"over 185 outstanding scientists and 23 physicians were interviewed, as well as officials of the American Medical Association and university medical school faculties. Also included were biologists, chemists, entomologists, nutritionists, pharmacologists, plant pathologists, toxicologists, zoologists (including a geneticist), as well as experts in agriculture, conservation, and public health." However, contrary to general practice, the testimony of these persons has never been published. Instead, only a summary written by the committee staff appears in the hearings report and there is no list of the scientists who appeared before the committee (*1*). A list does appear in Whitten's book but it includes only those who "were agreeable to being identified as having been interviewed by the staff" (*2*). Nowhere is there any indication that any, or which, of the scientists support Whitten's or the staff report's contentions, and nowhere is the testimony printed in its entirety for the open judgment of the scientific community.

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References

1. *Department of Agriculture Appropriations for 1966* (hearings before a Subcommittee of the Committee on Appropriations, H.R., 89th Congress, 1st session, Government Printing Office, Washington, D.C., 1966), pt. 1, p. 165.
2. J. L. Whitten, *That We May Live* (Van Nostrand, Princeton, N.J., 1966), p. 217.

Weightlessness Can Be Confusing

While much of the theory of the space age has no interest for the nonscientist, the concepts of orbiting in a gravitational field, and "floating freely" through space, are two which the public should be able to distinguish. The word "weightless" is used frequently to describe the condition of spacecraft and astronauts in orbit. A majority of readers of the daily press probably interpret weight to be simply the gravitational force of attraction between an object and the earth. I fear that many readers are led to the erroneous but understandable conclusion that if an object is weightless, then this force has ceased to exist. Some may invoke, as a reason, the great distance of an orbiting body from the earth. In fact, the height of most orbits reduces the gravitational force by only a minor part,

and the force is itself the cause of the orbiting motion, according to Newton's laws.

It is a pity that there should be scope for confusion over this basic principle of mechanics, as a scientific venture has rarely captured the interest of the public to the extent of the present space program (or spent as much public money). Furthermore, the interest will be greatly increased by the first Apollo mission, and there will then be a fundamental difference. The gravitational forces on an Apollo crewman will be very weak for much of his journey, and his weightless condition will indeed be due to his remoteness from the earth and moon.

Perhaps science writers, in view of the great public interest, should take care to make the distinction between the two different kinds of "weightlessness."

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A Trained Eye on UFO's

Correspondence in your columns on UFO's points to a grievous lack of trained observers. For the elucidation of these rare and mysterious objects, first-class observations are necessary, and very few people, even among those supposed to be scientifically trained, can observe. The following drill, commonly used by observers of meteors, fireballs, and so on, is applicable and deserves to be better known. It is assumed you can transfer your whole attention to the phenomenon.

On becoming aware of the object, stand still and start counting seconds. Kick with your heel to mark your position exactly. Hold a hand out at arm's length and gauge the angular size of the object. (The thumb in width subtends 2½°, the open hand, 20°.) Note the brightness of the object, compared to other visible objects, and any changes that may occur. Establish the beginning and the end of the object's path with reference to marks on the horizon. Determine whether the object passes behind or in front of any landmark. Try to fix the position of touchdown on earth, if you think that has occurred. After the object has disappeared, make written notes of the above details. Transfer the seconds count to accurate time by your watch. Listen critically for sounds as-