PERSONAL AND SCIENTIFIC ATTITUDES

A study of Persons interested in UFO Reports*

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"IT is easy enough to praise men for the courage of their convictions. I wish I could teach the sad young of this mealy generation the courage of their confusions. . . . May it not be that we have made too much of conviction as an ultimate goal? Show me a man who is not confused and I will show you a man who has not asked enough questions. . . . It takes courage to engage . . . confusion deeply. It is at least a ponderable proposition that the courage to engage it is a better, because a more humane, act of mind than is that order of conviction that can survive only by refusing to consider seriously those questions an inquiring mind must find unavoidable."

Ciardi, J., "Manner of Speaking"
Saturday Review, June 2, 1962

Since 1947 the "sad young of this mealy generation" have been exposed to a peculiar set of events which elicits many convictions and confusions: reports of "flying saucers" or unidentified flying objects (UFOs). Sightings have been claimed by thousands of persons in many countries (APRO, 1968; FSR, 1968; and NICAP, 1968). The interested reader faces a wide range of questions, assertions, analyses, and documentations from various persons with various viewpoints: e.g. Bowen, 1966; Fontes, 1962, 1966; Fuller, 1966(a), 1966(b); Hynek, 1966; Downing, 1968; Lorenzen, 1962, 1966; Lorenzen & Lorenzen, 1967, 1968; McDonald, 1966; Menzel, 1953; Menzel & Boyd, 1963; Michel, 1956, 1958; Roush, 1968; Ruppelt, 1956; Vallée, 1965; Vallée & Vallée, 1966.

PROBLEM

An important aspect of UFO investigation is the range of hypotheses which can account for the range of unusual phenomena (Salisbury, 1967). Another aspect of UFO reports is the interaction of observers of UFO phenomena and investigators of UFO reports (Sprinkle, 1967). The history of physical, biological, and behavioural sciences (Rosenthal, 1966) supports the observation that the beliefs of persons can affect their reactions to situations and to other people.

Thus, it seems that a study of attitudes and beliefs, or expressed views, might cast some light upon the question of the characteristics of individuals who submit UFO reports. However, there is a difficulty in connection with this approach: in many UFO reports there is no identification of these individuals, either because they do not identify themselves or because the investigators do not identify them in their description of the UFO reports.

Thus, this writer took the approach of investigating the characteristics of persons interested in UFO reports. This study is based upon a general interest in the relationship of "open mindedness" and "scientific mindedness". Specifically, the study represents an

* This study was supported by funds from the Grants-in-Aid Committee of the Society for the Psychological Study of Social Issues, A Division of the American Psychological Association. Appreciation is expressed to Richard Hall, Former Associate Director of NICAP, and Mrs. Brown of Batt, Bates and Company, Washington, D.C., and to fellow members of NICAP for their kind assistance.

attempt to determine if there are differences between the "personal" and "scientific" attitudes of persons interested in the scientific study of human behaviour and persons interested in UFO reports.

Null hypotheses

The investigation attempted to test the following null hypotheses:

1. There is no difference between the "personal" or "open-minded" attitudes of persons interested in the study of human behaviour and those of persons interested in UFO reports.
2. There is no difference between the "scientific" attitudes of persons interested in the study of human behaviour and those of persons interested in UFO reports.
3. There is no relationship between the "personal" and "scientific" attitudes of persons interested in the study of human behaviour and those of persons interested in UFO reports.

Subjects

The three groups of subjects who participated in the study were as follows:

Persons interested in the scientific study of human behaviour:

I. Thirteen graduate students and 13 faculty members of the Department of Psychology, University of North Dakota (UND), Grand Forks, North Dakota. The faculty members all held the Ph.D. degree, and their general orientation might be described as an interest in experimental approaches to various areas of theoretical and applied psychology.

II. Fifty-nine graduate students enrolled in the 1961-1962 and 1962-1963 NDEA Guidance Institute, UND. In general, the enrollees were public school teachers who were in training for positions as guidance counsellors.

Persons interested in UFO reports:

III. A sample of the 5,500 members (at the time the study was conducted) of the National Investigations Committee on Aerial Phenomena (NICAP). With headquarters in Washington, D.C., and directed by Donald E. Keyhoe, Major, USMC (Ret.), NICAP collects and disseminates information about UFO reports to members and interested persons.

