

OBSERVATIONS OF A SCEPTICAL BELIEVER

A study of observer's influence upon systems, contacts, Occam's Razor and signal and noise.

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AN objection often advanced against the hypothesis that UFOs may be craft operated by an extraterrestrial intelligence, is that if this be true "they" would certainly establish official contact at governmental level.

Proponents of the extraterrestrial hypothesis have in turn given various reasons why such contact would be avoided.¹

There is, however, one reason which as far as I know has never been given adequate attention, either by the proponents or by the opponents of the extraterrestrial hypothesis, although it is in accordance with scientific experience and principles, and is by no means speculative.

If we take the position that we are being visited by an extraterrestrial intelligence, we can in principle think of only three possible reasons:

- 1) Pure scientific curiosity,
- 2) Friendly contact,
- 3) Hostile contact.

In any of these three cases the first step would be a thorough scientific surveillance. In case 1 this would be an end in itself; in cases 2 and 3 it would precede other actions as a necessary means of self-defence. The choice between the three alternatives mentioned above could have been made in advance, but it could also depend on the result of the surveillance.

Dangers of observer's influence

From the scientific viewpoint, a surveillance is an examination of a system. It is an accepted principle of scientific methodology that precautions have to be taken, and that the instruments or methods of examination should have no undue influence upon the observed system. Otherwise the results might be distorted, and, during a following examination—although carried out properly—the system might exhibit other properties as a result of an undue interaction with the instrument, or the observer, during the first examination.

If, for example, one wants to measure the level of a fluid in a tank, one may use for this purpose a sounding-rod. But as the sounding rod itself has a certain volume, it will displace some fluid, and the level will therefore be slightly higher during the measurement than it was before.

Another example. If the electrical potential of a circuit is measured with a voltmeter, an additional load is applied. As a result the voltage will drop, and the instrument will indicate a lower potential

than that actually present (i.e. without the instrument). In extreme cases—when the internal resistance of the instrument is too low—the applied additional load may even cause permanent damage to the components of the observed system (the circuit).

Nowadays, for the calculation and compensation of the instrument influence upon systems, a whole science of its own has developed. For most practical applications it is therefore possible to obtain a sufficient degree of accuracy.

It must be emphasized, however, that this presumes a thorough knowledge not only of the instrument, but also of the system, and of the possible interactions between both. Practically, a researcher will always try to keep the instrument influence beforehand as low as possible, rather than correct the measured results by calculation.

A reduction of the instrument influence, however, is only effective if—to put it in general terms—the instrument's energy consumption can be made negligible when compared with the total energy in the observed system.

In the physics of elementary particles, for example, this condition cannot be realized. It was this insight which ultimately led to the concept of the *uncertainty principle* by Heisenberg.

The instrument influence presents difficult problems in mechanical or electronic systems, yet those problems are simple when compared with those encountered in the observation of living, and/or intelligently controlled, systems. In such cases one cannot consider a possible influence on the part of the observer only in terms of the relative amounts of energy involved.

If the observer of a living system uses an insufficiently sterilised probe, the influence is negligible on a pure energy level, yet it may alter the system to such an extent that it is no longer available for observation—at least not as a living system. When an animal smells an observer, the amount of energy or substance conveyed between them is immeasurably small, but none the less it may cause violent reactions.

A new factor we have to take into account in the observation of the living and the intelligent is information. Genetic information enables a bacteria to multiply and to exert a fatal influence upon a living system. Information guides the be-

haviour of the animal in the same way as, in a computer, a certain condition may cause the programme to branch to a sub-routine, although this condition may be represented only by the presence (or non-presence) of a very small amount of energy.

The same principle applies to the examination of sociological systems. The anthropologist knows very well that he must hide if he wants to observe the secret fertility dance of some native tribe—otherwise he would be shown an insignificant substitute. It is a common experience that people behave differently if they know they are being observed, and it is well known that the mere fact that a man is being interviewed may influence his answers.

There are, in fact, few principles which apply so universally to all fields of science, as well as to everyday life, than that for which I have just given some examples.

One can say that:

- 1) Observation is impossible without interference with the observed system;
- 2) This interference in turn distorts the results of the present, or even of a future observation (depending on the degree to which it is irreversible);
- 3) For this reason an observer will always try, as much as possible, to reduce any interference with the observed system.

