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# "UFOs - MYTH & MYSTERY"

BY

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PRESENTED AT

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INTRODUCTION

I have had the privilege of speaking about flying saucers ("Flying Saucers are Real") to more than 125 college and professional audiences across the country and in Canada since late 1967. These talks which have always been followed by question and answer sessions and have included many discussions with radio, television, and newspaper reporters have given me a unique opportunity to determine what all kinds of people think about UFOs and related matters. This article summarizes some of the myths and mysteries of UFOs as I see them. Hopefully, it will help lift the "laughter curtain" and the ignorance barrier which have so far tended to prevent meaningful public discussion on this fascinating and important subject. I will stress that my own conclusion is that the earth is being visited by intelligently controlled vehicles from off the earth.

MYTH: "UFO Sightings are Rare"

There are myths and mysteries on both sides of the UFO fence. Almost everyone - believer, nonbeliever, and agnostic seems to believe "Sightings are not common" - the believers say there have been good sightings by respectable people - the nonbelievers shout that the only people who see UFOs are drunks, kooks, profit seekers and other untrustworthy observers. What are the facts?

A Gallup Poll taken in 1966 showed that about 5 million adult Americans believed that they had seen a UFO. An even larger, more detailed (and much less publicized) poll taken for the University of Colorado study on UFOs in 1968 concluded that about 3.75 million adult Americans believe that they have seen UFOs and indicated that the actual number could fall within the range of 1 to 5 million. This gives you some idea of the accuracy of polls in which one is dealing with only a few percent of the small group polled in the first place. A much more recent and more meaningful (to me) poll was conducted by Industrial Research magazine in the winter of 1971. The results help destroy many myths and are presented in their entirety in Table 1.

Table 1. Opinion Poll  
(From Industrial Research, April 1971)

<i>Q 1: Do you believe that UFOs exist?</i>			
Definitely	20%	Probably not	23%
Probably	34	Definitely not	8
Undecided	15		
<i>Q 2: Do you know anyone who claims to have seen a UFO?</i>			
Yes	36%	No	64%
<i>Q 3: Have you ever observed a UFO yourself?</i>			
Yes	8%	Perhaps	14%
No	78		
<i>Q 4: Do you think that most people who observe a UFO report their sighting to authorities?</i>			
Most report	15%	Few report	36%
Some report	49		

*Q 5: Do you believe that the government has revealed all its information concerning UFOs?*

Yes .....24% No .....76%

*Q 6: In your opinion, were the conclusions of the Condon Report on UFOs definitive?*

Yes .....20% No .....80%

*Q 7: Do you think that the government should support further research to document existence (or non-existence) of UFOs?*

Yes .....49% No .....51%

*Q 8: If you consider the possibility of UFO existence, where do you think they originate?*

Outer space .....32% Communist nations 0.6%  
Natural phenomena 27 Undecided .....35.4  
U.S.A. ....5

(Poll reprinted with permission of Industrial Research Inc., Beverly Shores, Ind. 46301.)

I believe that this poll deserves (and probably will not get) very wide circulation. IR is sent to 90,000 people involved in research and development work across the country. As a scientist I tend to believe that the number of kooks involved ought to be quite small since 27% of its readers have a PhD, another 26% have a masters degree and an additional 44% have a bachelors degree. Incidentally, the magazine is not available on the newsstands so the ballot boxes could not have been easily loaded by either side of the opinion conflict. Over 2700 readers responded to the questions presented in the January 1971 issue. Note that 8% of this large group of professional scientists and engineers definitely believe that they have observed a UFO with another 14% indicating that they may have seen one. These figures match extremely well the results of the polls which I personally take after each of my lectures. I have consistently found that 5 to 15% of the people who attend my talks have seen a UFO. Usually the sighters themselves seem surprised that they are not the only ones who have seen one. I also find that only about 1 in 25 of these observers - have officially reported what they have seen. As an interesting sidelight, I have also asked many audiences "How many have had polio?" In every instance there have been fewer victims of polio than there have been UFO observers - though every state has laws about polio inoculations and millions are spent to do something about polio. It would seem that the anguish of the UFO observer who gets laughed at by his friends and the media and is seriously frightened or curious about what he has observed is at least as much of a mental health problem as polio is a medical problem. The myth, then, is that sightings are rare and only by untrustworthy people. The reality is that sightings are common and often by professional, quite trustworthy people.

MYTH: "The percentage of UFO sightings which remain unidentified after investigation is very small (under 3%) and the only reason some sightings haven't been identified is that there wasn't enough information available about the sightings."

This myth has been fostered by both non-believers and the government press releases. It is patently



absurd, primarily because every large scale scientific study has developed a greater percentage of unknowns and there has always been a category in the Air Force sighting tabulations known as "insufficient information". This latter designation was, unfortunately, not used by Dr. E. U. Condon's staff so the situation is blurred in the Condon report which has no categorization at all of the 117 sightings investigated by the University of Colorado, though careful analysis of the Condon report reveals that 30% (not the widely quoted 10%) were unknowns. Fortunately, the much larger (2199 versus 117 sightings) and more extensive study done 16 years earlier by Battelle Memorial Institute, and published in Project Blue Book Special Report 14, gives a breakdown of sightings by both category and quality as shown in Tables 2 and 3.

Table 2. Categorization of UFO Sighting Reports

Category	Number	Ratio, %
Astronomical	479	21.8
Aircraft	474	21.6
Balloon	339	15.4
Other (misc.)	233	10.6
UNKNOWN	434	19.7
Insufficient Information	240	10.9
Total	2199	100%

Data from reference 2

Table 3. Quality Distribution of UNKNOWNs

Quality Group	No.	% of Total	Unknowns	% of Group	Insufficient Information	% of Group
Excellent	213	9.7	71	33.3	9	4.2
Good	757	34.5	188	24.8	27	3.6
Doubtful	794	36.0	103	13.0	111	14.0
Poor	435	19.8	72	16.6	93	21.4
Total	2199	100%	434	19.7	240	10.9

Data from reference 2

These tables were not made public at the time the study was completed (1955) but a widely distributed and highly deceptive press release included the following statement by the then Secretary of the Air Force, Donald Quarles: "On the basis of this study we believe that no objects such as those popularly described as flying saucers have overflowed the United States. I feel certain that even the unknown three percent could have been explained as conventional phenomena or illusions if more complete observational data had been available."

It was carefully not pointed out that the "3%" had nothing to do with the 2199 sightings (of which 19.7% were Unknowns) but only referred to a small group of 131 sightings looked at under pressure to reduce (by one means or another) the percentage of Unknowns in the six months preceding the issuance of the press release. The notion that even the Unknowns could have been identified if more data had been available was completely false. Neither of these facts stopped newspapers around the country from putting out articles lauding the "comprehensive" Air Force study and saying that saucers

don't exist. The Los Angeles Times even added an editorial a few days later stressing the low (3%) percentage and the notion that even those could have been identified, etc., ad nauseum. This idea becomes especially repugnant when one examines the quality distribution and finds that the better the quality of the sightings the MORE likely they could not be identified and the least likely that they were "insufficient information" sightings. This is exactly what one would expect if the UNKNOWNs were indeed different from the KNOWNs. My detailed comments concerning this data are spelled out in detail in the references.