METHOD OF STUDY

The investigation was conducted by means of a questionnaire survey with all of the inherent limitations of such a method. The questionnaire form included two attitude inventories and a personal information section for predicting the social class status of the respondents

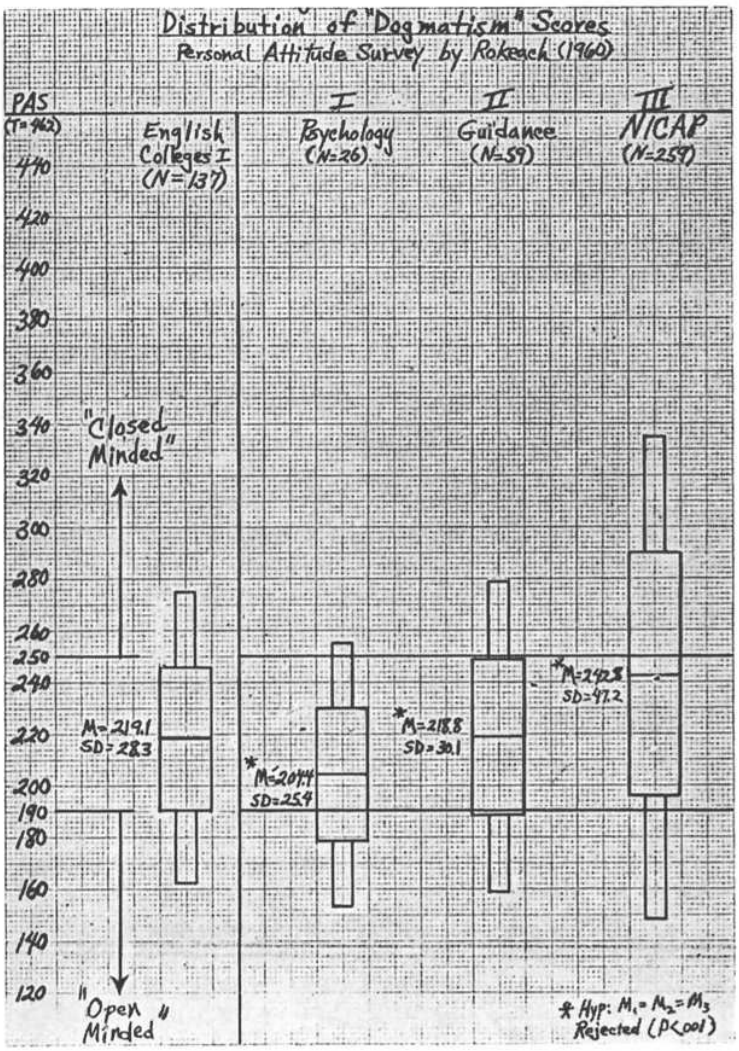

Fig. 1

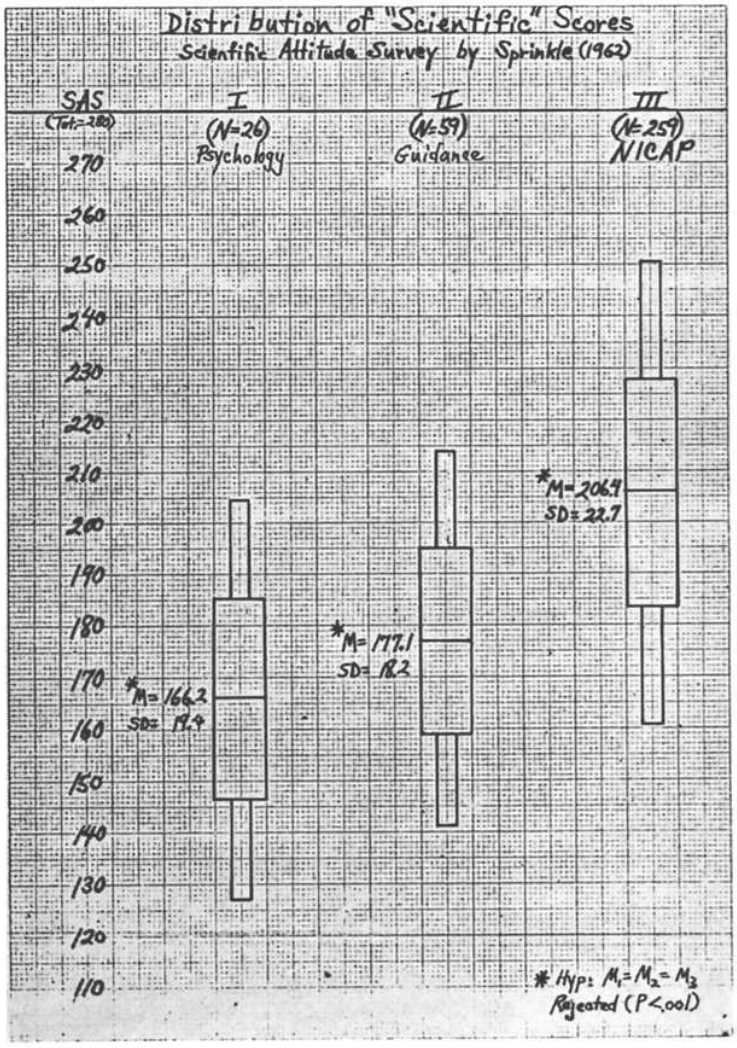

Fig. 2

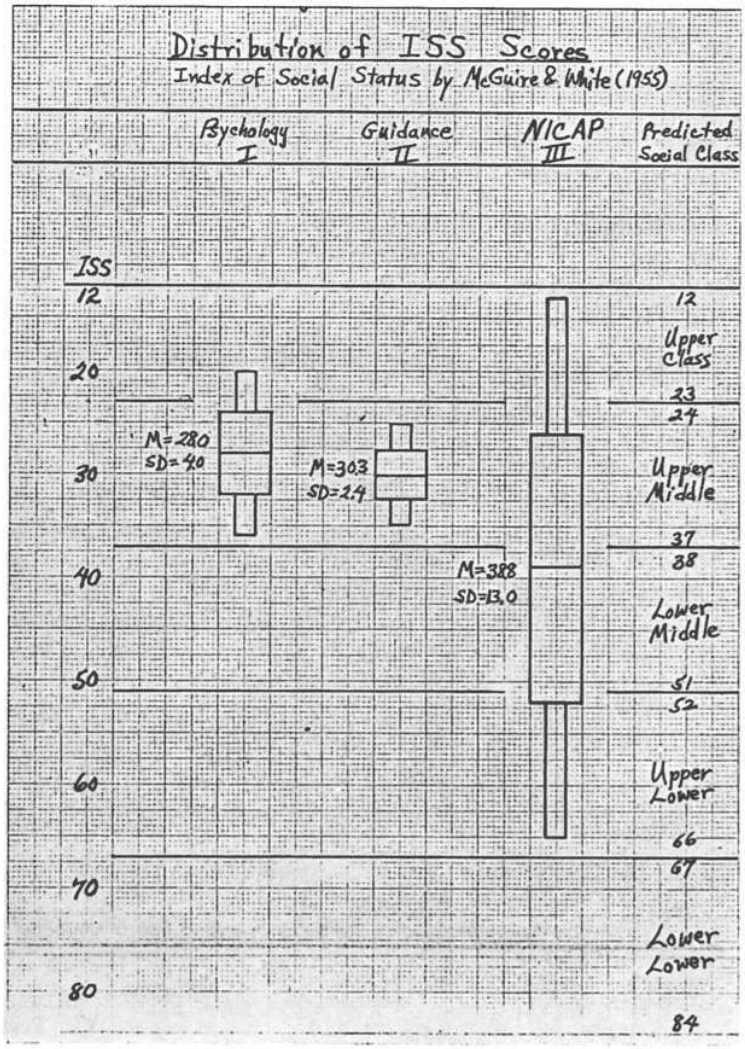

Fig. 3

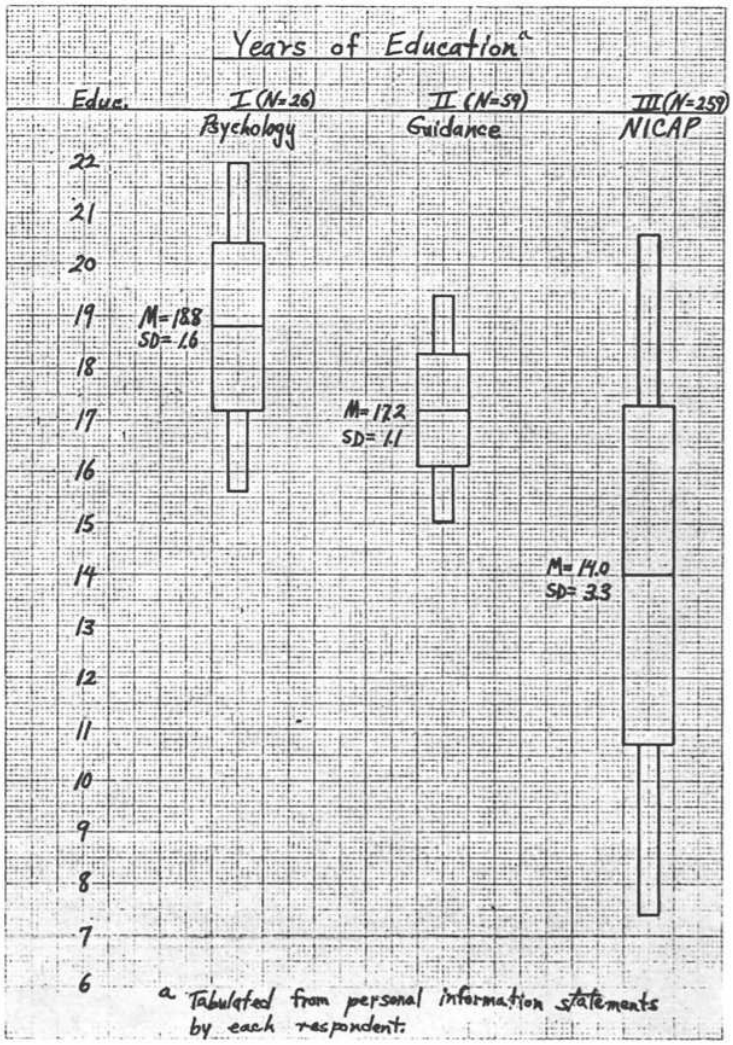

Fig. 4

(McGuire & White, 1955). The attitude inventory employed to assess "personal" or open-minded attitudes was the *Personal Attitude Survey* (PAS), or Dogmatism Scale (Form D), developed by Rokeach (1960). The attitude inventory employed to assess "scientific" attitudes was the *Scientific Attitude Survey*, an unpublished inventory by Sprinkle (1962).

In May, 1962, the questionnaire forms were completed and returned by 29 Guidance Institute enrollees and 26 members of the UND Department of Psychology. In September, 1962, 30 Guidance Institute enrollees completed the survey; they completed the survey again in May, 1963.

In January, 1963, 550 forms were mailed to a random sample of the 5,500 NICAP members. Of the 550 envelopes, 10 were returned with "No Addressee" marks. With follow-up postal cards, 277 (51 per cent) of the 540 forms were returned. The forms were examined for completeness, and 259 (48 per cent) were found to be usable.