It is therefore somewhat astonishing whenever scientists readily regard the absence of official contact as an argument for the non-existence of an extraterrestrial surveillance. This in spite of the fact that scientific criticism always seems to be well aware of the principle (as demonstrated above) in the evaluation of UFO-reports, as one may gather from the frequent references to the possibility of observers' influence—or bias—on perception and reporting.²

There is no doubt that a scientifically advanced extraterrestrial intelligence would be cognizant of the above principle, and would apply it. One should just remember that even our present scientific and technological achievements would never have been possible had we ignored it.

Considering our sociological structure (about which a lot of information could already be obtained by a mere high altitude reconnaissance) in which power and brains are concentrated in a few hands, an extraterrestrial intelligence would almost certainly avoid in the first phase a contact with those who direct the world's scientific and industrial efforts. If it did not, we, the system under observation, would soon alter our behaviour, thus distorting the observer's measurements or samples, or even endangering the observer himself. The more pronounced the difference between the extraterrestrial intelligence and ourselves, the more careful it would be to avoid interference with us. We must bear in mind that we humans are also more cautious if we are dealing with things and persons unknown to us. And if the surveillance were a long-term programme, the intelligence would be particularly uncommunicative for reasons given above.

If there is really a surveillance behind the UFO-phenomenon, it is very probable that every aspect of it that we are able to observe is either (1) an interaction by mere chance, or (2) a necessary interaction with our system in order to obtain data or to maintain the surveillance as such.

Although one cannot *a priori* exclude the first possibility, one could well argue that in an advanced scientific research programme nothing would be left to chance, particularly if it were conducted by a superior intelligence. Certainly this possibility would play a minor role—if any at all—and we would be well advised to consider the UFO-phenomenon in terms of the second possibility.

In this connection it is very interesting to consider the cases of the car and plane pursuits. If they were indifferent, or friendly towards us, they would carefully avoid giving any impression of hostility, and if they had hostile intentions this avoidance would be all the more pronounced. As the evidence for such cases is pretty strong, although the alleged behaviour is in direct contradiction to the principle discussed above, one might say as it were, that this behaviour could be a presupposition for the surveillance as such.

This also supports the suggestion which I made in a recent article, that such cases could possibly be regarded as more or less successful attempts by UFOs to enter our space from another dimension, thereby using the electromagnetic radiation from our ignition systems as a sort of beacon.³

A reason for single contacts ?

On the other hand, our hypothetical extraterrestrial observers may well have decided that the influence of their sampling and sounding techniques upon our system may be kept under control if they only contact single individuals. This could explain why the contact is not completely avoided, but it poses a new question. Although our scientific community has, up to now, maintained a rather sceptical attitude concerning UFOs, our hypothetical observer could never be sure whether or not even an alleged hidden contact would trigger a violent reaction in our system. It seems, therefore, conceivable at least that he would apply some sort of counter measures in order to prevent a witness from spreading dangerous information.

The most simple means would be to eliminate the witness himself. If considered in terms of observer's influence upon the system, however, this would be better avoided, because it could bring about a contrary effect. This may be the reason why there are indeed witnesses to such events.⁴

Another possible method could be the obliterating of memories. There are more and more cases on record in which close-up witnesses of UFOs have suffered from amnesia or a derangement of their feelings of time, which could be related to this possibility.⁵

It would be quite unjustified to conclude from the

number of close-up and contact reports that there is apparently no such influence, or at least that it does not work very well. By now it is possible that the one point of agreement of opponents and proponents alike, is that only a minority of the sightings which actually occur are reported to an official project or to private UFO research groups.

If 87% of all UFO sightings are never reported, as a recent study has disclosed,⁶ then the number of sightings in the above-mentioned category is actually eight times greater. However, as the natural inhibition against reporting such things is the greater the more private the intimacy concerned, and the more ridiculous an alleged experience may appear to others, one must suspect that the hidden cases of close-ups and of little men episodes are far more numerous than would appear at first sight.

If, for example, a number of people saw an inexplicable craft in the air, and an equal number were to undergo an experience as alleged by Antônio Villas Boas, it is pretty certain that there would be more reports from the first group than there would be from the second.

