

*issn 0391-111 x*

# UFO PHENOMENA

an international annual review devoted  
to the scientific study of ufo phenomena

editor in chief  
r. farabone

**1980/1981**

**UPIAR**

COOPERATIVA STUDI E INIZIATIVE UPIAR S.R.L.

**Vol. IV No. 1**

# **UPIAR**

**UFO PHENOMENA  
INTERNATIONAL  
ANNUAL REVIEW**

## WE ARE NOT ALONE

The defense of truth is, formally, humbler and less exultant than the affirmation of an untruth. Always.

And especially the defense of a truth which has long gone unquestioned and has been considered unquestionable.

If we should suddenly for some reason or other have to defend it, we would be beset with bewilderment. There is too much in the way of documents, of memory, to allow us, in this moment of indignation, to extract the soundest arguments, the absolute proof.

An article in a newspaper, a day or two, would not nearly suffice: one would have to have all the books ever written, all the time it ever took to compile that truth.

Leonardo Sciascia

Corriere della Sera, January 3, 1979

Struggle for truth, like struggle for survival, has its own price. For the time being that price is solitude, sheer isolation.

Richard Haines, Alexander Keul, Alvin Lawson may be regarded as living examples of researchers who have paid (or are paying) that price for their heretical approach to UFO phenomena. Their writings have a fundamental factor in common—they all betray a natural allergy to certain untouchable sacred values. They dare to speak about 'heterodox' topics, such as the human factor (the forgotten witness), the physical environment in which an observation takes place, the 'cultural well' from which the brain of the witness draws its information

as it shapes the report of an alleged UFO experience. They share the Voltairian candour of formulating questions which may seem old fashioned, such as what the stimuli behind UFO reports are.

"Investigators must come to understand that they have been accepting UFO reports far too uncritically to date" (5) stands as an unvarnished j'accuse of the rigid core of belief and carelessness on which thirty years of "UFO research" are based.

Flying Saucers are a serious business, Frank Edwards wrote in the late sixties. That statement needs to be amended now. UFO phenomena are too serious a business indeed to leave to the mercy of "UFologists".

We do not want to imply that the work of "UFologists" has been entirely useless. But at times it has been extremely harmful. And "...to be brutally blunt, the majority of UFologists have no training whatsoever which could qualify them to be "experts" capable of commenting meaningfully on the majority of UFO experiences" (1).

While 'UFologists' thoughtlessly continue to drift in the mare magnum of slime represented by UFO reports, only recently have a few brave souls felt the need to cast anchor and wonder about where to go and what to do. The stabilizing compass - as Richard Haines loves to say (6) - is the scientific method which may help us to demonstrate that UFO phenomena offer a field of research rich in experimental cues and worthy of further investigation.

By "method" we do not mean a tranquillizing pyramidal view of science with empirical data at its base, the prescientific phases in between and the 'great principles' or unifying ideas at the top. Closer to home is the idea expressed by the Italian epistemologist Giulio Giorello (4) when he compares a scientific idea to a geographic map.

In fact a map describes the reality of a given region, emphasizing its features and traits. But each map by itself (and, to go back to UFO phenomena, the 'map' of UFO reports, for instance) can only capture some of the traits of a region. We must therefore work with several maps in order to have a global view of a given situation. And still we might find ourselves beset with difficulty. There are many different ways of connecting one map with another.

Can the map analogy teach us anything useful or relevant to UFO phenomena ? Our answer is: yes it definitely can.

If we were today to reconsider most of the allegedly genuine UFO reports gathered up to date we should probably discover that only one map had been used: the blindness map. Namely the acceptance at nearly face value of the accounts of the experiences. Basic 'maps' focusing on the role and credibility of the eyewitness, on the expertise (if any) of the investigator, on the socio-cultural context of the alleged experience, and so forth, have seldom - to say the least - been used.

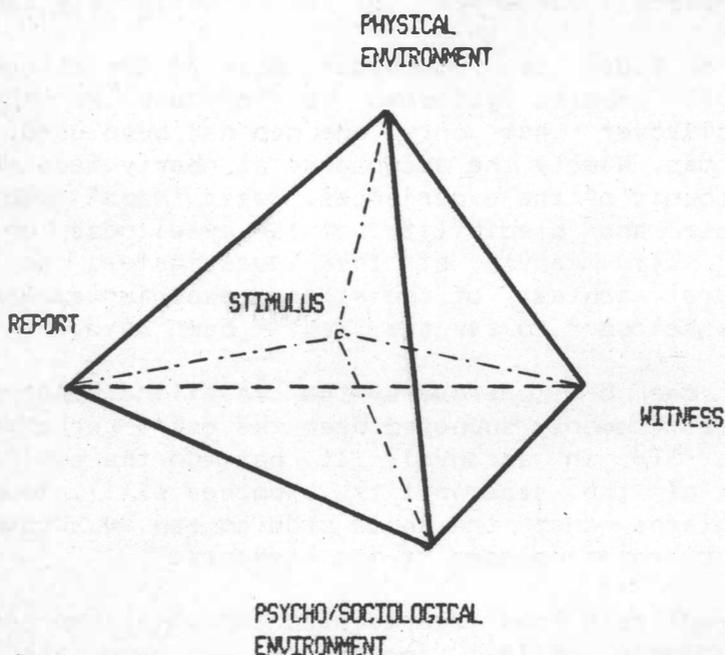
Throughout the UFO controversy the prevailing hypothesis has not as commonly supposed been the extra-terrestrial hypothesis (ETH in acronym). It has, on the contrary, been that of the separability hypothesis (1). Roughly this postulates that the whole problem can be accounted for simply by relating some of its elements.

Such a hypothesis has represented and still represents the most common pitfall for those who approach UFO phenomena without the necessary tools of critical knowledge.

Continuing the map analogy, it is as if one could presume to represent the world relying only upon maps of Ireland and Canada !

This is the error but also the rule.

In opposition to the separability hypothesis let us here and now proclaim a holistic approach to UFO phenomena in which the interactions of four observable parameters -Reports, Witnesses, Physical Environment and Psycho-sociological Environment- are explored. According to the strikingly simple scheme recently proposed by Alain Esterle et al. (2) these four parameters may be arranged at the vertices of a tetrahedral figure:



The only non-observable parameter to be found is the stimulus (stimuli) which triggers a UFO experience. At times this may be close to the Witness vertex (if a clinical or perceptual disturbance is involved), at times close to the Physical Environment vertex (if some known physical phenomenon is the possible source of the

observation), at times close to the Psycho-sociological Environment vertex (if behavioural components are the major culprit), at times close to the Report vertex (if substantial distortions of information occur in the reporting dynamics).

One thing must be clear: paying attention to each vertex per se excluding its intimate relationship with the others would prove to be a capital mistake.

If we were to look at the UFO problem through these methodological glasses we would become aware of a colossal disaster.

None of the four vertices of the tetrahedron nor their mutual interaction have so far been the object of competent unbiased attention. Even the Report vertex might seem to be the best known one is in reality an excellent alibi which serves to hide the blatant intellectual mediocrity of 'UFOlogists'.

Of a total of over 1600 references in her annotated bibliography (3) Lynn Catoe lists only eleven under the heading of perception. With just indignation we can wonder why such a small percentage concerns the Witness and the Psycho-sociological Environment vertices of the tetrahedron (7).

Need we stress ad infinitum that stimuli are processed in the brain of our neglected witness ?

In the last analysis UFO reports are but external indicators by which inferences about the mind (of the witness) and how it functions are made. And Elizabeth Loftus reminds us that "as more and more is learned about the brain functions, less and less will need to be inferred" (9).

These reflections are call for experimental study. Once more (if not for the first time) they raise other old fashioned queries: have we any right to speak in terms of

anomaly when an exhaustive scientific description of UFO phenomena is still missing? Can we label as anomalous a corpus of data when the efforts devoted to its rigorous examination have been admittedly ludicrous?

As Ronald Westrum points out (12) "what the witness regards as an anomalous experience may well be accepted by the scientific community as real". Thus it must first be verified that UFO phenomena cannot be dealt with by present scientific structures.

This has never yet been done.

As far as we know GEPAN, in France, is the only serious funded, full time enterprise currently at work on determining whether or not the UFO phenomena are a real or merely alleged anomaly.

Without suspending our critical judgement we shall keep our readers abreast of the significant advances in GEPAN studies, taking into due account - to quote Marcello Truzzi (11) - that if we are facing a real anomaly the ultimate explanation for it may take place rather far afield from the initial expectations of its proponents.

The present volume of UPIAR is atypical.

It hopes to achieve two things: to expose what we consider unfair, mean and shameful in the current status of UFO research (see the State of Art) and to bring challenging contributions on the Witness vertex (see papers by Keul and Schonherr) to the attention of interested students.

Special mention should go to the painstaking review of the New Zealand case (see papers by Maccabee and Haines) and a highly technical contribution on digital analysis of alleged UFO phenomena pictures (see paper by Louange). Both can be regarded as significant articles which shed more light on the Report and Physical Environment vertices.

Some sections of the journal present gaps due to the rejection of low quality manuscripts. This should not be surprising considering our previous remarks upon the intellectual paucity that surrounds the subject. In any case we have the naive presumption to believe that UPIAR editorial policy and aims can encourage more and more serious researchers "to come out into the open".

So we warmly invite authors unhesitatingly to submit their works to EDITECS in compliance with the instructions to the authors.

It goes without saying that if the criterion of repeatability of results still means something in scientific research all authors should take all possible care in the preparation of their manuscripts. This would help other students to understand and possibly repeat results obtained elsewhere. Moreover this would sensibly reduce the burden of bureaucracy....

It will be seen that there are some changes in this volume.

In the first place any direct or indirect reference to the CNIFAA group has disappeared thanks to 'euthanasia'. UPIAR does not want to be the bulletin of one particular association or group.

On the contrary we intend to be the voice, the reference point for all those committed to a competent and responsible approach to the heterogeneous category of phenomena referred to as 'UFO phenomena'. To be independent, really independent, of all group connotation as well as to have an international stature permits UPIAR to rise above the quarrels and animosity that are often found in UFO groups and to make significant contributions more extensively known. Of course this choice of independence does not imply that we like to remain silent.

We are well aware that for the moment we are a minority. But we are also aware that "a minority is powerless while it conforms to the majority; it is not even a minority then; but it is irresistible when it clogs by its whole weight" (10).

There have been many deletions in the advisory and editorial boards. The duties of a referee are not light and at times may clash with the professional duties of some of the editors.

UPIAR requirements have not therefore always been followed with sufficient continuity. This is why we have begun a changing of the guard, beginning with the busiest referees. In one case only was a deep incompatibility of methods and goals the reason for deletion.

As 'old' referees leave 'new' referees arrive. This is the case with physicist Theodore Auerbach, sociologist Phillis Fox, astronomer Elaine Hendry and psychologist Elizabeth Loftus. To all four we address our heartfelt welcome and thanks for having accepted the position as well as our best wishes for a fine job.

This volume of UPIAR has been printed in the usual 500 copies, the number with which we began five years ago. Up to volume three the advance subscriptions for ensuing volumes could be counted on the fingers of two hands. Now, for the first time, we have a growing number of subscriptions for future volumes. This is certainly hopeful but we vitally need an increase in the number of subscription in order to cover printing costs and the huge mailing expenses (often doubled due to loss or unexplainably missing deliveries).

We once again invite our readers and our editors to make themselves the real promoters for subscriptions to UPIAR and to request the libraries of their faculty to subscribe as well. Otherwise -notwithstanding the partial

success recorded in our fund raising campaign- UPIAR will of necessity be silenced. We need your help in coping with new commitments such as the publication of an UPIAR companion to serve as a forum for rapid communications of UFO research. UPIAR RESEARCH IN PROGRESS, as the new supplement is called, is a refereed publication in English issued three times per year, starting with Summer 1982.(\*)

Editor-in-Chief is the Spanish data analyst Vicente-Juan Ballester Olmos, to whom we express our best wishes. Manuscripts and subscriptions are urgently requested for this important addition to our activity.

If you believe in our honesty, if you are convinced that our endeavor is motivated by a profound love and obsession for truth this is the moment to show us that we are not alone.

F.Izzo  
R.Farabone  
R.Cabassi

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- (\*) Miniature Issues are available on request.  
The maiden issue of URIP Vol. I has been published in July 1982.  
Subscription orders can be placed immediately.

## SCOPE AND PURPOSE

This journal publishes *original* papers concerned with the following fields of research

- 1) PHYSICAL ASPECTS OF UFO PHENOMENA
- 2) GATHERING AND PROCESSING OF DATA CONCERNING UFO PHENOMENA
- 3) THE "CE III" (according to Hynek's terminology) IN THE UFO EXPERIENCE
- 4) PSYCHOLOGICAL AND PERCEPTIVE ASPECTS IN THE UFO EXPERIENCE
- 5) EPISTEMOLOGY OF THE RESEARCH ON UFO PHENOMENA

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In the interest of an authoritative publication, UFO PHENOMENA is published only after expert selection of manuscripts submitted, by experienced editors.

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The following will be taken into consideration for publication:

- 1) Papers stressing experimental results.
- 2) Papers of theoretical content leading to higher level of understanding of UFO phenomena and stimulating new experimental research.
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Supplements (monographs or congress proceedings) are occasionally published. Announcements of meetings, symposia and workshops in the field will also be considered for publication.

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Only original papers written in English will be considered. As an exception, papers written in French will be also accepted. But, they will have a full English translation of the title and the abstract.

For the interdisciplinary nature of the journal, which is addressed to the scientific community as a whole, but also to those who are not familiar with the author's discipline, the contributors to UFO PHENOMENA are requested not to use technical terms or jargon.

All accepted manuscripts will be published by a *direct photographic reproduction process*, excluding every possibility of subsequent alterations.

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## **PRESENTATION OF MANUSCRIPTS**

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- B) ORIGINAL PAPERS (MODELS AND HYPOTHESES)
- C) CASE HISTORIES
- D) BOOK REVIEWS
- E) LETTERS TO THE EDITORS

All papers should be typed, single spaced on one side only on good quality white paper. (the maximum length of each line must be 15 cm.), preferably of size approx 28 x 22 cm. The papers should contain an abstract of 200-300 words. This abstract should not be a mere summary of the work comprehensible only to people working in the area. Furthermore, it should underline the implication of this work in the understanding of UFO phenomena.

**TITLE:** The title should be chosen so that it conveys to the informed reader the particular nature of the contents he can expect from the paper. The first page of each paper should carry the title (main title underlined), the authors' names and the name of the Department, Institute or Association in which the research work was done.

**ABSTRACTS:** Each paper must include a summary of 200-300 words, as stated above. Papers in French should have also a full English summary, with an English translation of the title.

**KEY - WORDS:** A list of 5-15 key-words for indexing purposes *must* be given by the authors, after the Abstract.

CHAPTERS: ORIGINAL PAPERS (Models and Hypotheses) must be divided into chapters in the following order:

- A) Abstract
- B) Introduction
- C) Material and Methods
- D) Results
- E) Discussion
- F) References

REVIEW ARTICLES and CASE HISTORIES may be divided into Chapters at the authors discretion.

ILLUSTRATIONS: All illustrations (photographs, diagrams or graphs) should be in the desired final size. The proportions of the printed page (12 x 18 cm) should be borne in mind when authors are preparing the format of illustrations.

Several figures should be grouped into a plate on one page.

LINE DRAWINGS: Submit good-quality glossy prints. The inscriptions should be clearly legible. Letters 5 mm. high are recommended.

HALF-TONE ILLUSTRATIONS: Submit well-contrasted photographic prints, trimmed at right angles. Inscriptions should be about 5 mm high.

CAPTIONS: Each figure should be briefly and clearly described. Remarks like "For explanation, see text" should be strongly avoided. Captions are a part of the text and should be appended to it. Any lettering or annotation should be indicated on a tracing overlay or a photocopy of the original. All figures should be numbered in sequence.

REFERENCES: References must be limited to publications quoted in the text: they must be listed in alphabetical order, according to the surname of the first author, and be cited as numbers in the text according to the quotation. For Journal Papers, the following data must be successively reported: Surname and initial(s) of the first name(s) of the Author(s), year of publication in brackets, full title of the publication underlined (or abbreviation of it, according to international usage), volume, issue and page(s) number.

For example: - Poher C. (1976) - LUMIERES DANS LA NUIT 19, No. 158, 3  
(or) - Poher C. (1976) - L.D.L.N. 19, No 158, 3.

When a paper with more than two authors is quoted, all authors will be mentioned in the first quotation, but afterwards the first only will be mentioned, for ex.: (Schwarz et al., 1970).

For Books Citations: surname and initial(s) of the first name(s) of the Author(s), year of publication in brackets, full title of the book underlined, publisher, city of publication, and page(s) number.

For example - Webb D. (1976) "1973 — YEAR OF THE HUMANOIDS" Center for UFO Studies: Evanston. 33-36.

Responsibility for accuracy of references rests with the author(s).

SYMBOLS AND TERMINOLOGY: With regard to the abbreviations, symbols and technical terms, the authors must use the international rules when they exist. If they do not exist, one may use the terminology of well known authors or treatises.

The editors of UFO PHENOMENA strongly recommend the development of a *uniform terminology* for descriptions and evaluations of UFO reports. Meanwhile, authors should always

mention explicitly the terminology used, e. g. "The terminology followed is that used by..." or "According to the classification of...".

A list of uncommon abbreviations could be placed by the author(s) as a footnote on the first page of the article.

**FOOTNOTES:** They should be avoided; if essential, they should appear on the first page of the article.

**REPRINTS:** Fifteen reprints will be sent to the Author free of charge. Other copies will be available on request, the cost depending on the number of their pages.

## ABOUT KEY WORDS

As you can see in the Instructions to Authors a list of 5-15 key words is requested to authors for indexing purposes.

Looking at manuscripts so far submitted for publication we must note that most of them do not meet this requirement.

This want is likely due to the fact our contributors did not receive the Miniature Issue of UFO PHENOMENA before writing their articles. On the other hand we think useful to summarize the meaning of this practice, typical of any scientific journal, for those still not familiar with it. Webster defines key word as "a significant word from a title or document that is used as a index to content".

Now through proper key words authors supply jointly to their papers the Subject Index and the information retrieval system as well could be prepared.

Some scientific journals point out the index terms have to be chosen from a **Thesaurus** (i.e.: a list of subject headings with a cross-reference system).

Thus we find the **Index Medicus** which collects the subject headings. All the same the **Chemical Abstracts Service Source Index** (American Chemical Society) is used in chemical and biochemical literatures.

In UFOlogy we lack a **Thesaurus** even if words as "abduction", and "entity", or "teleportation" and so on are by now widespread and therefore potential index terms.

As clearly stated in the Instructions to Authors one of UFO PHENOMENA goals is the foundation of a uniform terminology for descriptions and evaluations of UFO reports. The creation of a **Thesaurus** in UFOlogy is a legitimate part of this schedule. But for the actual accomplishment of this purpose we ask for the close cooperation of our most experienced contributors of the Advisory and Editorial Boards.

Suggestions and outlines in this sense are urged and should be sent to Coop. UPIAR Srl. P.O. Box 11221, I 20110 Milano, Italy.

## CALL FOR PAPERS

Authors are requested to send as soon as possible their manuscripts to be considered for publication in UFO PHENOMENA.

All manuscripts must be received not later than December 31 of every year.

A careful reading and application of the Instructions to Authors is strongly recommended.

In fact it will be one of *basic* principles used in the final approval of any paper submitted for publication in the journal.

Review articles, original papers (models and hypotheses), analyses of UFO cases, book reviews, letters to the editors, contributions for debates, criticisms and suggestions, are welcomed.

**Long and detailed** manuscripts will be preferred to short and scarcely significant communications.

# **GATHERING and PROCESSING of DATA**

# DIGITAL UFO PICTURE ANALYSIS

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Received February 7, 1979

## ABSTRACT:

This paper is intended for those UFO investigators who have heard of picture processing by computers, but only have a vague idea of what this actually means. An overview of available digital techniques to enhance and analyze pictures in general is presented, with more emphasis on those features which are of direct interest for analysis of alleged UFO photographs, such as edge enhancement and deblurring. Although mathematical developments have been avoided, some background in mathematical analysis, and particularly in Fourier analysis, is required to understand the concepts underlying the techniques presented.

Investigations on an alleged UFO picture are carried out in two steps: establish or reject authenticity, and extract information on the phenomenon. For both steps, specific types of work performed efficiently by digital means are presented; in particular, searching for evidence of hoaxes based on small artifacts, and enhancement of picture quality are considered.

Digital picture processing proves to be a powerful tool for research into photographic evidence of the UFO phenomena, especially when

used in conjunction with other means, e.g. optical or chemical analysis of the films.

KEY WORDS:

deblurring/densitometry/digital processing/edge enhancement/hoax/image/photograph/picture/restoration/sharpening.

1. INTRODUCTION: UFO PICTURES

Among the various investigations into the UFO phenomena, analysis of alleged UFO photos is certainly one of the most delicate areas. For the layman, pictures are often the only acceptable evidence of a UFO's existence, which loads them with a particular emotional content. Photographic hoaxes are common practice, since false UFO pictures are easy to produce, and sometimes are profitable. On the other hand, there are many natural and photographic effects which result in false UFO photos. Optical effects can cause mirages in the same way as spurious Radar echoes can originate from various propagation anomalies. In most cases, good testimony is more reliable and carries more information than an undocumented photograph. When, however, a picture is available as well as reliable testimony, it becomes extremely useful, enabling investigators to confirm quantitative elements brought forward by witnesses, and to derive valuable additional information on the phenomenon.

UFO picture analysis can be divided into two types of work:

- Attempts to establish whether a photo is authentic or not, trapping deliberate hoaxes as well as spurious effects (such as optical reflections, multiple exposures, chemical degradations of the film, etc...).

- It is essential to emphasize that only negative results can be considered final. In other words, it is sometimes possible to prove that a given photo is definitely the result of a hoax or spurious effect, but authenticity can never be absolutely demonstrated; in the best case, a picture will "resist" all analysis performed on it.
- Assuming authenticity, attempts to extract positive information from a photo, such as the UFO's shape, size, distance from the camera, etc...

Given the original negative of an alleged UFO picture, there exist two different approaches to study it: the "analog" one essentially makes use of the actual picture by optical processing, while the "digital" one is based on a digitization of the picture and its subsequent processing by computer. A good illustration of those two approaches was given in 1976 when the pictures from San Jose de Valderas were analyzed independently by C. Poher with analog means (5) and Ground Saucer Watch with digital means (1), both reaching the same negative conclusions.

The aim of this paper is to provide UFO investigators having no background in digital image processing with an overview of this rapidly growing branch of signal processing. This presentation does not in any way pretend to be exhaustive, and it will remain deliberately at the level of concepts and results, leaving aside most of the lengthy mathematical developments which can be found in specialized literature (2), (3), (6), (7). In Section 2, the different aspects and applications of digital image processing in general will be reviewed, while subsequent sections will concentrate on those features which are of direct interest for UFO picture analysis.

## 2. DIGITAL IMAGE PROCESSING

Image Processing by computers consists of a wide range of techniques and mathematical tools, which have been developed mainly to solve the three following problems:

- Picture digitization and coding, to convert from continuous to discrete form. Coded pictures can be "compressed" so as to save computer memory space or channel capacity

without loss of information.

- Picture enhancement and restoration, to enhance specific features of particular interest, and to improve the quality of images.
- Picture segmentation and description, to convert a picture into a set of simple maps, and to identify their properties with a view to automatic classification.

## 2.1 Picture Digitization

A black and white picture can be represented by a function of two spatial variables  $f(x,y)$ , whose value at each point is the "brightness" or "gray level" of the picture at this point. In the case of colour pictures, which will not be considered in this part, 3 functions are required, corresponding to the 3 colour film emulsion layers.

Digitization of a picture consists of two successive operations:

- Sampling: a discrete set of values is extracted from the picture, corresponding to regularly spaced points of the picture, or to averages of the values taken over small neighbourhoods of such points. For processing purposes, the samples obtained can be represented as a rectangular array of real numbers.
- Quantization: the values of the sampled points are rounded so as to yield a discrete set of intensity levels, which can be used to represent the relative brightness of the picture.

Therefore, a digitized image can be regarded as an array of integers. Each element of this array is called a "pixel" (picture element). Usually, sampling is done using a regularly spaced square array of points, but an alternative solution consists of using a regular hexagonal array of sample points, each of which has six equidistant neighbours.

The sampling of an image is only justified if there exists a means to reconstruct mathematically each point of the original image from the samples. It can be shown that this is the case if and only if the conditions defined by the generalized Shannon theorem are fulfilled:

With each picture function  $f(x,y)$  is associated a unique bidimensional Fourier transform  $F(u,v)$ , called the spatial frequency spectrum of  $f(x,y)$ , and defined by:

$$F(u,v) = \int_{-\infty}^{+\infty} \int_{-\infty}^{+\infty} f(x,y) e^{-j2\pi(ux+vy)} dx dy.$$

If  $f(x,y)$  is sampled on a "sample lattice" of equidistant points separated by  $d$  in the  $(x,y)$  plane, one defines a unique "reciprocal lattice" of equidistant points which are  $1/d$  apart in the  $(u,v)$  plane. The Shannon theorem says that if the spectrum  $F(u,v)$  vanishes over all but a bounded region of the  $(u,v)$  plane, the original picture can be everywhere reproduced from its values taken over the sample lattice of points, provided these points are close enough to ensure non-overlapping of the spectrum  $F(u,v)$  with its images on the reciprocal lattice (see fig. 1).

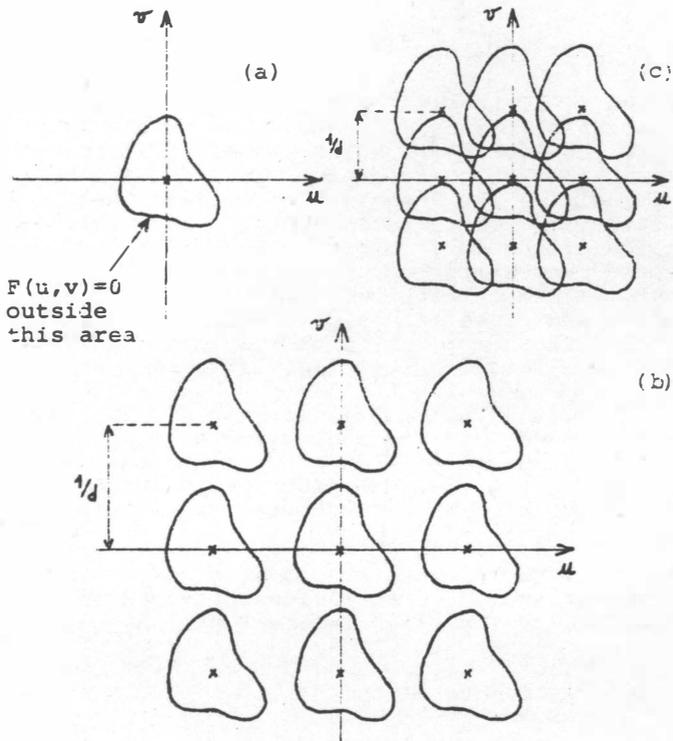
If this condition is not fulfilled, the picture is said to be undersampled, and the reconstructed image will be degraded by "aliasing" effects (in a different context, aliasing is illustrated by chariot wheels which seem to rotate in an erratic manner in movies or on television).

