

UFO's may afford little chance of contact with other life forms, as Carl Sagan has said, but their puzzling nature merits attention. The ideas of Von Daniken are an aberration, which should no more restrict our attention to UFO's than astrology impedes astronomy. But they are not an aberration because he suggests that Earth was visited in the past by space-ships. If we argue that way, we are provincial. They are a quirk because they are based largely on inaccurate inferences. He denigrates scientists and jumps to unjustified conclusions. If our egos were not at stake, if prior belief were not so strongly dominant in such matters, he would be innocuous.

"Scientists are no respecters of authority," Condon writes.⁴ "Our conclusion that study of UFO reports is not likely to advance science will not be uncritically accepted by them. Nor should it be, nor do we wish it to be. . . . If they do get (new) ideas and can formulate them clearly, we have no doubt that support will be forthcoming to carry on with such clearly defined studies" (page 2).

These ideas are apparently unshared by Menzel, who finds it important enough to twice assail any UFO funding. Condon concludes his statement above, with clearly defined studies in mind, by saying, "we think such studies *should* be supported [*italics added*]."

References

1. L. Davidson, ed., *Flying Saucers: An Analysis of Air Force Project Blue Book Special Report No. 14*, 3rd ed., Ramsey-Wallace, New Jersey (1966).
2. E. J. Ruppelt, *The Report on Unidentified Flying Objects*, Ace, New York (1956).
3. J. G. Fuller, *Incident at Exeter*, G. Putnam, New York (1966).
4. E. U. Condon, *Scientific Study of Unidentified Flying Objects*, Bantam, New York (1968).
5. J. A. Hynek, *The UFO Experience*, Henry Regnery, Chicago (1972).
6. US House of Representatives, Ninetieth Congress, Hearings Before the Committee on Science and Astronautics, *Symposium on Unidentified Flying Objects*, Washington, U.S. Government Printing Office (1968).

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I would like to congratulate Harold Heaton for having written his letter "Investigating UFO's" (February 1975, page 11), and I hope that your journal will consider, in the future, this topic far more seriously in presenting evaluations on UFO's by scientists who took the initiative to study them, while lots of others simply scoffed.

Unhappily, it seems that this puzzling subject is still a sort of taboo in the scientific community and, in my opinion,

this unusual psychological reaction to the simple word "UFO" would also be worth studying by psychologists and other social scientists!

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The question of why scientists generally will not investigate UFO phenomena has at least one good answer, unrelated to "scientific peer-group pressure" (letter of Harold I. Heaton, February 1975). We simply do not like to work with those who are true-believers in the phenomena, because any scientific skepticism we have, or impartially drawn conclusions, are met with another explanation or justification for the existence of the UFO's, rather than with a rational examination of the conclusions on the basis of the observable facts. I don't claim non-believers are unbiased, but most retain some sense of balance.

To illustrate, I was asked to examine a metal sample of about $\frac{1}{2}$ kilogram mass, said to have been left behind after a UFO landing. It was further said to be of a composition totally unknown on Earth, unidentifiable by a metallurgist, to include a large quantity of gold in its composition, to have a hardness second only to diamond, and to have been fabricated and finished in a manner unknown to us on Earth. It was also said to have certain structural damage features, on which I am not competent to comment. I enlisted the help of experts: the Principal Mechanicians in our shop agreed that the metal was cast and finished off crudely but smoothly on a belt sander. It appeared to be crystalline in structure. The analytical chemist whom I asked to make a preliminary survey of its chemical content to see if it was worth examining in detail, George Shalimoff, made the following report: "specific gravity $15.4 \pm 10\%$; magnetic; no alpha, beta, or gamma radioactivity; 80-90% tungsten, 10% cobalt, 0.5% chromium, 1% iron, traces of manganese and silicon, no gold or 31 other commonly found elements; very similar to tungsten carbide; looks like a carbide alloy, exotic but not mysterious." The specific gravity of carballoy is about 14, that of tungsten 19. Upon return of the sample, the owner said, "The analysis certainly confirms that the material is extraterrestrial." The next report which I saw, made by a newspaper's "Blue-ribbon UFO panel," of which the sample owner is a member, said, ". . . better than even chance that the material is extraterrestrial . . . its density is certainly unusual . . . this material would be very difficult to duplicate. It would require a highly sophisticated and complicated process at high temperatures." The sample owner is a man of integrity so far as I know; he is an eminent engineer, yet in my opinion he throws away his judg-

ment when he discusses UFO's. This is what makes it difficult for me to talk seriously with those who have seen UFO's, or study UFO phenomena.

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Male chauvinism

The American Institute of Physics is to be commended for taking a giant, albeit long overdue, step to end discrimination against women in physics by adopting the term "chairperson" in lieu of "chairman." It is then with regret that we note a residue of male chauvinism in some circles, as is evident from the names of an otherwise distinguished group of particle physicists: Feynman, Gellman, Neeman, and Gottsman. Even worse, it is known that there is a strong particle-physics group (largely male) at the Weizman Institute.

In this connection we should also be on our guard against discriminatory tendencies in common English words, for example, population. Fortunately in this case there is an obvious emendation—use "POPulation" for a group of males, "MOMulation" for a group of females, and simply "ulation" for a mixed group. Other cases, such as misfortune, mishap and misinformation, are not so easily disposed of. It is to be hoped that such matters will be given priority attention by the Committee on Physics and Society.

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More pollution hazards

In his letter (December 1975, page 9) on the hazards of air pollution from coal-fired power plants Joseph Devaney did not mention the release to the air of natural radioactivity by fossil-fueled power plants. A paper by Z. Jaworowski, et al, ("Environmental Surveillance Around Nuclear Installations," Vol. I, page 403, International Atomic Agency, Vienna, 1974) indicates that the dispersion of natural radioactivity by fossil-fueled power plants is likely to be much higher than the release of artificial radioactivity from nuclear power stations.

Jaworowski has calculated that the dose rate 15 km from the fossil-fueled Siekerki plant near Warsaw is 0.11 mrem/year per megawatt of electric power. For comparison he quotes a dose rate of 10^{-7} mrem/year per MW(e) at the site boundary of the Dresden I reactor and a dose rate of 2×10^{-4} mrem/year per MW(e) at the site boundary of the Yankee reactor at Rowe, Mass. From these figures one might conclude that reactors emit between five hundred and one million times less radioactivity than fossil fuels producing the same amount of electricity.

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