More interesting, however, is the fact that 56% of those who have never seen a UFO thought they would report it if they saw one. It seems that natural inhibitions, such as ridicule or the publicly-known treatment that has been accorded some witnesses, should have the same effect, quantitatively, upon the answers given by the non-sighters and on the actual behaviour of the sighters.⁷

Additional inhibition

One could say, therefore, that it looks as if a UFO sighting itself would produce an additional inhibition against reporting it! Without being categorical, it would seem that suggestions that UFOs or their occupants might derange observers' memories at least are not completely unsubstantiated. An artificially created amnesia could make a witness uncertain as to the reality of certain parts of his experience. It is even conceivable that he may forget it completely, or, if he remembers some part of it, he doesn't connect it with UFOs.⁸

Far more could be hidden even than those who are concerned with the "conspiracy" aspect could imagine. There is even a good chance that UFO-reports, as a whole, will show a considerable decrease if certain proposed "methods for establishing observers' creditability" become known to the public.⁹

In the above connection there is another possible point of interest. Counter intelligence is often faced with the problem that the dissipation of certain significant information simply cannot be avoided. By issuing a lot of non-significant or conflicting information about the same thing, however, the value of the significant information for the enemy may be considerably reduced. An example of this is the radio traffic between the American Polaris submarines and their base. Naturally all messages are coded, but the mere fact that a message is being transmitted could warn an enemy that something is

afoot. Radio traffic is therefore kept on a steady level by transmitting meaningless information in the intervals between the orders.

If we do not wish to grossly underestimate our hypothetical extraterrestrial observer, we must take into account the fact that he may intentionally add "noise" to the inevitable signal. In the case of close approaches, and the various degrees of contact, this could be done, for example, by appearing in different guises, by making ridiculous or contradictory statements to witnesses, or, in a more sophisticated manner, by mental conditioning.¹⁰

Hallucinatory elements

It seems that there may be pronounced hallucinatory elements in some reports, but it is by no means evident that in all of these cases the explanation could be found in the psychopathology of the witness. We have to face in principle, therefore, two possibilities:

1) Hallucinations are a side effect caused by the conditions (force field) in the vicinity of the UFO. It is at least conceivable that the human brain could be affected by these conditions in such a way that subconscious or unconscious images may reach the centre of perception, and become indistinguishable from a real experience. Maybe, however, this side effect is quite intentionally applied.

2) The hallucinatory effects are transmitted from the UFO to the observer by some form of thought-transference.¹¹

Again, however, as in the hypothetical case of UFOs affecting the memory, we are on extremely dangerous ground. From my own experience, I know very well that there is a strong inclination, especially on part of sober technicians, to discard such possibilities out of hand.

Commenting on Occam's Razor, R. V. Jones wrote: "Of all the possible explanations for a set of observations, the one with the minimum of supposition should be accepted, until it is proved wrong. Otherwise one lives in a fearsomely imaginative world in which rational conduct becomes impossible."¹²

There is no doubt that we who are interested in UFOs, and who are often engaged in rather wild speculations about their nature, would be well advised to consider this advice—and yet. . . .

As Occam's principle is often presented in arguments by opponents of the extraterrestrial hypothesis simply as a sort of justification for being sceptical, I feel that a few remarks are indicated.

The emphasis in the above quotation is on the words "possible" and "set".

The "impossible" explanations (i.e. those that do not account for all facts of a given set) must have been ruled out before applying Occam's razor. It does not mean that it is permissible to reject one fact after the other until an explanation does fit. It means only that if more than one explanation

is known, and that each one accounts for all facts of a given set, then that with a minimum of suppositions should be held to be true for the time being, until further facts come to light. Again, it does not mean that this explanation must necessarily come true.

It so happens that there is an ever increasing number of reports for which so-called conventional explanations can only be accepted by grossly ignoring certain scientifically disreputable aspects of the phenomenon. In other words the number of facts in the set is reduced. In such cases I feel that Occam is the wrong argument.¹³

However, his principle may be applied to the various hypotheses which fall beyond the present frame of science, in order to select those with the minimum of supposition.

In this article I have tried to show that one of the major objections to the extraterrestrial hypothesis is invalid, and that possibly, it could be a mistake to deal only with the technological aspects of the UFOs without worrying about the motivations behind them.

It has often been said that logic is adaptation to environment. If, for example, an animal receives a certain signal, after which comes food, and another signal, after which comes punishment in the form of an electrical shock, the animal will learn to associate the first signal with food and the second with punishment, and to act correspondingly. It has adapted itself to its environment by a sort of logic (it does not matter whether this logic consists of a mere reflex, or of a higher function). But if the two signals are interchanged completely at random, so that the environment no longer corresponds with the animal's logic,* the animal becomes mentally disoriented, often to such an extent that it develops neurotic symptoms and does not even touch the food, even if it is within its reach.¹⁴

A good deal of counter intelligence work consists of causing a similar disorientation on part of the enemy and—as one is tempted to say—to prevent him from making conclusions that may be within reach.¹⁵

Certainly an intelligence which wants to conceal its own activities, and remain unrecognised, would act similarly in order to prevent us from deducing a common denominator from our observations, knowing all too well that science is helpless if there is no logical order and system in the facts. Moreover, the present tendency, on the part of many members of the scientific community, to regard problems which defy treatment by the approved tools of science simply as pseudo-problems would only favour such intentions.¹⁶

Commenting on our subject, scientists sometimes imply that we are fooling ourselves. But if an extraterrestrial intelligence should really be present, there is a good chance that we are being fooled by it to such an extent that the difficulties of separating the signal from the noise may become insurmountable.

