it all up. Really, I did. And so ...]

Once upon a time, in a secreted spot in the hills of my old home state, and

Charlie Tolbert's, mysterious happenings began to occur. This was in the area of Proctor, West Virginia, or "Out Proctor" as the locals say. The motto of the area ("We don't cotton much to strangers around here"), plus the fact that it was universally agreed that there was nothing to see, meant that visitors were few. In fact, the last known visitor was in the late 1950s, when the aspiring astronomer, Charles Tolbert, came there for reasons so arcane that they have not yet been revealed. But it is fortunate that he did or we would not have this story—an incalculable loss. Found in a locked file drawer at the University of Virginia, his diary of this episode tells the whole truth.

As one goes further Out Proctor, one comes to the end of it—a place known as Bedlam Hollow (Holler, in the vernacular). Very few do go there, which is why it was so unusual when the locals began reporting sightings of a strange entity rummaging around sheds, barns, and (usually) abandoned houses at night. The entity was described as humanoid but difficult to see in detail, because, if you tried to approach, it disappeared (usually behind a tree or a barn). Upon mentioning these sightings to the visiting astronomer, Charlie told them that there was probably nothing to it—they'd mistook a black bear or shadows in the night. "Surely it was just some natural phenomenon" (or hysteria, he said silently). This didn't go down well with the witnesses at all but it made sense to those who didn't see it. And a great deal of good-natured mockery was shared by all.

As the people who had witnessed the entity talked to one another, several of them agreed that there was something about it that didn't seem at all like a black bear: it wore a hat. A weird hat, too. Something that looked like a broad-brimmed disk with little balls hanging off the rim, attached by string or something. When this feature was mentioned, Charlie agreed that he had heard of such a thing but it was allegedly something that persons wore in Australia. Although Charlie believed in persons from Australia, he assured the Proctorites that Australia was much too far away for any of them to get here. And why would they anyway? And even if they did, wouldn't they show themselves, announce themselves to the Proctor Sheriff or something? Some locals weren't convinced. Reflecting on the sheriff, Mack (Big Daddy) Morgan, a 350-pounder with little levity, they weren't sure anybody would voluntarily announce themselves. Plus, Billy and Willy Akers (their mother had unaccountably named both of them William) were out at night regularly with their rabbit guns and none too careful at that. Australians sounded like a reasonable answer to most of the witnesses.

The young astronomer complained that they had no evidence for this. "Well, we all saw it!" they retorted, "and the whole Brookover family saw it at the same time!" Charlie said that this didn't count as evidence, as it was just subjective. Mack Morgan said that if the Brookovers reported seeing somebody light fire to a barn, he'd sure use that as evidence for arson. Charlie, not wanting to upset Mack, said "Okay. That's *courtroom* evidence. What I mean is *science* evidence. I need something physical." "What about the footprints!? They were all over the place when Judd Martin saw that thing after the rain." "Anybody



could have made those." "I don't buy that for a second," said an increasingly frustrated Judd; "I measured those prints and took a photograph—din't look like anything from around here. The treads on the soles weren't normal, not West Virginian. I think it was Australian!"

Charlie just shook his head. To believe that Australians in weird hats and shoes would be blundering about secretively Out Proctor, it was just ... ludicrous. Multiwitnessed sightings and odd footprints just didn't make any difference—the whole idea was crazy. When he found that Judd Martin had gone around the entire hollow measuring shoes and found no match, he had to chuckle.

Then came the Close Encounter. Johnny Gray Barker and Amelia Higginbotham were out late (a little too late as far as most were concerned) when they stumbled upon The Entity. It appeared as a male human, normal sized, with dark black hair and full beard and mustache. It wore glasses and a strange hat. After everyone recovered from the shock, they tried to communicate. The Entity seemed to be speaking English but, just barely, through a bizarre accent. Comprehension was difficult but the entity said that he *was* from Australia and apparently had advanced scientific knowledge of chemicals. This, of course, wowed Johnny Gray and Amelia who tried hard (a lot harder than on their homework at Magnolia High School) to remember what he said. He was here to study the Brine Wells even further Out Proctor than Bedlam Hollow. Why, the Lord Alone Knows. At least they remembered his name ("Henry Bauer") and that his visit heralded the possibility of great wealth in the future. Then he just disappeared, behind a barn.