Suffice to say here that a careful examination of this document leads one directly to the explanation that some of the objects which were reported were intelligently controlled extraterrestrial vehicles observed by competent observers for an extended period of time under good viewing conditions. As with many technical reports I have scanned over the years, the conclusions and press releases bear little relationship to the data. The fact that the government would not make copies available for examination by the press and scientific community even though the report was unclassified is in itself significant as is the fact that so few scientists have discussed it in detail. If only Condon would have soberly sifted and tabulated his data as well. It is not at all obvious from Condon's summary chapters that he even read the rest of the report written by his colleagues. If he read Project Blue Book Special Report 14, he gives no indication of it in his book.

**MYTH:** "Only kooks, quacks, and little old ladies in tennis shoes believe or are interested in UFOs."

During a recent TV interview the interviewer repeatedly insisted to me that only little old ladies in tennis shoes and various quacks believe in or are interested in UFOs. "No scientists believe in UFOs", he said. Joe Pyne told me, on camera, that he knew of no other scientist who believed in UFOs. It may be significant that both these programs were done in Los Angeles which has a worldwide reputation for being the kook capital of the world (as well as the aerospace center). The newsmen seem to think that with all the space age scientists around, if UFOs were real these guys would be telling the newsmen — none of the local space scientists seemed to be willing to speak up publicly, at least until I got to the LA area in 1969, so it was presumed that there was nothing to UFOs. It is taking me a while to get the mediamen to listen.

The point is that it is indeed clear that many, many other scientists believe that UFOs are worth studying and a substantial number believe that they are extraterrestrial. One just has to look in the right places. Ten of the twelve scientists testifying at the hearings held by the House Committee on Science and Astronautics (1968) clearly indicated that they thought this problem was one worthy of scientists' involvement — many seemed to lean (usually very carefully) to the extraterrestrial hypothesis. As the only one without a PhD degree I felt I had less to lose (besides my job, that is) and came out four square for extraterrestrial.

Several of these same scientists also indicated their interest and commitment to solving the UFO problem in the published proceedings of the seminar on UFOs held by the National Amateur Astronomers Convention in Denver in 1969. APRO lists a few dozen scientific consultants on their Board of Advisors (almost all with PhD degrees). The Industrial Research Poll (Table 1) showed that 54% of the research and development community believe UFOs exist in contrast to only 31% who think they don't. Some scientists couldn't make up their minds or at least admitted they didn't have enough data to make a judgment.



Every large scale poll including the Gallup and the ones taken for Condon indicated that more education means greater likelihood for belief in life in outer space and UFO reality.

With regard to interest on the part of professional people I can certainly cite my own experience in lecturing to dozens of technical societies across the country. It is clear that most of the members have never heard of me but must have turned out because they had heard that I had a legitimate technical background in advanced nuclear and space development programs and that the title of my talk was a straightforward "Flying Saucers ARE Real" — rather than some wishy-washy fence strutting one. The Engineering Society of Detroit — hardly a kook group or an ivory tower organization — was sold out for my dinner talk three weeks in advance, for 1008 people. Record crowds also turned out at the Engineering Society of Cincinnati, several sections of the Institute of Electrical and Electronic Engineers and of the American Institute of Aeronautics and Astronautics, as well as the Pittsburgh Chemists Society, the Los Alamos Scientific Laboratory, Westinghouse and Gulf Research Labs, and numerous other such groups. The question and answer sessions revealed far more interest than hostility, and frequently went on and on until the halls had to be cleared to keep the janitors happy.

As a clear and definite indication of a broad community-wide interest, I can again cite the turnouts at my college talks. Several colleges have apologized in advance of my talk for the apathy of their campus and then had to turn people away for the talk. Overflow crowds have been the rule rather than the exception — almost 2000 at E. Carolina State University, about 1600 at New Mexico State University, about 1800 at College of the Sequoias, 1200 at Merced College, etc., etc., In most cases the audiences included a substantial number of townspeople as well as college students and faculty members. Perhaps an even better indication of high community interest (even if underground until I showed up) is provided by the kind of newspaper response I received AFTER the talks. In February 1971, six of seven college talks had overflow audiences and four of the six received front page favorable non-ridiculing coverage. The other two received no coverage. Anybody who believes that the thinking public isn't interested in a serious approach to UFOs is incorrect and ignorant of the facts.

Incidentally, for those who may believe that only kooks attend the Giant Rock (California) convention, I can testify that after each of my two appearances there, I was thanked quietly by many professional people who attended more or less incognito.

**MYTH:** "You can't get here from there."

One of the most common myths, again amongst both believers and non-believers, is that travel between earth and other solar systems is impossible. Thus, if we are being visited, "they" must be from either another planet in our solar system or from a 4th dimension "parallel universe" or from a secret civilization — in the center of the earth, under the oceans, or buried under the poles, etc. I don't deny the remote possibility of either a parallel universe or of secret bases (bases would require much smaller installations than an indigenous advanced society would probably require). However, I see no need for invoking them — travel to the stars is feasible with the knowledge we have today. This does not mean you can buy tickets for a trip tomorrow, only that we have the technology to plan trips to the stars. The question is, do we want to spend the money on the required development program??? No laws of physics prevent such trips and we don't need

scientific breakthroughs such as revocation of the laws of gravity or relativity.

Published studies such as those by Spencer and Jaffe of the Jet Propulsion Laboratory at the California Institute of Technology clearly show that staged fusion or fission propulsion systems would be capable of providing trips to nearby stars in round trip times less than 50 years. We forget that there is very little resistance to acceleration once one gets away from large gravity field regions such as near the earth, moon, or sun and that fusion (the process which powers H-bombs and the sun) provides millions of times as much energy per particle expelled as chemical reactions. At even a nominal acceleration of only one-G, one can very quickly reach extremely high speeds: 100,000 mph at the end of one hour if starting from an earth orbit, and 1.8 million mph after a day. Remember there is no friction "out there" and that the fuel for fusion systems is the most readily available material in the universe — namely hydrogen isotopes. One need not invoke anti-gravity, space time warping, matter, anti-matter annihilation or other probably achievable (but not terribly soon) approaches. One also must bear in mind that there are many stars and undoubtedly many solar systems in the universe much older than our own sun and that somebody out there (if not almost everybody) may have developed fine schemes for interstellar travel a million or billion years ago. Note too, that at high speeds we would take advantage of the gravitational and magnetic fields produced by the stars.

**MYTH:** "The finiteness of the speed of light and man's short life span forever limit our exploration of the universe to nearby stars."

Everybody seems to have gotten the idea that Einstein's findings restrict our travel because as they solemnly proclaim, nothing can go faster than the speed of light. Thus, the shortest time for a round trip to a star ten light years away, even neglecting the time to accelerate and decelerate is 20 years. Right??? No — wrong, at least for space ships if not for light photons which unlike men and machines have no mass. The Einsteinian laws of relativity, as a matter of fact, are what make it possible to explore the universe in times compatible with human life spans, — for the voyagers, if not for their friends back home. Relativity says that as the velocity of a mass approaches very closely to the velocity of light, time, in effect, slows down for the mass though not for the observer. This effect has been repeatedly proved for particles and must be taken into account in the design of high energy accelerators for physics research. Dave Froning (of McDonnell-Douglas) presented the following information to illustrate in a simplified form the contrast between vehicle time and observer time for trips made in a hypothetical interstellar spaceship accelerating at 1-G during the initial part of the journey and decelerating at 1-G for the final half. Obviously most of such a journey would be made at velocities very, very close to the speed of light.

