

and was headed by H.P. Robertson of the California Institute of Technology. The Robertson panel, after a thorough investigation of the UFO reports to that date, concluded that all were probably natural phenomena, wrongly interpreted.

The most reliable testimony is that of the professional astronomer. Jesse L. Greenstein of Mount Wilson and Palomar observatories pointed out that a vehicle 100 feet (30.5 meters) in diameter, at an altitude of 50 miles (80.5 km), would leave a broad track on photographic plates of the sky taken with large telescopes. This track could be differentiated easily from those of ordinary astronomical objects, such as stars, meteors, and comets. Nevertheless, it appears that such tracks or unambiguous visual observations of classical UFO's have never been made by professional astronomers.

In the Harvard Meteor Project performed in New Mexico during the period 1954-1958, extensive photographic observations were made by Super-Schmidt cameras, with a 60° field of view. In all, a surface of about 3,000 square miles (7,700 sq km) was observed to a height of about 50 miles (80 km) for a total of some 3,000 hours. Visual and photographic observations were made which could detect objects almost as faint as the faintest objects visible to the naked eye. These observations by professional astronomers were made in a locale and period characterized by extensive reports of unidentified flying objects. No unexplained objects were detected, despite the fact that rapidly moving objects were being sought in a study of meteors. Similar negative results, obtained by large numbers of astronomers, help to explain the general skepticism of astronomers toward flying saucer reports.

A series of puzzling and well-publicized flying saucer sightings in the mid-1960's again led to the appointment of a government investigating panel, this time under the aegis of the Air Force Scientific Advisory Board. It is significant that this panel was convened not at the request of the operational or intelligence arms of the Air Force, but in response to a request by the Air Force public relations office. The panel, under the chairmanship of Brian O'Brien, a member of the board, met in February 1966 and restated the general conclusions of the Robertson panel. It recommended that the Air Force make a more thoroughgoing effort to investigate selected UFO reports of particular interest, although the probability of acquiring significant scientific information (other than psychological) seemed small.

The O'Brien panel suggested that the Air Force establish a group of teams at various points within the United States in order to respond rapidly to UFO reports. Each team would consist of (1) a physical scientist familiar with upper atmospheric and astronomical phenomena, (2) a clinical psychologist, and (3) a trained investigator. In October 1966 the University of Colorado was selected by the Air Force Office of Scientific Research to manage this program and to prepare a thorough analysis of the UFO problem. The National Academy of Sciences agreed to appoint a panel to review the Colorado report.

Hypotheses of Extraterrestrial Origin.—Repeated sightings of UFO's, and the persistence of the Air Force and the responsible scientific community in explaining away the sightings, have suggested to some that a conspiracy exists to conceal from the public the true nature of the UFO's. Might not at least a small fraction of the unexplained few percent of the sightings be space vehicles of intelligent extraterrestrial beings observing the earth and its inhabitants?

It now seems probable that the earth is not the only inhabited planet in the universe. There is evidence that many of the stars in the sky have planetary systems. Furthermore, research concerning the origin of life on earth suggests that the physical and chemical processes leading to the origin of life occur rapidly in the early history of the majority of planets. From the point of view of natural selection, the advantages of intelligence and technical civilization are obvious, and some scientists believe that a large number of planets within our Milky Way galaxy—perhaps as many as a million—are inhabited by technical civilizations in advance of our own.

Interstellar space flight is far beyond our present technical capabilities, but there seem to be no fundamental physical objections to it. It would be rash to preclude, from our present vantage point, the possibility of its development by other civilizations. But if each of, say, a million advanced technical civilizations in our galaxy launched at random an interstellar spacecraft each year (and even for an advanced civilization, such a launching would not be a trivial undertaking), and even if all of them could reach our solar system with equal facility, our solar system would, on the average, be visited only once every 100,000 years.

UFO enthusiasts have sometimes castigated the skeptic for his anthropocentrism. Actually, the assumption that earth is visited daily by in-