Excitedly, Johnny and Amelia told their story the next day (leaving out the part about what they were doing and how late it was). Charlie knew that all of this was so unlikely as to be virtually impossible and decided that the whole thing was a hoax. Amelia complained that The Entity had given her one of the little balls that hung off his hat as a souvenir but that she'd lost it. "Well, unless it was made of some material native only to Australia (whatever that might be), it wouldn't make any difference. It could have come from anywhere," was the young scientist's response. Amelia went away weeping. Charlie shrugged. Science has to be tough.

Later, he fell to meditating upon all this. Could there *really* be Australians Out Proctor? Lots of claims from witnesses, marks on the ground, even Judd's crude experiment. And would it be a good idea if they were? The presence of Australians might challenge the local economy, the religion, the whole cultural matrix of Bedlam Hollow. Who knows what incommensurable, fool ideas might be brought in? Chemistry as more important than physics! Weird fashions! The existence of dragons in lakes in Scotland! No. It was all just too much to contemplate.

Years later, in the latter decades of the 20th century, Charles Tolbert met a chemist from the rival in-state University of Virginia Tech. He claimed his name was Henry Bauer. Charlie immediately threw his Out Proctor diary

into the abandoned file cabinet, locked it, and threw the key away. No, no. No way. This was in no way personally witnessed proof of anything. *This* guy wasn't wearing a weird hat. And, Henry Bauer didn't constitute *scientific* evidence anyway.

Hopefully, Charlie will forgive that little lark. But, remembering a talk given (January 23, 1993, 8:00 pm, Dewing Hall, Kalamazoo College), where he was very Shapleyan indeed in his remarks about UFOs and ufologists<sup>108</sup>, maybe he'll view it all in terms of karma. Fortunately, for all of us in the SSE, the good Doctor Tolbert is a far better scientist than Harlow Shapley and Donald Menzel anyway and seems to well-tolerate the weirdo ufologists among us like Peter Sturrock, Jacques Vallee, and myself. Menzel would never stoop to that. For him there was never a hint of real mystery in the phenomenon, never a scientific thinker, never a rational fact. Well . . . maybe just one. When Donald Menzel passed on, he went to his death believing that there was only one "UFO" observation which he didn't really feel that he had solved—the one he witnessed himself. Meditate on that.