In practice, if the picture function is bandwidth limited so that spatial frequencies in excess of  $W$  do not occur, the sampling interval will be defined

$$d = \frac{1}{2W}.$$

Sampling can also be done in a completely different manner: rather than use gray levels of the original picture  $f(x,y)$ , one may expand  $f(x,y)$  in terms of a set of orthonormal functions, and take the coefficients as the samples. Here again, a picture is represented by an array of numbers from which it can be entirely reconstructed. Several sets of orthonormal functions have been studied, and the interested reader will find comparative studies in the literature (4), (7).

Quantization, too, must be done carefully, since "false contours" may appear wherever gray levels are changing slowly in the original picture, if the chosen number of quantization levels is too small. Extensive studies have been carried out in order to optimize usage of a given memory storage capacity between sampling and quantization.



**Fig. 1:** Extended Shannon Theorem.

(a): Spectrum  $F(u,v)$  of a band-limited image to be sampled on a lattice of equidistant points  $d$  apart.

(b): Non-overlapping copies of  $F(u,v)$  on the reciprocal lattice: no aliasing.

(c): Overlapping copies of  $F(u,v)$  with undersampling, resulting in aliasing.

At last, there are a number of data compression techniques, based on particular transforms or on predictive algorithms. These are particularly suited when transmission of images is involved, which falls outside the scope of this paper.

## 2.2 Required Equipment

The main advantage of digital analysis over the analog approach lies in the high flexibility of digital computation. All operations performed on images can be expressed in terms of successive transforms applied to bidimensional functions. Although numerous transforms can be achieved by analog methods (e.g. Fourier transform by means of a simple lens), each of them requires a dedicated hardware implementation; moreover, many other transforms remain impossible to obtain in practice.

With a computer, the only limitations on operations performed on digitized images are those imposed by the memory size and computing time available; in practice, for occasional investigations, these resources are rarely a limiting factor.

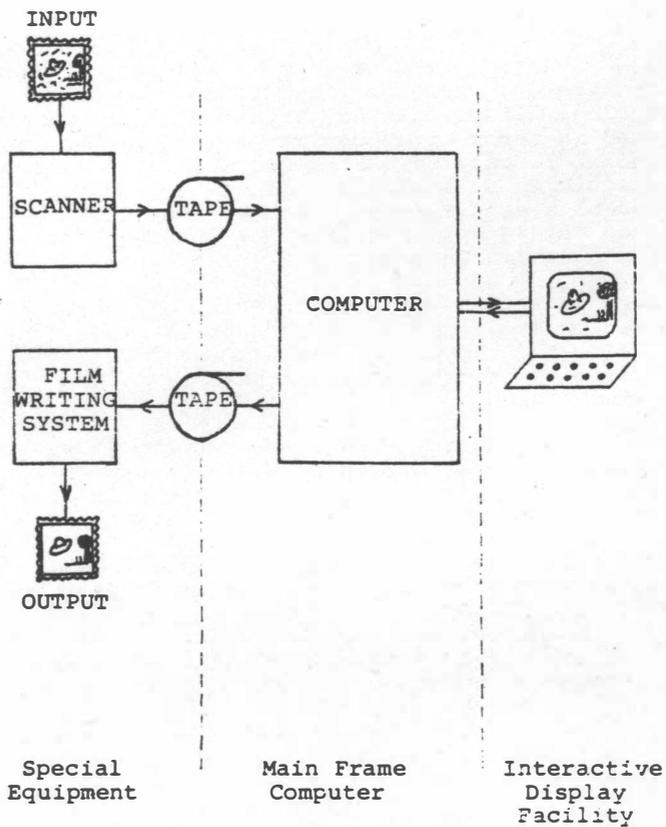
Digital image processing requires specific hardware facilities, and specialized software. A typical picture processing configuration is shown in fig. 2, where one can identify 3 functional blocks:

- Special equipments, used as interfaces between photographs and digitized pictures:

A scanner "reads" a photograph and produces a digitized picture on a computer compatible magnetic tape.

A film writing system performs the reverse operation: it reads a digitized picture on magnetic tape and creates a photographic negative.

- A main frame computer, with magnetic tape units to read and write digitized images, and sufficient memory size to process them.
- An interactive display facility, connected to the main frame, where images can be displayed on request in their digitized form. Image processing often requires extensive experiment before an effective method is found, and the display is used to monitor the progress achieved by each processing step. This device



**Fig. 2:** Example of a digital processing configuration.

is frequently driven by a dedicated minicomputer which performs basic operations, while the main frame is busy with time consuming computations.

In such a system, the input is a low quality photo, to be read by the scanner, and the final output is an enhanced photo produced by the film writing system. In the meantime, processing programs have been chosen and activated interactively from the display console, using one or several of the techniques described hereafter.

### 2.3 Picture Enhancement

In this paragraph, we will consider the case of low quality pictures for which no attempt is made to estimate the actual degradation process that has operated. Picture enhancement consists then in suppressing selected features of a picture, or emphasizing features at the expense of others, the final goal being to increase the picture's usefulness.

Taking into account general properties of picture degradation, the following corrections are usually performed:

- increasing the contrast (degradation usually erodes it);
- deblurring (degradation usually blurs, and the original is assumed to be sharp);
- smoothing (degradation is produced by noise, and the original scene is assumed to be noiseless).

### Picture Quality

There are several ways to evaluate the fidelity of a picture  $g(x,y)$  to its ideal original  $f(x,y)$ . It is often assumed that the degradation consists of a linear shift invariant operation (convolution) combined additively with signal independent noise:

$$g(x,y) = h(x,y) * f(x,y) + n(x,y) \quad (*: \text{convolution})$$

The function  $h(x,y)$  can be used as a measure of the degradation caused by the linear operation, since it describes the blurred output obtained if  $f(x,y)$  consists of a sharp point ( $h(x,y)$  is called "point spread function"). It is also possible to use the "line spread function" or the "edge spread function",

corresponding respectively to the outputs obtained when the input is a bright straight line or an abrupt step in brightness (these two functions may be orientation dependent or not).

A basic example of degradation is unweighted averaging around each point in the  $(x,y)$  plane, which causes losses in resolution or even "spurious resolution" effects.

There exist various sources of noise, which may or may not be signal-independent: channel noise, photographic graininess, quantization noise (difference between digitized picture and original), etc...

### Gray Scale Modification

This is a simple but very powerful class of enhancement operations, by which the gray scale of a picture is modified.

A first type of operations concerns pictures created by a system which maps object brightness into picture gray level differently from point to point.

If the "exposure mapping" function  $e(x,y)$  can be determined by a proper calibration (e.g. picture of a uniform field of known brightness) the original picture  $f(x,y)$  can be reconstructed mathematically pointwise using the relationship:

$$g(x,y) = e(x,y) f(x,y)$$

A second type of operations involves a transform of the gray scale equally applied to all points of the image: if a picture does not occupy its full allowable gray level range (e.g. underexposed photo), a proper transform will stretch and shift the gray scale to occupy the full range; if most of the gray levels of a picture lie in a given fraction of the range, a proper mathematical transform will stretch this fraction of the range and compress the remaining intervals. With a computer, there is no limitation in the choice of the transform, and considerable improvements in contrast can be achieved in this way.

A third approach to gray scale modification makes use of "histograms": if  $f(x,y)$  is quantized in  $X$  different gray levels, its histogram can be represented as a bar chart having  $K$  bars, the height of the  $n$ th bar being proportional to the number of points of gray level  $n$  in the quantized image. This method consists in redefining the discrete set of quantized gray levels so

as to obtain a histogram of a predefined shape; an interesting case is the flat histogram, which means that all the gray levels occur equally often; image normalization is achieved in that way, as well as contrast enhancement.

### Geometric Correction

Some pictures are geometrically distorted, because of various optical or electronic limitations. If the distorted image of a known pattern, such as a regular grid, is available, it is possible to approximate a distortion model, which is used to reconstruct mathematically undistorted pictures. Reconstruction is generally done piecewise, using linear or bilinear transforms.

### Sharpening

Blurring is equivalent to averaging, or integration. Consequently, sharpening can be achieved by differentiation operations, as long as the picture is stronger than noise (noise generally involves high rates of change in gray level, and it is often advisable to reduce the noise before attempting to sharpen a picture), and in the limits imposed by the innate resolution of both the camera lens and the film.

Any partial derivative operator  $\partial^n/\partial x^k \partial y^{n-k}$ , or any linear combination of such operators can be used, but it is of particular interest to construct derivative operators that are isotropic, i.e. rotation invariant, because the aim is to sharpen edges and lines independently from their direction. Two important isotropic operators are the gradient's magnitude

$$|\nabla f| = \sqrt{(\partial f/\partial x)^2 + (\partial f/\partial y)^2}$$

and the Laplacian

$$\nabla^2 f = \partial^2 f/\partial x^2 + \partial^2 f/\partial y^2.$$

Given a digitized picture represented by the array  $f(i, j)$ , these operators are used in a discrete form:

Digital gradient's magnitude (several alternative definitions are proposed in the literature):

$$|\nabla f(i, j)| = \sqrt{|f(i, j) - f(i-1, j)|^2 + |f(i, j) - f(i, j-1)|^2}$$

Digital Laplacian:

$$\nabla^2 f(i,j) = f(i+1,j) + f(i-1,j) + f(i,j+1) + f(i,j-1) - 4f(i,j),$$

which is proportional to the difference between the gray level  $f(i,j)$  and the average gray level in a neighbourhood of  $(i,j)$  consisting of  $(i,j)$  and its four horizontal and vertical neighbours.

Subtracting the Laplacian from a picture has a strong deblurring effect, for one can easily check the following:

$f - \nabla^2 f = f$  in the middle of a ramp or flat region

$f - \nabla^2 f < f$  at the bottom of a ramp or on the low side of an edge (undershoot)

$f - \nabla^2 f > f$  at the top of a ramp or on the high side of an edge (overshoot).

More generally, good edge enhancement can be achieved with operators of the type:

$$f - k\nabla^2 f$$

Another sharpening technique is called "high emphasis filtering". It compensates blurring by means of a digital filter which strengthens high spatial frequencies more than low ones, up to the point where noise would begin to dominate, where it drops off. This operation is often combined with a non-linear transformation of the gray scale, as shown in the following example:

Consider a photograph from which we want to remove shading effects due to uneven illumination, without degrading the details. The illumination incident  $i(x,y)$  on an object usually varies more slowly than does the object's reflectance  $r(x,y)$ , and therefore uneven illumination has more significant effects at low than at high frequencies. The resultant object brightness being given by  $b(x,y) = i(x,y)r(x,y)$ , let us transform gray levels by a logarithmic scale:

$$\log b(x,y) = \log i(x,y) + \log r(x,y).$$

Since Fourier transform is a linear operation, it is now possible to deemphasize selectively in the frequency domain the effects of  $i(x,y)$ , by a proper high-pass filter.

This technique, which has been used in space research, often leads to great improvements in picture quality.

### Smoothing

This operation is required to remove noise, but it must be used carefully since it tends to blur pictures.

If the noise occurs in known positions, or if it can be clearly distinguished from the rest of the picture, it is easy to remove it locally by interpolation methods, or in the frequency domain by subtraction (e.g. periodical lines).

If this is not the case, but we possess several independent noisy copies of the same picture (e.g. several grainy photos or several snowy TV frames of the same scene), we can reduce the noise by pointwise averaging the copies.

Lastly, if only one picture is available, local averaging can be performed, provided edges and lines are previously detected to avoid averaging where they exist. This method is particularly useful to remove quantization noise and associated "false contours".

## 2.4 Restoration

As opposed to the preceding paragraph, we consider now pictures which have been recorded in the presence of a specific source of degradation, and we assume that the following representation is still valid:

$$g(x,y)=h(x,y)*f(x,y)+n(x,y).$$

In the absence of noise, we have:

$$g(x,y)=h(x,y)*f(x,y),$$

which becomes, after Fourier transforming both sides:

$$G(u,v)=H(u,v)F(u,v),$$

where  $G(u,v)$ ,  $H(u,v)$  and  $F(u,v)$  are respectively the Fourier transforms of  $g(x,y)$ ,  $h(x,y)$ ,  $f(x,y)$ .

The function  $H(u,v)$  is the "transfer function" of the degrading operation.

Restoration requires some knowledge of the degradation function  $h(x,y)$  or the transfer function  $H(u,v)$ .

In some cases,  $H(u,v)$  can be derived from the physical phenomenon underlying the degradation. An important example is the degradation caused in photography by relative motion between the camera and the scene; assuming that the image is invariant in time except for the motion, that the shutter requires negligible time to change from closed to open, that the motion in the picture's plane is of uniform velocity  $V$  and parallel to the  $x$  axis during a time  $T$ , one can show that the transfer function is given by:

$$H(u,v) = \frac{\sin(\pi uVT)}{\pi uV} .$$

When the nature of the degradation is unknown, or the phenomenon too complex, the point spread function  $h(x,y)$  can be estimated from the degraded picture, if it is known that the original scene contained a sharp point. It can be shown mathematically that  $h(x,y)$  can also be estimated from degraded sharp lines or edges.

As concerns noise, the most current assumption is that it is white (i.e. with constant spectral density) and uncorrelated with the picture. This is alas not always true, and some sophisticated methods take into account some a priori information about the noise.

### Inverse Filtering

In the absence of noise, the original picture's spectrum  $F(u,v)$  can be derived from  $G(u,v)$  and  $H(u,v)$  by:

$$F(u,v) = G(u,v)/H(u,v) .$$

Unfortunately, even if  $H(u,v)$  is known or estimated as explained above, it usually contains zeroes, which, in the presence of noise, never coincide with the zeroes of  $G(u,v)$ , leading to spurious spikes in the estimate of  $F(u,v)$ . This problem may be circumvented by means of an arbitrary "processing transfer function"  $M(u,v)$ , the spectrum of the restored picture  $\hat{f}(x,y)$  being estimated by:

$$\hat{F}(u,v) = H(u,v)M(u,v)F(u,v) .$$

Different processing transfer functions are proposed in the literature.

### Least Squares Filtering

One way to avoid arbitrariness in inverse filtering is to find a restoration  $\hat{f}(x,y)$  that minimizes some measure

of the difference between  $f(x,y)$  and  $f(x,y)$ . One extensively used measure is the mean squared error, which corresponds to the "least squares filter" or "Wiener filter": the goal is to estimate in an optimal manner the ideal picture function from the actual picture, given some a priori statistical knowledge of the noise field; this is accomplished by setting to zero the estimated spectrum at frequencies where no power exists ( $H(u,v)=0$ ).

The calculations are rather lengthy and will not be reproduced here (6).

### Alternative Methods

"Constrained deconvolution", which involves a great deal of linear algebra, applies when all that is known is the nature of the degradation and the variance of the noise.

"Recursive filtering" is used when the picture can be represented by a Markov process corrupted by white noise (a process that generates an ordered sequence of random variables  $g_1, g_2, \dots, g_j, \dots$  is Markov if the conditional density function of  $g_j$  depends only on a finite number of  $g$ 's prior to  $j$ ).

It is worth noting that some of these techniques are still under development, and numerous papers are published each year in this relatively new area.

### 2.5 Segmentation and Description

In image enhancement, the desired output is an improved version of the input picture. In this paragraph, we will consider another branch of picture processing which deals with "image analysis", where the desired output is a "description" of the input picture. This is illustrated by the two following examples:

- The input is a hand-written text, and it is desired to read it; the output is a sequence of characters.
- The input is an aerial photograph of terrain; the desired output is a map showing specific types of terrain features (forests, cities, water, ...).

Reference is always made to specific "parts", and the first operation consists of segmenting a picture into such parts, by one of the following techniques:

## Thresholding

The easiest way to extract objects from a picture is to "threshold" it. Given a threshold  $f_0$ , the output of this operation is a two-valued picture which takes the value 1 wherever  $f(x,y) > f_0$ , and the value 0 elsewhere. Several more refined thresholding techniques have been developed, aiming at minimizing the probability of misclassification error, or using variable thresholds.

## Edge Detection

One approach to image segmentation is based on the detection of discontinuities in gray level (edges). As already mentioned, derivative operators, such as the gradient or the Laplacian, give high values at points where the gray level is changing rapidly; edge detection can be achieved by such an operation followed by appropriate thresholding.

The "best-fit edge detection" technique consists of fitting a plane  $z = ax + by + c$  to the gray level values at four neighbouring points of a picture. The magnitude  $\sqrt{a^2 + b^2}$  of this plane's gradient is used as an approximation to the gradient of the picture at the centre of that neighbourhood, and is less sensitive to noise than the gradient as defined in the preceding section, since it involves averaging prior to differencing.

Other edge detection techniques are used, which involve the respective statistical properties of objects and background on pictures, or changes in texture in the case of very noisy pictures.

## Matching

This technique treats the general problem of finding points where a given pattern matches the picture; this pattern can be a simple one, as a step, or a more complicated one, as a character, a configuration of stars, a given object, ...

The degree of match or mismatch between two functions can be measured in several ways; the simplest ones make use of the cross-correlation of these functions, or of a "matched filter". Somewhat more complicated techniques are required when the pattern to be recognized by a given template is subject to rotation, scale change, etc...

## Tracking

This is a class of sequential segmentation methods which take advantage, in processing a point, of the results at previously processed points.

A trivial example is given by extraction from a picture of thin dark continuous curves whose slopes never differ greatly from  $90^\circ$  (quasi vertical): these lines are extracted by tracking from row to row in the picture; in any row, we accept any point whose gray level exceeds some relatively high threshold (detection criterion), and once a point on a given row has been accepted, we accept any of the three neighbours on the next row, provided its gray level is above some lower threshold (tracking criterion).

## Geometry and Description

Once a picture has been properly segmented, geometrical properties (area, straightness, ...) of its parts and relationships between these parts are established, and provide a "description" of the picture. A special case of picture description is "classification", in which the picture is assigned to one of a prespecified set of classes; classification makes use of "pattern recognition" techniques.

This very important branch of digital image processing will not be described in any more detail, since it is of limited interest in the context of this paper.

### 3. UFO: PHOTOGRAPHIC HOAXES

Most UFO hoaxes consist of small objects which are either suspended by a thin thread or thrown into the air, and photographed. Digital picture processing can be a powerful tool to find evidence for such tricks, in particular in the two areas described below.

#### 3.1 Evidence for a Supporting Thread

Ground Saucer Watch's analysis of the pictures from San Jose de Valderas illustrated that sharpening (edge enhancement) techniques are very well suited to "extract" this type of feature from a picture in which it is present but not directly visible (1).

Generally, such an "invisible" thread is nearly vertical

in the picture's plane  $(x,y)$  and, consequently, derivative operators of the form  $\partial^n f / \partial x^n$  are quite appropriate. In practice, the best enhanced picture showing the object and its supporting thread can be obtained, after experiment, by means of a linear combination of the picture  $f(x,y)$  and its derivatives  $\partial f / \partial x$  and  $\partial^2 f / \partial x^2$ .

### 3.2 Evidence for a Small Object

In most alleged UFO pictures, sufficient elements of the landscape are available to determine a posteriori the approximative position of the camera; it is then possible to assess the angular size of the object. The problem is to find out whether this object was small and close to the camera, or large and far away.

A comparison between blurring at the edge of the object and at the edge of elements of the landscape, which is caused by atmospheric scattering, provides indications on their respective distances from the camera: within the limits of the depth of field, the sharper an object's edges, the closer it stood, and quantitative comparisons with several objects at known distances from the camera allow calculation of the "UFO"'s distance. From angular size and distance, it is then straightforward to derive the actual size.

This type of investigation could be done without digital means, but it is particularly convenient to visualize blurring at an edge by plotting or displaying on a screen the gray level values along a line perpendicular to this edge; many image processing systems have facilities to do this in an interactive manner.

Another possible method to establish that the object was very close to the camera is to identify the geometrical distortions caused by the camera's lenses near the low limit of the depth of field. This can only be done if it is possible to identify what should be a straight line or a symmetry in the studied object; calculations by computer are easy, using the gray level values of individual pixels in the corresponding part of the picture.

## 4. UFO: PICTURE ANALYSIS

If a photograph has successfully passed all possible

analysis, using both the film itself and its digitized form, it is deemed to be authentic (until further notice!). Digital techniques can be used to extract from it as much information as possible.

To start with, the object's size and distance from the camera can be assessed, as explained in section 3, from the effects of atmospheric scattering. Other types of work are possible, in particular in the two following areas:

#### 4.1 Digital Densitometry

Densitometry measurements can indeed be done by other means, but digitization is of obvious interest here, since density is directly given by gray level, and for each digitized pixel the gray level value is available numerically.

Quantitative studies of the relative illumination of the scene, and of the reflectance, transmittance and possible relative luminosity of the object are therefore possible, as long as film sensitivity and H&D curves are available for the film. Absolute quantitative studies of the scene radiance are also possible when these curves are calibrated.

Densitometric studies are of particular interest for establishing whether an alleged UFO was radiating its own energy.

#### 4.2 Picture Enhancement/Restoration

The main field of application of digital processing to UFO photo analysis lies in improvements of the picture's quality by the various techniques presented in section 2.

Enhancement techniques (paragraph 2.3) are used to increase the contrast and thus recover details, in particular by changes of gray scale and by sharpening operations; if there is a significant amount of noise (photographic grains, quantization), it must be removed prior to sharpening.

Another important feature is suppression of blurring caused by relative motion between the object and the camera, for which restoration techniques (paragraph 2.4) are well suited, provided the conditions of this motion can be assessed.

## 5. CONCLUSIONS

Digital image processing is a powerful tool for analysis of alleged UFO pictures; the results obtained from some of its methods are available by other means, but it provides in addition an unlimited flexibility as regards transforms to be applied to pictures. It is particularly suited for contrast enhancement, which makes it a valuable aid to the disclosure of hoaxes.

Although this paper deals with isolated black and white pictures, digital techniques can be extended very efficiently to analyze other classes of documents:

- colour pictures: by means of appropriate filters, a colour picture can be decomposed into several digitized pictures, corresponding to the colour film emulsion layers. Specific investigations can be carried out by colorimetry, i.e. measurement of colour. For instance, depending on whether or not the respective colours of a known source of light seen on a photo and of unidentified "luminous objects" appearing on the same photo are identical, one may confirm or reject the hypothesis of spurious optical reflections inside the camera.
- Movies: the numerical study of a UFO's trajectory can be facilitated by digitization of successive frames.
- Video tapes: each frame represents an image already sampled along the y axis. There exist in the market specialized equipments that convert video images into fully digitized images.

As explained above (paragraph 2.3: Smoothing), the signal-to-noise ratio may sometimes be increased by frame averaging.

If several pictures showing what is supposed to be the same UFO are available, matching techniques can be used to compare the objects in their digitized form.

Lastly, it is important to emphasize that, in the study of an alleged UFO picture, digital processing cannot do everything, and some other types of work remain necessary, e.g. analysis of the film at the grain level with a microscope, to detect double exposures, etc...

## 6. BIBLIOGRAPHY

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## 7. ANNEX: ILLUSTRATIVE EXAMPLE

The set of pictures presented in this annex illustrates a simple case of processing. A false UFO was photographed in bad conditions, the picture was digitized by a scanner, and the quality of the digital output was deliberately deteriorated in order to simulate bad transmission conditions (e.g. TV). The resulting "raw image", as well as the digital outputs of successive processing steps, were transferred onto film by means of a film writing system.

In their digital form, these pictures consisted of arrays of 880 x 1100 pixels, with gray levels between 0 and 255. Comments on the 4 photos are as follows:

### "Raw Picture"

This image has the following defects:

- Underexposed photo, resulting in a bad filling of the gray level range.
- Vertical blur, of the order of several pixels.
- Horizontal blur, over several tens of pixels, resulting from a horizontal movement of the camera while the photo was taken.
- Random noise added to the picture, with maximum peak amplitude of around two units.
- "Dropouts" (white points), corresponding to bad image transmission.

### "Most dropouts removed + scale stretched"

On a printed listing of the pixel levels in the raw picture, it appeared that only isolated points (dropouts) had levels less than 160. Consequently, a safe threshold of 155 was chosen, and each pixel whose level was less than 155 was given the average level of its two horizontal neighbours or the level 155, whichever was larger.

This very simple method eliminated most dropouts, while the remaining ones (of level 155) corresponded to locations where several adjacent pixels were dropouts in the raw picture.

Subsequently, the gray level scale was linearly stretched, so as to occupy the full range 0-255, instead of 155-255.

As can be seen on the picture, these two elementary operations resulted in a clear enhancement of the picture's quality and made the horizontal blur appear more obvious. False contours are also visible wherever the gray level changed slowly in the original scene (e.g. in the sky).

### "Evidence of supporting thread"

A careful inspection of the enhanced picture, and in particular of the vertical edges in the scene, suggests that horizontal blurring results from averaging over a window of 30 to 32 pixels width (almost linear movement of the camera). In order to bring into evidence a possible vertical line (e.g. a thread) of 1 or 2 pixels

width, the following transforms were carried out:

- The picture was differentiated along horizontal lines;
- The output was cross-correlated with the derivative of a negative rectangular window of 31 pixels length;
- The output was thresholded, in order to produce a 2-level picture (0 and 255).

The result of these operations shows some noise, which merely reflects the original noise, and vague contours of the scene, in negative. However, the supporting thread appears very clearly.

This step would normally close the investigation, and the case would be classified as one more hoax.

#### "Ideal Picture"

To enable the reader to make comparisons, another picture of the false UFO was taken in good conditions.





FALSE UFO: MOST DROPOUTS REMOVED + SCALE STRETCHED





FALSE UFO: IDEAL PICTURE

## ANALYSE NUMERIQUE DES PHOTOGRAPHIES D'OVNI

Le présent article est destiné aux enquêteurs ufologiques qui ont entendu parler du traitement informatique des photographies, mais n'ont qu'une vague idée de ce que cela signifie réellement. Un aperçu des techniques numériques dont on dispose pour renforcer et analyser les photographies en général est présenté, l'accent étant mis sur les caractéristiques qui offrent un intérêt direct pour l'analyse des photographies d'OVNI alléguées, comme le renforcement des contours et l'élimination du flou. Bien que l'on ait évité les développements mathématiques, certaines connaissances de base sur l'analyse mathématique, et particulièrement sur l'analyse de Fourier, sont nécessaires pour comprendre les principes sur lesquels s'appuient les techniques présentées.

L'étude d'une photographie d'OVNI alléguée s'effectue en deux étapes : l'établissement ou le rejet de l'authenticité, et l'extraction d'informations sur le phénomène.

Pour chacune des deux étapes, des types précis de travaux que l'on réalise efficacement par des moyens numériques sont présentés; on examine notamment la recherche d'indices de supercherie à l'aide de petits artefacts et l'amélioration de la qualité de la photographie.

Le traitement numérique des photographies se révèle un outil puissant pour la recherche relative aux données photographiques sur le phénomène OVNI, particulièrement lorsqu'on l'utilise conjointement à d'autres moyens, comme l'analyse optique ou chimique des films.

Traduit par Jacques Scornaux

## DIGITALE AUSWERTUNG VON UFO-FOTOS

Diese Arbeit ist für jene UFO-Forscher bestimmt, die zwar von der Bildauswertung mittels Computer gehört, aber doch nur eine unbestimmte Vorstellung davon haben, was darunter eigentlich zu verstehen ist. Hier wird eine Übersicht über die zur Zeit verfügbaren Verfahren der digitalen Bildverbesserung und -analyse geboten. Besonders berück-

sichtigt werden dabei jene Einzelheiten, die für die Untersuchung angeblicher UFO-Fotos von unmittelbarem Interesse sind, wie etwa die Konturenverstärkung oder die Beseitigung von Unschärfen. Obwohl mathematische Ableitungen vermieden wurden, ist eine gewisse Kenntnis analytischer Methoden, insbesondere der Fourier-Analyse, erforderlich, um die Grundlagen der besprochenen Techniken zu verstehen.