Interstellar Journey	Journey Duration	Journey Duration
	Earth Time	Vehicle Time
Earth to Nearest Star	6 years	3 years
Earth to Center of Milky Way Galaxy	30,000 years	19 years
Earth to Nearest Spiral Galaxy	750,000 years	26 years
Earth to Limits of Universe as now Postulated	30 billion years	46 years



These numbers may boggle the mind but they certainly provide food for thought for our descendants even if not for us, without funds for SSTs, no less Interstellar transports.

**MYSTERY:** "Why do I prefer the term Earth Excursion Module rather than UFO?"

In an invited paper which I presented in Las Vegas (to a technical meeting, not the local shills and dealers association) in September of 1970, I suggested that a better term than UFO would be Earth Excursion Module. A number of reporters have since picked up the term. I prefer it for those sightings of what appear to be intelligently-controlled vehicles whose behavior and configuration indicate an origin off the earth because, it seems to me, far more descriptive of the function of these objects than UFO which is a much broader and less specific term covering too wide a range of phenomena. The analogy between the reported actions and behavior of our own Lunar Excursion Modules and their oddly dressed pilots and the many reported UFOs on the ground as mentioned elsewhere is a real one. In both cases we have strange shaped (compared to airplanes, balloons or helicopters) craft able to land in unprepared out-of-the-way places with no assistance from people at the landing sites. In both cases the pilots look weird by normal standards though they all appear to be "humanoid". In each case, the pilots have been observed by reliable witnesses to seek out and gather specimens, to pick up artifacts, and to apparently gambol aimlessly in what appears to be a childish fashion. The duration of the stay is limited and in each case the humanoids finally re-enter their Excursion Modules and take off again without local assistance and without leaving someone behind. Definite marks are made on the take-off site. In both cases the Excursion Modules have been observed to rendezvous with mother ships and to apparently take off for another heavenly body at high speed. In both cases the reported mother ships look nothing like conventional airplanes or the rockets used to boost our spaceships into orbit. I might add that the fastest manned craft on earth are the Apollo Command modules capable of re-entering the earth's atmosphere at speeds around 25,000 miles an hour and looking nothing like a conventional airplane — no wings, external engines, tail surfaces, no sharp surfaces and very little heavy, high-melting point metal visible. I have stood next to several squat, round, symmetric Apollo Command Modules and quite frankly was very much impressed with how much more like UFOs they look than like airplanes designed for much lower speeds. One should also note the difference between the Command Modules and the Lunar Excursion Modules. Though they perform somewhat similar functions they are quite different because they are designed to operate in different environments. This suggests that mother ships and Excursion Modules need not look alike — which again holds for the Earth Excursion Modules since we typically find that the mother ships are zeppelin or cigar-shaped rather than saucer-shaped. Clearly the environment in far out space is very different in almost every possible way from the environment within the earth's atmosphere. In short, it seems to me about time to use our own knowledge of advanced technology and space travel to try to understand Earth Excursion Modules rather than being stuck with a landlubber approach.

**MYSTERY:** "Why haven't scientists and newsmen dug into the UFO problem in the same vigorous manner in which crime and corruption, cyclamates and nuclear structure have been dealt with???"

Here one has to speculate. One obvious reason is that both groups tended to accept the malarkey put out by

the Air Force which falsely indicated that there really wasn't any basis for belief in the reality of UFOs and further that the Air Force was maintaining a full blown scientific study of UFOs. Another reason was the fact that much of the earlier information was kept secret and was inaccessible to interested parties though the Air Force often stressed that it was not keeping anything back — a necessary but very deceptive practice to protect classified material. As an example, Project Blue Book Reports 1 through 12, which were administrative progress reports put out prior to the release of the unclassified Blue Book Special Report 14, were all stamped either Secret or Confidential until the mid 1960's. Condon says they were declassified in 1960 but the three reports which I obtained in 1964 were still classified.

Another reason for lack of effort is that neither scientists nor newsmen like to be taken in by hoaxsters or con-men of which there have been many in the UFO world and both like to work with problems having a high signal-to-noise ratio. Scientists at least, usually like to work with nice, clean, controllable, reproducible systems rather than intelligently controlled vehicles appearing at the whim of the pilots rather than at the beck and call of nature or of the observing scientist.

Perhaps most important of all is that the UFO problem came on the scene well before the space age. We were not prepared either emotionally or technologically. A very great many people in influential positions in the late 40's still believed that man was the only intelligent creature in the universe. They thought that the maximum speed of airplanes was the speed of sound, proved that very rapidly moving objects would burn up in the atmosphere, "knew" that the blunt body shape was all wrong for a fast vehicle which obviously required a streamlined sharp-nosed and winged craft. There were also many who were certain that travel to even the moon was impossible.

In an article in the 8 January 1956 Los Angeles Times, the newly appointed British Astronomer Royal, Richard Wooley, was quoted as saying that "talk of going soon to the moon was utter bilge and tales of flying saucers were all rather rot". The same article notes that Wooley's predecessor had predicted man will travel into space "about 200 or 300 years from now". He had called stories about flying saucers "bunk". It was further noted in the same article that the Greenwich Observatory Director, Thomas Gold, said "observatory research has proved that a layer of dust up to 6000 feet thick covers the moon. The moon dust is so loosely packed that no traveler would be able to walk on it". I suppose he neglected to tell our lunar astronauts that they wouldn't be able to walk around up there no less play golf in the dust. Proof must be a different concept to an astronomer than it is to me.

It is rather fun to dig out the old pronouncements by astronomers whose track record about predicting the technology of the future is absolutely terrible and includes many even more foolish statements than those above. Astronomers aren't the only naysayers around, however, Dr. Lee DeForest, "father of electronics" and inventor of the vacuum tube is quoted in the St. Louis Post Dispatch (25 February 1957): "To place a man in a multi-stage rocket and project him into the controlling gravitational field of the moon where the passengers can make scientific observations, perhaps land alive, and then return to earth — all that constitutes a wild dream worthy of Jules Verne. I am bold enough to say that such a man-made moon voyage will never occur regardless of all future scientific advances."

I mention these statements not so much to ridicule thoughtless, unimaginative, egotistical people but to point out the average Joe Scientist or John Newsmen would have to have been fighting the system pretty strongly



to take on the "experts" and consider UFOs seriously even in the fairly recent past.

Finally the "laughter curtain" mentioned earlier has not only kept most sighters from reporting their sightings but has kept many newsmen and scientists from risking their professional reputations by sticking their necks out to request funds for investigation of UFOs. In the case of the scientists, I can personally testify that my managers at two different major manufacturing concerns requested that I not make any public statements about UFOs because they were afraid such statements might jeopardize existing and potential development contracts from the government. Two PhD scientists in responsible positions with large employers in the LA area reluctantly turned down invitations to testify at the Congressional hearings in July of 1968 because their employers told them to maintain a low visibility with regard to their UFO activities. If this smells like coercion or censorship — it is certainly not the first or the last time employers have put the lid on their employees about controversial subjects.