* (and if it is impossible to restore adaptation)

REFERENCE BOOKS QUOTED IN THE FOLLOWING NOTES

- (A) "Symposium on Unidentified Flying Objects." Committee on Science and Astronautics U.S. House of Representatives, Ninetieth Congress. 29th July, 1968. Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151. No. PB 179 541.
- (B) "Final Report of the Scientific Study of Unidentified Flying Objects." Conducted by the University of Colorado, under Contract to the United States Air Force. Dr. Edward U. Condon, Scientific Director. Bantam Books, New York, 1969. No. 553-04747-195.
- (C) Coral and Jim Lorenzen. "Flying Saucer Occupants." Signet Books, New York, 1967. T 3205.

NOTES

1. One of the least anthropocentric considerations of the contact problem was presented long ago by Aimé Michel ("Flying Saucers and the Straight Line Mystery," Criterion Books, New York, Part 6, *The Sword of Damocles*). However he misses one argument completely, as also does Prof. McDonald, when he suggests that it would "certainly be unjustified to extrapolate human motives and reasons to any other intelligent civilisation." [see Book (A): pages 23 and 83.]
The present article is intended to show that, based on a universally valid scientific principle, such an extrapolation may well be permissible.
2. Two recent examples of this attitude may be quoted:
2/1 In a paper published in Book (A) Dr. D. H. Menzel asks: "Is it not natural that beings from outer space should exhibit interest in us? But when we consider that these beings—if indeed they are beings—have been bugging us for centuries, why should not one have landed and shown himself to the president of the United States, to a member of the National Academy of Sciences or at least some member of Congress?" [see (A): page 199.]
2/2 The Condon Report (B) contains approximately 40 pages on the influence of the observer on perception and reporting (Section VI, Chapters 1 and 2) and numerous hints on that possibility in the case stories (Section IV). Yet with regard to a hypothetical extraterrestrial intelligence, the same problem is disposed of in one single sentence: "It is also obvious that if an extraterrestrial intelligence were assumed to be present, there is no logical reason to assume that it would not, or did not, make contact with a human being." [See (B), Section III, 8. Remarks and Recommendations, page 74.]
3. See my *UFOs and the Fourth Dimension, Part IV*, FSR Nov./Dec. 1968. The application of the concept of a fourth dimension to the UFO-phenomenon has been subject to some criticism (C. M. Cade: *A Long Cool Look at Alien Intelligence*, FSR March/April 1968, page 9, also Ivan T. Sanderson: "Uninvited Visitors," Cowles Education Corp. page 181). I know that most scientists hold the opinion that the concept in question is of little or no heuristic value. Time will tell whether or not this is correct. Presently I am more convinced than

ever that if we are to understand this phenomenon, such a concept will be forced on us sooner or later whether one calls it "fourth dimension," or, more cautiously, a "manipulation of space time continua." (A. Michel: FSR Nov./Dec. 1965, page 8). [Or, perhaps, we may even be unguarded enough to refer to it as a "parallel universe"—Editor.]

4. Such considerations may sound a bit cynical. Not only saucer cultists comfort themselves with the idea of a "higher" moral standing of extraterrestrial visitors. However I feel we would be on the safe side if we made no such assumptions.

I do not imply that the intelligence behind the UFO-phenomenon is necessarily hostile. But even if its motive is only scientific curiosity, its methods could well be directed by pure considerations of utility. Almost, I should like to say, that if it be a superior scientific intelligence, it could well be beyond good and evil in the Nietzschean sense.

With regard to the possibility that UFOs might be time-machines, the present editor of the FSR once made the interesting suggestion that "it is unlikely that time travellers would want to say or do anything calculated to upset or unbalance that time, in our future, in which their society exists in three dimensional surroundings" (Charles Bowen: *Time, Saucers and the Fourth Dimension*, FSR May/June 1963, page 13).

