

UFOs I Have Loved and Lost

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UFOs I Have Loved and Lost

Professor Condon conducted a study of Unidentified Flying Objects, from late 1966 to the summer of 1968, at the request of the U.S. Air Force. The full report has been published under the title, "Scientific Study of Unidentified Flying Objects," in paperback by Bantam Books, and in hardback by E. P. Dutton and Co. This article is based on a talk presented before the American Philosophical Society last April. The author is professor of physics at the University of Colorado.

Throughout human history men have been seeing strange and terrifying apparitions in the sky. The literature dealing with such experiences is enormous. The word "spectre" is used generically to describe phenomena of this type. This word's earliest use, cited in the Oxford English Dictionary (OED), is in the title of a book by Z. Jones published in 1605, "A Treatise of Specters or straunge Sights, Visions and Apparitions appearing sensibly unto men." The word "spectrum" is cited first in 1611 in a passage which said, "Walsingham hath written of a fatal Spectrum or Apparition . . . where sundry monsters of diuers colours . . . were seen." Sixty years later, Isaac Newton used the word to describe his decomposition of sunlight with a glass prism in these words, "The Sunbeams . . . passing through a glass prism to the opposite Wall, exhibited there a Spectrum of diuers colours."

From these two uses of the word "spectrum" comes naturally the two meanings which the OED gives for the word "spectrology": (1) The science or study of spectres, and (2) The scientific study of spectra. The OED cites as an example of the first meaning an 1820 quote from Washington Irving's "Sketchbook": "The gloom of religious abstraction, and the wildness of their situation . . . had filled their imaginations with the frightful chimeras of witchcraft and spectrology." And of the second, an 1862 quote from the "American Journal of Sci-

ence": "The attention of the French scientific world is wholly fixed on spectrology, for thus do they designate the experiment with the spectroscope of Bunsen and Kirchhoff."

I am the second man in human history to have written a book on spectrology in both of these two distinct meanings. Donald Menzel was the first.

FLYING SAUCERS

Modern interest in UFOs stems mainly from the observations of Kenneth Arnold, a Boise, Idaho, businessman on June 24, 1947. While flying near Mt. Rainier in Washington he reported seeing some objects skimming along which he described in a manner that led newspapermen to call them "flying saucers." Although not all objects later reported are saucer-shaped, this term is often used generically, but the term UFO is preferable. The Air Force studies anything seen flying in the sky which might present a defense hazard, and thus has been concerned with the thousands of reports of sightings of UFOs that have come to them in the nearly 22 years since this first modern report.

From such study they concluded long ago that no defense problem was involved in these reports from the public. The amount of attention which the Air Force gave to the problem after the first four or five years has been minimal.

In the early '50s the story of UFOs began to appear in sensational pseudo-science magazine articles and paperback books. These have had a large sale. The book by Frank Edwards, "Flying Saucers—Serious Business," probably holds the record with more than 1,300,000 copies sold. Several other titles have sold more than 200,000 copies. The so-called Condon report was given an initial printing of 200,000 copies. In the last three years 40,000 school children have written the Air Force asking for UFO data.

The principal source of the widespread interest is the contention of some writers that at least some of the

things seen may represent flying craft from other civilizations, either elsewhere in the solar system, or even from a planetary system associated with some other star.

We must be extremely careful about our language. Some UFOs may be such visitors, it may be postulated, and some writers go so far as to say that they actually are. To discover clear, unambiguous evidence on this point would be a scientific discovery of the first magnitude, one which I would be quite happy to make. We found no such evidence, and so state in our report. But it is not true to say that we "proved that flying saucers do not come from outer space." All that can be said is that, of the cases we looked into carefully, we found no evidence in support of the hypothesis of their extra-terrestrial origin.

STUDY ADVISABLE

We concluded that it is not worthwhile to carry on a continuing study of UFOs in the manner which has been done thus far: that of going out into the field to interview persons who say they have seen something peculiar. The difficulty about using objective means of study lies in the rarity of the apparitions, their short duration, and the tendency of observers not to report their experience until long after it has ended. When a known object is the source of many reports, as in the case of the Zond IV re-entry of March 3, 1968, there is extraordinary disagreement among the descriptions of what was seen by different observers of the same event. This result shows that no great certainty attaches to the specific details of any of the reports.

These difficulties led us to conclude that it is quite unproductive of results of scientific value to study UFOs in the traditional manner. But, contrary to popular belief, we do not rule out all future study. We say: "Although we conclude after nearly two years of intensive study, that we do not see any fruitful lines of advance from the study of UFO reports, we believe that any scientist with adequate training and

credentials who does come up with a clearly defined, specific proposal for study should be supported."