### References

1. Phillips, Ted. 1975. *Physical Traces Associated with UFO Sightings*. Chicago: Center for UFO Studies.
2. Rodeghier, Mark. 1981. *UFO Reports Involving Vehicle interference*. Chicago: Center for UFO Studies.
3. Swords, Michael D. 1991. Research Note: Delphos, Kansas, soil analysis. *Journal of UFO Studies*, 3, 115–133.
4. Faruk, Erol A. 1989. The Delphos case: Soil analysis and appraisal of a CE-2 report. *Journal of UFO Studies*, 1, 41–66.
5. Budinger, Phyllis. 2003. New analysis of soil samples from the Delphos UFO case. *Journal of UFO Studies*, 8, 1–26.
6. Phillips, Ted. 2002. *Delphos: A Close Encounter of the Second Kind*. Fairfax, VA: UFO Research Coalition.
7. Swords, Michael D. 1995–6. The University of Colorado UFO Project. *Journal of UFO Studies*, 6, 149–184. (Citation: Robert J. Low. 1967. "Informal Position Paper, April 21." American Philosophical Library archives.)
8. Tullen, Tom. The Sign Oral History Project. Minneapolis, MN.
9. Sturrock, Peter. 1999. *The UFO Enigma*. Warner Books.
10. Swords, Michael D. & Appelle, Stuart (eds.). 1989–present. *Journal of UFO Studies*. Chicago: Center for UFO Studies.
11. Clark, Jerome. 1998. *The UFO Encyclopedia* (2 vols., 2nd ed.). Detroit: Omnigraphics. The single best reference to UFO information ever written.
12. Haines, Richard. Our SSE colleague is one of the most continuously productive UFO researchers throughout this whole period. Two examples of books are *Advanced Aerial Devices Reported during the Korean War* (1990) and *Project Delta: A Study of Multiple UFOs* (1994), both Los Altos, CA: LDA Press.
13. Hall, Richard. Ufology patriarch Richard Hall has produced the two best "casebooks" of high strangeness UFO encounters during this period. They are *Uninvited Guests*. 1988. Santa Fe, NM: Aurora Press; and *The UFO Evidence* (Vol. 2). 2000. Lanham, MD: Scarecrow Press.
14. The early history of the intelligence community's studies of (and conclusions about) UFOs is covered in "UFOs, the Military, and the Early Cold War Era" by Michael Swords, chapter 4 of *UFOs and Abductions*, David Jacobs (ed.). 2000. Lawrence, KS: University Press of Kansas.
15. This is the ufologically famous Twining Memo, entitled: "AMC Opinion Concerning Flying Discs," 23 September 1947. (The Twining Memo has been reproduced in G. Eberhart, (ed). *The Roswell Report: A Historical Perspective*. Chicago: Center for UFO Studies. 31–3.)

16. Ruppelt, Edward. 1956. *The Report on Unidentified Flying Objects*. Doubleday and Co.; and Michael Swords. 2000. Project Sign and the Estimate of the Situation. *Journal of UFO Studies*, 7, 27–64.
17. Swords, Michael D. 2003–4. 1952: Ruppelt's Big Year. *International UFO Reporter*, Winter, 7–11.
18. Swords 1995–6, op cit.
19. Exchange of letters between Col. Robert Hippler and administrator Robert Low, January 1967, as cited in Swords 1995–6, op cit.
20. Low, Robert. Audiotaped lecture to the Jet Propulsion Laboratory at Cal Tech, October 1967. NICAP-CUFOS files. (cited, Swords 1995–6.)