5. Or could such symptoms perhaps be the after-effects of a sampling or scanning on a mental level?

6. See (B), Section III, Chapter 7.

7. See (B), Section II, 16. *Public Attitudes*.

The discrepancy between the 87% of UFO sighters who did not report, and the 56% of the non-sighters who felt they would report in case of a sighting, is simply called "puzzling" (page 45).

8. See (C), Chapter IV, *The Interrupted Journey Continued* (Betty and Barney Hill case).

9. Sydney Walker, II, M.D.

Establishing Observer Creditability: A Proposed Method. Journal of Astronautical Sciences, Vol. XV, No. 1, pp. 31-36 Jan.-Feb. 1968, reproduced in (A) page 185. For case history see (A) pages 152-174.

Certainly the value of the proposed method will not be debated if, for example, the subject belongs to a specially trained elite, or is for some other reasons himself interested in such an examination.

But if this method should be generally applied to average UFO-witnesses, thereby becoming publicly known, I fear, it would soon furnish us with a perfect example of how an observation may influence a system to such an extent that further observations become impossible. There is little doubt that most people (psychologists perhaps not even excluded) would restrain from testifying even to the most common experience if they knew that they then had to pass an examination that "strips the poor fellow bare" (R. H. B. Winder: *Turning Point*, FSR Jan./Feb., page 18).

As far as the situation in Europe is concerned, the psychological part of the proposed examination may be highly debatable. Psychological tests widely used in the USA (such as the Minnesota Multiphasic Personal Inventory) are often completely useless in other countries and could at best provoke some sarcastic answers. (When asked what he would best like to be if he were not

a human being, contactee Reinhold Schmidt—Kearney, Nebraska 1957—allegedly answered "a psychiatrist." See Weltraumbote No. 38/39 Zürich.)

10. It would seem that with respect to such possibilities, even sober scientists may sometimes have uneasy feelings, as the following comment on contactees may show:

"It is interesting to consider the possibility that the contactees are genuine. When considering the UFO-phenomenon all sort of wild alternatives come to mind. If the extraterrestrials wanted to be ignored by the scientific community on earth, they could hardly choose a better and more effective way than the delivering of profound messages to the souls who presently claim contact."

[See Frank B. Salisbury, Utah State University: *The Scientist and the UFO*, Bio Science, volume 17, No. 1, 1967, pages 15-24, reproduced in (A) page 236.]

11. In speculations on telepathy, the problem of coding is frequently overlooked. It would seem that the transmitter has to use the same code as the receiver. While one might with some justification presume that thoughts and memories in every human brain are expressed in the same code, this would not necessarily be the case if a completely alien intelligence is concerned (be it a living brain, or a computer). Therefore, the first possibility may be more probable. However, see also C. M. Cade: *A Long Cool Look at Alien Intelligence, Part IV*. FSR Nov./Dec. 1967, page 15.

12. See R. V. Jones: *The Natural Philosophy of Flying Saucers*, in (B) Section VII/V, page 930.

See also A. Michel: *A Note on William of Occam*, FSR March/April 1968, page 10, and René Fouéré: *On the Theme of "A Note on William of Occam" by Aimé Michel*, FSR Sept./Oct. 1968, page 30.

13. The physiologist Hj. Öhrvall used to say that if some strange phenomenon was put before a scientist, his first task was to assure himself of the falseness of the assertions.

It seems that this advice is often taken rather too literally.

14. Lidell: *"Emotional Hazards in Animal and Man."*

15. Years ago, in the school I was then attending, we learned somehow that one of our favourite teachers, an ex-officer of the Austrian Army, had done intelligence work during the First World War. Naturally at that time we had rather romantic ideas about such things, and so we pressed him to tell us something about it.

"Really, there isn't much to be told," he remarked dryly. "You start by thinking about what the enemy may think. Some day it will occur to you that this isn't enough, and you begin to think about what the enemy may think you are thinking. Suddenly you find yourself thinking about what the enemy may think you are thinking he may think. Then you develop the habit of rejecting everything that is logic, for it may be a trap laid by the enemy, and finally you go crazy!"

Needless to say we were rather disappointed, but I must confess that since I have been interested in UFOs (and UFO-literature!) I have often remembered his words.

16. It would, however, also favour the maintenance by our own counter-intelligence of a cover-up programme, in order to assure a possible extraterrestrial intelligence that we are unaware of its presence, an idea that has been suggested by APRO.

[see (C) Chapter IX, *The Censorship Situation*.]