Die Untersuchung angeblicher UFO-Fotos wird in zwei Schritten durchgeführt: Zunächst muß die Echtheit des Fotos nachgewiesen (oder widerlegt) werden und dann erst kann man versuchen, daraus Informationen über das Phänomen selbst zu gewinnen. Für beide Schritte werden hier leistungsfähige digitale Verfahren beschrieben, z.B. solche mit denen Fotos kleiner Gegenstände oder Modelle erkannt werden können sowie Verfahren zur Verbesserung der Bildqualität. Der Verfasser ist der Meinung, daß die digitale Bildauswertung ein wirksames Instrument zur Untersuchung fotografischer Beweise für das UFO-Phänomen darstellt. Dies insbesondere dann, wenn sie in Verbindung mit anderen Verfahren, wie etwa einer optischen oder chemischen Analyse des Filmmaterials, eingesetzt wird.

Übersetzung von Adolf Schneider

#### ANALISI DIGITALE DELLE FOTO DI UFO

Questo scritto si rivolge a quegli investigatori UFO che hanno avuto notizia della possibilità di analisi delle immagini mediante computer, ma possiedono solo una vaga idea di cosa ciò significhi effettivamente. Viene presentata una panoramica delle tecniche digitali generalmente utilizzabili per evidenziare ed analizzare le immagini, con particolare riguardo per le caratteristiche che sono di interesse diretto per l'analisi delle pretese fotografie di UFO, come l'intensificazione e lo schiarimento dell'immagine.

Nonostante siano stati evitati sviluppi matematici, per comprendere i concetti che sono alla base dei concetti presentati si richiede una certa base di analisi matematica, in particolar modo dell'analisi di Fourier. Relativamente ad una pretesa foto di UFO, vengono condotte delle ricerche in due passi: prima stabilirne o rifiutarne l'autenticita', poi trarne informazioni sul fenomeno. Per entrambi i momenti vengono presentati dei tipi specifici di lavori eseguiti adeguatamente con metodi digitali; in particolare vengono considerati la ricerca di un'evidenza di falsi basati su piccoli artifici, e l'aumento della qualita' dell'immagine. L'analisi digitale dell'immagine si dimostra essere uno strumento potente per la ricerca, nell'evidenza fotografica, dei fenomeni UFO, specialmente se usati in connessione con altri mezzi, ad esempio l'analisi ottica o chimica dei film.

Traduzione di Rosalba Viano

#### ANALISIS DIGITAL DE FOTOGRAFIAS OVNI

Este trabajo está dirigido a aquellos investigadores OVNI que han oído del proceso de fotografías por ordenador, pero que sólo tienen una idea vaga de lo que ello significa realmente. Presentamos una panorámica de las técnicas digitales disponibles para mejorar y analizar fotografías, poniendo énfasis en aquellas características más interesantes para el análisis de supuestas fotografías OVNI, tales como la mejora de los bordes y la eliminación de borrosidades. Aunque se han evitado los desarrollos matemáticos, se requiere alguna base en análisis matemático para entender los conceptos que subyacen en las técnicas presentadas (particularmente el análisis de Fourier). Las investigaciones sobre una supuesta fotografía OVNI se llevan a cabo en dos etapas: establecer o rechazar la autenticidad del fenómeno, y extraer información del mismo. Para ambos pasos presentamos tipos específicos de trabajos realizados eficientemente por medios digitales; en particular, la búsqueda de evidencia de trucajes o pequeños modelos y la mejora de la calidad de la fotografía son considerados. El proceso digital de fotografías es una poderosa herramienta de investigación para la evidencia fotográfica del fenómeno OVNI, especialmente cuando se uso conjuntamente con otros medios, como el análisis óptico o químico de las películas.

Traducción por Vicente-Juan Ballester Olmos

# PHYSICAL ASPECTS

# TECHNICAL ANALYSIS OF THE NEW ZEALAND UFO FILM: THE AMPERSAND IMAGE

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Received February 19, 1981

## ABSTRACT

This is the first of two papers which present results of technical analyses of one frame of the New Zealand film obtained by cameraman David Crockett during the early morning of Dec. 31, 1978. A highly summarized version of the New Zealand sightings and an analysis of the ampersand image is presented in this paper. The ampersand image is an image that was smeared by relative motion between the light source and the camera in such a way as to produce a complex loop in the form of an ampersand, "&". This paper contains my conclusion that the image might have been generated if the camera bumped into something. In the following paper Richard Haines discusses the experimental results of his test of the "bump theory". Flying in a less heavy plane and using a less heavy camera he was unable to create any loop image, even though he intentionally vibrated his camera.

KEY WORDS: New Zealand Sightings, UFO Film, Kaikoura, photographic analysis

#### INTRODUCTION

The New Zealand sightings of December, 1978 , made headlines around the world when Australian TV reporter Quentin Fogarty and a film crew claimed that they had obtained the world's first film of UFOs. Subsequently UFO skeptics offered instantaneous explanations and the film was gradually forgotten by the news media and ignored by the scientific community. However, because TV Channel 10 of Melbourne (formerly Channel 0 ), Fogarty's employer, wished to resolve the issue of whether or not UFOs had in fact been photographed , I was offered the opportunity to investigate the sightings on behalf of the National Investigations Committee on Aerial Phenomena (NICAP), a U.S.A. based UFO organization. The results of that investigation have been published in several U.S.A. based UFO organization journals , magazine articles, and newspapers. The authors of this paper assume that the reader is familiar with the narrative (history) of the events as presented in one or more of the publications listed in the Bibliography (References 1,2,3,4,5,6). The articles which appeared in the International UFO Reporter (IUR, published by the Center for UFO Studies; Reference 1 ) were based on a privately circulated document entitled "What Really Happened in New Zealand" by Bruce Maccabee. The narrative portion of that document was published in Ref. 2 , and part of the technical analysis was published in Ref. 4. The most comprehensive narrative is presented in The Kaikoura UFOs by Captain William Startup , who was the pilot of the plane on which the film crew was riding during the sightings. This book (Ref. 6) discusses all the events of Dec. 31, 1978 from the point of view of the air crew (pilot and copilot), and also comments extensively on the "instant explanations" offered by the New Zealand government in the weeks following the sightings. This book also describes the events during the earlier sightings of Dec. 21, 1978. (The film crew was aboard Capt. Startup's plane on Dec. 31 because of the sightings of Dec. 21. )

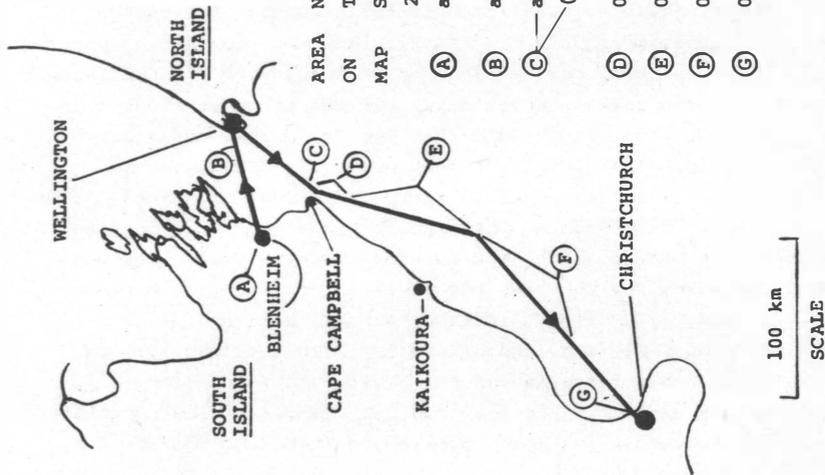
Three other references ( 7,8,9) make the New Zealand film case one of the few, if not the only, cases to be discussed in the open scientific literature. These references present technical data related to the subject of this paper, specifically, the ampersand image which occurs on one frame of the film. For the

convenience of the reader, the history of the Dec. 31 sightings will now be very briefly recited before presenting the technical analyses which are the main subjects of this paper.

#### Synopsis of the December 31<sup>st</sup> Sightings

Sightings by aircraft pilots and reports of radar targets associated with the visual sightings during the early morning of Dec. 21, 1978 off the east coast of the South Island of New Zealand made front page headlines in New Zealand and Australia. A producer, at TV Channel 0 (now Channel 10 ) in Melbourne, Australia, decided that a news story on the sightings would be of interest to Australians in Melbourne because of the relatively recent disappearance of pilot Frederick Valentich .(Valentich had disappeared while flying a small plane off the south coast of Australia in October, 1978 under circumstances which had "UFO overtones".) Therefore Channel 0 called reporter Quentin Fogarty who was on vacation in New Zealand and asked him to interview several of the people involved with the previous sightings. Fogarty did the interviews and managed to get himself and a film crew on board a similar early morning flight of one of the same Argosy aircraft ten days later (Dec. 31 ). The film crew, David Crockett and his wife Ngaire, were strangers to Fogarty, as were the pilot , Capt. William Startup and the copilot, Robert Guard. Fogarty's intent was to obtain film footage for background material to be used in his television news stories. He planned to fly from Blenheim, New Zealand, to Wellington, and to Christchurch, where he and the news crew would get off the plane at about 1:00 A.M., Dec. 31. The plane would then fly its normal route back to Blenheim, after delivering Sunday papers to Christchurch. However, as a result of combined radar and visual sightings during the trip from Wellington to Christchurch, the news crew decided to make the return trip north to Blenheim . Thus the film crew was aboard the plane for the time period 11:45 P.M. Dec. 30 through 3:10 A.M. Dec. 31. During this time period visual and radar sightings took place from approximately 12:10 A.M.(Dec. 31) to 1:00 A.M. when the plane landed at Christchurch, from approximately 2:19 A.M. to 2:33 A.M. as the plane flew northeast out of Christchurch, and again from about 2:45 A.M. to 3:00 A.M. as the plane flew toward Cape Campbell. The flight path of the plane

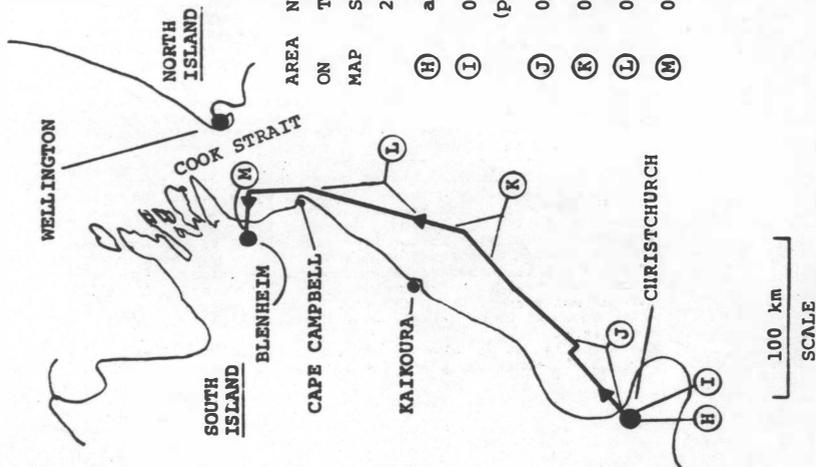
FIGURE 1  
 NEW ZEALAND UFO SIGHTINGS  
 OF DECEMBER 31, 1978  
 TIMELINE FOR THE FLIGHT SOUTH



AREA	N. Z. LOCAL ON TIME (DAYLIGHT SAVINGS TIME; 24 hour clock)	CROCKETT FILM SECTION (CF)	FOGARTY TAPE SECTION (FT)	WELLINGTON RADAR TAPE SECTION (WT)	AIRPLANE RADAR SECTION (PR)
(A)	about 2000 } Dec. 30, 1978	CF-1	---	---	---
(B)	about 2030	CF-2	---	---	---
(C)	about 0008 - Dec. 31	---	FT-1	---	---
(D)	0012	---	---	WT 1	---
(E)	0015-0028	CF-3, CF-4	FT-2, FT-3	WT-3 to 9	---
(F)	0028-0037	---	FT-4 to 8	WT-10 to 14	---
(G)	0055-0100	CF-5	FT-9	---	---

(Air crew notices pulsating lights in the direction of the town of Kairoura, and apparently above Kairoura.)

FIGURE 2  
 NEW ZEALAND UFO SIGHTINGS  
 OF DECEMBER 31, 1978  
 TIMELINE FOR THE FLIGHT NORTH



AREA	N.Z. LOCAL TIME (DAYLIGHT SAVINGS TIME; 24 hour clock)	CROCKETT FILM SECTION (CF)	FOGARTY TAPE SECTION (FT)	WELLINGTON RADAR SECTION (WT)	AIRPLANE RADAR DETECTIONS (PR)
(H)	about 0145	CF-6	FT-10	---	---
(I)	0216-0217 (plane takes off from Christchurch)	CF-7	FT-11	---	---
(J)	0219-0235	CF-8, CF-9	FT-12 to 18	WT-15	PR-1
(K)	0240-0248	---	---	WT-16 to 20	PR-2
(L)	0250-0300	CF-10	FT-19 to 21	WT-21 to 33	---
(M)	0310	CF-11	---	---	---

FIGURE 3 BRIEF SYNOPSIS OF EVENTS

- A -Plane leaves from Blenheim. Cameraman David Crockett filmed the plane on the ground and filmed from the cockpit during the takeoff.
- B -Crockett filmed the landing at Wellington
- C -The air crew noticed unusual lights appearing and disappearing and apparently sending light beams downward. The lights were in the general direction of Kaikoura and appeared to be "above" Kaikoura. Reporter Quentin Fogarty began taping messages that were later used in the news stories.
- D -The air crew called Wellington Air Traffic Control Center (WATCC) to ask if there were targets near Kaikoura. WATCC responded that there were targets in that direction, but closer to the plane.
- E -The air crew and the passengers watched flashing lights that appeared in the direction of Kaikoura, generally, and occasionally ahead of the aircraft. WATCC reported several radar targets, at least two of which were correlated with visual sightings. Crockett filmed a bright blue-white light which flashed on three times, and other distant unusual lights.
- F -WATCC reported targets behind and beside the plane. One target was so close to the right side of the plane that the plane and unknown targets merged on the screen. The passengers saw a flashing light at the right side of the plane.
- G -Christchurch radar detected a target at the right of the plane in the same apparent location as a flashing light that appeared to travel along with the plane. This was just before the plane landed. After the plane landed the unknown radar target continued southward. Crockett filmed the airport during the landing.
- H -While at the Christchurch Air Traffic Control Center (CATCC) Fogarty taped a message stating that WATCC still had targets around the Clarence River, north of Kaikoura.
- I -The plane took off from Christchurch. Crockett filmed from the cockpit during takeoff.
- J -The aircrew and passengers continually watched a very bright yellow/orangish - white light that was at first ahead and to the right of the aircraft, and which subsequently dropped back so that it was at the right side. A strong target was detected on the plane radar. The azimuth of the target agreed with the azimuth of the bright light. The radar distance decreased from about 34 to about 18 km before the target went off the screen at the right. Crockett filmed with a 100 mm zoom lens, obtaining many feet of film, including the single frame "s" image. About 70 km from Christchurch the plane turned toward the light. Crockett filmed with a misadjusted 240 mm lens and obtained the defocused images which were widely publicized at the time. The light was last seen at the right during or after the left turn back to the original track. The captain saw a different light appear ahead of and above the plane during the left turn. This second light quickly dropped downward and apparently passed below the plane on the left side.
- K -WATCC and the airplane radars had targets off the coast near Kaikoura. In the captain's opinion the airplane radar targets were in the same place as the Wellington targets. No unusual lights were seen, however.
- L -The air crew and passengers saw pulsating and flashing lights in the general direction toward Cape Campbell and Blenheim. WATCC reported a strong target ahead of the aircraft in the direction of one of the unusual lights. Crockett filmed a series of about 32 cycles of a flashing light which at first appeared to oscillate up and down in position at the same time that it changed brightness and intensity. The cycles consist of color and brightness changes from bright white/yellow or bright pale orange to dim combinations of red, red and white, and red and orange. WATCC reported several targets, some of which appeared to be correlated with the positions of ships in Cook Strait.
- M -The plane landed at Blenheim. Crockett filmed the landing field just before the plane landed.

and a very brief summary of the important events and associated time periods are given in Figures 1,2 and 3. Much more complete descriptions of the events are given in the aforementioned references (1,2,3,4,5,6).

Of the 16,440 frames contained in the Crockett film, about 4500 frames have analyzable images of unidentified lights. Several thousand other frames have images of known light sources, such as landing field lights , which can be used to calibrate the film as to color and brightness sensitivity. They can also be used to calibrate the optics of the camera and aircraft windows to determine whether or not distortions were excessive or normal. (Distortions were found to be normal, meaning images of point sources are round , with the image size being a function of source brightness.) This paper, and the following paper by Haines, presents an analysis of one of the most widely publicized of the 4500 frames of unidentified lights, a frame designated N-1766 ( North- 1766). This frame was obtained as the plane flew north out of Christchurch (see Fig. 2 and Fig. 3 ). Figure 4 presents a highly magnified view of the image in frame N-1766. This "ampersand" image has already been the subject of a paper<sup>7</sup> in which the luminous intensity of the light source was estimated from the exposure of the image. An estimate such as this can be made regardless of whether the smeared image was produced as a result of camera motion, object motion, or a combination of the two motions. Naturally, if it were possible to show that the light source moved and not the camera, then frame N-1766 by itself would contain evidence that the light came from a UFO. In this paper I discuss ways in which the image might have been produced by normal camera motion if the shutter stopped or slowed momentarily, or by an unusual camera motion (bump) if the shutter did not slow down for one frame. In the following paper Haines described his experimental attempt to creat a similar smear by intentionally vibrating or bumping a camera.

#### The Ampersand Image of Frame N-1766

The ampersand image is in a frame which occurred 176.6 seconds of film time after the bright light was first seen as the plane

flew north from Christchurch. (The camera was running at 10 frames/second.) However, the actual time at which the image was obtained can only be estimated since there are indications that Crockett stopped filming several times between frame N-0 (first frame of UFO imagery) and 1766. Frame 0 was probably obtained between 0219 and 0220 (2:19 A.M. and 2:20 A.M.) , so 1766 would have been obtained after 0222 or 0223, but probably before 0226.

Technical data related to the film and camera are as follows: the camera was a Bolex H16RX, EBM electric , with a 16-100 mm zoom lens (Kern Vario-Switer ) operated at 100 mm focal length and f/1.9 (the focal length was 1.9 times the aperture diameter); the camera uses a rotating shutter which illuminates the film for 160° out of 360° , so at 10 frames/sec. the shutter was open for 0.044 sec. ; when the camera is turned off the shutter can stop in any position, including partially or completely open ( When the shutter stops partially or completely open, the film just behind the shutter is illuminated continuously by light. If the light is very low level, the film becomes exposed very slowly and the frame looks reddish after development.); the camera was supported on Crockett's shoulder for most of the filming, meaning that most of the images are smeared by camera motion; the film was Fujicolor 8425 , which is a high speed (400 ASA ) color reversal film with a sensitivity that is slightly weighted toward the red end of the spectrum.

At the time frame N-1766 was shot the plane was climbing out of Christchurch in a direction 054° with respect to true north (see Fig. 2) and would have been at an altitude of 2000 to 3000 m (6,500 to 10,500 ft) and at a distance of 25 to 45 km (13 to 25 nm) from Christchurch, depending upon the actual time of frame 1766 . The aircraft ground speed was probably around 180-190 knots (about 340 km/hr).

The line of sight from the plane to the bright light was initially in the range 20°-60° to the right of straight ahead, with the range in angles corresponding to the recollections of the various witnesses. Coincident with the sighting of the light, the airplane radar, operated in the mapping mode, picked up a strong target. The air crew and passengers were certain that

the radar target was always in the same direction as the bright light for as long as the target remained on the scope. The visual and radar azimuths moved around to the right during the sighting, and ultimately the target went off the airplane radar at  $+60^{\circ}$  (right side) which is the limit of the sweep of the radar [ $-60^{\circ}$  (left) to  $+60^{\circ}$  (right)]. The air crew concluded at the time that the radar target and the light were the same object. The radar target was initially about 35 km (19 nm) from the plane when the plane was about 15 km from Christchurch. Before the target went off the radar scope, it was as close as 18-20 km. According to the captain, who was closest to the radar scope and thus had the best view, the decrease in distance occurred as the target maintained an essentially constant azimuth, implying that the target actually moved toward the flight path of the aircraft (i.e., was not stationary). The radar azimuth was about  $+30^{\circ}$  during this time. After reaching a distance of about 18-20 km from the plane, the radar and visual azimuths rotated around to the right, and ultimately the light was seen at about three o'clock to the plane ( $90^{\circ}$  to the right of straight ahead), and was no longer on radar. The light then appeared to pace the airplane. The assumption that the radar target and the light were the same object has already been used to estimate the intrinsic luminous intensity of the light, since the necessary calculation can be done using film exposure levels when the distance to the light source is known.<sup>7</sup>

The ampersand image is highly exposed over its whole length. Film density values from measurements on the original film have been given<sup>7</sup> and range from 0.18 density units at the brightest portions to about 0.39 at the dimmest portions. The density of the transparent film base is about 0.15, and the density of the black background surrounding the image is about 2.18. (Film density is defined as  $-\log T$ , where the transmission,  $T$ , is the ratio of light intensity transmitted through the test optical system without the film divided by the light intensity transmitted with the film inserted into the optical system.) The color of the image is bright golden yellow or bright pale orange/yellow, except at the extremely overexposed portions (density less than 0.2) which look white (no color). Using the estimated average exposure of the image and the estimated radar distances to the object the luminous intensity of the source has been estimated to be in the range  $2 \times 10^5$  candelas (cd)

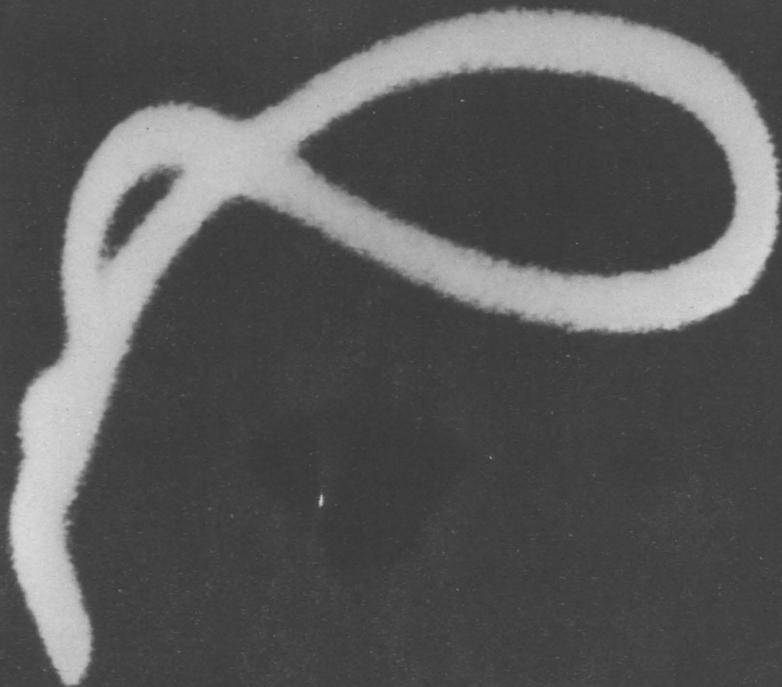


FIGURE 4 The Ampersand Image in  
Frame N-1766 of the Crockett Film

SCALE:

0.5 mm

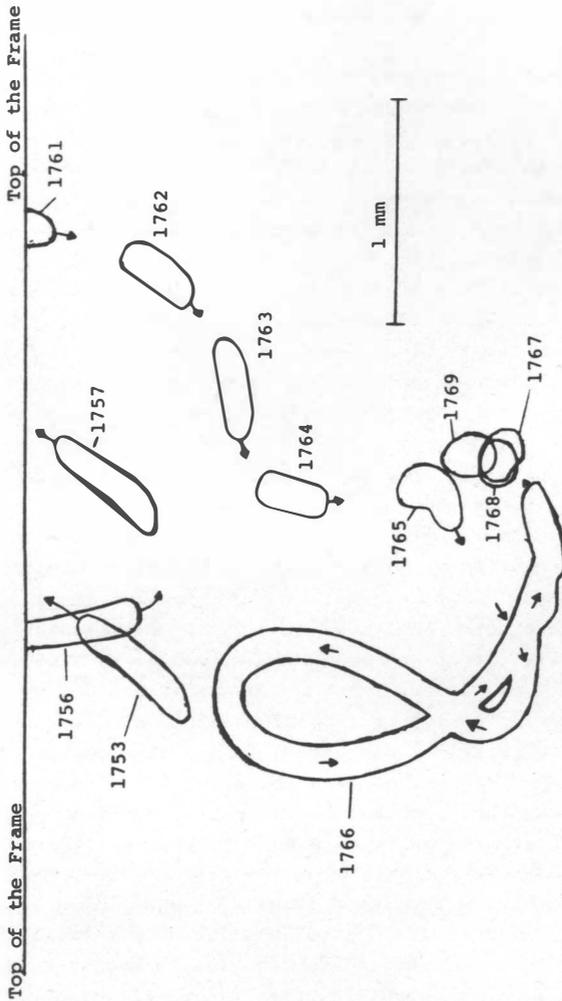
to  $2 \times 10^6$  cd ,depending upon the exact range at the time N-1766 was shot . For comparison, a 10,000 watt bulb with no reflector to focus the radiation has a luminous intensity of about 26,000 cd.

#### Creation of the Ampersand Image

The ampersand image, as with all smeared images, was created as a result of relative motion between the camera and the light source during the time that the shutter was open. Since the camera was supported on Crockett's shoulder , it was moving around randomly all the time creating a "normal" amount of image smear, which ranged from nearly zero to quite long smears. Naturally, if the shutter remained open for a long time (many seconds to minutes) exceedingly long smears could be created, and such very long smears are seen in several of the "red" frames that were slowly exposed by background light while the shutter was open (camera was not filming). If the camera shutter was open for the normal amount of time at 10 frames per sec , that is,open for 0.044 sec. , it is difficult to imagine how a smear as long as the ampersand image could have been created without some unusual motion of the source or of the camera, because the length of the ampersand image is much greater than the length of normal image smears. Figure 5 illustrates some normal image smears as well as the ampersand image. The lengths of the streaks in frames 1753 and 1757 are about 0.6 mm long on the film. Other streaked images leading to 1766, such as 1763 and 1764 , are short, lying in the range 0.3-0.4 mm. The lengths of streaks following 1766 are very short, ranging from apparently zero,or nearly zero, to 0.1 mm . The lengths of the streaks in frames other than 1766 represent normal camera motion smears (assuming the light wasn't moving) ,and are comparable to the lengths of streaks produced when Crockett was filming known light sources (landing lights). In contrast to the normal lengths of image smears, the ampersand image is 4.1 mm long, or about 12 times the length of the images immediately preceding it (1763, 1764). Clearly either the relative motion between the camera and the light increased to about 12 times the usual speed for one frame, or else the shutter stayed open for about 12 times its usual duration for one frame. The small amount of motion indicated in the frames following 1766 indicate that the relative motion between the camera and light nearly stopped immediately after

FIGURE 5

MOTION SMEAR ASSOCIATED WITH THE AMPERSAND IMAGE AND OTHER AND OTHER IMAGES OBTAINED AT ABOUT THE SAME TIME

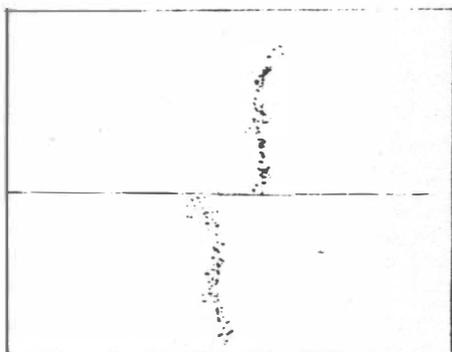


The arrows indicate relative image motion from one frame to the next. The arrows inside image 1766 indicate the estimated motion during that one frame. This figure is the superposition of twelve frames of the Crockett film. The images above are freehand tracings on a reflection screen.