21. Gillmor, Daniel (ed.). 1969. *Final Report of the Scientific Study of Unidentified Flying Objects*. E. P. Dutton.
22. National Academy of Sciences. 1969. *Review of the University of Colorado Report, etc.* Springfield, VA: NAS.
23. A Sledgehammer for Nuts. 1969. *Nature*, 221, 8 March, 899–900.
24. Sturrock, op cit.
25. Swords, Michael D. 1998. The History Making Sturrock Workshop. *International UFO Reporter*, Fall, 3–6.
26. Sturrock, op cit. 122.
27. Sturrock, op cit. (Chapters 14, 28).
28. Sturrock, op cit. (Chapter 29).
29. Sturrock, op cit. (Chapter 11).
30. Shallet, Sidney. 1949. What You Can Believe about Flying Saucers. *Saturday Evening Post*, 30 April and 7 May.
31. United States Air Force. 1949. *Project Saucer*. Washington, DC: National Military Establishment, 27 April.
32. Levy, David. 1993. *The Man Who Sold the Milky Way* [biography of Bart Bok]. Tucson, AZ: University of Arizona Press.
33. Menzel, Donald. 1949. "Report of an Unusual (?) Natural (?) Phenomenon" [question marks are Menzel's]. Letter attached to flying disk report form, Project Blue Book microfilms, 16 May.
34. Menzel, Donald. 1953. *Flying Saucers*. Harvard University Press.
35. Ruppelt, Edward. "Menzel, Dr. Donald H." Edward Ruppelt files, currently in Kalamazoo, Michigan.
36. Menzel, Donald. 1952. Mirage or Not, Radar Sees Those Saucers Too. *Look* interview, 9 September. The Truth About Flying Saucers. *Look*, 17 June.
37. Menzel, Donald. 1952. Those Flying Saucers. *Time*, 9 June.
38. Menzel, Donald. 1952. Letter to Winfield Salisbury dated 31 July. In APL archives, Philadelphia, PA, Donald Menzel collection. See also materials re: proposal in Project Blue Book microfilms.
39. Shapley, Harlow. 1950. Quoted in Curtis Fuller. The Flying Saucers—Fact or Fiction? *Flying Magazine* (July), 60.
40. Liddel, Urner. 1951. Bogies at Angels 100. *Research Reviews* (March). Office of Naval Research, Washington, D.C. and Richard Wilson. 1951. A nuclear physicist exposes flying saucers. *Look*, 27 February, 60–64.
41. Liddel, Urner. 1953. Phantasmagoria or Unusual Observations in the Atmosphere. *Journal of the Optical Society of America*, 43, 314–317.
42. Associated Press release. 1952. Flying Disks Doubted at Scientist Meeting. Stuttgart, Germany: dateline 5 September.
43. Menzel-Tombaugh correspondence. APL, Philadelphia, PA. Menzel archives. Menzel began quizzing Tombaugh on this in 1952 and did not let up until 1962 when he got Tombaugh to say "probably reflections" for his second book.
44. McDonald, James E. 1966. Letter of 24 October to Richard Hall. NICAP files, Center for UFO Studies, Chicago; and J. Allen Hynek personal communication. (On Hynek's copy of Frederick Menkello's monograph on the "Quantitative Aspects of Mirages," Hynek double-underlined the sentence, "Thus far we have been unable to find any UFO sightings explained as mirages which met the above conditions." He then wrote on the back page: "La *Comediae finita!* Now let the work begin.")
45. Menzel-Hess correspondence. 1961. APL, Philadelphia, PA. Menzel archives.