The strange part about all this is that almost everybody who believes in UFOs behaves as if they believe that nobody else but themselves believes in UFOs — despite the fact that all the Polls show that a majority of the people around, especially the younger ones, believe in the reality of UFOs with the percentage of believers increasing as the education level increased and the age decreased. This is why I think that a few of the right people speaking out can very quickly create a landslide of interest and support since all it takes is somebody to "tap" the interest and existing belief. Sometimes I see my own role as that of the boy in the tale of the Emperor's clothes pointing out that as everybody knows but is afraid to admit, the case against the UFO is bare of reason, and factual backing and cannot compare with the full dress suit of facts supporting UFO reality.

Incidentally, I know that most naysaying scientists and newsmen haven't studied the facts about UFOs because I ask my audiences how many have read each of the four most useful sources of information about UFOs including "Project Blue Book Special Report 14", "The UFO Evidence", "The Symposium on UFOs," and even the "Scientific Study of Unidentified Flying Objects" (the Condon Report). Perhaps 2-3% have looked at the Condon report but almost invariably the percentage who have examined the others is less than 1%. One might say ignorance is bliss.

**MYSTERY:** Why was Condon so negative?  
Was it a government-sponsored whitewash?

Condon's contribution to the University of Colorado study was certainly negative and his actions since the publication of the study even more so. For example, he published a vicious, mindless paper "UFOs I have Loved and Lost" after the completion of the report with no useful information about UFOs, though he had just spent \$539,000 of our money to study UFOs. He refused to participate in and tried very hard to prevent the holding of three sessions of papers on UFOs by PhD level scientists at the annual meeting of the American Association for the Advancement of Science in Boston in December 1969, sending a seven-page letter to the members of the board of trustees of the AAAS as well as to Spiro Agnew, etc. He became almost livid to the editors of technical magazines who had provided "straight" cover age of his UFO study.

I had several phone conversations and some correspondence with Condon. I do not believe he mouthed a government-sponsored whitewash. I do believe that he, like Donald Menzel, William Markowitz, Philip Klass,

and other anti-UFO persons, sincerely felt that he was rendering a service to society by protecting us against such foolish notions as UFOs. Unfortunately, I believe that this feeling was and is based upon fulfillment of his own psychological needs rather than upon any sensible scientific basis. Remember that Dr. Condon was just short of his 65th birthday at the time the study really got under way. He had been a prominent scientist for more than 30 years and had been president of such groups of his peers as the American Physical Society, the American Association for the Advancement of Science, the American Association for Physics Teachers. He had been at the center of things for a long time without doing anything about UFOs. If they were real he would have to admit that he had ignored them for all that time. He is an old friend and fellow member of the National Academy of Sciences of Donald Menzel, Harvard Astronomer, who had long ago "shown" that UFOs were all explainable. Condon was not at all accustomed to being challenged by younger scientists such as Jim McDonald or myself. His own visions of his own greater importance would certainly be punctured if UFOs were not only real but their occupants had failed to come knocking at his door or that of the National Academy of Sciences. In phone conversations with me, he was far more emotional in his reactions to his critics than rational in response to the content of their criticism.

In short, it is my belief that Condon as one of the high priests of 20th century science was reacting in a similar fashion to the priests of the 16th-18th centuries who rejected Copernicus' notions about the sun replacing the earth in the middle of the universe. If the new notions are true, then the older priests are less important than they would like to believe. Menzel reacted in a similar fashion with baseless attacks on Jim McDonald at the previously mentioned AAAS Symposium. The proceedings of that symposium should be published in 1972 by Cornell University Press and should provide a fascinating contrast between the comments of those who have studied the data and those enamored of their own notions and importance without benefit of examination of the data. Jim McDonald's paper "Twenty-Two Years of Inadequate Investigation" is especially impressive.

Many newsmen who didn't bother to examine the data did seem to be taken in by the Condon report but as an indication that truth will out no matter how prominent the teller of untruths, it is worth noting the reaction to the Condon report by professional scientists and engineers. Drs. J. Allan Hynek and Jim McDonald, have reviewed it in detail and found it wanting in many specific respects. A UFO subcommittee set up by the prestigious American Institute of Aeronautics and Astronautics (AIAA) published its evaluation of the UFO problem and found, perhaps too generously, that it was a scientific study but that one could come to the opposite conclusions from Dr. Condon on the basis of the data in the report itself. The committee noted that careful study of the report reveals that 30% of the 117 cases studied in detail could not be identified. "The opposite conclusions could have been drawn from the content of the report, namely that a phenomenon with such a high ratio of unexplained cases (30%) should arouse sufficient scientific curiosity to continue its study." The committee is publishing other articles in the relative obscurity of the Aeronautics and Astronautics Journal, which I hope will receive more publicity than its conclusions. It is refreshing to note that the silent majority (80%) of the 2700 respondents to the Industrial Research UFO poll also did not believe Condon's conclusions were definitive.

Without belaboring the point that Condon's conclusions and the National Academy of Sciences review of them were totally inadequate, I would like to mention some sins of omission of the Condon report; sins not obvious to most readers of the study.



Nowhere in the report is there any mention of the largest study of UFOs ever conducted, "Project Blue Book Special Report 14", though it was also Air Force financed, involved only professional scientists and engineers, was not classified, and was loaded with useful data, besides covering more than 18 times as many cases as did the Condon report. It is standard practice in scientific work to refer to earlier work in the same field. I am absolutely certain that Condon was aware of the study because it is discussed in gory detail in a 39-page lecture transcript which I sent him and which he acknowledged in a letter, as having read with interest. The same transcript discussed Jacques Vallee's excellent article on UFO landings, and published studies by scientists showing that interstellar travel is indeed feasible with the knowledge we have today. Condon laughs at stories of outerspace visitors by hamburger stand operator, George Adamski, but fails to mention the Dr. Vallee article.

He made these foolish statements about interstellar travel:

Page 27 - "Travel of men over interstellar distances in the foreseeable future seems now to be quite out of the question."

Page 28 - "We consider that it is safe to assume that no intelligent life outside our solar system has any possibility of visiting earth in the next 10,000 years."

Do note that if these statements were true, then flying saucers could not be the product of civilizations of other solar systems and if there are no advanced civilizations which have developed indigenously on the other planets in our solar system, then there is no point in studying UFOs at all. The answer to the question of UFO reality is "not so" - without spending \$539,000. The only possible basis for the second statement would be an assurance from the scheduling agent of the Intragalactic Transport System that no craft were scheduled to pass this way for another 10,000 years (by which time they hoped we would clear up our pollution problem).

Condon gave no indication to me that he had talked with the scheduling agent. He, also in the final report, gives no indication of having examined the studies which I had referred him to concerning the feasibility of interstellar travel. I wouldn't mind so much if he had dismissed them as inadequate (though they are not) but to ignore them entirely is not scientific.