FIGURE 6

DENSITOMETRIC MEASUREMENTS OF THE BACKGROUND IN FRAMES  
1765 AND 1766

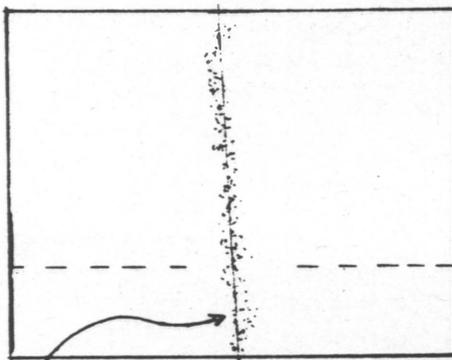
NEUTRAL DENSITY →



P  
O  
S  
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O  
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F  
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M  
↓

Scanning along the  
film with and without  
a neutral density  
"wedge" of 0.05 units  
placed on top

┆ ┆ 0.05 Neutral Density Units



1765

Edge of Frame

1766

Scanning along the  
background of bottom  
of frame 1765 to the  
top of frame 1766

The tiny dots represent individual measurements of density by the scanning densitometer. The slight tilt of the line of density measurement points was caused by a non-uniform illumination of the film by the densitometer, and does not indicate a variation in the film density.

1766. Image 1768 appears to be nearly stationary (no smear).

One proposed explanation for 1766 is that the camera stopped for many seconds (or more), as if the camera had been turned off at frame 1766. However, long stoppage times seem unlikely for the following reasons: (a) a long stoppage time should have produced an even longer smear, as is seen in some of the red frames, and (b) the background film density should be less than the background densities of the preceding or following frames because of a longer exposure to background light and to light scattered by the camera optics. However, sensitive densitometry has revealed no detectible difference between the background density of frame 1765 and that of frame 1766. The experimental results are illustrated in Figure 6, which shows the data produced by a scanning TV densitometer. The sensitivity of the system is illustrated in the top part of the figure. Note the sizeable change in the density readings when the scan crossed the boundary between an area of the background on the film and an area in which a 0.05 neutral density film had been placed on top of the Crockett film. By contrast, no jump in density values was seen when the scan crossed the boundary between 1765 and 1766. Thus I conclude that there is no measureable difference in density between the background of 1765 and 1766, suggesting that the shutter did not stop for many seconds to minutes.

It is unlikely that there was any time lag between the time that the shutter closed in frame 1766 and when it opened again for frame 1767 because the "tail" of the ampersand image is nearly straight and it points directly toward the image in 1767. One would not expect such good alignment of the images if there were an appreciable amount of time between the "end" of 1766 and the "beginning" of 1767, such as would happen if Crockett had actually shut off the camera for a short time.

Finally, if the shutter had been open as long as about 0.5 sec., the image in 1766 would have been as bright as the preceding images rather than less bright. To see why this is so, note that film exposure (density) is a function of the product of light flux incident on the film multiplied by the time duration and divided by the area,  $FT/A$ , where  $F$  is the flux in lumens. Since the widths of the images in 1766 and preceding images are about the same, the relative areas are proportional to the

relative lengths. If, for example, 1766 and 1764 had equal exposures (densities) all the way along their respective image lengths, then the values of  $FT/A$  would be equal for the two images:  $FT/A_{1764} = FT/A_{1766}$ . Since the areas are given by  $WL$ , with  $W$  the width and  $L$  the length, and since the widths are nearly equal,  $FT/L_{1764} = FT/L_{1766}$ . Now assume that the light source did not change its intrinsic intensity (i.e., assume it remained at a constant brightness level). Then  $F_{1764} = F_{1766}$ , and  $T_{1766} = T_{1764} (L_{1766}/L_{1764})$ . That is, assuming that the source brightness was constant, and assuming that the exposure levels (densities) of the two images were the same, the exposure time of 1766 should be equal to that of 1764 multiplied by the length ratio. Since frame 1764 was exposed for the normal duration of 0.044 sec., and since the length ratio is 12.5,  $T_{1766}$  would then be 0.55 sec. if the exposure levels and light fluxes were the same. Conversely, if the shutter stayed open 0.55 sec. and the light flux did not change, the ampersand image should be as bright as the image in 1764, rather than less bright, as pointed out at the beginning of this paragraph.

There is no reason to believe that the intrinsic brightness of the light source decreased considerably for the time period of frame 1766. Although there were temporary brightness changes of images earlier in the film when the plane / object may have been in the clouds, those brightness changes were slow and ended well before 1766. There were no abrupt brightness changes following 1766. Therefore I conclude that the fact that the exposure of the ampersand image is considerably lower than that of 1764 of the other images in Figure 5 means that the camera shutter was open for considerably less than 0.55 sec, although it would be difficult or impossible to state exactly how much less based on measurements of image density alone (because of the extreme non-linearity in the relation between  $FT/A$  and film density of overexposed images).

Because of the preceding analysis, and because the mechanical inertia of the camera mechanism would tend to keep it running at a nearly constant speed, I conclude that the shutter was open during frame 1766 for the usual time duration, 0.044 sec.

This conclusion means that the relative motion indicated by the length of the ampersand image took place at an unusually high rate of speed. The next question to be answered is the

following: could some unusual movement of the camera account for the image, or must it be mostly or partly attributed to motion of the light source? Since the witnesses did not report rapid motions of the light source it would be consistent with the visual data as remembered by the witnesses (subjective data) to assume that the image is totally due to camera motion. However, the relative motion in 1766 apparently took place in a time period of less than  $1/20$  of a second. Moreover, the angular amplitude of the motion is only about 13 milliradians (mr) in the vertical direction. This angular size is only about 1.5 times the angular size of the moon. Thus the image in 1766 corresponds to a very rapid, very small movement of the source, if the camera did not move. Such a small, rapid motion might go undetected by the witnesses, or, even if they did detect it, if it happened only once or very few times during the sighting they might not have remembered it since their memories were "saturated" by many other events of that night. If we allow for the possibility that a small, rapid motion of the light source could take place and not be seen and remembered by the witnesses, then the proof or disproof that camera motion could not have caused the ampersand image must come from film data alone.

Early in the investigation I proposed that the image was created when the camera bumped into some part of the airplane, in spite of the claim by the cameraman that he was careful not to bump the camera. My proposal is based on the observation that the film indicates the camera was moving rather rapidly just before 1766. The images in frames 1743 and earlier are in about the same area of the film as the images following the ampersand image. From 1744 through 1750 the image moves up toward the top of the frame, and between 1750 and 1761 the image actually disappears several times above the top of the frame. As indicated on Figure 5, following 1761 the image moves downward again and ultimately ends up in the area of the images before 1743. This overall image motion, assuming that the light source did not move upward and then downward over a period of about 2 seconds (about 20 frames), would occur if the camera tilted downward, and Crockett, realizing that the image had gone above the frame,

tilted the camera back upward again to bring the image back to its original position (near the image in 1767). (Considering the weight of the camera with a film magazine and 100 mm lens it is not surprising that Crockett was not able to hold it steady.) It is conceivable that , while raising the camera quickly (over a period of one second) to bring the image back, Crockett might have bumped something. Such a bump might might make the camera/lens combination undergo a structural oscillation , as , for example, if the lens were to twist slightly in one direction while the camera body moved in another direction. Such a hypothetical structural oscillation would be rapid and highly damped, meaning that the motion would be fast and wouldn't last long. Unfortunately no experiments have been done with Crockett's camera, or a similar camera , to determine whether or not such structural oscillations are possible.

Assuming that a bump might have created a short period structural oscillation, what might Crockett have bumped into? He was crouched down behind the copilot's seat on the right side of the plane, so one might guess it bumped into the copilot's seat. However, his lens was to the right of the back of the seat, and the image motion from 1765 to 1766 indicates camera motion to the right , or away from the seat (assuming that the light source did not move). From Crockett's description of how he was positioned, with Fogarty on his right side, it appears that he was not close enough to the right side of the plane for the lens to bump into the window. Moreover, Crockett stated that he never let the camera lens hit the window. Therefore a remaining mystery is just what the camera could have bumped into with sufficient force to create a structural oscillation (assuming a structural oscillation of the type needed to create the ampersand image is possible to create by bumping the camera). Because of this I leave my proposal as just that, a proposal , unsupported by experimental evidence. In principle one would like to be able to have Crockett take his camera back on board the plane and to duplicate as nearly as possible the conditions of the flight. Unfortunately it seems highly unlikely that a reconstruction of the flight will ever take place.

Richard Haines has taken an experimental approach to the problem. He has used a less heavy camera and has flown aboard a

less heavy aircraft, under the assumptions that (a) it is easier to make a lighter (less heavy) camera vibrate, and (b) a lighter aircraft is less stable than the Argosy freighter aircraft that Crockett flew in. The following paper presents Haines' results: he was not able to produce any sort of loop image, even when he intentionally vibrated his camera.

#### Relative Motion of the Unknown Light Source

Assuming that the ampersand image was created by motion of the light source alone, and assuming that the distance to the light source is comparable to the distance to the radar target picked up by the airplane, say 18 km, then it is possible to calculate what sort of motion (projected onto a plane 18 km from the airplane) the ampersand image represents. The length of the loop is 4.1 mm on the film plane, corresponding to  $4.1 \text{ mm} \times 18 \text{ km}/100 \text{ mm} = 740 \text{ m}$  at 18 km from the plane. An average speed over this length of path corresponds to  $740 \text{ m}/0.044 \text{ sec} = 16770 \text{ m/sec}$ , truly a "meteoric" speed. The radius of the top portion of the loop is about 0.25 mm on the film plane, or  $(0.25/100) \times 18,000 = 45 \text{ m}$  at 18 km from the airplane. Assuming a constant speed of 16,700 m/sec as the light source moved around the loop, the radial acceleration at the top of the ampersand image loop would be  $v^2/r = (16,770^2)/45 = 6.3 \times 10^6 \text{ m/sec}^2$ , which corresponds to about 640,000 "g's" (i.e., to 640,000 times the acceleration of gravity at the earth's surface,  $9.8 \text{ m/sec}^2$ ). Of course, if the light source were closer to the plane than 18 km the estimated velocity and acceleration would be smaller. The estimated velocity and acceleration would also be smaller if the ampersand image had been created by a combination of camera motion with motion of the light source.

#### Shape and Size of the Light Source

The film image of a small source of light is always larger than the geometric size would predict because of diffraction and aberration. Therefore it is difficult to be sure of an estimate of the size of the light source in this case, especially because the image size of a small source increases with the

source brightness. However, in studying the loop image and the successive images one notes the following interesting facts: (a) the "top" of the loop image is narrower than the more nearly vertical "sides" of the loop even though the exposure level is greater at the top than along the sides; and (b) the image 1768, which was taken when the camera (or object) was apparently stationary is nearly elliptical. If the source of light had been truly a point source, that is a source so small that it couldn't be resolved by the camera, the image should be round. Ellipticity could be a result of camera and airplane window aberrations. However, a study of the images of known "point" sources of light - the lights along the runways of the Wellington and Christchurch landing fields when the plane was several miles from the fields - indicates that such images are basically round. This suggests that optical aberrations cannot account completely for the ellipticity of the image in 1768 (and other frames). The apparent ellipticity of the source can also be estimated from the loop image in 1766 by comparing the width of the vertical portions of the loop with the width of the horizontal portion at the top. If the source were a point source, or if it were perfectly round and with sufficient angular size to be resolved by the camera, all portions of the loop image should be the same width, except that brighter portions might be wider because of image growth due to increased brightness. Thus, if the source were circular or a "point", the top of the loop, which is brighter than the sides, should be wider than the sides. The fact that the top of the loop is narrower than the sides can be explained if the source was elliptical and of a size large enough to be barely resolved by the optical system and film. If the source was elliptical and kept its major axis horizontal during the time the loop was made, the vertical portions of the loop would be wider than the horizontal portions. The ratio of the width of the left side of the loop image to the width of the top of the loop image is about 1:4. This ratio compares favorably with the ratio of the horizontal width (major axis) to the vertical width (minor axis) of the elliptical image in 1768. The ratio for the image in 1768 is about 1.5. These ratios can only be considered to be approximate since it is difficult to decide exactly where the "edge" of an image

is after the image has been magnified sufficiently for analysis (see the edges of the image in Fig. 4, for example). Because the horizontal/vertical width ratios in 1766 and 1768 are very nearly the same, I conclude that the source itself was actually elliptical, with a major/minor axis ratio of about 1.4-1.5. A corollary of this conclusion is that the optical system did manage to barely resolve the shape of the source, and that therefore the image size in 1768 is geometrically related to the actual source size. The geometric relationship allows a calculation of the size of the light source from the size of the image provided that the focal length of the camera and the distance to the source are known. In this case the focal length was 100 mm. The distance to the source can only be guessed at, based upon the detections of the object on the airplane radar. A useable distance would be about 10 nm (18 km) . The width of the horizontal dimension (width of the left hand vertical part of the loop) from Fig. 4 is about 0.12 mm , so the size at 18,000 m would be  $18,000 \times (0.12/100) = 21.6$  m, or about 22 m (70 ft). This would be the approximate width of the source, and the height (vertical dimension) would be the width divided by the ellipticity, or  $22/1.45$  , of about 15 m (50 ft). The actual dimensions could be smaller than these because the image size, as pointed out before, may be too large because of the great brightness of the source. (In an earlier estimate I obtained about 18 m wide by about 12 m high.<sup>7</sup>)

#### Conclusion

In view of the photographic evidence I conclude (a) that the ampersand image was created during a time period of 0.044 sec. , and (b) the camera was being moved upward just before the ampersand image and the camera bumped into something. However, (b) is a "weak" conclusion because there is no experimental evidence that bumping the camera could have caused a loop image, nor is there any clear indication from Crockett's testimony that his camera would have bumped into anything, anyway. Furthermore, Haines' experiments (next

paper) suggest that it would be extremely difficult or perhaps "impossible" to create a complex loop image in one frame by vibrating or bumping a camera. On the other hand, the results of Haines' experiments must not be considered absolutely conclusive , since he did not have Crockett's camera to work with. In my opinion the question of how the ampersand image was created is still unanswered.

If one could prove that the ampersand image could not have been created by camera motion alone, frame 1766 by itself could prove that Crockett filmed a UFO , when considered in the context of the surrounding events. However, the failure to prove that the image motion could only have been due to motion of the light source does not mean that the light source was not a UFO. Other evidence, visual and photographic, indicates that the occurrence of the light was an abnormal event. The witnesses had the impression that the light paced the aircraft for a period of time until the plane turned to the right toward the light (see Fig. 2) , at which time the light "reacted" by moving away from the path of the plane. The brightness and color of the film image indicate that the source was bright yellow/white or bright pale orange. No light source known to be in the area matches the color characteristics. A squid boat fishing (i.e., with its lights on) would have been bright enough, but the color is wrong for a squid boat. Moreover, there were no known boats fishing in the area of the sighting<sup>9,10</sup>. And, of course, a squid boat cannot pace the aircraft.

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## ANALYSE TECHNIQUE DU FILM UFOLOGIQUE DE LA NOUVELLE ZELANDE: L'IMAGE "&"

Ceci est le premier de deux textes présentant les résultats d'analyses techniques d'une image du film de Nouvelle-Zélande obtenue par le caméraman David Crockett, tôt dans la matinée du 31 Décembre 1978. Une version très résumée des observations de Nouvelle-Zélande et une analyse de l'image avec le symbole "&" est présentée ici. Cette image diffuse a été obtenue par mouvement relatif entre la source lumineuse et la caméra, de manière à produire une boucle complexe de la forme du "&" commercial. Ma conclusion dans ce texte est que l'image peut avoir été créée par le choc de la caméra sur quelque chose. Dans le texte suivant Richard Haines discute les résultats expérimentaux de son test à propos de la "théorie du choc". En volant dans un avion moins lourd et en utilisant une caméra moins lourde, il lui fût impossible de créer une seule image contenant une boucle, même en faisant vibrer sa caméra intentionnellement.

Traduit par Marcel Delaval

## ANALISI TECNICA DEL FILMATO UFOLOGICO DELLA NUOVA ZELANDA: L'IMMAGINE A "&"

Questo e' il primo di due lavori che presentano i risultati delle analisi tecniche di un fotogramma del film della Nuova Zelanda, ottenuto dal cameraman David Crockett al mattino presto del 31 Dicembre 1978. In questo lavoro viene presentata una versione molto riassunta delle osservazioni della Nuova Zelanda ed un'analisi dell'immagine a forma di "e commerciale" (&). Tale immagine venne ottenuta a causa del moto relativo tra la sorgente luminosa e la cinepresa, in modo da produrre una linea intrecciata a forma di &. Questo lavoro contiene le mie conclusioni e cioe' che l'immagine potrebbe essere stata generata nel caso in cui la cinepresa avesse urtato contro qualcosa. Nel lavoro seguente Richard Haines discute i risultati sperimentali delle sue prove relative alla "teoria dell'urto". Volando su un aereo meno pesante ed usando una cinepresa meno pesante, non fu in grado di ottenere alcuna immagine a linea intrecciata, anche se fece vibrare apposta la cinepresa.

Traduzione di Roberto Farabone

## EINE TECHNISCHE UNTERSUCHUNG DES NEUSEELAND FILMS: DIE AMPERSAND-SCHLEIFE

Die vorliegende Arbeit ist die erste von zweien, in denen die Ergebnisse einer fachmännischen Untersuchung des, von Kameraman David Crockett am frühen Morgen des 31. Dezember 1978 über den Gewässern Neuseelands gedrehten, UFO-Films publiziert werden. Die Arbeit enthält eine sehr summarische Darstellung der Sichtungen in Neuseeland sowie eine Analyse der sog. 'Ampersand-Schleife'. Es handelt sich dabei um eine Lichtspur, die durch die Relativbewegung zwischen Kamera und Lichtquelle entstanden ist, wobei auf dem Film eine Schleife in der Form eines Ampersand-

Zeichens (&) erzeugt wurde. Der Verfasser kommt zu der Schlußfolgerung, daß diese Schleife dadurch verursacht worden sein könnte, daß die Kamera während der Aufnahme irgendwo angestoßen ist. In der zweiten Arbeit befaßt sich Richard Haines mit den Ergebnissen einer von ihm durchgeführten, experimentellen Prüfung dieser 'Stoß-Theorie'. Haines, der in einem leichteren Flugzeug flog und eine leichtere Kamera verwendete als Crockett, war nicht in der Lage, irgendein schleifenförmiges Abbild zu erzeugen, obwohl er die Kamera willkürlich in Vibration versetzte.

Uebersetzung von Adolf Schneider

#### ANALISIS TECNICO DE LA PELICULA OVNI DE LA NUEVA ZELANDA: "LA IMAGEN "&"

Este es el primero de dos trabajos que presentan los resultados de los análisis técnicos realizados sobre un fotograma de la película de Nueva Zelanda obtenida por David Crockett durante la mañana del 31 de diciembre de 1978. Este trabajo presenta una versión altamente resumida de las observaciones de Nueva Zelanda y un análisis de la imagen ampersand (&). La imagen ampersand (&) apareció por un movimiento relativo entre la fuente de luz y la cámara, de tal forma que produjo un complejo lazo de la forma de un ampersand (&). Este trabajo contiene mi conclusión de que la imagen podría haber sido generada si la cámara se golpease con algo. En el trabajo siguiente, Richard Haines discute los resultados experimentales de su prueba de la "teoría del golpe". Volando en un avión menos pesado y usando una cámara menos pesada, fue imposible crear una imagen de lazo, aunque intencionadamente se hiciera vibrar la cámara.

Traducción por V.-J. Ballester Olmos

# COMMENTS ON SELECTED ASPECTS OF THE NEW ZEALAND UFO CASE OF DEC. 31, 1978

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Received February 19, 1981

## ABSTRACT

Experiments were done to determine whether or not a loop image such as is found in frame 1766 of the Crockett film could be duplicated by intentionally vibrating a camera with a telephoto lens. No loop images were created in these experiments. Results of an analysis of the color changing/oscillating sequence in the Crockett film are also presented, along with some observations on the witnesses with whom I had the opportunity to speak (Startup, Fogarty, Crockett).

KEY WORDS : New Zealand Sightings , UFO film, data analysis, eyewitness evaluation

## INTRODUCTION

This paper presents a brief summary of selected measurements and other activities related to a purported UFO event off the Eastern Coast of New Zealand's South Island on December 31, 1978 from an aircraft. A summary of the sighting is presented in the previous paper in this journal by Maccabee (Technical Analysis of the New Zealand UFO Film: The Ampersand Image). This author received a color 16 mm copy of the original film on February 20, 1979, for analysis. The copy was on Kodak 7242 film and had been made from an internegative copy of the original (because the original is color reversal film, and thus is a positive transparency film). The length of the copy was about 410 feet. Two separate sets of analyses are described in this paper: an attempt to reproduce the interesting "figure eight" in frame N-1766 (according to the numbering scheme of Maccabee), and spatio-temporal quantification of a sequence of frames near the end of the film in which the unidentified light blinks on and off over a period of approximately twenty eight seconds and appears to oscillate in an almost vertical plane. The paper concludes with some observations on three of the five eye witnesses on board the aircraft with whom I had an opportunity to talk at length about the sighting details.

## THE "FIGURE EIGHT" IMAGE

Frame N-1766 has proven to be very interesting due to the fact that early microdensitometry analysis by Maccabee across the background regions of this particular frame and the immediately preceding frame showed the optical density to be the same (see the preceding paper by Maccabee). If, as some have claimed, the motion picture camera's rotary shutter had somehow become stuck in the open position long enough to allow camera motion to smear the image of the distant light over this strange-shaped figure, one would expect that the additional radiant energy (light) entering the lens in the regions of the background (from lens-related scatter of the light from the UFO source as well as from the available background scene luminance) to decrease the optical density of this particular frame over that of the preceding frame. Such was not the case: a stuck shutter did not appear to be the cause of this strangely shaped image.

Another explanation lay in the possibility that the point UFO source was stationary and the camera underwent an extremely fast and complex movement during the 0.044 second-long exposure! Perhaps the cameraman was suddenly jarred (bumped) or the telephoto lens unexpectedly struck a part of the aircraft's cockpit structure. The author attempted to check this possibility by trying to duplicate the blurred image while in flight using comparable photographic conditions. The film's sensitivity and the camera's shutter speed were duplicated. Stationary reflective domes at the Lick Observatory (southwest of San Jose, California) about ten to fourteen miles from the plane were photographed from about their altitude of 4,500 ft. The tests were made while flying in a single engine Cessna aircraft at a nominal airspeed of 120-145 mph. The camera was hand-held. Under one condition of photography the camera was stabilized as well as possible while in another condition it was purposely vibrated by hand at as high a frequency as possible, but without the lens touching the aircraft window. In still another condition the telephoto lens was held touching the vibrating window. The photos were taken on a clear sunny day near noon. The spherical domes each reflected sunlight into the lens as if they were optical point sources.

The results of this experiment clearly showed that the most complex image blur that could be produced was an L shaped image, or , in some cases, a J shaped image. The length of the long part of each blur would be 10 to 15 times the length of the short part ("width") of the image . In no instance was a complex , or even a simple closed figure produced. Figure 1 shows the largest blur pattern obtained. The darkened hills are at the bottom of the photograph. Each J shaped smear represents the image of sunlight reflected from one of the observatory domes. This and the other photos taken were obtained using a Nikkormat 35 mm Single Lens Reflex camera, Soligor C/D Auto Lens (80 to 200 zoom) set at 200mm focal length, f/3.5 , with a 12 degree diameter field of view . The total weight of the camera and lens was 4.1 lbs. The shutter speed was 1/30 sec. and the film was Kodachrome 25 with normal processing.

If an image blur with roughly comparable length and complexity as that on frame 1766 could not be produced intentionally

100 mm lens. The cameraman (Crockett) told this author that he did not touch the camera body or lens to the aircraft's window.

While a small proportion of the figure eight image smear is probably due to camera motion, as is evident in many other frames before and after this particular frame, the author feels that the distant object may well have undergone a high speed translation in position, perhaps in a vertical plane oriented approximately toward the aircraft. Since the distance of the point UFO source is not known exactly, it is not possible to calculate the vertical distance it may have travelled even though the vertical angle subtended at the camera is known (but see the previous paper).

Another particularly intriguing feature of the N-1766 image is the fact that it is well centered in the frame, i.e., the figure eight pattern seems to end almost where it started, which is what would be expected of a point source moved through a  $360^{\circ}$  circle whose axis of revolution is stationary. Such an image shape could be reproduced quite easily by fixing a small light on the rim of a spinning wagon wheel and photographing one complete revolution while there is a small oscillatory horizontal motion of the camera. All of this would have to be done, of course, during a single period of exposure. This tentative explanation of the nature of the source motion may find further support from the results presented next.

#### ON-OFF SEQUENCE OF IMAGES

There occurs a series of 280 frames near the end of the Crockett film (specifically, N-4581 through 4860 in Maccabee's designation scheme) in which a point source is seen to alternately appear and disappear, or fade considerably in intensity. Independently of the analysis by Maccabee, the author has determined that there exists in this sequence a regular

change in the area of the image of the light source .  
The image area reaches a maximum 33 times with a period of approximately 0.85 sec. per cycle. The source was probably not a capacitor discharge type (which usually possesses a highly regular interval between flashes) since some variation is found in the following cyclic sequences: no. 2 to 3 (N-4593 and N-4603) + 10% ; no. 3 to 4 (N-4603 and N-4610) -10%; no. 5 to 6 (4618 and 4628) +12%; no. 11 to 12 (4671 and 4680) +11%; no. 12 to 13 (4680 and 4688) - 10%; no.14 to 15 (4697 and 4706) +14%; no. 23 to 24 (4774 and 4782) -9%; no. 24 to 25 (4782 and 4793) +10%. The above percentage values represent the temporal variation relative to the average period of approximately 0.85 sec.

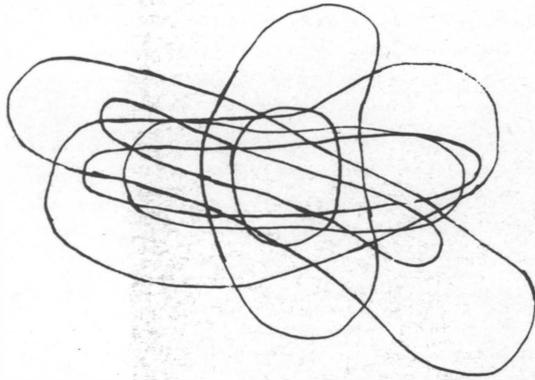
Referring to the above percentage changes and their signs, it can be seen that there is no particular regularity to the deviations from the average period. However, the measured variation could have resulted from the fact that the camera's rotating shutter is open for  $160^{\circ}$  or 44.4% of the time and that the time of maximum image size could have occurred in some instances when the shutter was closed. The shutter is closed for a duration of 0.055 sec. between exposures.