LIMITATIONS OF THE STUDY

It should be obvious to the reader that there are serious limitations to the study—which deals with a topic fraught with difficulties. Among the limitations are the following:

1. The small number of subjects in each sample.

2. The small number of usable returned questionnaires from the NICAP sample (259 or 48 per cent).

3. The difficulties of assessing "personal" or "dogmatic" attitudes by means of a questionnaire.

4. The use of an untested inventory to assess "scientific attitudes of respondents. The *Scientific Attitude Survey* (SAS) was developed because there seemed to be no available inventory to assess attitudes about "scientific" approaches to the study of various unusual phenomena. The inventory consists of short statements which are taken from comments by well-known philosophers and scientists, including comments about UFO reports. However, the inventory was not subjected to tests for reliability and validity before it was used in this study.

5. Another limitation is the personal bias of the writer. The writer is not satisfied with the official interpretations of UFO sightings. (On two occasions, each time in the presence of another person, the writer has observed an aerial phenomenon which he could not identify and which he could not understand.) His interests and experiences in UFO reports have

led him to accept the hypothesis that many UFO reports represent observations of spacecraft and occupants of spacecraft. The writer also accepts the hypothesis that there are some UFO reports which indicate relationships between ESP, hypnosis, and UFO phenomena. Thus, the reader should be aware that the bias of the writer may be an influence in the investigation and reporting of the results of the study

RESULTS

The data obtained from the completed questionnaire forms were tabulated and submitted to the UND Computer Centre. The scores from the attitude inventories and the personal information section were analysed by use of the Pearson Product Moment Correlation Coefficient (r). A correlation matrix was used to determine the statistical relationship of each of the 23 personal characteristics with every other characteristic for each of the three groups of subjects. Also, the mean scores on the inventories were analysed by use of *t* tests (Dixon & Massey, 1957) to determine significant differences between the scores of the Psychology (I), Guidance (II), and NICAP (III) subjects.

Fig. 1 shows the distribution of "Dogmatism" scores for the three groups.