Another significant omission in the report is a chapter or at least a few pages out of the 965 dealing with just the UNKNOWNs. These after all should have been the focus of the study. One can by extended examination pick out the more than 30 cases for which no explanation was found, but why not focus on them to see if they have any features in common; to see if the characteristics are different from the sightings for which they did find an explanation; to determine typical speeds, maneuverability, size, shape, color, duration of observation, location, etc., etc.

Another omission not at all obvious to the casual reader was any mention of the many letters sent to Dr. Condon by professional scientists indicating their views on UFOs. These letters were sent as the result of a request that Condon made to me for such expressions by professional scientists. I had passed the letter on to NICAP which had in turn sent copies of the request to scientists having studied data on UFOs. Some of these letters make fascinating reading, but it is as if they didn't exist. Equally distressing is the omission of sightings followed up by members of Condon's early warning network - one of which is so comprehensive that it is the

subject of a book, but it is not even mentioned in the Condon report.

Last but not least of this mini-list of omissions is any discussion in a 42-page chapter "Atmospheric Electricity and Plasma Interpretations of UFOs" of my own published views on airborne electromagnetically propelled vehicles involving plasmas around vehicles. This, too, had been transmitted to and read by Condon and is totally ignored though I am convinced that an entirely new approach to atmospheric propulsion can be derived based on a combination of high magnetic fields and intentionally created plasmas around symmetric vehicles in the atmosphere. This combination would explain many of the stranger manifestations of UFOs. Perhaps not surprisingly none of the so-called plasma physics experts called in by Condon for a conference on plasmas and UFOs were experts in the interactions between vehicles, plasmas and magnetic fields. This area was also not mentioned at all by Phil Klass in his book "UFOs Identified", though he tries to explain most UFOs as atmospheric plasmas. Sometimes I wonder a bit about the closed-mindedness of the scientists of our day.

**MYTH:** "Life as we know it cannot exist on the surface of the moon or the other planetary bodies in the solar system."

Such nonsense though frequently expressed is unworthy of the scientists who express it. There is certainly no doubt that the conditions important for life are indeed different on the large bodies in the solar system. The composition, temperature, and pressures of the atmospheres if any, the presence of moisture, the temperature of the planetary surface on the other planets may all, at first blush, seem totally incompatible with the living of life as we know it. Further complications in many cases include the absence of built-in protection (an atmosphere plus a magnetic field) against such external dangers as meteorites, high-energy charged particles, cosmic rays, and solar ultraviolet rays. However, it is quite obvious that an intelligent creature (such as man is in his better moments) is perfectly capable of creating conditions suitable for living in all sorts of odd places such as on the moon (ask Neil Armstrong and Allan Shepherd if life as we know it can survive on the moon), in outer space, in the depths of the oceans, etc. Man is the manipulator supreme of the world around himself. Like the turtle, he is capable of carrying along his protection and like the camel is capable of carrying along his nourishment. We certainly don't as yet have any basis whatsoever for saying that there has never been or even, is not now, intelligent life (I don't much care about Martian or Lunar microbes) on the planet Mars or on the moon. We have explored only a very small portion of either body, and we know that, if we were to set up a base on either one, it would most likely be, at least initially, buried under lunar rocks or in lunar caves in order to more easily provide the conditions we desire such as an even temperature, air to breathe without space suits, protection against solar storms, meteorites, etc.

One certainly must also ask the question "would we be informed by NASA or the Soviet equivalent of any indications of intelligently controlled artifacts on the moon or Mars or anywhere else???" I am not convinced that we would - especially if there was any thought of either getting "them" (if alive and kicking) on our side or learning the secrets of their propulsion, energy production, communication, etc., systems. Does anybody really believe that the astronauts or cosmonauts are free to say what they please anymore than anybody believes that we are being told the whole truth and nothing but the truth about such down-to-earth problems as pollution, Vietnam, marijuana, wire tapping, etc.? Note again the Industrial



Research Poll and the fact that 76% of the respondents do not believe that the government has released all it knows about UFOs. Talk about credibility gaps!!

I should stress that many times some government people are also unaware of what others in the government know, have done, etc. Consider the position of the late Adlai Stevenson at the United Nations just before the Bay of Pigs fiasco - totally left out of the information circuit so that he made a fool out of himself. The left hand not only doesn't always know what the right hand is doing but isn't always aware of the activities of its own fingers.

**MYTH:** "No astronaut has observed a UFO."

Many newspaper editorials and other articles have stated that no sightings have been made by astronauts. The aerospace writer for the LA Times asked me what I can only call an illogical question "How come no astronaut has seen a UFO?". It isn't logical because one in general works with the information on hand, not with the information one does not have available. Much more important is the fact that Chapter 6 of the Condon report includes detailed descriptions of three sightings by orbiting astronauts which have still not been explained - all from the Gemini series. This chapter by Dr. Franklin Roach is one of the better chapters of the Condon report, though Condon's summary fails to give adequate attention to these observations.

It should be noted that the Apollo flights, about which there have been many rumors concerning UFOs, employ a different approach to communications between the astronauts and the ground. The radio signals are sent directly back to Houston and then rebroadcast with Houston having the option of deleting whatever they choose to delete with essentially no one outside NASA able to monitor the broadcasts. During the earlier Gemini and Mercury flights the talk was "in the open" - readily monitored by ham equipment.

I did once spend over two hours discussing UFOs with one of the Apollo astronauts who was extremely interested in what I had to say, bought four hard-to-get UFO documents but would give me no information at all - not even that which turned up in the Condon report - about astronaut sightings.

For those who have never worked on classified programs I should stress that the classification guides for such programs are normally also classified so it is, practically speaking, impossible to even determine what fraction of the astronauts' observations of the earth and space is classified. Contrary to some comments I have heard much NASA data is secret. The penalties for breaking security are extremely rigorous and it is often necessary to lie as a cover story. I believe I can guarantee as a result of working under security for 14 years that the government and its employees can indeed keep secrets - despite the fact that some secrets have been inadvertently revealed.

**MYTH:** "UFOs violate the law of physics."

As a physicist this myth has irked me ever since the first time I heard it over a decade ago. It is an excuse for not thinking creatively or scientifically. It is often accompanied by the statement that some aspect or other of reported UFO behavior "is impossible". In both cases what we scientists should be saying is that we don't either know how to duplicate the reported maneuvers and actions and/or that we don't understand how they were performed. Each generation of eminent, typically elderly scientists has told society very solemnly

all the things that were impossible, only to have those objectives achieved within short order by people with more humility and a better understanding of the open-endedness of the laws of physics and of the fact that all of the laws of physics have certain limited realms within which they apply. The test of the laws is not their theoretical elegance or mathematical complexity but whether or not they describe the real world rather than the idealized world of the theoretician.

One can say that the laws of biology and physics prevent a person's loudest shouts from being heard more than a certain distance away from the shouter. That doesn't mean that a megaphone or radio transmitter or laser broadcasting system can't be used to have his voice "heard" very much farther away. The laws of physics tell us that the intensity of light from a normal light source such as a light bulb is reduced as the square of the distance from the light bulb. This does not mean that the intensity of the light from a laser or searchlight directed in a very, very narrow beam decreases with the square of the distance from these sources. One can say that a good explosive releases the maximum amount of energy available in chemical substances . . . so long as one carefully neglects the nuclear energy also present which just happens to be at least a million times greater if one picks the right substances and learns the secrets (new laws) of nature that enable one to release that energy.