The images of the first portion of the 280 frame sequence were projected onto a large sheet of paper and traced so as to illustrate spatial location changes during these on-off cycles. In general the images move along a fairly linear trajectory that is nearly vertical (top inclined slightly to the right by about  $15^{\circ}$ ), and the images are generally four to six times as long as they are wide. That is, within each on-off cycle the image begins as a reddish point source and expands to its maximum size and brightness for from four to six frames, during which time the image is typically yellowish white and hotdog shaped. It then decreases in size to (usually) another red image. When these images are superimposed over the same centroid location in such a way as to reduce the influence of image motion, it becomes clear that the great majority of the first 50 or so images (about 60% of the first fifty images in the sequence) are approximately vertically oriented blurs, as illustrated in Figure 2. Several tear drop shaped images and several circular shaped images are also found among the first fifty frames of this series. The frame-to-frame changes in image size are possibly a result of the obvious

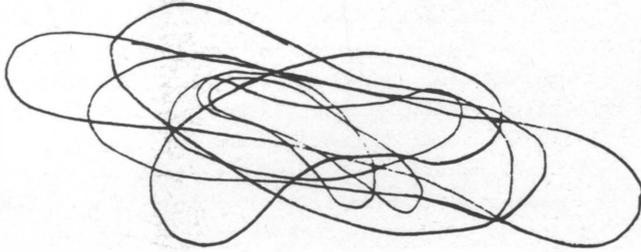


FIGURE 1 IMAGE OF DISTANT POINT  
SOURCE OF LIGHT SMEARED BY INTENTIONAL  
CAMERA MOTION

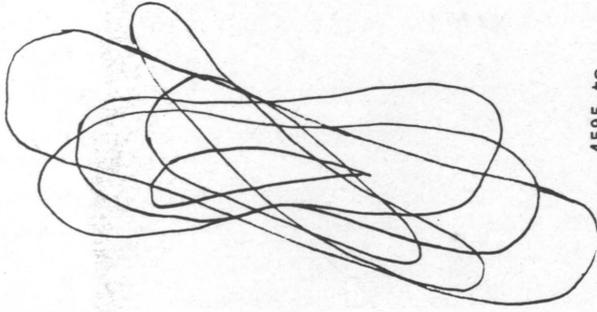
FIGURE 2 : TRACING OF IMAGES IN THE ON-OFF, COLOR CHANGING SEQUENCE



4581 to 4587



4588 to  
4594



4595 to  
~~4601~~  
(two frames have no image)

change in received luminous radiation , since for small (point) sources, the image size grows with increases in luminous intensity. Consequently it is suggested that the smaller images more nearly correspond to the color, shape, and size of the UFO source. Further comment on this particular segment of frames must await further detailed analysis.

#### SOME OBSERVATIONS ON THE WITNESSES OF THE UFO EVENTS

Having had the opportunity to talk with three of the five eye witnesses who were on board the aircraft , I want to offer a few general observations :

Captain W.E. (Bill) Startup and his wife Shirley visited me and my family twice in 1980. Capt. Startup is unquestionably a highly credible and experienced eyewitness of many kinds of visual phenomena seen from the air. Forty-six years old at the time of the sighting, Bill had flown for 23 of those years. The most recent 14 years he had flown for Safe Air Ltd., based in Blenheim. I was impressed by Bill's ability to describe the operation of his basic and secondary flight systems on his four engine turbo-prop aircraft. Such a capability is representative of reliable eyewitnesses who can remember details well. In addition, Bill is the kind of pilot who maintains cockpit discipline, another important trait of a successful pilot. Bill, and his copilot Robert Guard, had far more to lose professionally than to gain by taking part in a hoax, and all indications are that he actually saw the anomalous light(s) he described in his recent book (The Kaikoura UFOs, 1980, Hodder and Stoughton, Auckland).

Quentin Fogarty and I chatted over a two day period (July 17, 18, 1980) about his experiences during the sighting. Quentin is a professional investigative journalist who was on an official news assignment. He was not out to catch UFOs, but rather to produce an accurate and meaningful TV news documentary. I found him to be a warm and sincere person who said, when I asked if he would like to do the whole thing over again, "...in no way would I want to , nor would I wish it upon somebody else." But why were Fogarty and two others even present on board the nighttime freighter flight? TV Channel 0 (now Channel 10) in Melbourne, Australia, for

whom Quentin worked at the time, had assigned him the task of filming the aircraft's interior and exterior for a documentary about another UFO encounter by two other pilots of Safe Air, Ltd. The earlier encounter occurred during a flight between Blenheim and Christchurch during the early morning hours of Dec. 21, 1978, between the hours 1638 and 1650 Greenwich Mean Time. This earlier sighting also involved on-board weather radar contact with a bright flashing object (UFO), but it did not create the same magnitude of worldwide publicity that the Dec. 31 sightings created. In light of the radar/visual contacts, involving airplane and ground radar, on Dec. 21, it is not surprising that Quentin Fogarty and his crew had good equipment on board the aircraft in order to produce a news story about the previous sighting. I believe that the reliability of their story is greatly enhanced by many statements to the effect that the cameraman, David Crockett, was not prepared to photograph lights at night outside the aircraft and had to make educated guesses about his camera's settings. He had only planned to film one shot of the exterior of the aircraft and the rest of the shots were to be inside the aircraft. The whole emotional tenor recorded on the voice tapes also supports the reliability of the events. Other personal impressions and facts I gained through this meeting with Quentin Fogarty combined to reinforce my present belief that he was telling the truth as he perceived it, and he also downplayed the amount of journalistic license that he could have introduced into the narrative in favor of adding observational facts. This is not to say that he could not have been influenced by certain optical illusions that everyone is subject to in flight, particularly during banking turns. But my analysis of these flight conditions indicate that they would have played a very short-duration role at most (primarily during the flight segment while flying North out of Christchurch when the aircraft made a right turn and then a left turn.).

The third eyewitness I interviewed was cameraman David Crockett. It took place on July 7, 1979 in San Francisco. I was able to learn something of his basic personality as well as his professional background; both subjects can play an important role in determining one's basic credibility.

David takes his work very seriously. It appears that he did his best under the hectic circumstances on-board the aircraft that night. He made some good judgements about resetting the filming speed in order to photograph the bright luminous sources. Yet he also apparently made some bad lens focus settings as well, something one would not expect if the affair had been a hoax or less frightening. His own description of his psychological, physiological, and mental condition weeks after the event conforms to a very typical eyewitness syndrome.

In summary, I found these three eyewitnesses of this bizarre event to be clear-headed, forthright people. All had more to lose than gain in the long run by perpetrating a hoax. Captain Startup, for a number of reasons given previously, was the best (most objective) witness I interviewed, in terms of establishing the basic details of what took place.

COMMENTAIRES SUR DES ASPECTS SELECTIONNES DU CAS  
UFOLOGIQUE NEO-ZELANDAIS DU 31 DECEMBRE 1978

Des expériences ont été réalisées afin de déterminer si une image contenant une boucle comme il en existe sur la 1766<sup>e</sup> image du film de Crockett, aurait pu être reproduite ou non en faisant vibrer intentionnellement une caméra avec téléobjectif. Aucune image avec boucle n'a pu être créée dans ces expériences. Les résultats d'une analyse de la séquence des changements de couleur et des oscillations dans le film de Crockett sont également présentés ainsi que certaines observations sur les témoins avec lesquels j'ai eu l'opportunité de parler (Startup, Fogarty, Crockett).

Traduit par Marcel Delaval

BEMERKUNGEN ZU EINZELNEN ASPEKTEN DES UFO-EREIGNISSES  
VOM 31. DEZEMBER 1978 IN NEUSEELAND

In Bild Nr. 1766 des von David Crockett gedrehten Films ist eine schleifenartige Lichtspur zu erkennen. Um festzustellen, ob ein solches Abbild durch eine absichtlich in Vibration versetzte Kamera mit Teleobjektiv verursacht werden könnte, wurden mehrere Versuche durchgeführt. Dabei konnten keine schleifenartigen Abbilder erzielt werden. In der vorliegenden Arbeit werden auch die Ergebnisse einer Untersuchung der Farbwechsel- und Schwingungsfolge im Crockett-Film veröffentlicht, zusammen mit einigen Angaben über jene Zeugen, mit denen der Verfasser sprechen konnte (Startup, Fogarty, Crockett).

Übersetzung von Adolf Schneider

COMENTARI SU ASPETTI SCELTI DEL CASO UFOLOGICO  
NEOZELANDESE DEL 31 DICEMBRE 1978

Sono stati fatti degli esperimenti per stabilire se una immagine ad anello, come quella che si trova nel fotogramma 1766 del film di Crockett, possa essere riprodotta mediante delle vibrazioni intenzionali di una cinepresa con un teleobiettivo. In questi esperimenti non si sono ottenute immagini ad anello. Vengono presentati i risultati di un'analisi della sequenza variazione/oscillazione nel film di Crockett, insieme con alcune osservazioni sui testimoni con i quali ho avuto la possibilità di parlare (Startup, Fogarty, Crockett).

Traduzione di Rosalba Viano

COMENTARIOS SOBRE ASPECTOS SELECTOS DEL CASO OVNI  
DE NUEVA ZELANDA DEL 31 DE DICIEMBRE DE 1978

Se realizaron experimentos para determinar si la imagen de lazo hallada en el fotograma 1766 de la película tomada por David Crockett podría o no duplicarse vibrando intencionadamente una cámara con teleobjetivo. En dichos experimentos no se crearon imágenes similares a las de un lazo. Los resultados de la secuencia de oscilación y de cambio de color de la película de Crockett son también presentados, así como algunas observaciones sobre los testigos con los que tuve la oportunidad de hablar (Startup, Fogarty, Crockett).

Traducción por V.-J. Ballester Olmos

# **PSYCHOLOGICAL and PERCEPTIVE ASPECTS**

**The "CE III"**

**REFERRING TO THIS SECTION  
WE HAVE NOT RECEIVED  
ANY CONTRIBUTIONS**

# THE DARK SIDE OF THE UFO

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Received January 3, 1980

## ABSTRACT

By surveying 30 years of UFO literature and studying 100 Austrian UFO reports in the field, Luis Schönherr and Ernst Berger have found a "dark side", i.e. a force field of psychosocial and pathological influences in UFO experiences. In this paper, the latter shows how these influences can be traced in published, old cases and studied experimentally by means of clinical psychology and psychiatry in recent events. Detection of the "dark side" should result in a new, witness-centered investigation technique particularly for "close encounters" and through the application of a different scientific attitude towards the whole UFO phenomenology. A review of papers including "dark side" viewpoints is given. The material generated in the behavioral sciences lends support to the author's opinion that the UFO problem is primarily linked to the

"human self-portrait" of our time, which is the degree of scientifically-based awareness the UFO researcher has of himself and of the witness. It is hypothesized that progress in the psychosocial disciplines will gradually brighten the "dark side" of the UFO, if no a priori reductions are made.

#### KEY - WORDS

Close encounters; dark side; hallucinations; hypnotic regression; illusions; mirror-effect; parapsychology; psychosocial influences; spiritualistic views; sub-conscious material; social situation; UFO experience; UFO symptomatology; visions; witness-centered UFO investigation.

#### INTRODUCTION

"Thee are very much aware of the fact that the answer to many of these questions that thee ask must transcend the information that's at hand. For if the information at hand were such that thee would know the answer, thee would not ask the question. So thee are on the frontier, my friend, and it is a point of challenge" (2).

"In the meantime, we must satisfy ourselves by studying UFO reports, not UFOs. Reports are made by people and

people are often mistaken about what they observe... The witnesses I interviewed could have been lying, could have been insane, or could have been hallucinating collectively - but I do not think so" (18).

The basic question underlying meaningful UFO investigations is SCHÖNHERR's "question of reality" (31). Will it ever be possible to document the transitory phenomenon with instrumentation "in the right place at the right time"? Many details about UFO witnesses "lend a subjective reality to their UFO experience", but "The question we must puzzle over is simply this: What level of objective reality?" (18). In this regard HYNEX remarks: "My experience with UFOs is secondhand, observed entirely through the eyes of others" (17). If you ask a police investigator how he looks at case reports he will respond: "I first use my eyes to study the reporter. I will refuse to accept reports of people without that."

The "police approach", contrary to the "acceptance at face value" of UFO data, yields two levels of reality - the psychosocial reality of the reporter which can be checked after the incident and the subjective reality of the witnessed incident. The latter roots in the psychosocial context and is shaped by it.

#### MATERIAL AND METHODS

Over 100 Austrian field investigations including two so-called "local flap" studies done in the traditional, phenomenologically-oriented way (6) have left us with the impression that the standard investigation procedure is far from what is desirable. GRATAN-GUINNESS is right with his complaint: "Much information may be being lost because ufologists are not asking UFO witnesses relevant questions, or carrying out appropriate procedures. ...



Fig. 1  
Francisco de Goya  
*"The Sleep of Reason Produces Monsters"*  
from *"Los Caprichos"*, No. 43  
Amsterdam, Rijksmuseum - Photo: C.Richartz

the interview of witnesses is regarded only as a search for information and opinions: no attempt is made to recreate the possible psychic state of the mind of the witness" (11). IZZO has articulated the same point in his "State of Art" for 1977: "Very few students, however, ponder over the respective weight of roles played by the percipient and the perceived. ...the bearer of our information, the true independent variable in the UFO problem, the witness, did not arouse a similar attention (as the perceived things - E.B.). The UFO is generally a source of profit whereas the percipient is not." (19).

### Witness-centered investigation

Both for European and Australian cases (1,6,16,24) the percentage of single witness events lies close to 50% or even higher. HYNEK suggested rating a single witness event automatically lower than a two or multiple witness case (17). It is a valid idea to try to get several independent observation reports and compare them. However, as BLAKE has pointed out, this is not possible because "unless a multiple witness sighting involves independent witnesses it is a social situation... The fact that most multiple witness sightings (about 97% - E.B.) are social situations deserves as much attention as the contents of the report" (9).

Whereas few observation conditions are no social situations, all field investigations are. The excellent book of WATZLAWICK illustrates the dependency of what we call "reality" on human communication and should be must reading for UFO investigating scientists (42).

To neglect the psychosocial dimension of the reports and concentrate on UFO phenomenology alone leads one out onto thin ice (Figure 1). Thus, we modified our field investigation procedures towards witness-centered case

studies. After the routine checks on conventional explanations have run without result, our attention is centered fully on the witness(es):

On May 29, 1977, at 0030 CET, a radio mechanic apprentice lying in bed at his home at Lower Austria, with TV set off after a local power black out at 2330 was startled to see a large "hollow globe" 50 centimeters across made up of "red bars" inside his room. The witness, suspecting a fire, jumped out of bed and hit the object with his leg. It dimmed gradually "into nothing". A traditional investigation obtained site measurements and found no traces. A witness-centered investigation at Vienna's Medical School for Psychiatry involved psychological tests and an electroencephalogram. The former showed a normal intelligence and memory, but a somewhat abnormal personality profile. An EEG recording with a 16 channel polygraph with hyperventilation and photostimulation was disrhythmic with low theta-activity on both sides of the anterior brain areas, but without epileptiform signs. We cannot be sure that the case happened as the witness claims it did, but it was not a simple psychotic product (7).

Another investigation on an alleged close encounter northeast of Vienna used a full clinical exploration of the witness conducted in the same laboratory in December 1979. It disintegrated the case completely revealing an emotionally disturbed personality with primitive neurotic repression mechanisms ranging as far as deliberate lies. The witness was working as an insurance agent. It was concluded by our team that a descending airliner with landing lights together with an abnormal personality explained the case, which is still unpublished.

At the time this revised UPIAR contribution was finished, we were conducting a pilot study with 10 witness-centered investigations in the Vienna area under financial support

of the Board of Education.

## RESULTS

"Mankind is not disturbed by things themselves, but by opinions of things," says EPIKTET in chapter 5 of his "encheiridion", a handbook on stoical ethics. Compared to the study of alleged physical evidence and technical aspects based on certain opinions, the psychosocial dimension of UFO phenomena has received only marginal interest until 1977.

A summary of results is given by SPRINKLE (36): People who study UFOs show personal integrity; witnesses of UFO landings compared with the rest of the U.S. population do not show deviations in age, sex, occupation and activity; psychiatric case studies by SCHWARZ did not uncover psychopathological symptoms in UFO witnesses (35) and the latter claimed that no UFO-induced paranoia has been observed in clinical psychiatry (34).

On the other hand, WALKER in the 1968 U.S. Congress Hearings presented a case study of an alcoholic UFO-shaped hallucination by a witness and a detailed routine for medical, neurophtalmologic, neurological and psychiatric witness examinations (40).

In 1970, SCHÖNHERR speculated about hallucinatory elements as follows: "Hallucinations are a side effect caused by the conditions (force field) in the vicinity of the UFO... in such a way that subconscious or unconscious images may reach the centre of perception, and become indistinguishable from a real experience" (30).

Cases of paranoid episodes involving UFO researchers have been published in book form (BENDER, KEEL). Only in 1959, Hans BENDER, Western Germany's leading parapsychologist, remarked that "...the UFO phenomena show some

similarities to controversial paranormal appearances, especially to the physical ones, i.e. the poltergeist. One is tempted to speak of a spook in the sky.." (4). Even if we suppose the UFO as an object did not show up in SCHWARZ' investigations (contrary to the fundamental work of JUNG (20) ), the inability of the former author to detect psychopathological symptomatology is striking.

For example RAYNES and FICKETT write on the Trip Pond, Maine, case:

"...on several occasions saw what appeared to be white snow flakes coming down around them and overhead black cubes and spheres flying in the direction of the pond, while silver spheres whizzed in all directions. W.alone witnessed a red face-like outline as well as what looked like the beak of a giant bird that flew across the sky and dived into the pond. On the night of October 27, P. was watching television in the living room of Mrs.W.'s home when he saw a black cube-shaped object 'tumbling' in the air. It seemed to disappear through a wall. A few minutes later what looked like 'golden wires' appeared over the television set..."

Wires, cubes, spheres, snowflakes are classical elementary hallucinations of the sense of sight. SCHWARZ, in his comment on the case, asks: "Was this reality, illusion, or hallucinations?" (35). If this effect has been a pathological one, then we have hundreds of "UFO witnesses" around the world in psychiatric hospitals. On the other side, if a senior psychiatrist overlooks psychiatric symptoms caused by a UFO experience, something is wrong with the epistemology of UFO research.

From a psychiatric viewpoint, the classification of "strangeness" (17) loses its scientific value. Hallucinative pictures like the Trip Pond affair rate high on the "strangeness" scale by definition, since they are vivid intrapsychic pictures, not tied to logic. However, the "question of reality" is something else.

Polygraph examinations and hypnotic regressions have been

applied to CE III witnesses and have yielded strong emotional disturbances associated with the reports and an equally strong belief of the witnesses in the reality of what they saw. According to JASPERS, high subjective evidence for its reality is a constitutional factor for hallucinations. Internal consistency of a report or a series of reports is not necessarily a valid criterion for assessing its objective reality, i.e. being not delusional, in psychiatry. "Hearing, sight, touch, smell - everyone of those senses furnished me with false data for my reasoning," a healed paranoid is quoted by THALMAR (37). Or, as ARNOLD expressed it: "We can only understand the problem of hallucinations when we realize that the 'normal, objective' world has the same subjective perceptive value as the hallucinated, for both are equal psychic appearances..." (3).

LAWSON's hypnotic sessions with "imaginary abductees" (21) have revealed structural parallels not only between "real" and hypnotically induced "abductions" but also with other altered states of mind (hallucinogenous drugs, "death" narratives etc.). It seems, he concluded, that the human brain reacts in a similar way regardless of the hallucinative stimulus.

The unconscious is not the factual reporter technically trained people hope it could be. LA TOURETTE gives a cynical, but true picture of "demons" "unearthed" in hypnosis: "Who has committed the crime does not have claws nor a tail nor horn and need not come from hell. Should I add especially that the victim is always the hypnotized and the devil the hypnotist?" (22). It seems this 1894 contribution was forgotten later on, unfortunately.

HAINES, author of two psychologically orientated books on UFOs and their eye witnesses (14,15) has developed a special UFO drawing procedure and found upon its

application "that there are not any readily discernable differences between the eye witnesses and the non eye witnesses UFO drawing... This does not prove that the two participant groups come from the same population sample or that all UFO witnesses may be merely portraying (through their drawing) a commonly held social stereotype image of what UFOs are supposed to look like, (but) the evidence could be interpreted this way" (13). Without data about the drawer, fiction and facts are likely to mix.

RIPAT presents an "induced dream hypothesis" for CE III witness reports (26). By interfering with the witnesses' brain a "LSD-like experience" is induced, producing the bizarre elements reported by the person involved.

Experimental studies of KLÜVER and SIEGEL found similar hallucinated shapes for different exogenic reactions, including electric stimulation of the brain: Bars, filigranes, honeycombs, chess boards, spider webs, tunnels, funnels, corridors, cones, vessels and spirals with intensive colors and symmetrical arrangements (39). Bars, cones, spirals and other symmetric forms with "psychedelic colors" were reported by a Graz, Austria, "local flap" witness to us.

## DISCUSSION

BESSLER has pointed out the typical appearance of "phantom ships":

"Nearly always...phantom ships are seen suddenly and at full size, apparently approaching from the vicinity and disappearing equal suddenly after a few seconds, scarcely minutes without moving away... Their manoevers challenge all laws of physics...like a picture with wrong perspective. ..In relation to its presumable distance it is much too large and even if every detail, every yard, is visible, it appears flat, picture-like and unspatial..." (8).

In his classical work, TYRRELL remarks that "visible

apparitions behave as a rule...with regard to the lighting of the scene, the distance of the percipient, and the presence of intervening objects, exactly as any material person would do" (38).

Psychiatric symptomatology bridges over the difficulty. There is more than one optical hallucination type. For instance, hallucinated persons may be elevated, on the ground, transparent or opaque.

GUERIN has stated flatly "Psychiatry, which knows nothing whatsoever about the symptomatology of UFOs..." (12). He is a physicist and, it seems, knows little whatsoever about psychiatry. He quotes WALTER who assumed that "the description of UFOs don't obey the laws which psychoanalysis has proposed to cover material produced from the unconscious...but (the UFOs) display a very large number of purely physical features of no great symbolical importance." Both authors overlook the fact that the unconscious is -fortunately for technicians- not limited to producing symbolic material. It works creatively giving rise to solutions to problems by "inspiration". The sudden perceptive recognition of certain (i.e. technical) Gestalt features is no conscious process itself, as is seen in laboratory experiments and by the psychopathology of recognition, e.g. the "déjà vu".

The author's contacts with several national groups have shown a rising tendency to view UFOs as something psychic, parapsychological, and dissatisfaction with physical hypotheses. SPRINKLE puts it the following way:

"However, the paradox of UFO evidence suggests that UFO investigators may continued to be frustrated in their attempts to 'prove' the existence of flying saucers..." (36). Phrases like "programmed non-evidence", "Trojan Horse" or "deliberate deception by transspatial creatures" are probably symbolic expressions of the

despair over their phenomenologically-based odyssey.

BRAND-SCHNEIDER of MUFON-CES give details on a Rorschach test and a "hypnotic regression" done with one of the two witnesses of a CE III at Langenargen, Bavaria. Neurotic problems and an observation trauma were indicated. The hypnotic session details were rated hallucinatory by MUFON-CES after consultation by a psychiatrist. Structural features of the "beings" correspond with the frog Kermit of the popular "Muppets Show" on TV. SCHNEIDER compiled a number of contributions about effects of electromagnetic fields on the brain and hallucinatory components in UFO reports. Cases are reviewed under such headings as "hypnagogic imagery", "delusional hallucinations", etc.(23).

*Classification should be reserved to those cases where professionally administered psychiatric exploration and/or tests are available.*

For instance, a depression with negative effects on mood and vegetative functions is likely to be observed by average ufologists, whereas a hypomanic state would be rated "good health" by the non-professionals. As a first step in field investigations we recommend asking relatives who are not involved in the UFO sighting whether the mental state of the witness has shown any alterations before, during and/or after the UFO experience. Nevertheless, the best thing to do in "stranger" cases would be to conduct a full psychiatric exploration instead of dilettante labelling.

### The "mirror effect"

The presence of hallucinatory components in many UFO experiences is suggested by a number of circumstances. Mythologically orientated UFO hypotheses have tried to integrate aberrant details on the ground of a superior intelligence, a "deus ex machina" that makes virtually everything possible. This has led into a "circulus

vitiosus" away from scientific methodology. Behavioral scientists have begun to demonstrate now that they can study the "dark side" of the UFO with their tools. Although physical trace cases and other data, such as radar returns, furnish us with a physical component, the anecdotal material of the witness' reports is largely responsible for the social impact of the UFO theme. But what can be done with the old reports where psychosocial data are missing or spurious?

The author has hypothesized together with SCHÖNEERR that psychic elements, thoughts, wishes, experiences and models of the witness as well as shapes of his everyday surroundings existing in his memory before the encounter may flow into the UFO experience to form parts of the phenomenal details. We called this "the mirror effect". It is confirmed by the "imaginary UFO encounter" experiences of LAWSON (21) and HAINES (13). SCHALLENBERG has shown similar processes in a 20th Century case study on European religious visions and their witnesses (28).

On the cultural-mythological dependence of hallucinatory material a case published by SEITE may be of interest: A member of the Brazilian Waika indian tribe who had been baptized and schooled by missionaries took part in drug rites of his tribe to contact the "haeculi", i.e. ghosts of their ancestors. Instead of "haeculi" he saw the angels of his Christian education (29).

A most interesting, unpublished evaluation by ARNOLD has covered the interpretation spectrum of hallucinated body sensations by average intelligent schizophrenic patients at Vienna from 1880 until 1980. He arrived at the conclusion that a "sufficient explanation" for the hallucinated strange sensations had to be always a physical borderline phenomenon: In 1880 patients complained of "electricity", in 1904 of "Marconi waves", later on of "radio and radar waves" (1946).

The interpretation of the effects as "X-rays" dropped proportional to the more frequent use of X-ray equipment by Vienna doctors. In 1954, the first "UFO ray attack" was reported by a patient - it was the year of the "Austrian wave". Then, "nuclear spirals and rays" appeared. This, besides, is a parallel to the "UFO pattern" evolution from the "airships" to "ghost fliers", "ghost rockets", "flying saucers", "spaceships" and "paranormal appearances".

One must not forget the discovery of FREUD that it is the repressed material originating in the subconscious or unconscious which will have the greatest pathogenetic influence, in the UFO case as hallucination stimulator and modulator. Indeed, one cannot expect that this sort of data will reveal itself automatically in technical case studies. Consequently there are rather few cases in the older literature where the hallucinatory stimulus is manifest by chance. SCHÖNHERR quotes some of them in his recent contribution to UPIAR (32). In the following, three Austrian examples of the "mirror effect" are given:

August/September 1955, Mr.W.: The witness claims he encountered a landed object near Arbesthal, Lower Austria, while driving through the woods on his motorcycle. He noticed a ramp and door and drove right inside at full speed. Inside he talked with 5 or 6 "occupants", giving them a detailed description of social problems on earth and how they could be changed. "The answer of my discussion partners was that I...had to be the leader in such an action whereby they broke out in tears when I disputed with them too violently." In his report Mr.W. gives a short personal biography indicating he had had problems under the Nazi regime, was not employed after the war and still feels being persecuted by Nazi agents (41).