46. Struve, Otto. 1952. What I Don't Know about Flying Saucers. *The Griffith Observer*, December, 138–140.
47. Hynek, J. Allen. 1952. *Special Report on Conferences with Astronomers on Unidentified Aerial Objects*. Air Technical Intelligence Center, Wright-Patterson Air Force Base (6 August).
48. Hynek, J. Allen. Personal communication.
49. Department of the Air Force. 1954. *Air Force Regulation #200-2* (12 August). (Other regulations such as *Air Force Regulation #11-30* also govern restrictions on how UFO information is to be released.)
50. Swords, Michael D. 2005. Radio Signals from Space, Alien Probes, and Betty Hill. *International UFO Reporter*, 29(4), 10–15.
51. Bracewell, Ronald. 1974. *The Galactic Club: Intelligent Life in Outer Space*. W. H. Freeman.
52. Menzel, Donald & Boyd, Lyle. 1963. *The World of Flying Saucers*. Doubleday.
53. Menzel, Donald & Boyd, Lyle. 1961. Letter dated 13 June. American Philosophical Library archives, Philadelphia, PA. Menzel collection.
54. Myler, Joseph. 1966. Are We Earthlings Alone in the Universe? Scientist Feels Superspacemen Have Visited Earth Many Times. *UPI Release* (2 April).
55. Condon, Edward. 1971. Letter dated 22 July to Umer Liddel. American Philosophical Library archives, Philadelphia, PA. Colorado Project collection. Condon says: "As to Carl Sagan, I really don't know what to say. I think he has behaved rather like an irresponsible nut in the UFO arena."
56. Page, Thornton. 1966. Letter dated 8 September to Frederick Durant. American Philosophical Library archives, Philadelphia, PA. Menzel collection.
57. Swords, Colorado Study, op cit.
58. Menzel, Donald. 1966–1967 era. Several letters to Edward Condon. American Philosophical Library archives, Philadelphia, PA. Colorado Project archives. Richard Hall is described as Keyhoe's "henchman."
59. Low, Robert. Audiotape of JPL talk, op cit.
60. National Academy of Sciences, op cit.
61. *Nature* magazine, op cit.
62. Whipple, Fred. 1969. Letter dated 7 May to J. Allen Hynek. CUFOS archives; and Fred Durant. 1970. Letter dated 26 February to Charles Gibbs-Smith. Smithsonian archives. Durant collection.
63. Morrison, Philip. 1970. Quoted in 19 June letter (J. Allen Hynek to Jennie Zeidman). CUFOS archives.
64. Menzel, Donald & Taves, Ernest. 1977. *The UFO Enigma*. Doubleday, published posthumously.
65. Swords, Michael D. 1992. Astronomers, the Extraterrestrial Hypothesis, and the United States Air Force at the Beginning of the Modern UFO Phenomenon. *Journal of UFO Studies*, 4, 79–130.
66. Shapley, Harlow. 1958. *Of Stars and Men*. Beacon.
67. Menzel, Donald. 1957. *The Universe in Action*. Birmingham, AL: Rushton.
68. Swords, Michael D. 2006. Colonel Odell and the Invasion of Earth. *International UFO Reporter*, 30(3), 3–6.
69. NICAP. 1961. The Mystery Behind the Project OZMA Shutdown. *UFO Investigator*, 2(1), 4–5. (Struve quoted)
70. NICAP. 1972. Scientists Ponder the Alternatives. *UFO Investigator*, May, 2, 4. (Kopal quoted)
71. Berendzen, Richard (ed.). 1973. *Life beyond Earth and the Mind of Man*. Washington, DC: NASA. (Wald and Ashley Montague quoted)
72. Villard, O. G., Fraser-Smith, A. C., & Cassam, R. P. 1971. LDEs, Hoaxes, and the Cosmic Repeater Hypothesis. *Stanford Radioscience Laboratory Technical Report #2* (May). Stanford, CA: Stanford University.
73. Newman, William & Sagan, Carl. 1981. Galactic civilizations: Popular dynamics and interstellar diffusion. *Icarus*, 46, 293–327.
74. Forward, Robert. 1988. *Future Magic*. Avon.
75. Tipler, Frank. 1980. Extraterrestrial intelligent beings do not exist. *Quarterly Journal of the Royal Astronomical Society*, 21, 267–281.
76. Hall, Richard. 1959. Hypothesis of Extraterrestrial Visitors. *UFO-Critical Bulletin III* 6, 6.
77. Simpson, George G. 1964. *This View of Life*. Harcourt-Brace.
78. Bieri, Robert. 1964. Humanoids on Other Planets. *American Scientist*, 52, 452–458.
79. Shapiro, Martin. 1965. Letter dated 21 April to J. Allen Hynek. CUFOS files.