One can say that, if UFOs were really vehicles going at speeds of many thousands of miles per hour in the atmosphere, then we would have to hear a sonic boom. We don't usually hear one when UFOs are observed so UFOs must not be real because they would violate the laws of physics relating to sonic boom production. What the true scientist ought to say confronted with this paradox is somebody has cleverly figured out a way to eliminate the production of sonic booms by a supersonic vehicle in the atmosphere. The true scientist might then re-examine the comparisons between UFOs and our supersonic airplanes. He would note that the shapes are drastically different and that it is evident that the mode of propulsion must be different since UFOs don't seem to be putting out an exhaust, move relatively silently, don't seem to depend upon lift from wings, don't seem to be restricted to flight along the direction of an engine's thrust, and seem able to hover and move vertically as well as to change direction "instantaneously". Airplanes on the other hand don't normally create colorful glows in their vicinity, seem invariably to have wings, poor lift to drag ratios at low speeds, are designed for motion in one direction only, have many sharp streamlined rather than blunt surfaces, and are quite noisy. They are also much less symmetric than most reportedly round UFOs and have very large maximum dimensions in comparison with the actual dimensions of the payload as well as maximum surface-to-volume ratios.

The glow and a little knowledge of plasma physics might suggest that the UFOs somehow modify the flow of the air around them at high speed especially since the color of the glow changes with changes in velocity. We know that if the air were electrically conducting (ionized) it could be diverted around the high speed craft without pileup of shock wave or heating of the craft - another problem we have in high speed flight. The reason making the air electrically conducting - which incidentally we usually try to avoid but actually do know how to do - is useful, in that an electrically conducting fluid (an air plasma, or seawater, or a liquid metal such as mercury, sodium, lithium, etc.) can be acted on at a distance by electric and magnetic forces without physical contact (drag and friction) between the body (within which one produces the electrical and magnetic fields) and the fluid itself. Physicists are doing this (pushing without touching) every time they crank up a particle accelerator such as a cyclotron. The amount of energy actually imparted to the accelerated particles is usually quite small though



in conventional accelerators an enormous amount of electrical power is wasted to generate the magnetic and electric fields. The use of superconducting magnets enables one to greatly reduce the electrical power consumption since there is no resistance to the flow of an electrical current in a superconductor and the size and weight of the current carrying wires or coils can be enormously reduced because of the absence of a requirement for carrying off vast amounts of wasted electrical energy as heat.

This may sound very theoretical but as it happens a number of papers have been published describing the benefits of having a magnet inside a vehicle and an electrically conducting fluid with which to interact outside the vehicle. The vehicle might be required to have a saucer shape rather than an airplane shape but that is the way the cookie crumbles. As noted earlier, seawater is an electrically conducting fluid. Interactions between seawater and a magnet inside a 9-foot long electromagnetically propelled submarine designed by Dr. Stewart Way, provided noiseless motion for the submarine in tests in the Pacific Ocean near Santa Barbara, California, and have been the basis for a number of published papers concerning very much larger, more efficient submarines propelled by electromagnetic forces.

Unfortunately, many of my scientific colleagues have not heard of the EM sub, are not really aware of the recent developments in the fabrication of large (18-foot diameter) compact superconducting coils able to easily generate very high magnetic fields. These fields are sufficiently strong (and the coils sufficiently light) to be used for silent propulsion and can be "charged" by an external source of power which need not be carried along with the magnet. This would provide a system like an electric golf cart which obviously doesn't carry along the power source which charges the battery - fortunately for the golf courses. My colleagues also seem totally unaware of published experiments and analyses which indicate that all the problems of high speed flight can be mitigated by the use of on-board electromagnetic fields - including heating, drag and lift control. Condon was referred to these references and also neglected them - par for the course.

MYTH: "No UFOs have ever landed on earth."

Many people including some who believe in the reality of UFOs have told me that no UFOs have ever landed. The non-believers get almost belligerent with the statements, "If they were real, they would have landed." "Since they haven't landed they must not be real." A strange sentiment indeed in view of the very numerous reports of UFO landings from all over the world. The ridicule problem "laughter curtain" is, of course, much worse for landings than for just plain airborne sightings and I am certain that only a small percentage of landings have been reported . . . especially by respectable, responsible persons unwilling to risk their reputations.

There are several excellent sources of information about UFO landings and the humanoids who are observed to get in and out of the UFOs. These are listed in the References section. Of special interest to me is the almost total unwillingness of other scientists besides myself and Jacques Vallee to talk about humanoids and landings. The issue was skirted by the other 11 scientists providing testimony to the congressional hearings on UFOs in 1968. Put bluntly, the evidence appears to be overwhelming that humanoids (meaning human-like creatures with 2 arms, 2 legs, a head, and a body) who were born on some other planet have been observed to walk on this earth. It is strange indeed that a large

NASA bibliography on the search for extraterrestrial life has no reference on UFOs.

One would expect that the most interesting of all UFO sightings for studies by scientists would be these landings. The appearance of objects in the air can be quite misleading. It is difficult to get very accurate estimates of size, speed, shape, distance, etc., since all one can really observe are relative values for each of these for things in the air. On the other hand if one observes something sitting on the ground one has a frame of reference which makes it relatively easy to determine size and distance. One of the intriguing aspects of the study by Dr. Vallee is that the estimates of the size of the dozens of landed saucer-shaped craft observed in France in 1954 zeroed in on 5 meters in diameter (around 16 feet). This dimension is not very different from the size of either the Apollo Command Module which landed on earth or the Lunar Excursion Module which landed in the boondocks on the moon. Vallee also found that the landings seemed to almost always occur out in the country away from inhabited areas. They were observed by men, women, and children going about their normal business. Testimony in a court of law of the same people on other matters would undoubtedly be taken at face value.

One of the more disturbing sides of the landings question is the cavalier fashion in which Ed Condon, Major Keyhoe, and Frank Edwards have each in his own way avoided the issue, especially in view of the potentially far greater amount of information derivable from landings than from things in the sky. Condon quotes and laughs at Frank Edwards' remarks about George Adamski but fails to even mention Vallee's study of 200 landings through I had informed him of it at some length. Frank Edwards who certainly believed that some UFOs were extraterrestrial and that the U.S. Air Force knows all about them, spent half of a lecture he gave in Pittsburgh a few months before he died making fun of all sorts of contactee and landing stories. I had introduced Frank and found out in a conversation after his talk that he had not seen the "Humanoids" special issue of the Flying Saucer Review. Keyhoe for a long time kept NICAP from vigorously pursuing landing reports and cases like the Barney and Betty Hill story. My feeling is that Edwards and Keyhoe had labored long and hard to make UFOs respectable and were afraid of being tarred with the kook brush if they seriously suggested that many landings have been observed - complete with little guys. Condon, on the other hand, was so prejudiced about UFOs and so angry at the many people who were in effect, publicly questioning his integrity (with good reason) - such as John Fuller, Dr. David Saunders, and Dr. Jim McDonald that he pushed out of his mind anything that might lead to a notion of UFO reality. Incidentally, in the Condon report he also failed to even mention published studies by scientists showing that travel to the stars is feasible and instead relied upon older, much less relevant or useful studies to help him conclude that one can't get here from there. Errors of omission are as serious as errors of commission.