The question of whether the scores indicate "open-minded" or "closed-minded" attitudes was approached in two ways:

1. Rokeach (1960, p. 90) presented data for a sample of English College students, with an N of 137, a mean PAS score of 219·1 (Form D), a SD of 28·3, and a test-retest reliability of ·91 (odd-even reliability with correction by the Spearman-Brown formula). Using these data, a range might be established as follows: scores of 190 or less would indicate Open Mindedness: 250 or more, Close Mindedness.

2. Kemp (1963) presented a study using the PAS (Form E) as follows: scores of 120 or less indicated Open Mindedness; 150 or more, Close Mindedness. Since Form E contains 40 items and Form D contains 66 items, a comparable range might be as follows: PAS (Form D) scores of 200 or less would indicate Open Mindedness; 250 or more, Close Mindedness.

Using a range of 190 or less and 250 or more, it may be seen from Fig. 1 that each of the mean scores is in the average range. However, the scores are significantly different ($P < ·001$); the Psychology group scored lowest, followed by the Guidance and NICAP groups, respectively.

Fig. 2 shows that the mean scores on the SAS are different (P ·001) for the groups.

The Psychology group scored lowest on the inventory, followed by the Guidance and NICAP groups, respectively. Supposedly, a higher score on the inventory indicates a more "scientific" attitude, since the respondent is tending to agree with the statements of various well-known scientists.

Fig. 3 shows the distribution of ISS scores. As expected, the scores of Psychology and Guidance subjects are shown as more homogeneous in predicted social status than the NICAP respondents, who apparently are a sample of persons from a wider range of socio-economic status.

Fig. 4 shows the distribution of years of education, as indicated by the self descriptions of the respondents.

It is interesting to note that the NICAP group is characterized as a sample of persons with a wider range of years of formal education; however, the mean response of 14 years indicates that the respondents described themselves as having attained higher than average educational status.

Correlations of inventory scores and personal information were obtained to determine if statistical relationships could be observed for certain variables. Table 1 presents certain correlations which were selected from the matrix because of their possible interest and their statistical significance.

It may be seen that there are several significant statistical relationships between certain variables. However, none of the correlations is meaningful in terms of prediction, except perhaps the correlation of PAS and SAS scores for the NICAP group. The higher correlations of SAS scores and total UFO items probably were obtained because the UFO items are included in the SAS items.

Reliability of inventories

Only one test-retest administration of the inventories was conducted: 30 Guidance subjects completed the inventories in September, 1962, and then in May, 1963. The results were as follows: the Pearson-Product Moment correlation (r) of the PAS is ·569; of the SAS, ·578. These results indicate that, in this particular study, the reliability of these inventories is similar. Rokeach (1960, p. 90) reports a correlation, with use of the Spearman-Brown formula for correction, of ·91 on the PAS for 137 subjects in English Colleges.

Although the SAS may not be a valid instrument to assess "scientific" attitudes, the results of this one test-retest administration suggests that the inventory might be found

Table 1

Correlations of Selected Variables

Selected Variables	I Psychology	II Guidance	III NICAP
Education & PAS	—·128	—·116	·149***
Education & SAS	—·317	—·050	·045
Education & UFO items ..	—·326	·111	·137
ISS & PAS	—·128	·000	·107
ISS & SAS	—·317	·000	—·034
PAS & Age	—·312	—·045	·096
SAS & Age	·156	·112	·253***
PAS & SAS	·321	·109	·430***
PAS & UFO items	·349	—·101	·161***
SAS & UFO items	·698*	·600**	·501***
	*(N = 26, r > ·487, P < ·01)	**(N = 59, r > ·325, P < ·01)	***(N = 259, r > ·148, P < ·01)

useful in obtaining consistent responses from subjects.

DISCUSSION AND CONCLUSIONS

It would appear that the serious limitations of this study are exceeded only by one other feature: the paucity of significant findings. There are significant differences between the "personal" and "scientific" scores of these three groups; the writer, however, is hesitant to argue that the results demonstrate that the NICAP subjects are more "scientific minded", as well as more "close minded", than the Guidance and Psychology subjects.

The above interpretation would be distasteful because the writer wishes to continue believing that "scientific mindedness" is not correlated with "close mindedness", and that psychologists are more "scientific minded" than other groups of people. Nevertheless, the results indicate that, with further research, it is a possibility that the NICAP group might be found to be more "scientific" than these other groups, at least in regard to statements about UFO phenomena.