80. Michel, Aime. 1966. A Worldwide Secret. Translated from *Planete*, July, 29, 41-49, and distributed privately. J. Allen Hynek files, CUFOS.
81. Keel, John. 1970. *UFOs: Operation Trojan Horse*. G. P. Putnam.
82. Dickinson, Terence. 1974. The Zeta Reticuli Incident. *Astronomy*, 2, 4-18.
83. Vallee, Jacques. 1969. *Passport to Magonia*. Chicago: Henry Regnery.
84. Hynek, J. Allen & Vallee, Jacques. 1975. *The Edge of Reality*. Chicago: Henry Regnery.
85. Hynek, J. Allen. 1978. Quoted from an interview with J. L. Brochard. *Flying Saucer Review*, 23(5), 2.
86. Michel, Aime. 1969. The Strange Case of Dr. X. *Flying Saucer Review Special Issue*, 3, 3-16.
87. Guerin, Pierre. 1979. Thirty Years after Kenneth Arnold. *Flying Saucer Review*, 25(1), 8-16.
88. Vallee, Jacques. 1979. The Case Against UFOs as Spacecraft. *Second Look*, February, 6-14.
89. Hynek, J. Allen. 1983. The Case Against E.T. *MUFON 1983 UFO Symposium Proceedings*, 119-126. Seguin, TX: MUFON.
90. Papagiannis, Michael D. 1983. The importance of exploring the asteroid belt. *Acta Astronautica*, 10(10), 709-712.
91. Taken from the British sci-fi show, *Red Dwarf*.
92. Shklovskii, I. S. & Sagan, Carl. 1966. *Intelligent Life in the Universe*. San Francisco: Holden-Day.
93. Evans-Wentz, W. Y. 1911. *The Fairy Faith in Celtic Countries*. London: H. Frowde.
94. Vallee, Magonia, op cit.
95. Geow-lud-mo-sis-eg is one of the many native American designators for the "little people" of their folklore.
96. MacManus, D. A. 1959. *The Middle Kingdom*. London: Max Parrish.
97. Michel, Aime. 1968. A Note on William of Occam. *Flying Saucer Review*, 14(2), 10-11.
98. Swords, Michael D. 1989. Science and the extraterrestrial hypothesis in ufology. *Journal of UFO Studies*, 1, 67-102. 1991. Modern biology and the extraterrestrial hypothesis, *MUFON 1991 UFO Symposium Proceedings*: 51-74. Seguin, TX: MUFON 1995. Could extraterrestrial intelligences be expected to breathe our air? *Journal of Scientific Exploration*, 9, 381-392.
99. Morris, Simon Conway 2003. *Life's Solution: Inevitable Humans in a Lonely Universe*. Cambridge University Press. 2005 Letter exchange between Dr. Morris and author.
100. Jasek, Martin. 2000. Twenty-two Witnesses Report Giant UFO in Yukon. *MUFON UFO Journal*, February, 3-12.
101. Swords, Michael D. 2006. We know where you live. *International UFO Reporter*, 30(2), 7-12.
102. Randles, Jennie. 1983. *UFO Reality*. London: Robert Hale.
103. Even the siege gun of the ancient astronaut "school" for the last several decades, Zechariah Sitchin, seems completely devoid of credible content. A ufologist friend of mine, and academic specialist on ancient history, finds Sitchin's "translations" of Mesopotamian texts preposterous.
104. Bullard, Edward, Jerome Clark are (like myself) board members of the Center for UFO Studies. Our biannual meetings at the Center afford very interesting opportunities to discuss such matters with two of ufology's finest.
105. Vallee, Jacques 1990. Five arguments against the extraterrestrial origin of unidentified flying objects. *Journal of Scientific Exploration*, 4, 105-117. Wood, Robert. 1991. The extraterrestrial hypothesis is not that bad. *Journal of Scientific Exploration*, 5, 103-111. Toward a second-degree extraterrestrial theory of UFOs. *Journal of Scientific Exploration*, 5, 113-120.
106. Budinger, Phyllis. 2002. Analysis of soil samples related to the Delphos, Kansas, event. *Delphos*, 143-163. Ted Phillips. Fairfax, VA: UFO Research Coalition.
107. Baker, Robert M. L. 1968 Observational evidence of anomalous phenomena. *Journal of Astronautical Sciences*, XV(1), 31-36. Hartman, William. 1969. Photographic case studies, section IV, chapter 3. *Scientific Study of Unidentified Flying Objects*. D. S. Gillmor (ed.). E. P. Dutton. Maccabee, Bruce. 1981. The McMinnville Photos. Mt. Rainier, MD: Fund for UFO Research, special publication. Haines, Richard. 1987. Analysis of a UFO photograph. *Journal of Scientific Exploration*, 1, 129-147.
108. Tolbert, Charles. 1993. Evidence for Extraterrestrial Life. Audiotape of a talk at Kalamazoo College on 23 January. Personal files.