MYSTERY: "If they have landed, why haven't they made contact?"

I had a very vehement astronomer at the Allegheny Observatory in Pittsburgh tell me angrily that UFOs couldn't be real. "No astronomer or other scientist has ever seen one; if they were coming here we would measure their orbits. If they were coming here they would be talking to us." He struck out by missing all three of these pitches. As indicated in the Industrial Research poll and elsewhere, many scientists and astronomers have indeed observed UFOs. One of the more interesting



aspects of UFO flight seems to be that they do not move in ballistic orbits, but seem able to move in whatever direction they please - not at all in the manner of orbital type vehicles such as satellites. His ego was showing, concerning the "talking to us" - I suppose he felt that since astronomers are concerned with the external universe, if visitors were coming from outer space they would immediately speak to the astronomers. "They" apparently haven't asked for an audience with him or his colleagues so obviously we are not being visited.

I maintain that we need a frame of reference for the potential encounters between outerspace visitors and earthlings that does not involve such an egotistical assumption as our equality with the visitors. First, we have to recognize that it may well be that there have been official contacts between ET life and various governments on earth without our being informed of them. Many other significant, potentially less panicky, events have been kept from the peoples of the world by the governments of the world - always of course for the "good of the country" or at least the best interests of the governments - it says here in small print. Secondly, we must recognize the smallness of both our chunk of space and the chunk of time represented by earth's technological and sociological development when examined on a cosmic level. The planet earth has been around for roughly 5 billion years. Human type creatures have been on the surface of that planet for, at most, about 10,000,000 years, or 0.2% of the earth's history. We have recorded history available to influence our own development for roughly several thousand years. We have been aware of gravity for perhaps 300 years; have flown in powered aircraft for fewer than 75 years - have been capable of receiving a radio signal from outer space for fewer than 50 years, have discovered the means by which our own star, the sun, produces its energy fewer than 40 years ago and duplicated it on more than a lab scale fewer than 20 years ago - and walked on another body in our own solar system for the first time fewer than 3 years ago. Some parts of the universe outside of our solar system have been around more than 13 billion years. If we could advance from wood fires producing hot air to run balloons to the 6 million pound Saturn 5 rocket in a couple of hundred years, on what basis can we presume that others had not done so billions of years ago or say at least 5 billion years after the formation of their stars??? Why stop at travel within a quarter of a million miles of home (the moon) when the universe is so large? The moon is 1.5 seconds away at the speed of light. The sun is 8 light minutes away at the same speed and the nearest star is under 5 light years away. We are, however, aware of stars billions of light years away in all directions. In the light of even our own undoubtedly extremely limited knowledge of the universe, interstellar travel is as feasible today as moon flights were in 1940 - no "new science" needs to be discovered, though if we survive, we will undoubtedly discover plenty of new science.

To return to the apparent absence of contact - we should really ask "why should they make contact with us?", which in a very real sense would make us as important as they are. I really can't understand anyone's notion that we would be as important, exciting, helpful, friendly, informative, etc., to them as they might be to us. Their technology has to be well in advance of our own - quite easily a million years ... this means we would have plenty to gain from them (since progress comes from doing things differently) but what would they gain from us? I can't see any areas of technology, agriculture, sociology, religion, cosmology or anything else in which we could expect to have information useful to them that they don't already have; except perhaps information about how earthlings will behave when we get "out there" and, perhaps information about why we behave in the primitive, anti-humanistic anti-all religious faiths fashion in which we do indeed behave.

Can anyone seriously say that the behavior of the societies on this planet is desirable, humanistic, rational, or religious???

I believe that all the jokes about take me to your leader are a kind of whistling in the dark means of protecting our own egos and of trying to convince ourselves that we are OK, important, worthwhile, etc.

Would any earthlings seriously suggest that this planet has a leader to be taken to? Would any earthling seriously suggest and believe that the major governments on this planet would willingly and openly share the technology that is potentially available as a result of either capturing or being given a saucer to study?? Would any earthling seriously suggest that the inhabitants of this planet have shown sufficient responsibility as "universarians" to be trusted with the kind of "new" energy control and production systems such as must be involved in the saucers?? Do we deserve the gifts of the future without having learned how to use the efforts of the past?

Is there any reason to expect that mankind would have any more understanding and acceptance of the motivations of our visitors than whites have of blacks, communists of capitalists, Arabs of Israelis? How do astronomers and other scientists dare to suggest, as they have that, if "they" were coming here they wouldn't sit over swamps when they could visit Paris - they wouldn't land behind girls' college dormitories (as if the dormitories were why they landed) and wouldn't come near our planet without asking our permission or talking to the National Academy of Sciences or dropping in at the White House for tea. Surely men who study anthraps, bacteria colonies, flocks of kangaroos, or even dolphins don't enter into formal negotiations with the parties being studied. We don't deny the ants, bees, kangaroos and dolphins are worth studying or that these creatures have intelligence. We simply don't require their understanding, acceptance, love, before we make a move to look over their activities. We don't expect them to be able to tell us more about their activities than we can get from our own studying, do we??

Before attacking the mystery of why bother coming to the earth at all, we should not neglect the many reports of individual interactions between ET collectors and earthling specimens. I would heartily recommend John Fuller's "Interrupted Journey" as a detailed report of what I consider to be a genuine interaction between earthlings and extraterrestrials. It is frightening on the one hand that "they" could do as they please with their specimens - but comforting that there did not seem to be any desire to injure or in any way permanently damage the Hills - either physically or emotionally. One must ask how many other earthlings have been put through the same ordeal without discovering it?? After all there are few psychiatrists in the country and only a small percentage of them use regressive hypnosis on a regular basis, and only an even smaller percentage of those who do, have the background and skill of Dr. Simon and the raw material of the Hills to work with. I should add that I spent about four hours with Betty and Barney in November of 1968, a few months before Barney's death, of natural causes, in February of 1969. I was very impressed with them in every respect - intelligence, integrity, sensitivity, openness, sense of humor, etc. Incidentally, I am now aware of at least one case of persons in the Los Angeles area who have a missing time interval associated with a UFO sighting. I would be delighted to learn of others.

**MYSTERY:** "If they are not interested in making contact why come here in the first place?"

In a sense this question is unanswerable without talking to the UFO pilots. However, it is worth some specu-



lation in order to better expand our knowledge of ourselves and to improve our perspective about the planet earth and its inhabitants. I have elsewhere (Reference 5) listed ten reasons for visiting earth; some facetious but none totally impossible or implausible.

Let us first examine the question of the planet earth compared to the other planets in this solar system. Earth has a number of unique features. This earth is much denser than all of the other planets (except Pluto) and therefore must have some denser materials on it. It has a magnetic field and must therefore have iron-like elements in profusion, and some other interesting but heavy metals such as uranium, gold, tungsten, platinum, and light metals such as aluminum, titanium, beryllium, magnesium and boron. The earth is covered with liquid water and gaseous oxygen and nitrogen in a way in which no other planet in the solar system is provided. This would certainly be of interest to earthling-like creatures.