It is interesting to notice that the central problem of his life, social isolation and paranoia, re-shaped into a glorious role in his alleged encounter, where "people from heaven" cry tears about his fate. The report was rated a delusional product of an abnormal personality by psychiatric expert, Professor Dr.O.H.Arnold, Vienna's Psychiatric Medical School.

January 1975, Josef P.: At Traunstein, Lower Austria, an old man described a number of "sky clocks". He saw them as

enormous objects with multicolored clockhands appearing and disappearing in the sky at dusk. After some time we heard of his heavy drinking and of "ghost" observations he had made in his room. Observing the rising Jupiter with us he did not see a point of light but a "clock" plus "umbrella" and "a worker with broom" on top in his alcoholic hallucinosis. A pensioned sacristan, with the church tower and its clockhands in his field of vision from the porch, he had described the phenomena's clockhands in positions telling the correct time of his observations (5).

July 11, 1979, Mrs.M.: An old lady reported "Skylab" in a lit-up cloud and "four bright balls moving past" to the southwest of Preßbaum, Lower Austria, at 0300 CET. She had been waking up at this early hour (sudden wake-up between 00 and 06 CET is a typical Austrian pattern). The central object had the dark shape of "Skylab" and a huge size. The case occurred within 24 hours before the expected reentry of Skylab parts and the shape was in all mass media with strong, negative emotions. At 0300 in the morning, the moon was behind a broken cloud cover in the southern sky. Twilight and mental state were ideal for an illusion widening into hallucinatory details.

Another indication for the existence of the "mirror effect" is the "recognition" of certain object features by the witness during a second observation in a different place. A witness watching three red, overlapping globes associated with a deep roaring sound from her Hollabrunn home in August 1972 remarked in our 1975 investigation she had seen "precisely the same object" again near Güssing, Burgenland, in February 1973. The 1972 sound had been the same as with an earthquake she witnessed at Neunkirchen in April 1972. The connection between two alleged observations of this kind lies not in the surroundings or the phenomenon but in the witness.

For witnesses with higher than average intelligence, the field investigator should ask cautiously: What object from everyday life resembles the thing you have seen? Does this resemblance have a special, even absurd, meaning to you? "Mirror effect" questions should not be posed straight, but should act as association stimuli, i.e. yield unconscious material in an indirect way.

## Psychosocial variables

UFO reports are dependent on psychosocial variables. Acceptance or refusal of the reports by our society is a function of culture and technology, as pointed out by WESTRUM (43). The existing gap between culture and technology has provoked a paradox situation: Bizarre UFO reports are refused by scientific authorities, the opinion leaders of technology, but are simultaneously accepted by many merely because they wish to accept them... Why is this possible? We know, or rather a technical "elite" upon which we rely knows a variety of physical theories and their practical applications. Although they have helped to make (western) life more easy, the physical approach cannot solve central human problems. With a rising standard of living dissatisfaction with this technical "inability" often leads to anti-scientific, occult movements. What paralyzes "UFology" is nothing more than the old conflict spiritualism versus animism encountered in parapsychology long ago which has no scientific solution. Belief in a supernatural intelligence cannot be "proved" or "disproved" in terms of modern science which is based on a different paradigm. To say it polemical, it seems to us that the "new age of darkness", the "new regression in human thought" UFO spiritualists like COLEMAN, CLARK, GUERIN, KEEL, MICHEL, VALLEE and others fear from UFO manipulation in our world is rather a projection of their own fearful way of thinking into our restless reality.

## CONCLUSION

*We don't need a "UFO intelligence" to enter a "new dark age": our own "ufological" is enough for the purpose.*  
We, human beings with unconscious feelings and wishes, are the dark side of the UFO mystery. The more we learn about

ourselves, the more we will realize about the true meaning of what goes under the terminus UFO.

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## LA COTE OBSCURE DES OVNIS

A la suite de l'examen de 30 années de publications sur les OVNI et de l'étude sur le terrain de cent rapports autrichiens d'OVNI, L. SCHÖNHERR et E. BERGER ont constaté l'existence d'une "face obscure" dans les expériences OVNI, c'est-à-dire d'un champ de force d'influences psychosociales et pathologiques. Dans le présent article, E. BERGER montre comment ces influences peuvent être retrouvées dans d'anciens cas publiés et étudiées expérimentalement par la psychologie clinique et la psychiatrie pour les faits récents. La détection de la "face obscure" devrait aboutir à une nouvelle technique d'enquête, centrée sur le témoin, particulièrement dans le cas des "rencontres rapprochées", et à l'adoption d'une attitude scientifique différente à l'égard de l'ensemble de la phénoménologie OVNI. Des textes présentant des points de vue sur la "face obscure" sont passés en revue. Les données obtenues dans les sciences du comportement viennent à l'appui de l'opinion de l'auteur selon laquelle le problème que posent les OVNI est lié avant tout à "l'autoportrait" de l'homme de notre temps, c'est-à-dire au degré de connaissance à base scientifique que le chercheur dans le domaine des OVNI a de lui-même et du témoin. L'hypothèse est avancée que les progrès des disciplines psychosociales éclaireront progressivement la "face obscure" des OVNI, si on ne fait pas de réductions a priori.

Traduit par Jacques Scornaux

## DIE DUNKLE SEITE DER UFOs

Beim Studium der UFO-Literatur der vergangenen dreißig Jahre und bei der Felduntersuchung von etwa hundert österreichischen UFO-Berichten, haben die Autoren Luis Schönherr und Ernst Berger gewisse psychosoziale und psychopathologische Einflüsse festgestellt. In dieser Arbeit zeigt Berger an Hand von Fallbeispielen, wie diese Einflüsse in älteren, publizierten Berichten nachgewiesen werden können und wie man sie in UFO-Ereignissen jüngerer Datums mit den Methoden der klinischen Psychologie und Psychiatrie untersuchen kann. Die Aufdeckung derartiger Einflüsse sollte zu einer neuen Untersuchungsmethodik führen, bei der der Zeuge des Phänomens im Mit-

telpunkt steht. Diese Methode wäre insbesondere auf sog. 'Close Encounters' anzuwenden, also jene Fälle, in denen die Entfernung zwischen Zeuge und UFO sehr gering ist, wobei die Wissenschaft der gesamten UFO-Phänomenologie gegenüber eine andere Stellung als bisher einnehmen würde. Weiters wird eine Übersicht über andere Arbeiten geboten, in denen die oben erwähnten Einflüsse ebenfalls diskutiert werden. Das bisher von der Verhaltenswissenschaft erarbeitete Material stützt die Auffassung des Autors, wonach das UFO-Problem in hohem Maße mit dem menschlichen Selbstbild in unserer Zeit zusammenhängt. Dabei wird unter 'Selbstbild' das Ausmaß der wissenschaftlich gesicherten Erkenntnis verstanden, das der UFO-Forscher sowohl von sich selbst als auch vom Zeugen des Phänomens hat. Es wird erwartet, daß die Fortschritte in den Sozialwissenschaften und in der Medizin diesen dunklen Bereich mit der Zeit doch etwas aufhellen werden, soferne man willkürliche a priori Einschränkungen vermeidet.

Uebersetzung von Adolf Schneider

## IL LATO OSCURO DEGLI UFO

Esaminando 30 anni di letteratura UFO e studiando 100 rapporti UFO Austriaci, Luis Schonherr ed Alexander Keul hanno trovato un "lato oscuro", cioè un campo di forza di influenze psicosociali e patologiche nelle esperienze UFO. In questo scritto, quanto detto mostra come di tali influenze possano esistere nei vecchi casi pubblicati e come esse possano essere studiate sperimentalmente negli eventi recenti per mezzo della psicologia e della psichiatria clinica. La scoperta del "lato oscuro" si risolverebbe in una nuova tecnica di investigazione centrata sul testimone, particolarmente per gli "incontri ravvicinati" e mediante l'applicazione di un atteggiamento scientifico differente nei riguardi dell'intera fenomenologia UFO. Viene fornito un riesame di scritti che includono punti di vista relativi al "lato oscuro". Il materiale prodotto nelle scienze

comportamentistiche fornisce un supporto all'opinione dell'Autore, secondo la quale il problema UFO è collegato soprattutto al "comportamento umano" del nostro tempo, che è il grado di consapevolezza, su basi scientifiche, che il ricercatore UFO ha di se stesso e del testimone. Si propone l'ipotesi che il progresso nelle discipline psicosociali renderà gradualmente più chiaro il "lato oscuro" dell'UFO, se non si faranno delle riduzioni a priori.

Traduzione di Rosalba Viano

### EL LADO OSCURO DE LOS OVNIS

Revisando 30 años de literatura OVNI y estudiando sobre el terreno 100 informes OVNI de Austria, Luis Schönherr y Ernest Berger han descubierto un "lado oscuro", esto es, un campo de fuerza de influencias psicosociales y patológicas en las experiencias OVNI. En este trabajo, el autor muestra como tales influencias pueden hallarse tanto en casos antiguos publicados, como en sucesos recientes, estudiados experimentalmente por medio de Psicología y Psiquiatría clínicas. La detección de este "lado oscuro" motiva una nueva técnica de investigación, particularmente para casos de "encuentros cercanos", centrada en el testigo, a través de la aplicación de una actitud científica diferente hacia toda la fenomenología OVNI.

Se pasa también revista a aquellos otros trabajos que siguen el mismo punto de vista expresado por el autor. El material generado por las ciencias del comportamiento apoya la opinión del autor, por la que el problema OVNI está primordialmente ligado al "autoretrato humano" de nuestro tiempo, que es el grado de concienciación científica que el investigador OVNI tiene de sí mismo y del testigo. Se adelanta la hipótesis de que el progreso en las disciplinas psicosociales iluminará gradualmente este "lado oscuro" del OVNI, a menos de que se hagan reducciones a priori.

Traducción por V.-J. Ballester Olmos

Alexander G. Keul (Ernst Berger) has announced that his MUFON liaison ends with June 1981 and he therefore sees no reason anymore to use his pseudonym in cooperation with serious-minded people.



# PERCIPIENT - DEPENDENT COMPONENTS IN UFO EXPERIENCES

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Received March 10, 1980

The entities looked how I  
wanted them to look. (UFO percipient)

You mean you would like to  
use this phenomenon, say, to  
produce an image of Christ  
over the Kremlin ?  
(Scientist during Blue Book  
briefing session)

## ABSTRACT

This paper demonstrates that in the general UFO literature cases can be found which display details, that are strangely related to the percipient's memory, his psychic and physical situation.

I have called them 'percipient-dependent components' abbreviated 'PDCs'. It is recommended that PDCs found in UFO experiences should be considered as essential, integral parts of the phenomenon and not as random, in

the final analysis non-significant distortions.

Consequently a working hypothesis concerning the inherent dualistic nature of the UFO phenomenon is proposed. Finally the perception structure of and a possible primary cause for UFO experiences are discussed from various aspects.

### Key-Words

Apparitions	Perception Structure
Extra-Dimensional Phenom.	Percipient-Dependent Component
Extra-Sensory Perception	UFO Definition
Hallucination	UFO Experience
Ideoplasty	Working Hypothesis
Memory Pattern	Reality
Parallel Space	Syntrometry

### INTRODUCTION

In the phenomenology of UFO experiences there are a considerable number of details in which percipient-dependent components (PDCs) as defined in the foregoing section must be suspected.

One of them for example is the wide diversity in size, appearance, dress and behaviour of the so called UFO occupants, as well as the biological impossibility of some of those humanoid creatures.

If we are perhaps still prepared to put up with beings that have webbed feet, no nose or a jerky movement, it becomes increasingly difficult to accept luminous figures unipeds and single-eyed freaks or hairy monsters engaged in pointless or nightmare-like activities.

Strictly speaking however within the framework of the extraterrestrial hypothesis it can always be argued that we know virtually nothing about the life forms in other parts of the universe and therefore everything may be possible.

The formal weakness of this sort of reasoning clearly shows how little the extraterrestrial intelligence hypothesis can contribute to an understanding of the process, the mechanics of the UFO experience.

In this paper a different approach has been chosen. Instead of ascribing all the inexplicable absurdities found in UFO experiences to a hypothetical non-human intelligence it has been tried to find out, whether there are cases with demonstrable elements of human intelligence (PDCs) in their phenomenology.

## MATERIAL AND METHODS

A survey of old and recent published cases was conducted in search for data, which possibly could demonstrate the presence of PDCs in UFO experiences.

The resulting sample is a relatively small one. Yet its significance shouldn't be undervalued as will be shown in the Results section.

With respect to the symptoms indicative of the presence of PDCs, their patterns and the role played by the

percipient therein, the following tentative subdivisions are proposed:

1) PDC Symptoms

The symptoms mentioned below constitute strong evidence or can be regarded as serious indications for PDCs in a UFO experience.

11) Identification of Memory Patterns

This means the identification of statistically significant details (particularly visual ones) of the experience with images or patterns the witness has already had stored in his memory before the UFO experience took place.

At first sight such an attempt seems to be pointless considering the fact, that the witnesses of UFO events invariably point out, how different their experiences were from everything they had encountered before.

Nevertheless there are cases in which the witnesses themselves have indicated by their statements that parts of the phenomenology of their UFO sightings were related to previous experiences resp. to their psychic situation.

According to prevalent concepts the human memory may be likened to a stratified storage, the different memory strata having various degrees of accessibility and individuality.

For our purpose very roughly two categories of memories will be considered:

111) Individual Memory

It stores the images and patterns the person has acquired during his individual life.

## 112) Collective Memory

In it those patterns are stored, which are the same for all individuals, independently of personal experiences as for instance JUNG's archetypes in the collective unconscious.

## 12) Physical Impossibilities

Identification of occurrences as being physically impossible although they are alleged to have taken place during the experience.

It seems that within this group only truly hallucinatory experiences can be identified at all by a judgement about the physical reality or non-reality of the alleged event. This may be difficult once we are confronted with a situation, that renders useless all our everyday practical experience.

If a witness claims that he did experience a levitation while he was near a UFO we cannot without any hesitation classify this as a hallucination, in spite of the fact that in psychopathology such things are considered as subjective experiences.

If we deal with a phenomenon that displays so many earmarks of something physically real too, we can not a priori exclude the possibility, that in its vicinity conditions may exist which produce physical levitations. This is just one of the countless and irritating ambiguities encountered when one tries to interpret the reported phenomenology.

On the contrary another witness may assert, that during his experience he was able to do things, he isn't able to accomplish normally, while at the same time there is no reason for the assumption, that the cause for this alleged ability depends on the presence of the UFO.

Scenarios of such a configuration offer a chance to apply our normal judgement to the identification of hallucinatory components, although there is possibly no infallible diagnostic method.

13) Witness/UFO Synchronicities

Now and then synchronicities in the UFO scenario and in the psychic resp. physical state of the percipient are reported. Sometimes they are described in terms like 'telepathy', 'strange coincidence' etc.

14) Inconsistent Descriptions

Demonstrable differences in the descriptions given by different percipients which cannot be accounted for by the normal divergencies appearing in multi-witness reports of conventional events.

Theoretically such differences would conclusively prove that subjective memory patterns have been triggered during the experience. In practice it would seem to be not easy to establish statistical quantitative standards for the measurement of such differences. Conceivably existing UFO recognition tests could be adapted for this purpose. (11,16,17)

15) Extra-Sensory Perception (ESP)

ESP and other paranormal phenomena occurring during or in apparent connection with a UFO experience indicate a certain psychic predisposition on the part of the percipient and/or the ability of the primary cause, to trigger or to favour this sort of phenomena.

In any case the presence of this symptom is very suggestive of the existence of a spatial 'field' in which PDCs can be expected.

On the basis of the case histories given in this paper the reader can decide for himself which of the above categories of symptoms he is willing to consider as the most conclusive ones. Possibly their relative weight will change with future improvements in the investigation procedures and the quantitative treatment of the data.

2) PDC Patterns

Within the UFO scenario a witness may perceive

21) Visual Patterns,

which may be subdivided again in patterns that are

212) Static, i.e. images that remain immobile or

213) Dynamic, i.e. images that move or 'act' with

varying degrees of complexity and

22) Acoustic,

23) Olfactory,

24) Taste and

25) Touch Patterns.

In this paper the emphasis is definitely on visual patterns, simply because those data most likely appear in published reports (albeit still seldom!) and because they contain enough informations that reasonable conclusions can be drawn.

If a witness recognizes a complex visual pattern this fact is of course far more conclusive, say, than the statement that a UFO had left a smell like embalming fluid, (49) although there aren't many people who are familiar with this chemical and the wide variety of smells reported is more suggestive of olfactory hallucinations, than of the exhaust of some physical craft.

If UFO recognition procedures for non-visual memories were developed, they could perhaps furnish interesting data although the information density of those memories is lower than that of the visual ones. Possibly this would be compensated for by the fact that contrary to visual memories the non-visual ones are not subject to 'contamination' by low quality but high circulation comics, science fiction and UFO literature.

3) Role of Percipient

With regard to the percipient's role in the UFO scenario we may distinguish two basic situations:

31) Non-Involvement

During the UFO event the witness experiences himself as a mere observer who doesn't interfere with and isn't influenced by the scenario which he watches very much like a spectator watches a play on a stage.

32) Involvement

The witness experiences himself as a person who interferes with the UFO scenario either actively or passively. For instance he can allege, that he had spoken with or fought against ufonauts, had been the subject of a physical examination, was burned by the UFO etc.

While the first two subdivisions refer to the quality of the PDCs the latter is a sort of (very rough) quantitative scale. It may be inferred that the capacity of the unconscious in staging a PDC scenario must be the greater, the more the percipient experiences himself as being involved in the scene.

The following case histories demonstrating the presence of PDCs in UFO experiences are widely separated in time and space, the data having been collected by different investigators. This alone precludes any manipulation. It is also impossible that all those witnesses had enough knowledge of the phenomenology of the hallucination to invent these details in order to add an extravagant touch to their cases. This is the more unlikely as even the average person is usually well aware, that such things may cast doubts upon the mental sanity of a reporter as well as on the reality of the alleged event.

Therefore the presence of PDC data in a report suggests that witness, investigator and publisher were honest or at least naive enough, to present the case without any downstrokes. On the part of the witness it further means that he must have been genuinely impressed by his experience and that this very impression was the motivation to share it with others.

It is to be hoped that this paper contributes to the recognition of PDCs as integral elements of UFO experiences and that it will help to remove the prejudice that people who report psychic experiences as parts of UFO events must be regarded as 'pathological' cases.

#### CASE HISTORIES

##### Kearney, Nebraska, USA, November 5th, 1957

A grain buyer from California was inspecting some wheat fields, when he came across a UFO which stopped his car and paralysed him. Then a sliding door in the UFO opened and two men came out. The witness was permitted to visit the interior of the UFO. (23)

His account of the whole episode contains one outright and several suspected instances of PDCs. So he told, that the man with whom he spoke while he was aboard the UFO 'looked exactly like the man with whom I had watched the TV programme in the hotel hall the evening before'.

Experiences of this type are closely related to the so called Doppelgaenger phenomenon or autoscopic vision, a hallucination, in which the percipient visualizes an external image of his own person. Cases in which the object of the experience is an acquaintance or a relative are also possible and more frequent than the classic Doppelgaenger.

That the witness did report such a detail at all, shows that he made his report in good faith. If he had made up the whole story, he would certainly have been aware, that this detail could only raise doubts about his mental sanity and we should never have found such an item in his account.

A phenomenon occurring during paranormal experiences is the extension of the perception to things which couldn't have been visible to the percipient if the description of the scenario is considered. So the reporter may assert that he could perceive a spectre although it was beyond his field of vision, behind him. (46)

Sometimes the percipient later seems to be aware of such inconsistencies, in other cases he doesn't realize them. It is as if such events would consist of one part which imitates a sensory and another imitating an extra-sensory experience so to say.

The following detail in the witness' report apparently falls into this category. While he was within the UFO, he saw on one end of the interior what he took for a

TV set on a desk and two women sitting behind it. He gave a description of their dresses and stated that they wore shoes with medium-sized heels. But he couldn't have seen this, because according to his own statements the women never left their seats in his presence.

There exists also a sketch made under the witness' direction which shows the front and the sides of this desk covered so that neither legs nor feet of those women could have been visible at all.

The language used by the Kearney UFO occupants during the contact is also not without interest. If a contactee wanted to attribute a message of his own to the UFO people in order to lend more weight to it, he can for instance allege, that the message was given to him either in a language he is conversant with, mentally by telepathy or in the form of a pictorial display.

Now the witness told that the ufonauts addressed him in English, but among themselves they spoke German. It is quite plausible that an extraterrestrial crew will speak English (if we forget technical considerations for a moment) to an earthling encountered in the USA. It would also be plausible if the witness had stated, that among themselves they had used a language he couldn't understand. But why German ?

For a simple hoaxer a story like this one is completely pointless. It seems to be an unnecessary complication if we consider the whole affair in terms of fraud only. But it constitutes a very delicate detail when one knows, that being of German ancestry this contactee was still familiar with this language.

For a further test of the basic truthfulness of this witness, an analysis of his account of the departure of

the UFO is also very interesting. According to his report it first rose to about three meters where it became pitch black, at 30 meters it took on a bluish green colour and 50 meters above the ground it disappeared suddenly in a bright flash.

The cloud ceiling was at 250 meters and the witness said that the UFO disappeared long before it had reached this altitude.

For a hoaxer all this is a very strange tale. If he had wanted to account for the fact, that in case of a pure fabrication potential other observers in the vicinity naturally couldn't have seen anything, it would be quite conceivable that such a detail like that of a UFO disappearing instantly will be invented. But why then did he not 'let' his UFO disappear on the ground but at an altitude of 50 meters which in plain country means the introduction of potential other observers - resp. non-observers - who would contradict his story ?

And why did he let the UFO disappear in a conspicuous flash when he could count on the fingers, that everyone would argue, that if under those circumstances the departure hadn't been observed by others, it couldn't have been true ?

Where is the point in burdening the story with such critical details, that must appear incredible to most people ? Certainly it would have been far less risky to say that the ship disappeared on the ground or to avoid that point completely by telling that after leaving the UFO he was busy with restarting the car and so didn't observe how the UFO departed.

That the witness didn't say such things is a strong

indication that he believed sincerely in the reality of the event. And his whole behaviour afterwards also shows that he was apparently eager to learn of possible other, independent witnesses.

Moreover the UFO left physical traces in the form of imprints and an oily substance was found at the landing site. During the investigation conducted by the US Air Force it turned out that at the same time the engine of a tractor in the vicinity had stopped, allegedly because of a distributor defect.

As a detective would put it - the Kearney report is too absurd and too improbable to be a simple fabrication. It has definitely a ring of truth, in part a subjective truth perhaps in which PDCs can be identified.

In the late fifties, the US Air Force evaluated the Kearney incident as 'hoax and engine failure' (10) and so did many UFO researchers. Certain developments after alleged subsequent contacts seemed to support this view.

In 1960 the Kearney witness claimed openly that during one of those contacts he was taken aboard a UFO for a trip over the Soviet Union. There the ufonauts allegedly showed him an area of 4.000 square kilometres which had been devastated by a nuclear explosion. As a result of this and other seemingly extravagant claims the contactee met with disbelief and mockery even among most ardent UFO enthusiasts. (31,34)

The Kearney case was long forgotten when sixteen years later first hints about an alleged nuclear disaster in the Soviet Union reached the press. And in 1979 about the time of the accident in the nuclear plant at Harrisburg it turned out, that a nuclear explosion actually

had occurred in a waste depot in the Sverdlovsk region in the USSR in winter 1957/58. (26)

Allegedly US intelligence knew of this explosion already in 1959. But the information was kept secret, presumably because of its predictable adverse influence on the public's attitude towards the American nuclear power programmes. It is highly improbable, that a simple grain buyer should have had access to top secret information of this kind, the more so as it was claimed by him, that 'one of Russia's bombs fell back on her own territory'. Not realizing the correct cause, he had clearly stated that the explosion was not the result of a controlled test. Some remarkable 'coincidences' in the Kearney case have already been discussed elsewhere. (41) To add still another one would stress the law of probability considerably. Therefore we are left with two 'explanations': The spiritualistic one as given by the witness himself, and the animistic interpretation, which would mean that it was a case of spatial clairvoyance induced by and/or dressed in a UFO episode.

Itaperuna, Rio de Janeiro, Brazil, November 17th, 1971

From September 22nd to December 19th, 1971 a typewriter mechanic had several encounters with UFOs and their alleged occupants in the region of Itaperuna. (2) His first encounter began, when he was followed by a luminous body which circled his car before it left. He drove on to Tombos, where he arrived in a state of considerable fear and reported his experience at the police station. Later in that night, things came to a climax when he suffered an abduction experience with lasting physical effects. On November 17th during a third contact he was aboard a

UFO and had to undergo what looked like a physical examination to him. After this he was shown two panels with pictures. The witness interpreted the one of them as an atomic explosion while on the other panel he recognized a plan 'resembling the plan of the town of Itaperuna' as he had seen one at the police station of Tombos.

It is obvious that we have here a nice example of a PDC. And the connection of the plan of Itaperuna with the picture of an atomic explosion looks very much like a symbolic hallucinatory expression of the witness' unconscious fears.

What makes this case specifically interesting is the fact, that throughout the time in question the witness was accompanied by a friend. This friend gave a completely different account of what had happened. According to him his colleague became very nervous while they drove in the typewriter mechanic's car and he spoke of a flying saucer accompanying them although there was only a bus behind the car.

Shortly thereafter their Volkswagen slowed down, stopped and now the friend discovered, that the typewriter mechanic was no longer on his seat while the door on his side was open. He found him on the ground behind the car in a semi-conscious state and managed to get him on to his feet, leaning him against a mudguard.

It seems that this moment and the instant when the car began to slow down are the only reasonable checkpoints, the interface so to say, by which this UFO experience is linked with what we usually call 'reality'. At first sight it looks as if the friend's account could be relied on as that of a real experience, in which case the

mechanic would have had a sort of dream or a trance-like experience. In this respect I have already once mentioned that very complex and logically consistent scenarios may be passed through in dreams within an incredibly short lapse of time and how they can even be significantly related to real events in the dreamer's environment. (40)

Considering however the circumstances the friend's account doesn't fulfill the requirements of a report pertaining to a real experience. For instance he could never explain how the door was opened and how it could have happened that the mechanic fell out of the car. On the other side the mechanic stated, that he had pointed out to the friend that the car was slowing down, but he had replied, that he was drowsy and wanted to sleep.

Now this drowsiness at the onset of a UFO experience is well known in ufology. It looks very much as if the friend too had already responded to that mysterious primary cause we call 'UFO' and perhaps even more readily than the typewriter mechanic did. Maybe that both, the bus and the saucer were only hallucinations.

This is one of those cases in which the unbiased researcher begins to doubt the validity of all the data gathered during UFO experiences as a useful means for the 'subjectively correct perception of the objective facts' as the text book definition for 'truth' reads. On no account is the friend's report the yardstick which we could use to measure the degree of reality in the UFO experience of the typewriter mechanic.

Sydney/Melbourne, Australia, August 24th, 1967

At about 5 p.m. a Mr. Hunter (pseudonym) was riding his motor-bicycle on the highway from Sidney to Melbourne

when he had a rather complex UFO experience with a pronounced PDC in it. (19)

First he was engulfed by a bluish-white light which came from above and blinded him so strongly, that he was forced to stop. He had to take off his driving goggles and to whip his watering eyes.

In a distance of about 30 meters he then saw a metallic looking object hovering near the ground in a clearing beside the road. While he was watching the UFO, his attention was distracted by what he thought was a passing car. He looked away towards the road but saw nothing and when he turned to the UFO again he perceived two silver-clad figures near it.

