

A.P.R.O., NICAP and the rest—have had to rely entirely on their own efforts and slender resources, they have received no help or encouragement from Authority, they have had to ward off ridicule. Yet by some miracle they have survived and have amassed extensive filing systems of reports, some of which have gone on record in their publications, and all of which may one day be of extreme value in the study of the subject.

I feel certain Mr. Vallée has derived a measure of assistance for past researches from some of the groups. Perhaps it would be more profitable for

him to co-operate with, and encourage the most reliable among them.

The author's comments about *FLYING SAUCER REVIEW* are kind, but as an afterthought I cannot help wondering if he may have been too busy to observe all we have been saying *since* October 1964.

These however are but tiny complaints about what is otherwise an excellent book, one of the most comprehensive analyses yet to appear on UFOs, and one which must be read by all who are interested in the subject.

SOME PRELIMINARY THOUGHTS ON DATA PROCESSING

By William T. Powers

Our contributor, an American electronics engineer with degrees in mathematics and physics and experience with radiation-measuring techniques, is at present working on low-light-level television systems for astronomy.

JACQUES VALLEE has offered a method for classification of UFO reports on the basis of the type of objective phenomenon apparently being reported. If one takes each report as an objective report, and as being sufficiently full of information to permit elimination of one classification over another, and if the reports do not yield any sub-classes worthy of differentiation within the five classes defined by Vallée, or any ambiguous cases, then the five Vallée classes should suffice for an analysis. In fact, this appears to be the case. Vallée has reduced most sightings to those major types which seem to be repeated over time and over the world, and his classification has introduced a regularising method into the analysis of UFO reports.

There remains, of course, the danger that the very existence of these categories will tend to form future observations into one or another niche, at the expense of information which in fact makes a particular sighting differ from any "prototype" sighting in significant ways. If a sighting were reported, for example, in which a cloud-like object swooped down, emitted smaller objects, and then turned bright blue and exploded, the tendency would be to class this as a Type II-B sighting, despite the colourful explosion which makes it wholly different from other Type II-B sightings. Such a classification would be recorded, and on later data-processing, only the fact that a type II-B occurrence had happened would be retrieved. Clearly, classification can be a hindrance to analysis as well as an aid.

Closely-related is the effect that use of classifica-

tions in terms of objective phenomenon can have on one's general impression of the regularity of UFO occurrences. If every occurrence is put in one of five major categories owing to the fact that just five such categories exist, then later on, in reviewing records of sightings, it is possible to gain the impression that UFO phenomena fall rather remarkably uniformly into five sharply-defined classes. One tends to forget the initial judgments whereby each recorded phenomenon was weighed and subsequently assigned to the class which it *most nearly fitted*. This is always the danger: classification schemes tend to be self-reinforcing and self-justifying. By looking only at those features which do match the criterion features for a given class, one tends to minimise and even obliterate differentiating and perhaps quite important features, which fall in no preassigned class.

These facts pose a problem for the data analyst. On the one hand, it is necessary to find generalisations which give dimensions to the phenomenon under study, so that one event can be differentiated from another and likened to still others. On the other hand, any such procedure seems to force one to throw away, in effect if not in strict fact, all information that might prevent finding a place for a sighting in one of the existing classes.

The answer to this dilemma, which offers rich ground for criticism of any approach involving classifications, is not to abandon classification as a method—after all, scientists have to rely on classification as the primary way to begin all studies of new phenomena—but to find a way to preserve

the aberrant information so that as the classifications are expanded and refined in the future, the data that originally had no place can be brought back in. Vallée's categories cannot be criticised on the grounds that they are inadequate—one would have to dig deep to find a case which at least in part would not fit one of them. They can be criticised only from the standpoint of the impression they could give an outsider, one who is not intimately familiar with the source-material from which they are drawn. The wrong impression is that all sightings of a particular type and subclass are alike, or that any differences that do exist are trivial. We are not in a position yet to say which differences are trivial and which are not.

To Vallée, of course, and to others who spend much time working their way through reports of sightings, the differences are not forgotten. Each case is an individual, so much so that they are remembered by their names: Socorro, Valensole, Monticello. Mere mention of these names brings flooding back to memory all the details of each case, the memorable phrases of the witnesses, the look of the countryside, the emotions of the observers communicated through their personal reports. Unfortunately, these memories are not written down anywhere, nor is there a place for them in any classification scheme. The richness of the original reports is lost, the more so when the interviewer is unsympathetic, as is usually the case in Air Force reports.

No, we cannot abandon classification schemes, because they are the opening moves for putting UFO investigations on a scientific footing. But we must find a way to preserve the details, the details that make any sighting of a given type different from any other sighting of the same apparent type. This cannot be done without labour, and the labour that is required cannot be done without money. Money or love, and somehow it seems that while love can inspire great thoughts, money works better for inspiring consistent deeds.

If anyone is serious about finding out what the

more puzzling UFOs really are (no matter what they prove to be, whether fact, hallucination, or profitable fancy), then a serious effort is called for. Not only must every report be classified according to the best current scheme; every scrap of information concerning every report must be written down, punched into cards for instant availability; additional information must be sought, both about witnesses and about other people in the vicinity of a sighting who may have been witnesses to the same thing.

Tests must be conducted to see how many reports can be elicited from various localities by *fabricated* (yes, *faked*) UFO reports; to see how many people in various localities will report odd phenomena like airplanes dropping purple flares; to see how many people in a given locality where sightings have occurred could have been in a position to verify a report; to see how accurately people report phenomena which can be fully identified. We must calibrate the measuring instrument for this phenomenon, the random lay observer.

We must also analyse the available information. If all the reports which have survived the elementary screening operations (eliminating obvious balloon, satellite, and aircraft sightings) were subjected to factor analysis on fast computers one could hope to predict where significant sightings would next be likely to occur and set up apparatus to detect in some physical way evidence in corroboration of the human reactions. Perhaps patterns could be found which would show that the reports were dependent on simple phenomena like phases of the moon or time of year: perhaps more interesting results would occur such as indications that particular climatic conditions were associated with reports of odd events in the sky. With sufficient care and objectivity, one could hardly fail to arrive at scientifically valid and interesting results. At worst, a new field of sociology might be revealed. At best (or is it worse still?) one might discover convincing evidence in support of the idea that our island is host to others, from elsewhere.

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AND about the SPECIAL ISSUE

(see details on inside front cover)