The earth-moon system is unique in the solar system in that the moon is larger compared to the size of the earth than is any other planetary satellite and is also further away compared to the size of the mother planet. In effect we have a twin planet situation in which one body has (at least for awhile) all the necessities of life such as light, water, air, relatively even temperatures, as well as protection against meteorites, solar ultraviolet, cosmic rays, and the solar wind. The moon offers working areas having a very high vacuum and a very low magnetic field, very dark regions, regions of no electromagnetic background, regions of very low temperatures, and low gravity for easy launching of interstellar vehicles, and Earth Excursion Modules, and no corrosive atmosphere to resist flight and damage materials. It would make an ideal base from which to receive and transmit signals from other star systems and to provide a convenient way station near a place having all kinds of other items of interest.

I should stress that the earth also has readily available supplies of substances which we weren't aware of or at least didn't care about until recently. Hydrogen isotopes are here in profusion and might be used to fuel fusion propulsion systems. Liquid water is a far more convenient form of hydrogen than is gaseous ammonia or hydrogen itself. Water, incidentally, has more hydrogen per cubic inch than has liquid hydrogen, strange as that may seem.

Many other isotopes are also available along with the previously mentioned metals - and others, many of which were only lab curiosities until this century - such as uranium, rhenium, tantalum, zirconium. The density of the earth and the presence of water vapor, oxygen, nitrogen, and a magnetic field can be determined from off the earth.

The earth also is an attractive site for the growing of a fantastic variety of substances requiring water and sunlight and fertilizer of one sort or another - especially if one has access to all locations with an Earth Excursion Module. Just consider the variety of farming conditions available in terms of type of soil, latitude, growing season, altitude, humidity, etc. The sunlight is free and readily available. The atmosphere, ocean, and surfaces also provide a convenient source of raw materials for chemical processing, either here, on board the mother ship or on the moon.

The above discussion is concerned only with the place - earth-moon. Let us now discuss the inhabitants and other reasons for coming here than using the "place". First let us note that the above discussion assumes that interstellar travel is common throughout a good sized fraction of the universe. This is roughly the equivalent of saying that transoceanic flights are common on earth

or that orbital spaceships are common. Not everybody flies across the ocean and certainly not everyone owns his own Boeing 747 for so doing, but there are a number of very expensive quite large planes making regular trips back and forth. Think of the contrast between the flights of the 70's and the balloons of a century ago (remember Around the World in 80 Days?) and then take the steps from 747s to Apollo manned spaceships which go around the earth in 90 minutes. Yet, it takes a lot of energy and effort to fly an Apollo spaceship (or at least the 60 times heavier Saturn rocket) but consider what we will be capable of doing in 100 or 1000 or 1,000,000 years and what progress others undoubtedly made a billion years ago out there.

If you were from an advanced civilization where sociology had kept pace with technology (or you would have been destroyed), wouldn't you be concerned about the inhabitants of a planet on which technology was well ahead of sociology? Wouldn't you rate as primitive a society for which every new frontier is a place to do battle rather than a stimulus for greater brotherhood and mutual efforts towards a better life for all the inhabitants of the tiny spaceship earth? It may be that the intergalactic council has rules about interference with primitive species so long as they limit their unpleasantness to their own planet but would they be permitted to do damage elsewhere? I seriously doubt it.

Certainly, in view of the events of the past which have included the use of atomic weapons and rockets first separately and then mated together would anyone observing the earth from time-to-time believe that we would refrain from spreading our peculiar brand of friendship to other planetary bodies? One must also note that the rate of technological progress has been steadily increasing so that an observer would be concerned not necessarily about the present but rather about the very near (on a cosmic time scale) future. After all, it took less than three years from the first controlled chain reaction to the first atomic bomb and less than four from the first satellite to the first manned space flight and only another eight for the first lunar landing. In short, earthlings would give any observer concern for where we are going and how we plan to get there. From an entirely different viewpoint one might say that we are almost at the point where we would be worth conquering. You pays your money and takes your choice.

**MYTH:** "No sightings have occurred in recent years."

I have had many newsmen and other people suggest that the whole problem of UFOs has in essence gone away. After all "I haven't seen anything in the papers". While it is certainly true that many big-city papers have carried next to nothing about sightings in the couple of years since the Condon report was issued, it is clearly not at all true that UFOs are not being observed. One can judge that sightings are still occurring by reading the Flying Saucer Review, the APRO Bulletin, and the more limited distribution but still very useful publications such as SKYLOOK (the publication of the Midwest UFO Network), DATA NET, the Kansas-Oklahoma Newsletter, "Saucers, Space, and Science," etc. - to all of which I personally subscribe. Perhaps a more objective evaluation of at least newspaper UFO publicity is possible by examining the monthly clipping batch issued by Rod Dyke (\$4/month from UFORC Research Committee, 3521 S.W. 104th, Seattle, Washington, 98146) which typically includes about 15 tightly packed legal size pages of clippings about UFOs - almost entirely sightings - from all over the world. I do not know how many clippings are not included but it is certainly clear the UFOs haven't stopped being reported at least in local newspapers.



I am firmly convinced that the problem has not gone away but that the fraction of the total number of sightings which gets reported has certainly decreased - even if, as may well be the case, the actual number of sightings occurring has not. The reasons are quite straightforward. There first of all, is practically nowhere to report a sighting in most parts of the country now that the Air Force Project Blue Book has been closed. Secondly, many large circulation newspapers have taken an anti-UFO editorial stand since the Condon report which means that even if a sighting were reported to a paper, it would take an unusual amount of courage for a reporter to try to do a thorough investigation since the editor's view is probably that everything is more important than a crackpot UFO story. Thus, we have the paradox that the news media are more reluctant to dig into UFOs at a time when more people than ever believe in their existence.

There is a related myth that the papers have conspired not to treat the UFO subject seriously - perhaps at the connivance of the Air Force or CIA. All I can say to this is that my own experience would seem to contradict this notion. I have received "straight" and friendly coverage of my views about UFO reality in several dozen newspapers across the country from New York to Hawaii. I have even had a couple of cartoons drawn "in my honor" with no hint of ridicule of my positive definite views on UFOs. Several stories about me have also gone out on the news wires so I can definitely say that no conspiracy exists and that probably the real problem is that not enough respectable, professional scientists and engineers and politicians have been willing to speak out. The newspapers are looking for new ideas, new approaches, and new views on all subjects. The UFO kooks and quacks got plenty of publicity in days gone by but really haven't said anything new in years that seems at all reasonable to the skeptical, cynical newsman. I would certainly encourage all investigators who can solidly back up what they believe to speak out forcefully and accurately.

#### SUMMARY AND CONCLUSIONS

This paper is an attempt to stimulate thinking by confronting some of the myths and mysteries prevalent about UFOs on a semi-personal basis rather than from a totally detached, uninvolved scientific viewpoint. Many of the ideas contained herein will be discussed in much more detail in a book on which I am presently working - hopefully for publication within a year. If the comments plus the references listed below stimulate even a few of the readers to plunge into the Earth Excursion Module world with minds soaring and fears quelled, I have no doubts that they will find the water invigorating and the mind expansion rewarding.

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