Another interpretation of the findings would be to regard the *Scientific Attitude Survey* (SAS) as an inadequate instrument for assessing scientific attitudes. The writer is willing to acknowledge that the inventory has not been tested for reliability and validity of the items. Also, the inventory undoubtedly reflects the bias of the writer that UFO phenomena are "real" and that reports of these phenomena should be investigated.

There is another interpretation of the findings which can be offered as a hypothesis: the PAS and SAS inventories have assessed the tendency of the three groups to exhibit the "Yeasay-Naysay" pattern of responses (Couch & Keniston, 1960). This interpretation suggests that there may be more persons in the NICAP group, than in the Guidance and Psychology groups, who would be classified as "Yea-sayers" (those persons with an agreeing response or a readiness to affirm). This interpretation seems feasible because an "agreeing response" would tend to result in a higher "closed-minded" score on the PAS and a higher "scientific-minded" score on the SAS.

In the opinion of this writer, the results of this study indicate that there are differences in the "personal" and "scientific" attitudes of persons interested in UFO reports and persons interested in the study of human behaviour. These differences suggest the possibility that persons interested in UFO reports are more likely to be more open to internal and external stimuli and more likely to exhibit an "agreeing response" or a readiness to affirm. Further investigation, of course, might lead to a test of this hypothesis.

Meanwhile, the writer concludes that both the tough-minded "Nay-say" response and the tender-minded "Yaysay" response may be important in the process of considering and investigating the physical, biological, psychosocial, and spiritual or psychic implications of UFO reports. As Michel (1966, *The Humanoids*, p. 68) has suggested: ". . . in Ufology the rule is to think of everything and to believe nothing."

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THE "FLAP" PHENOMENON IN THE UNITED STATES

An Examination and Analysis

John A. Keel

More than 60 American and foreign periodicals have carried John A. Keel's series of UFO articles, as well as over 150 major newspapers. His book "Operation Trojan Horse" will be published by G. P. Putnam's this year.

Flap—Originally an Air Force term for an ungovernable crisis. In ufology, a "flap" denotes a specific period of time during which a sudden outbreak of UFO sightings occurs. For example: if many sightings occur simultaneously nationwide on a single day, that day becomes a "flap date". A "flap" may also take place in a single area, marked by a beginning, a peak, and a decline in sightings. Such localized "flaps" can last from a few hours to several months.

HISTORICAL research by a very small group of dedicated ufologists is beginning to reveal some surprising patterns in the overall activities of unidentified flying objects. The year 1947 did not mark the start of the "UFO Era", as so many writers and students of the phenomenon have believed. "Flap" cycles have now been traced and documented back to the early years of the 19th century and additional research may eventually demonstrate that UFO "flaps" have occurred consistently on almost a regular time-table throughout all of history.

Not only have the "flying saucers" always been with us, but they seem to have always elected to remain aloof from our organized social groups and they may have operated under many guises, following deliberate patterns of confusion and deception. As Gordon Creighton, Allen Greenfield, and other scholars have suggested, it may be that all mythology, demonology, vampire legends, leprechaun stories, etc., are actually based upon earlier "flaps" and have merely been coloured and distorted by human interpretation of these events. An organized re-examination of all of man's myths and lore may yield important clues to the overall phenomenon.

I have now had an opportunity to investigate and study the numerous "flaps" of the past three years and have spent a great deal of time, effort and money probing into the astounding events taking place in the "flap" areas. The scattered published UFO sightings represent only a fraction of the overall situation, constituting only the small, visible part of an enormous iceberg. As a journalist I feed on facts and I have found that there are many, many solid facts which have been neglected by the general field of ufology, either because those facts were too fantastic to be considered seriously within the limitations of our own environmental framework, or because so many UFO researchers have been preoccupied with the random sighting reports and have made no organized effort to compile and analyse the "Big Picture". We have been laboriously counting the trees in a foggy forest and have made no maps and charted no paths.

Let us concern ourselves here with that "Big Picture" and disregard the many petty controversies and side issues which have diverted the ufological field for so long.

THE REPORT VERSUS SIGHTING RATIO

During my visits to "flap" areas it quickly became clear that only a small percentage of witnesses were actually reporting sightings. These reporting observers (ROs) do not give us a full impression of the scope of the phenomenon. After a lot of study and calculating, I have estimated that a single report may represent at least 250 unreported sightings.[1] I've made it my business to dig out as many of the non-reporting witnesses as possible. A single two-inch newspaper item from a remote area has often proved to be the tip-off that a