When one of them beckoned towards the observer, he became frightened, jumped on to his machine and drove away as fast as he could. He claimed to have done 100 to 120 miles per hour, 'slowing down at the corners as little as possible'. Furthermore he stated, that while driving he observed the UFO as it followed him at an altitude of 30 to 70 meters and about the same distance from the road. Allegedly Hunter tried to flag passing cars, but their drivers neither 'stopped nor appeared to see the craft'.

In view of the situation Mr. Hunter resigned and he decided to stop again. Now the UFO stopped too, changed colours from pink to a deep red, shot straight up into the air and disappeared immediately.

In this case events are alleged to have happened which can be submitted to the logic of everyday experience. These are Mr. Hunter's claims, that he drove that fast and yet was still able to

- observe the UFO following him and
- flag passing cars.

There is also the familiar pattern recurring in many a road sighting, that the drivers of passing cars do not react to signals and apparently do not see the UFO, although it is often described as a very conspicuous object that could simply not have been overlooked.

This argument is the more valid in Mr. Hunter's case because he reported, that he could hear the hum of the UFO above the noise of the engine and a motor-bike doing 100 miles per hour makes quite a noise. So Mr. Hunter's UFO must have been not only an optical but also an acoustic event. But none of the cars stopped.

It is impossible to ignore the dream-like quality of such scenarios and if we give some thought to this case it is striking, that the sequence of events doesn't develop continually. There appears a sort of 'break' in it and it is a reasonable assumption, that it was at this break, when the hallucinatory experience began.

I think here of the moment, when Mr. Hunter had thought he had heard a car, but then had seen nothing. This could mean, that not only the chase along the road, but the appearance of the UFO occupants too had been hallucinatory experiences.

It is interesting, that at the time of publication of Mr. Hunter's case the inconsistencies in this report were noted by one reader at least, who expressed his doubts in a letter, which was published by the periodical in question. This letter also shows, how important it is that the possibility of PDC data in UFO reports is always considered so that they can be recognized as such timely. If they are mistaken for simple lies or interpreted as an indication that the witness must be either a bad observer or a bad reporter, it is no wonder, when the

good is rejected together with the bad and a possibly valuable case dismissed as a whole. (28)

Finally it may be noted that acceptance of the above interpretation raises the strangeness level of the Hunter case considerably. Although the report doesn't state how far Mr. Hunter had 'driven' during the chase, it may be inferred, that the location where the event came to an end was different from where it had begun. But if the chase along the road is to be considered as a hallucination, this UFO experience must have included a so called teleportation, i.e. the paranormal transport of a physical object resp. body.

#### Hanbury, England, November 20th, 1968

The witnesses in this case were a married couple, the husband being a Yugoslav and one of their children. They were working in the scrap business and on the day in question they drove around in the area of Hanbury looking for houses that were up for sale. (9)

It was rather late in the afternoon and the light was already vanishing rapidly. Suddenly they observed many rabbits crossing the road in front of them from left to right. Then they saw a brilliantly-lit UFO rising from a field to their left. The UFO moved towards a solitary house an estimated 30 meters from the road and finally came to a stop above it.

For about five minutes the witnesses watched several humanoid silhouettes moving back and forth in a sort of lighted dome above a dark portion shaped like an inverted helmet. The observers became frightened and drove away while the phenomenon was still in sight.

The great surprise came, when witnesses and investigators

drove to the locality of the sighting. There was no house although at least one of the witnesses was sure that this was the correct place. In the Hanbury case it is telling that exactly people who had been preoccupied with the idea of buying a house, have experienced such a vision as a part of their UFO scenario.

It may be noted that in ufology like in the literature on paranormal events there are several stories about people who were unable to find again the locality of their experiences. Some of those descriptions suggest the idea that hallucinations can go very far, i.e. that not only single elements within an otherwise real environment are hallucinated but the whole scenario. (4,44,47)

There is still another item in the Hanbury case which could be related to PDCs and can be found in other UFO cases too. How often have UFO events been preceded by the appearance of animals, sometimes of a rather mysterious and elusive sort ?

In this case the rabbits came from the left, i.e. from where the UFO later appeared. Were they real rabbits, disturbed by the phenomenon or was it a case of the unconscious staging a logically consistent hallucination ?

There was a similar case in Australia in which a police car had come across a massive procession of snails in the immediate vicinity of a UFO scene. (5)

Apparently nobody had a doubt that the snails were real and the magnitude of the procession was such, that the patrol car had to stop and then to proceed with caution in order to prevent an accident. (6) But in fact this proves nothing because hallucinations can imitate reality so perfectly that a percipient doesn't recognize them as such.

In a report coming from Yugoslavia a witness described the overture to an UFO sighting as follows: (24)

"Just before we encountered the strange light, when we had reached the small town of Rasanac, I had seen a small green frog jump from somewhere onto the steering wheel. Only a moment later someone shouted to me to take care as a scorpion had appeared on the door. When I was a child I was afraid of this small creature because it is very poisonous. At that moment I stopped the car and it was then that one of the co-passengers spotted the light."

A businessman driving through a dark, rainy night along a road in the department Var, France, saw in the beam of his headlights what he described as a group of bizarre animals, a nightmarish sort of beings, with the heads of birds and covered in some sort of plumage. He stopped 150 meters further on and observed how these 'birds' were sucked up into a luminous dark blue object which hung in the air over a field. (43)

Certainly the above four instances do not constitute irrefutable evidence for PDCs. But the occasional absurdity of such patterns, the recurrence of the basic scheme in other cases justifies at least a tentative interpretation in terms of PDCs, the more so as images of animals are very frequently occurring in dreams as well as in demonstrable hallucinatory experiences.

BERGER has pointed out that some elementary forms of visual hallucinatory images can be recognized in UFO reports. (1)

Langenhoe, England, September 14th, 1965

This case is particularly interesting for the peculiar synchronicity in the UFO phenomenology and the witness'

physiology. It demonstrates this dependence in a very direct, compelling manner. Besides that there is an interesting precedent in the older literature on paranormal events.

At approx. 1 a.m. an engineer, age 29, travelling on his motorbike came across a luminous UFO which was the size of a gasometer. The engine of his bike stopped dead and the lights went out. The UFO had a flashing blue light which became so intense that it was painful and the witness noticed that it appeared to fluctuate in rhythm with his heart beat. (15)

RINGGER quoting ILLIG describes a very similar phenomenon observed in a completely different situation however. During several nights a young man, while he was in bed, perceived the tick of what seemed to be a pocket watch although there was no such watch in the room. Once this tick was witnessed by his father and the brother. But the three men couldn't locate the source of the noise, because 'it was never there where they sought for it'. It was considerably louder than the tick of an ordinary pocket watch and could still be heard over a distance of two to three meters (for a time they had the impression that the tick had its origin in the young man's body).

The young man said that the tick had the same rhythm as his pulse had. One could think here of a simple resonance effect, by which the noise of the heart beat was amplified. But then it seems to be very unlikely that the three men weren't able to identify the cause of the tick.

It must be mentioned that this occurrence was only the first of a series of others, which were in the opinion of the reporter an omen for the death of the young man, who fell a year later in World War I. (33)

Aldeburgh, England, 1916 or 1917

At about noon a women aged 30 observed a platform-like object flying at a height of 10 meters. Approximately twelve men stood around on this circular platform holding tightly on to a handrail and staring straight ahead. The platform which had a diameter of four meters first moved in the direction of the witness, then it changed it s course and finally it disappeared behind some trees or houses. The observation lasted for about five minutes. (8)

West Hampstead Viaduct, England, October 18th, 1955

An observation very similar to that made at Aldeburgh was reported by a West London clergyman. This witness was travelling by train, when he saw a slowly flying platform the size of a small bus at an altitude of about 40 meters. On it there were approximately 30 immobile, helmeted figures, some of them seated. They were looking forward like robots. The phenomenon could be observed for three or four minutes. (3)

The Aldeburgh and West Hamstead reports contain no statements concerning the psychic situation of the witnesses. It is however interesting that JUNG in his book on UFOs gives an account of a dream in which the subject saw an elliptical flying platform, manned with human figures standing around it s circumference. According to JUNG the dreamer, an academically educated lady had no relation to the UFO phenomenon. Immediately after the dream she made a painting of the scene which has been reproduced in JUNG's book. (22)

Perhaps one common denominator can be found in all three experiences - fear. In the Aldeburgh and West Hampstead

cases the witnesses were reminded of a 'German troop carrier' and their descriptions of the figures on the platforms definitely had a military touch. The dreaming lady interpreted her dream as a premonition of death, stating that while she was dreaming she 'was overcome by this vision and was shaking in this unearthly, cosmic space .....'. In his discussion of the dream JUNG himself interprets the occupant motif as a symbol for the human fear of death.

DRUFFEL has once conjectured that there may be 'mimicking' UFOs (12,13,14) and TYRRELL has long before emphasized the imitative nature of apparitions. (45)

Often invariants recurring in several observations are naively regarded as evidence for physical reality. But if identical patterns are present in the memories of all people, invariants appearing in UFO experiences do not necessarily prove their objective reality.

Oakenholt, England, July 1976

In mid-afternoon, on a sunny day a 8 years old boy saw a UFO standing on four tall legs in a field. He observed a number of occupants outside and one inside the UFO. The latter seemed to be looking on a picture on the inner wall of the craft. In the boy's opinion this picture showed a man who somewhat resembled 'the man who lived next door'. (32)

Apparently the investigators had the impression, that the dresses worn by the UFO occupants had been described by the boy as being similar to the clothing of the actors in the Star Trek TV series. During his experience the boy perceived also a rather phantastically looking 'animal' coming out from the UFO and boarding the craft again 'with

a sad expression'. In this case the presence of a PDC is quite obvious in the episode with the picture resembling a neighbour, while in the other instances PDCs can only be suspected. The detail of the picture clearly is a parallel to the UFO occupant in the Kearney case.

Temple, Oklahoma, USA, March 23rd, 1966

A Government employee from Sheppard Air Force Base saw a UFO sitting on a highway. A normal-sized human being wearing green-coloured fatigues and a mechanic's cap with the bill turned up knelt below the UFO. 'He looked just like a pure old G.I.' said the witness and stated also that he 'got the idea he had three stripes in an arch shape on his shoulder'. When the witness slammed the door of his car, the 'G.I.' crawled up a ladder and disappeared through a door in the craft. Almost at the same instant the UFO lifted off and ascended to about 17 meters. 'It didn't seem like he had time to get strapped in' the observer remarked. In about five seconds the craft was over a mile away. (25)

According to the witness there were the letters 'TL' on the craft and below them the numbers '4168' or '4768'. It is perhaps meaningful that the witness himself offered the interpretation that 'TL' could stand for 'test lab' and that he, who spent a great deal of his time in a military environment had witnessed this 'G.I.-ufonaut'.

Other UFOs with inscriptions have been reported from Provencal in Louisiana (30) and from Wolin, Poland (50) The UFO at Provencal displayed the letters 'UN' and some numbers. In the Wolin case it was alleged that it bore Russian inscriptions.

Why should an extraterrestrial craft be marked with earthly signs, why the lights of a UFO flash in rhythm with the observer's heart beat, why the picture of the witness' neighbour decorate a UFO's cockpit?

If those inscriptions had to be regarded as some sort of camouflage it would be a rather poor and ridiculous one considering the otherwise quite unusual appearance and performance of those UFOs. At Provencal the interior of the witness' car became so hot, when the UFO approached that he was forced to get out and to hide in a ditch. Shortly thereafter the car was afire.

The matter of these insignia perhaps doesn't seem to be important when considered isolated. But compared with the PDCs already discussed, it looks very much as if this feature had to be relegated to the same category.

#### Puy-de-Dome Region, France, April or May 1960

At about 2 a.m. a baker observed a UFO that had landed on an old fair ground. A small humanoid creature came down the steps of a ladder and walked towards the witness. The dwarf was wearing boots, tight-fitting trousers a greyish green buttoned jacket and a helmet. On his right side there hung what looked like the scabbard of a curved sword. He was also wearing a belt with four boxes on it which the witness saw as cartridge pouches. The dwarf paralysed him with a 'tube like a fireman's torch'. Then the creature went back and vanished inside the UFO, which rose and shot away at great speed. (27)

Again it looks as if the martial bearing of the ufonaut was related to the witness' psychological profile. The observer is described as a fearless man, who has faced many dangers in his life, a man of notable physical

strength and an ex-member of the French Air Force where he served in a special unit charged with the task of capturing enemy agents. In short a man with a strong emotional preference for the military profession. During the encounter apparently he experienced considerable aggressive emotions. 'I wanted to catch the little chap' he said.

## RESULTS

### 1) Significance

The significance of the above sample of cases cannot be judged by it's absolute size alone, because PDC data have to pass a number of very effective filters before they will appear in a published report.

### 11) Repression

It is well known in psychoanalysis that the data which will most likely induce dreams and psychic experiences like hallucinations are those which have been repressed to the lower, less accessible strata of the memory. Often it requires a considerable amount of time to ferret them out by analytical methods if they can be made conscious at all. The chance that a percipient himself is able to recognize such patterns in his UFO experience is therefore only an extremely small one.

### 12) Self-Reflection

If the witness is aware of such correlations it is very likely that he will conceal them, if he has enough time for some self-reflection. At most he will share such informations with his family confidentially. Otherwise such details will only be

reported if the witness is still upset by his experience or if he is rather ignorant of the possibility of a psychopathological interpretation.

### 13) Investigation Procedures

UFO organisations and individuals have dedicated an enormous amount of time and work to the investigation of UFO reports and this certainly deserves no light-minded criticism. But it cannot be overlooked that the motivation for all this troublesome and unpaid work often lies in the strong emotional appeal of the extraterrestrial hypothesis. In this climate and with the desire of most investigators to present 'hard fact' only for fear of being criticized as being gullible, PDC data have only a small chance to pass this filter. Hopefully this will change once the PDCs are accepted as an important clue to the understanding of the UFO phenomenon.

### 14) Semantics

The wording of reports is often ambiguous and not accurate enough. This fact is seldomly recognized by the casual reader of such reports. But if for instance one has once tried to code a great number of UFO reports from the literature for the purpose of a computer analysis, the inherent vagueness of all verbal descriptions soon becomes obvious. What does it exactly mean when the witness in the Temple case says, that 'he got the idea the ufonaut had three stripes in an arch shape on his shoulder'? Did he really see these stripes or did he only have the impression that there could have been such stripes? Or could it even mean that in retrospective he was aware that the perception of the stripes was somehow

dependent on his imagination? To say that the verbal vagueness is one of the most effective information filters is certainly no exaggeration.

It seems that the small size of the sample had to be expected as a result of the combined effects of the above filters and of the limited amount of time available for the literature survey.

## 2) Conclusions

From the above sample and other known facts already published elsewhere a number of conclusions can be drawn.

- 21) There are UFO experiences in which percipient-dependent components (PDCs) can be identified with reasonable accuracy.
- 22) The PDC phenomenology is partly related to that of psychic experiences as already known in a non-ufological context.
- 23) During UFO experiences the sensory channels cannot necessarily be considered as a reliable source of information reproducing an objective physical reality.
- 24) There exists a well documented body of physical trace cases which prove that a massive physical component must be present too. (29)
- 25) From the nocturnal lights to the occupant cases the majority of the UFO reporters has to be considered as sane, responsible people. Typically they can be defined as 'credible observers of relatively incredible things'. (20,21,42)
- 26) In the sample there is only one case in which PDCs and physical traces have been present. There is

however little doubt, that the trace cases in which UFOs, occupants etc. have actually been observed, do really belong to the same group of phenomena as the cases quoted in this paper.

- 27) Therefore it can be inferred, that every single UFO experience is dualistic in its nature - at least potentially. It consists of a psychic as well as a physical component.
- 28) As it is hardly possible that the primary cause for UFO experiences is a psychopathological factor originating in the witnesses themselves, this cause must exist independently of the percipients.

It would be a great mistake to separate cases with manifest PDCs from the totality of the UFO experiences and ignore them as a sort of inferior data. It is also not a recommendable approach to separate UFOs in psychic and physical ones. On the contrary UFO experiences containing PDCs offer us an opportunity to break up the hitherto impenetrable unity of every single case.

If we can learn how the physical and the psychic components are mutually dependent or how they participate in forming the experience this could be a step towards an understanding of the intricate mechanics of the UFO phenomenon.

### 3) Working Hypothesis

For true UFO experiences i.e. those in which the primary cause hasn't been identified as a known, conventional factor, the following working hypothesis is proposed:

- 31) The primary cause for any UFO experience is a hitherto unknown, probably physical component independent of

the witness. Its function is either that of a trigger or it is active during the whole experience.

- 32) The percipient-dependent component (PDC) is an effect caused by the percipient's response to this unknown primary cause.
- 33) It is not necessary to assume that the primary cause is the manifestation of some intelligence. On the contrary it has been shown that there are patterns to be found in UFO experiences which have their origin in the percipient.
- 34) In view of the filtering effects mentioned above and the fragmentary knowledge of the human psyche which make identification of PDCs not easy, presently nothing can be said about the true ratio of the two components.
- 35) For the time being it would seem to be a reasonable, acceptable methodology to regard all phenomena that are experienced during a UFO event as PDCs while only the lasting physical traces should be considered as the direct manifestation of the unknown primary cause.

#### 4) The UFO Definition

Trying to define such a poorly understood phenomenon seems to be a contradiction in itself. Without going that far it may be mentioned that in the present state of the art there must be more than one definition for the term 'UFO' each of them existing in its own right. The following classification may reflect the situation:

##### 41) The Phenomenalistic Definition

It defines the UFO by its phenomenology, i.e. as a

set of descriptors that must be present. HYNEK's strangeness concept for instance would fall into this category.

42) The Definition by the Degree of Investigation

The UFO is defined by the amount of investigation dedicated to a case. The International UFO Reporter for instance defines a UFO as follows: "Any anomalous aerial phenomena whose appearance and/or behavior can't be ascribed to conventional objects and effects - not only by the original witnesses, but also by analysts who possess technical qualifications the original observer may lack".

43) The Process-Oriented Definition

While the previous two categories of definitions can be regarded as filters which prevent the admission of mere noise to further research, the third defines the phenomenon for the scientific approach to the signal. In this sense, the working hypothesis proposed above can be regarded as a process-oriented definition for the UFO.

Very likely any process-oriented definition will evoke much more discussions than one belonging to the first two categories. In the following section it has been tried to anticipate some of them.

DISCUSSION

1) The Perception Structure of UFO Experiences

11) Psychic PDCs

Psychic PDCs may be defined as patterns which are fed

into the center of perception directly from the memory. If it is assumed that during an UFO event psychic PDCs are experienced together with the normal, real environment, this raises the question how the data from the sensory and the memory channels are coordinated during the event, i.e. during the construction of the UFO scenario.

Every event is experienced in a twofold manner. Once as a sequence and then also as an arrangement of various elements in space. Now it is perhaps relatively easy to accept the notion, that in the sequence of a UFO experience there are moments when the witness' perceptive system executes the 'switch-over' from the sensory channels to the data flow coming from the memory and vice versa. The Sydney/Melbourne and the Itaperuna cases may be mentioned here.

But how does it work, when hallucinatory and real perceptions are experienced simultaneously in a single scenario? During a sighting in Casa Blanca, California the percipients could see the wall of a house right through the 'body' of a ufonaut ( 7 ). This could be explained by the assumption that data from the sensory and the memory channels are superimposed and perceived as a sort of interference pattern. This situation would be somewhat comparable to the interference of two radio stations using the same frequency.

But if under otherwise identical circumstances the ufonaut is perceived as being non-transparent, by what process is only this one part of the real environment substituted by a hallucination? In the spatial presentation of the scenario where the hallucinatory image (the ufonaut) appears, the

sensory data from the visual channel must be suppressed while the memory data have to be inserted 'in the correct place' so to say.

Taking resort to the radio-analogy it is true that a strong transmitter can indeed suppress a weaker one. But the perception of a three-dimensional scene certainly is a much more complex process than the acoustic reception of an one-dimensional broadcast.

It seems that there must be what could be called a 'perception channel mixer' a neurological hardware for this type of coordination which operates on a temporal as well as on a spatial level. Particularly the latter must be a rather complex affair. Of course there remains still the question of the software which operates the perception channel mixer. Some of the inconsistencies observed in UFO scenarios could perhaps indicate that this software isn't always without any flaws.

TYRRELL who wasn't concerned with UFOs but with the 'conventional' spectres of the Victorian ghost story and their behaviour with regard to the environment, assumed that a mid-level constituent of the human personality was the coordinating factor. (48)

## 12) Physical PDCs

Although it seems to be pretty sure, that some PDCs are in fact hallucinations this cannot be stated categorically for all of them. According to the concept of ideoplasty, the human psyche may be able to create a physical reality which occupies physical space and therefore could be perceived through normal sensory channels. Occultists and spiritualists have used this hypothesis freely to explain the alleged

appearance of tangible reproductions of the bodies of the deceased during seances. Allegedly such reproductions have left imprints in wax etc. and they have been photographed too.

For ufology this would mean that PDCs could appear as objective, physical elements of a scenario although their creation is a psychic subjective matter.

To the best of my knowledge there is still no case which suggests an undeniable direct connection between a demonstrable PDC and a lasting physical trace. There are some reports of ufonauts who have allegedly left footprints. The Kearney occupant, in whose image a PDC has been identified left no physical traces. There is also no known instance of a verifiable PDC appearing on a photo.

Although the ideoplasty concept would be on a better ground in the explanation of PDCs in connection with multi-witness cases, its difficulties are not to be overlooked. Assuming for instance that the alleged ufonauts are such ideoplastic creations - who then controls their behaviour? Is it the witness' psyche or must we push this idea to its extreme by assuming that during a UFO experience the percipient is able to create (if only temporarily), living beings who act on their own accord?

### 13) Perception Structure Diagrams

In the following diagrams the boxes //1//, //2//, //3// and //4// represent the possible perception modes during a UFO experience. The diagrams and legends refer to true UFO experiences only, i.e. cases in which the primary cause remains unidentified after a thorough and competent investigation. In Fig.1

the primary cause is assumed to be physical as has been suggested in the Working Hypothesis section. Fig. 2 in which the primary cause is a psychic one has been added as the theoretically conceivable formal counterpart to Fig. 1. It seems that the idea of a primary cause of a psychic nature will only be tenable, if conclusive evidence for ideoplasty is forthcoming some day.

Considering the foregoing discussion about psychic and physical PDCs the use of termini like 'sensory-subjective' and 'psychic-objective' should no longer confuse. The reader may regard them as the semantic consequences of the fact, that the UFO phenomenon is really something from the 'edge of reality'.

#### Legend to the Perception Structure Diagrams

The numbers designate the possible perception mode syndromes.

//1// The primary cause is physical and it is perceived without any subjective falsification, i.e. the perception structure is identical with that of any conventional sensory event. (Fig. 1)

//2// The event is an ideoplastic reproduction controlled by the percipient's mind and induced by the primary cause. (Fig. 1, 2)

//3// The event is a psychic one, induced by the primary cause. With regard to it's content, this perception mode corresponds to TYRRELL's 'subjective hallucination'. But while the latter is completely endogenous, in our case an external cause is present. This cause is however not assumed to exert a direct control over the contents of the perception. (Fig.1,2)

//4// A primary psychic cause is perceived without subjective falsification, i.e. without PDCs. Possibly this perception mode is a highly hypothetical one even within parapsychological models. What has been called a 'telepathic hallucination' in parapsychology is not free from subjective elements added by the percipient. (Fig. 2)

//1,2// The event is the perception of a primary physical cause and of a physically real PDC. Physical traces may result from the primary cause as well as from the (ideoplastic) PDC. (Fig. 1)

//1,2,3// The same as above. Additionally a psychic PDC is present. (Fig. 1)

//1,3// The primary physical cause has induced a purely psychic PDC only. No traces are possible.(Fig.1)

//2,3// The event consists of physical and psychic PDCs induced by the primary cause. Traces may occur from physical PDCs. (Fig. 1, 2)

//2,4// The event is the perception of a primary psychic cause and of a physical PDC. Physical traces may result from the (ideoplastic) PDC. (Fig. 2)

//2,3,4// The same as above. Additionally a psychic PDC is present. (Fig. 2)

//3,4// The primary psychic cause has induced a psychic PDC only. (Fig. 2)

The diagrams show that the perception structure of a UFO experience could be a rather complex one. It can also be seen that the presence or non-presence of lasting physical traces doesn't permit a distinction between a physical or a psychic primary cause if the concept of ideoplasty is applicable to the phenomenon of the UFO at all.

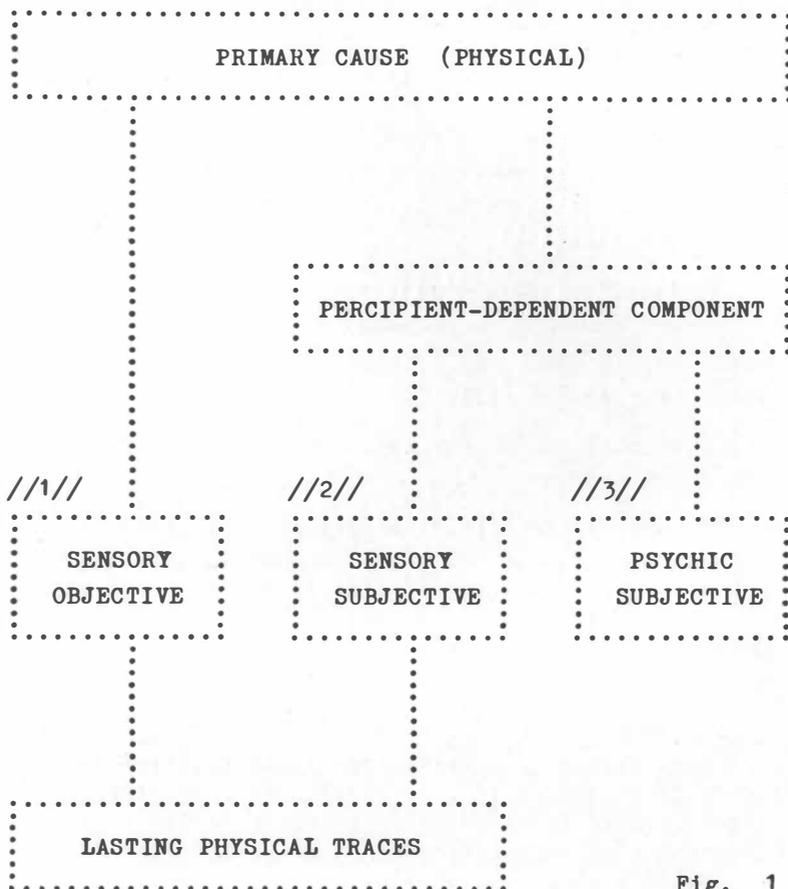


Fig. 1

If an external primary cause is absent or if it can be identified as some known factor, the explanation for the experience lies in the psychic situation of the witness and/or in the wrong interpretation of some known phenomenon. An interesting example is a case investigated by BERGER in Upper Austria (1)

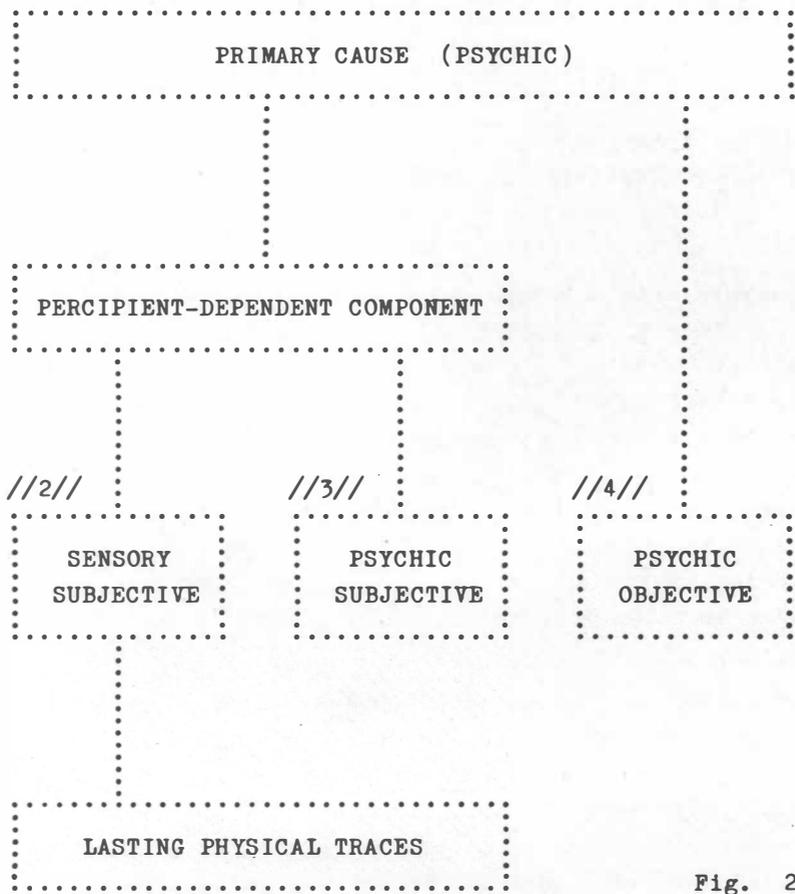


Fig. 2

in which a rising planet plus an alcoholic hallucinosis led to the vivid description of an UFO/occupant pattern not unknown in ufology.