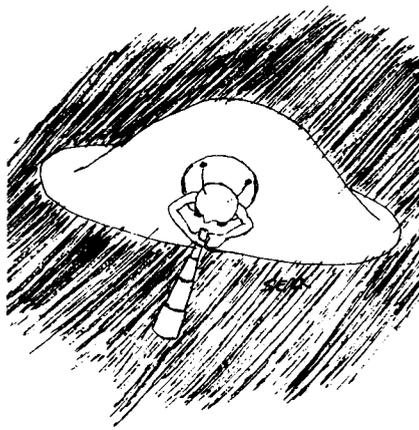
This conclusion has been bitterly denounced by the flying saucer buffs who have been making money from sensational writing and lecturing to gullible audiences, and collecting dues from the membership of their pseudo-science organizations. One prominent professor of atmospheric physics has been giving speeches in which he advocates that the federal government spend on UFO study amounts of money which would "dwarf" that spent on the space program.

Even though nearly a year has gone by since my work in this field ended, I continue to be astonished at the fervor with which many people hold views that are totally unsupported by objective evidence of any kind. Many people seem quite incapable of recognizing any distinction between what might be so and what actually is so. Some of these are charlatans, in my opinion, who profess belief in order to collect royalties from writing and fees from lecturing. But others are deeply sincere.

THE CULTISTS

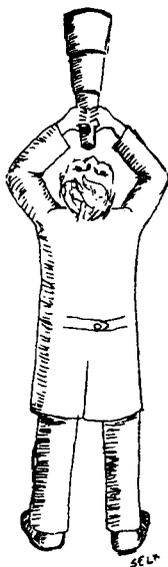
We ran into many more interesting cases than we could include in the report, already criticized by many for being too thick. There was a young airman, second class, at an Air Force base in New Mexico whose 19-year-old wife died suddenly of a heart attack. They were members of a flying saucer cult which gathered around and decided that the woman's spirit had gone to Venus on a flying saucer, and that she would want her body back when she returned. So they wrapped it in a sheet and stored it in a barn rather than having it properly buried. The police learned of this by a mysterious postcard from a woman in Spokane, Washington. At first they thought the card was a hoax, but investigation proved that the young woman's body had been by this time stored in that barn for about three weeks. The young airman had seen lots of flying saucers but had not reported any of them, saying: "I didn't know the Air Force was interested!"

In the spring of 1967 I was visited several times by a well-mannered man who claimed to be acting as agent for the Third Universe (we are the First,



and the Second is inhabited by beings that resemble polar bears, he said). He said he was authorized to negotiate a contract with the U.S. government by which they would teach us to make inter-stellar flying saucers for \$3 billion. The first billion was to be paid after a demonstration to government officials at Dulles airport, the second after a major national laboratory had been built and our scientists and technologists had learned how to make flying saucers, and the third after they had trained our flight crews in inter-stellar navigation. He was specific down to the point of naming the bank in Arlington, Virginia, where the \$3 billion was to be deposited.

He wanted me, in the interim, to pay him \$3,000 as "earnest money" to be deposited in a particular bank in Western Colorado to the account of his organization, which was called the "Omnific Intelligence Continuum." Inquiry to that bank revealed that there really was such an account. Asked the size of the account the



banker cautiously said, "Small sums go in and out." Asked about membership of the organization the banker told me, "So far as I know Mr. X is the only member." Since part of Mr. X's story is thus verified, ought we now to believe everything he tells us?

REAL OR PSEUDO-SCIENCE

The most vivid lesson that I learned from such experiences is what a narrow, wobbly line there is between real science and pseudo-science. So far as the public is concerned most of the science which they know about they do not understand. Very few people can state clearly the grounds for belief that the Earth goes around the Sun, rather than vice versa, or for that matter, for our belief that the Earth is a ball rather than flat. Coming to more modern instances, who among the many investors in the profitable semiconductor industries have the slightest idea how a transistor works really?

In the given circumstances most of the scientific ideas that are accepted by the public are accepted entirely on faith. To most people, completely lacking any basic understanding of underlying principles, the proposition that the configuration of the planets and stars at the time of our birth determines the course of events in our lives, seems no more unlikely or preposterous than many of the well-established truths of science which they do accept without understanding them. There are some 10,000 astrologers in America who make their living practicing astrology and only about 2,000 astronomers who live by practicing astronomy. If celestial matters were decided democratically by the members of both professions lumped together, then the "real" astronomers would always end up as a depressed minority.

Flying saucers and astrology are not the only pseudo-sciences which have a considerable following among us. There used to be spiritualism, there continues to be extrasensory perception, psychokinesis, and a host of others. Hanson W. Baldwin in the "New York Times" has told how the Marines at Camp Pendleton are trained for Vietnam in the use of dowsers made of bent wire coathangers as a means of locating tunnels and other underground works of the Viet Cong.

Recently a visitor from a Navy research installation told me that some

admirals had purchased from an inventor a wholly worthless invention which it was claimed could detect submerged submarines by a radar-like reflection of electromagnetic waves. This could not possibly work because of the conductivity of sea water, and it did not work when expensively tested. A test had to be made to satisfy the admirals and certain congressmen. A Russian spy in the same Navy laboratory got hold of the invention and our test results and sent them to Russia. The Russians did more work on the invention. Although they understood at once that it must be foolish, they thought they might be wrong because the Americans had spent so much time and money studying this crackpot invention. We know about this because an American spy in their laboratory sent to us the story of their work.

These and many other examples that could be given show that we have failed rather miserably to give even to so-called educated people some feeling for the way in which science investigates a subject, and the way in which scientists subject their observational material to critical evaluation before reaching conclusions. The thing that most people are least able to do is to refrain from drawing conclusions when there is not enough evidence at hand to warrant drawing conclusions.

In ancient times, the future was foretold in many ways that have gone out of favor, such as by examining the entrails of sacrificed animals, or basing omens on the study of the flight of flocks of birds. (Cicero practiced this latter method.) Before you smile, bear in mind that these views have never really had as much scientific study as have the UFO reports. Perhaps we need a National Magic Agency to make a large and expensive study of all these matters, including the future scientific study of UFOs, if any.

Where corruption of children's minds is at stake, I do not believe in freedom of the press or freedom of speech. In my view, publishers who publish or teachers who teach any of the pseudo-sciences as established truth should, on being found guilty, be publicly horsewhipped, and forever banned from further activity in these usually honorable professions. Truth and children's minds are too precious for us to allow them to be abused by charlatans.

Public Policy and Behavioral Science

I am testifying out of long experience in the application of anthropology to contemporary national and international problems. During World War II, I worked within the context of the National Research Council on problems of nutrition, national morale, civilian defense, and cross national communication with Great Britain. I was one of the group that developed anthropological work on cultures at a distance—notably Germany and Japan—and after World War II, I participated in and directed a series of studies on behalf of the Office of Naval Research, Rand and MIT, including studies on the Soviet Union, China and France. These were interdisciplinary team activities (summarized in “The Anthropology of Human Conflict,” Mead and Metraux in “The Nature of Human Conflict,” edited by Elton B. McNeil, Prentice Hall, Inc. 1965). Since 1952 I have devoted myself to the study of technical assistance and political implications of culture change, education, cross national and international order and control of warfare, population control, environmental control, urbanization, cross ideological communication, and recently to the world wide implications of the generation gap.

I am here to discuss the possible contributions that the behavioral sciences together, and anthropology in particular, can contribute to national and international affairs.

During World War II we made a fine start in the utilization of this group of young sciences on a whole series of problems ranging from obtaining a better understanding of the national cultures of our opponents, our allies and ourselves, to the deter-

Physical scientists have been vocal and highly influential in Washington in the shaping of public policy on a number of fronts since the end of World War II. But what has become of the influence of behavioral scientists in Congress and on Capitol Hill? Margaret Mead discusses the question in this excerpt from her testimony before the U.S. Senate Foreign Relations Committee June 20, 1969 in a hearing on the psychological aspects of public policy. Dr. Mead is Curator of Ethnology at the American Museum of Natural History and Adjunct Professor of Anthropology at Columbia University.

mination of specific policies within the armed forces and within the nation, from the prediction of how Japan would respond to our treatment of the Emperor, to a clarification of relationships between the United States and our principal allies, to an illumination of the ambiguities in the responses of the various occupied countries to problems of civilian morale, to the maintenance of the health of the nation, to an unprecedented mobilization of our industrial resources, and to a deployment of resources in post war rehabilitation of a badly wounded world. These successes were accomplished under a set of conditions which can be clearly specified: a state of preparedness, mobilization and post war activity made possible by almost total commitment to a war which could be seen as a moral effort against almost overwhelming power and risk; a willingness of the community of behavioral scientists to give unstintingly of time and effort, within and without government,