This case also shows that the degree of strangeness in an experience doesn't necessarily depend on the nature of the primary cause but can be the result of the relative ratio between the latter and the psychic situation of the percipient.

#### 14) The Question of Reality

Normally the human brain is able to distinguish between imagination and real experience. The UFO phenomenology and the development of hallucinations indicates that during such experiences this ability is no longer present, i.e. memory and sensory data have the same perceptual level. (40)

A person with self-control, self-reflection and a general critical attitude may recognize an occasional hallucination by its absurdity for instance. But psychiatrists can tell us of other cases in which patients are struggling desperately against prolonged hallucinatory assaults, with consequences being quite uncertain. Considering the naivety with which the most hair-raising and absurd details are sometimes reported as factual it seems, that during UFO events there is no such resistance on the part of the observers.

For a time ufologists hoped that hypnotic regression could be the proper tool to distinguish between the reality or non-reality of an UFO experience. Now it is clear that perceptions of mode //1// and //4// are stored only once in the memory i.e. as a element of the UFO experience. Therefore any internal comparison is impossible and if the witness wasn't able to recognize the actual perception mode during the experience any attempt to find out this later seems to be futile.

Contrary to that PDCs, i.e. perceptions of mode //2// and //3// are stored twice in the memory. First any potential PDC must have been stored on the occasion of some normal event. When it became part of a UFO experience (a PDC) it was stored again in the memory.

Otherwise it won't be possible, that a witness could recognize a PDC as it happened in the Kearney, Itaperuna or the Oakenholt cases for instance.

Therefore it is conceivable, that some day hidden PDCs could be identified by means of an improved regression method or a psychoanalytical procedure based on free association etc., which induce the witness to 'scan' his memory for this type of redundancies, making them conscious.

But the intrinsic question of reality even seems to be a much more fundamental one. An old Chinese legend tells us of a mandarin who dreamt he was a butterfly. He dreamt the same dream night after night. After some time he was completely confused as to his true identity. Was he now a mandarin who dreamt he was a butterfly, or a butterfly dreaming of being a mandarin?

It is a disturbing thought, that on the perceptual level the only detectable difference between a hallucination and the real environment should be the continuity of the latter, while the hallucination would appear as a sort of perceptual singularity.

The systematic, conceptual and semantic difficulties which have become apparent in the discussion about the perception structure of UFO experiences are possibly not only superficial ones.

Sometimes one must get the impression that a real progress in the understanding of the UFO phenomenon will only be made, if the old idea of a material world existing independently of the observer is abandoned, i.e. if all our concepts about the so called reality and the function of consciousness therein are drastically changed.

## 2) On the Possible Nature of the Primary Cause

When I became interested in the UFO problem more than two decades ago, I soon realized, that the typical space travel model of those times couldn't contribute to an understanding of the UFO phenomenology.

In order to account for the apparently only transient physical reality of the phenomenon, its singularity in time and in space, the often reported mysterious appearance out from and the disappearance into nothing as well as the physical traces, I thought right from the start in terms of an extra-dimensional phenomenon, force field projections from higher dimensions intersecting with our space, parallel spaces and even a manipulation of the space time continuum by a sort of time machines. (35,36,37,38)

Gradually all those interpretations appeared rather as different aspects of a single primary cause, than as mutually incompatible hypotheses. This process-oriented approach (i.e. the method of deducing from the observed phenomenology the possible processes which could explain it) led to some suggestions, of which two (made in 1965 and 1970) may be cited here:

- "In terms of modern physics perhaps it would be more appropriate to say that a UFO produces a local four-dimensional deformation of its space, thereby extending itself into ours." (37)
- "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." (39)

The suggestion, that the primary cause for the UFO manifestations must be some sort of extra-dimensional phenomenon (35) is in my opinion today supported by the theory of syntrometry, a completely new concept in theoretical physics, developed by HEIM for the description of the evolution of his six-dimensional universe.

Among other things, this theory predicts structures extending in a fifth dimension with the ability to convey energy, substance and information between different areas of this universe.

If such structures would intersect with the physical space of our experience, luminous phenomena, physical traces, hallucinations and various paranormal effects could be expected. It seems even to be not impossible that the psyche of an observer within the field of intersection could create ideoplastic productions, as discussed in the section about the perception structure of the UFO experience.

Presently only the most fundamental part of HEIM's work, a unified quantitative theory of the elementary structures of matter has been published. (18) It must be emphasized, that HEIM was motivated by the great contemporary challenges of modern physics, like the unified field theory, gravitation etc. and not at all by the UFO problem. The responsibility for the proposal that the theory of syntrometry could be applied to the UFO phenomenon, rests therefore exclusively with the author of this paper.

### 3) On Speculations about Non-Human Intelligence

Aside from considerations of methodology etc. the proper recognition of PDCs is indirectly important for possible social consequences of ufology. Such a statement seems to be far-fetched at first sight and therefore a bit more must be said about this matter.

In view of the spontaneous character of the UFO phenomenon and the resulting absence of instrument data resp. repeatable experiments it is no wonder, that the interest concentrated more on the possible meaning of the phenomenon, than on its process.

Speculation can be regarded as a sort of brainstorming, that well known technique for stimulation of creativity and new ideas. It is also quite in accordance with the accepted methodology, that during this process criticism should be suspended so that no idea is suppressed, how curious it may be.

Like most ufologists I too have once speculated freely about the possibility of some non-human intelligence behind the phenomenon and whether it could be indifferent, friendly or hostile to us. For quite a time I considered the whole topic as a wonderful brain-teaser and it never occurred to me that such speculations could do any harm.

But in the last years I have become more and more uneasy about the general frame of mind created by this sort of thinking. In a world in which the careless, inhuman application of science and technology has led to an increasing threat of the very existence of the human race, the mere idea of the intervention of a non-human intelligence gives rise to rather

anthropocentric and potentially dangerous views.

The one extreme is that of a cheap escapism, often culminating in the believe, that 'cosmic brothers' are going to save us from our self-inflicted troubles.

According to the other, an intelligence behind the UFO phenomenon is eager to take advantage of the present critical situation of mankind trying to manipulate us for most sinister and evil purposes.

Ironically non of both parties seems to be aware of the very real danger, that either believe could be misused by quite earthly powers.

Although the ambiguity and absurdity apparent in the UFO phenomenology could simply indicate that we still haven't learned to formulate meaningful questions and therefore cannot expect reasonable answers, from a narrow anthropocentric viewpoint, the same fact suggests deliberate deception by some evil, non-human intelligence.

Particularly the psychic component in UFO experiences is very susceptible for interpretations in terms of the evil, the demoniacal.

In this state of mind it can easily happen, that quite imperceptibly scientific methodology will be dominated by magical thinking and self-delusion. If this process attains a collective extent a branch of knowledge could appear perfectly scientific in the foreground, while in the background most irrational motivations could be present.

It won't be a matter of concern if such speculations were discussed exclusively in specialized journals, accessible to a limited number of regular subscribers only. But when statements about an alleged sinister

manipulation of percipients and even of mankind by UFOs are publicized in an authoritative manner in periodicals, paperbacks and hardcovers sold over the counter to virtually everyone, the question may be justified whether their authors are aware of the psycho-social dangers of such ideas being distributed to a broad public.

There are examples in history of pseudo-scientific theories developed on the basis of very meagre or even no evidence at all and how they furnished the formal justification for inhuman actions, once certain political and/or economic conditions were given.

Although it won't be necessary to go back in history that far, the era of the witchcraft trials may be quoted here as an example. Often it can be read, that the believe in witchcraft and the resulting autodafes were a perverse aberration of the 'dark' Middle Ages only and progress-conscious contemporaries enjoy the complacent feeling, that such things cannot happen again in our enlightened times.

In fact the believe in witchcraft is a universal phenomenon throughout the recorded history of man till today and the great upsurge of witchcraft trials fell in an era which parallels our present time in more than one respect.

The geographic discoveries of the fifteenth century had stimulated the imagination of the people as the modern space programmes do. The effect of the introduction of printing was comparable to television and the present explosion in mass communication and mass media.

Gunpowder made new weapons possible, with a power of

destruction unheard of before. There was a general fear and uncertainty among the citizens. Today the permanent threat of nuclear annihilation probably has an even greater psychological impact but until now this has been successfully repressed by a general hedonism and a consumer's euphoria. But one needn't be a psychoanalyst to guess that exactly this type of repression could make people susceptible for delusions of persecution as well as salvation.

In the field of religion age old traditions were questioned as they are questioned today, the earth was no longer considered to be the center of the universe and in science authority was replaced by the experiment.

Yet this science was still far away from an adequate understanding of the processes in the depth of the human soul and the hypothesis, that an evil non-human intelligence was trying to interfere physically with human affairs was gaining credit.

By the new means of printing this delusionary system of believe was rapidly spread among a public who still considered the written word as something magical and therefore was not prepared for the impact of this new communication medium.

A disastrous feed-back circuit was the result. The people's growing superstition and the resulting excitement aroused the interest of establishment and science. The official occupation with the matter in turn lent more credit to the delusion and so on.

With the approbation of this delusional believe by the authorities, its codification in text-books like the Malleus Maleficarum the economic aspects began to

play a growing role. An increasing number of jailers, executioners, advocates and inquisitors earned their living from the delusion, i.e. from the confiscation of the property of the unlucky victims.

The autodafes served as a popular amusement which could be used to distract the public's attention from other things and at the same time they were a very efficient demonstration of official power. Ambitious scholars soon discovered that publicity, promotions and academic honours could be gained by a thesis on such topics like the witches' Sabbath or the complex hierarchy of the succubi and incubi.

In short, the whole matter became big business sustained by so human properties like jealousy, zeal, vanity, sensationalism, panic, fear, avarice and even genuine idealism. The few who had preserved a cool mind had no chance to alter the course of events.

Luckily certain trends in ufology haven't yet led that far, but some parallels stand out already now. Today however we have a better chance to recognize the presence of human intelligence in the UFO phenomenon and we should be able to form a sober judgement concerning the true significance of all non-human intelligence speculations. Up to now, their inherent social dangers certainly haven't been compensated for by their heuristic value, the latter being rather poor.

Therefore it can be expected from us, that we handle this aspect of the phenomenon with utmost reserve and responsibility. Should we fail to do this, it could be, that some day we, the ufologists, had to be regarded as the 'messengers of deception'.

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#### Abbreviations

- FSR - FLYING SAUCER REVIEW, FSR-Publications Ltd.,  
West Malling, Maidstone, Kent, England  
MUFOJ - MUFON UFO JOURNAL, 103 Oldtowne Road, Seguin,  
Texas 78155, USA  
UPIAR - UFO PHENOMENA, Editecs, Publishing House,  
Cas. Post. (P.O.B.) 190, 40100, Bologna, Italy.  
WB - WELTRAUMBOTE, UFO-Verlag, Zürich, Switzerland

## COMPOSANTS DEPENDANTS DU TEMOIN DANS LES EXPERIENCES OVNI

Le présent article montre que dans les publications générales sur les OVNI, on peut trouver des cas présentant des détails qui sont étrangement liés aux souvenirs et à l'état psychologique et physique de l'observateur. J'ai appelé ces détails des "éléments qui dépendent de l'observateur", soit sous forme abrégée en anglais "PDCs". Il est recommandé que les PDCs relevés dans les expériences OVNI soient considérés comme des parties intégrantes essentielles du phénomène et non pas, dans l'analyse finale, comme des distorsions aléatoires non significatives. Une hypothèse de travail concernant la nature dualiste intrinsèque du phénomène OVNI est en conséquence proposée. Enfin, la structure de la perception des expériences OVNI et une cause première possible de celles-ci sont examinées sous divers angles.

Traduit par Jacques Scornaux

## BEOBACHTERABHANGIGE KOMPONENTEN IN UFO ERLEBNISSEN

In dieser Arbeit wird zu zeigen versucht, daß in der UFO-Literatur Fälle beschrieben werden, deren phänomenologische Einzelheiten zu den Gedächtnisinhalten bzw. zur psychischen und physischen Situation jener Personen in Beziehung stehen, die das Phänomen jeweils wahrnehmen. Der Verfasser bezeichnet diese Einzelheiten im englischen Text als 'Perceptient-Dependent Components', abgekürzt als PDCs. Es wird empfohlen, PDCs in UFO-Erlebnissen als wesentliche, integrale Elemente des Phänomens zu betrachten und nicht nur als zufällige und letzten Endes unbedeutende Verzerrungen im Gesamtbild. Dementsprechend wird eine Arbeitshypothese befürwortet, die der wesentlich dualistischen (d.h. sowohl physischen als auch psychischen) Natur des UFO-Phänomens Rechnung trägt. Schließlich wird die Wahrnehmungsstruktur von UFO-Erlebnissen besprochen und auf eine denkbare, auslösende Ursache für das Phänomen hingewiesen.

Uebersetzung von Adolf Schneider

## COMPONENTI DIPENDENTI DAL PERCIPIENTE NELLE ESPERIENZE UFO

Questo scritto dimostra che nella letteratura UFO si possono trovare casi che mostrano dettagli stranamente correlati alla memoria, alla situazione psichica e fisica del percipiente.

Li ho chiamati "Componenti Dipendenti dal Percipiente", abbreviato in "PDC". Si raccomanda che i PDC trovati nelle esperienze UFO siano considerati parti essenziali ed integrali del fenomeno e non distorsioni casuali, alla fin fine non significative.

Di conseguenza viene proposta una ipotesi di lavoro riguardante la natura dualistica insita nel fenomeno UFO. Infine si discutono sotto vari aspetti la struttura della percezione ed una possibile causa primaria delle esperienze UFO.

Traduzione di Rosalba Viano

## COMPONENTES DEPENDIENTES DEL PERCEPTOR EN LAS EXPERIENCIAS OVNI

Este trabajo demuestra que, en general, pueden hallarse en la literatura OVNI casos que muestran detalles que están extrañamente relacionados con la memoria del perceptor y con su situación física y psíquica.

Los he llamado "componentes dependientes del perceptor", o CDP, en forma abreviada. Se recomienda que los CDP encontrados en experiencias OVNI se consideren como partes esenciales e integrantes del fenómeno, y no como distorsiones aleatorias y no significativas, en el análisis final.

Consecuentemente, se propone una hipótesis de trabajo sobre la inherente naturaleza dual del fenómeno OVNI. Finalmente, se discute la estructura de percepción de y una posible causa primaria para las experiencias OVNI, a partir de varios aspectos.

Traducción por V.-J. Ballester Olmos



# **EPISTEMOLOGY of the RESEARCH**

**REFERRING TO THIS SECTION  
PAPERS RECEIVED  
DID NOT MEET THE REQUESTED STANDARDS**

## BOOK REVIEWS

Richard F.Haines  
Observing UFOs  
Nelson-Hall Publishers  
111 North Canal Street  
Chicago, Illinois 60606  
1980  
pp.300, plus xix pages  
\$ 22.95

The vast majority of books devoted to the so-called UFO-lore is a superb masturbatory act reiterated with incredible constancy around one central theme: mystery.

In Italy we have an idiomatic expression for this sort of thing: aria fritta (fried air) -- a way of saying "it's always the same old story". Nevertheless publishers of such books can set their minds at rest. There is no lack of customers. I'll never cease being amazed at the sight of the crowd surrounding Lionel Beer bookstall in the hall of London's Mount Royal Hotel. After all ambiguity and the importance of a subject have been shown to be the ideal cocktail for the transmission of rumours (1), a rule which is also the key for the publishing and bookselling business. For the last two years I have preferred to turn my attention to topics other than UFO-lore. I don't think I shall lose any significant information in the meantime even though I am fully aware that further studies on the sociology of UFO groups would be necessary in our attempt to identify the underlying motivations of most UFOlogists. Let's leave the unpleasant task of coping with UFO-lore publications to Lucius Farish. He is the undisputable

tycoon in that field.

So although I risk being labeled an "ignoramus in UFOlogy" or even worse a charlatan, I have to cheek to state (and, why not, to suggest) that it's definitely more rewarding to invest your money in books on philosophy of science, brain biochemistry and perceptual psychology, than overcrowding your shelves with the umpteenth essay on UFO-masturbation.

These books will teach us that post-event experiences (i.e. when witnesses to an event later read or hear something about it and are subsequently asked to recall the event in question) can change a witness's memory and even cause non-existent details to become incorporated into a previously acquired memory (3).

Particularly you can discover that witnesses interrogated with questions worded in an emotional, aggressive manner report that the originally perceived event was more violent than did those witnesses interrogated with a "neutral-passive" questionnaire (4). And this implies that subjective recollections of an event can be dramatically altered by the nature of the questionnaire. Furthermore, this demonstrates that the interrogator (at times inquisitor) is a crucial factor in the stage of information retrieval from the witness's brain.

We know that everyone is a potential witness of a UFO phenomenon. Both the witness and the investigator-interrogator are ultimately human beings.

Richard F.Haines, a human being himself, re-proposes in the eighties the Socratic maxim Know thyself to reduce the "unidentified" list in which a good number of UFO reports still fall. It is not armchair philosophy. It is rather a choice of lucid rationality.

After the relevant exceptions of C.G.Jung (Flying Saucer: A Modern Myth), James McDonald (UFOs: The Greatest

Scientific Problem of Our Time?) and D.M.Jacobs (The UFO Controversy in America) this is the first time that a scientist endowed with courage and criticism turns his specific professional expertise to UFO phenomena study. Not even Father Hynek to whom so much (too much) is due for his contribution to the growth of UFO phenomena studies into an established science has succeeded in doing what Haines did naturally.

Observing UFOs is a long, carefully constructed, detailed and enlightening book. It should be studied and not merely read. References and the rich glossary should be consulted rather than hastily peered at as boring tinsel.

"We can learn far more than we already have about unidentified flying objects and anomalous aerial phenomena by having a better understanding of our own perceptual capabilities and limitations" is the main assumption the author sets himself in the prologue to this book written for the benefit of the investigator.

Haines, a NASA research scientist versed in the problem of human perception, reviews data available in that three-stage process (acquisition, retention and retrieval) through which events are perceived, stored in memory and subsequently communicated.

Each stage is affected in several ways by the personality of the percipient as well as by that of the investigator. Both may go wrong since memories are things to handle with care and are easily distorted. By leading questions, for example.

Anatomy of a definition might be the alternative title for chapter two where the Author dismantles one of the most commonly accepted definition of what constitutes a UFO (the Hynek definition).

Does it make any sense to speak about "common-sense identification"? Ultimately -as Haines remarks- it is

pretty rare that what may seem 'exhaustive' to the field-investigator be 'exhaustive' to the specialist who wants for example to assess the degree of accuracy of the field measurements in a UFO case.

Actually "the witness, field-investigator and specialist form a single, highly interrelated team" (page 21). Each component of such a triad has different expectations but all three want to know what has happened. The problem arises of how to combine the requirements of each component.

The glue proposed by Haines is simply knowledge.

As far as witnesses are concerned (as far as everyone is concerned) the suggestion is made to improve their accuracy of shape identification with practice (page 92). The seven-steps UFO Appearance Recognition and Identification Test extensively described in chapter five might be successfully applied for the benefit of both witnesses and investigators. Witnesses could use it as a "set adjustment" technique, a tool to discriminate -for instance- "genuine" UFO phenomena from conventional phenomena. Investigators could rely on this procedure to assist witnesses in retrieving some details of the stimulus that would otherwise be lost.

This test -originally described in this journal (2)- is based on similar shape recognition procedures which advocate the superiority of visual recognition of complex visual stimuli over verbal description. A superiority that would appear still more pronounced when the event perceived is "unfamiliar and, so, not uniquely or succinctly 'captured' by readily available terms or labels" (5).

In spite of the undeniable advantage that the afore-mentioned technique can offer we should be extremely cautious about those "errors of commission" -as Haines warns- too often made by UFOlogists in the field.

In this context I feel I disagree (perhaps it is my only dissent) with the Author when he disconsolately says that "we must begin (to study UFO phenomena) with the people available and build upon that base" (pp.252-253).

Why must we?

The fact that in over thirty years of vigorous UFO-masturbation nothing meaningful has been brought forth to advance our knowledge on standardization of terminology, measurement repeatability and joint cooperation and sharing of findings, is not due to chance.

Someone must be responsible for that lethargy. And once we have determined that the motivations (like the love for beliefs, mystery, gratification, commercial interests, privileges, personal power and other less noble drives) of the "people available" clash with those (essentially the 'old love for truth') of serious researchers we do not at all need to rely upon unreliable and untrained UFOlogists. It would be like squeezing an empty lemon.

In the opinion of this reviewer we must especially contribute (and Observing UFOs skilfully achieves this goal) towards training a new generation of searchers for evidence who are first of all acquainted at university and/or post-doctoral level with scientific method, language and procedures.

This turnover of staff is indispensable if "our intent is to try to help improve the quality of the basic sighting data at the field investigative level and, thereby, to help improve the reliability of data" (page 252).

It's a matter of moral courage and responsibility.

Haines compares the study of UFO phenomena to a drive on a road where there are patches of fog (page xii). Useful comparison indeed. To come out of the fog we need another

driver, better equipped and endowed with cerebral cortex. Reptiles' brain are dangerous .... If we are not willing to make this radical decision now we no longer have the right to complain because we are working in a fog-shrouded environment.

In chapter five, the central one of the book, serious doubts are raised on hypnotic regression reliability and on the use and misuse of polygraph testing as well. Some valid guidelines for interpreting elements present within the witness report are also given.

An exciting panorama of the psycho-physiological mechanisms responsible for the rapid disappearance of an object and their implications for research on UFO phenomena follows in chapter six.

Here we can appreciate how true it is to say that even now we possess a mine of scientific data: data that still remain unused and forgotten because of ignorance and a lack of competent people. I am sure that the serious field-investigator can find practical aids for her/his job here. Such terms as visual acuity, fovea, luminance and luminosity will hopefully enter our vocabulary.

A valuable discussion on the human visual field (chapter seven) is followed by a detailed review of basic principles and concepts related to various estimates and measurements which are made in the course of a UFO field-investigation (chapters eight to eleven).

The extensive use of line drawings and diagrams gives the written words a sense of extreme reality and certainly facilitates the understanding.

What constitutes an unusual or erratic object motion?

That's the major question which Haines raises in chapter twelve. The answer is dependent on the accuracy with which the witness identifies the aerial phenomenon. But -Haines

adds- we cannot offer a conclusive answer, because "each UFO encounter is different, even unique" (page 191) and "one's visual perception is highly personal and variable" (page 166).

A noteworthy exercise in problems of visual acuity is then described. Haines reports two sightings he made during his regular evening walks. In one case he firstly believed that a star was the source of his puzzlement. Later a "...merged image of the aircraft's two intense, white landing lights" appeared to be the explanation. In the other observation, a bright object (star) witnessed by the Author was physically eclipsed by power or telephone wires (previously unnoticed) every time he walked forward. Since the blinking effect following the Author movements could be easily repeated, the conclusion was reached that the originally invisible wires were the real cause of the unusual behaviour recorded by the observer. These two examples should be kept in mind by all those who immediately label as anomalous something that they do not succeed in explaining due to lack of training.

As Haines stresses "there are a great many often overlooked, visual factors which are involved in every (*italics mine*, FI) UFO sightings. These factors should be understood before an interpretation of the visual phenomenon is attempted " (page 196).

A comprehensive analysis of the visual appearance of jet aircraft's lights (often mistaken for "genuine" UFO phenomena) is made in the next chapter. The volume closes with a well illustrated section devoted to the different surface reflection properties of an object as well as an absorbing discussion on perception of details of an object versus its brightness. A special point of interest here is the role of after-images in recovering information on the basic appearance of the original visual stimulus.

Summing up the substantial arguments Haines puts forward about UFO phenomena, experiences and reports, one could

say -paraphrasing the words of Greek physician Hyppocrates- that "the occasion is fleeting, experience is deceptive, judgment is difficult".

No other book available today is as authoritative or as filled with practical advice as is 'Observing UFOs.

The Author will earn the gratitude of innumerable field-investigators and serious students concerned with the perceptual pitfalls inherent in every UFO experiences.

I can hardly imagine a searcher for the evidence behind UFO phenomena who can afford not to have Observing UFOs: it is not important, it is indispensable.

Francesco Izzo

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ACTAS DEL PRIMERO CONGRESO NACIONAL DE UFOLOGIA  
PONENCIAS TECNICAS  
EDITADO POR STENDEK-CEI  
Apartado 282 Barcelona - Spain  
1978  
pp.100  
Ptas. 300

1977 seems to have been the year for UFO congresses: in Acapulco for the Americas, in Toscolano Maderno for Italy, in Barcelona for Spain. They also all seem to have had something in common: a great many papers by people appertaining to that undercurrent of mistery and wisdom which is improperly associated with the UFO phenomenon. Important papers were few and far between everywhere.

Luckily the presence of various valid Iberial UFO researchers at the Barcelona Congress raised the level of this congress.

I have before me their "Ponencias Tecnicas".

Taken as a whole they provide a good overall view of the vitality of serious ufology as it is being formulated in Spain circles.

First of all comes the paper by Vicente-Juan Ballester Olmos, "La Ufologia en la decade de los Setenta" (Ufology in the Decade of the 70's), in which the key steps taken in the 70's and the state of scientific UFO research are clearly and concisely illustrated, together with the prospects and some of the directions in which action could be taken. This has been done by singling out the most important papers which portend further development in the field of ufology. The basic reports by Poher and Vallee, which make manifest the physical reality associated with UFO phenomena, are followed by the work by Phillips which shows the close correlation between the estimated

dimensions of the UFO in the CE II cases and the actual dimensions -dimensions that were not haphazard, but prevalently fell into the 5-15 m. range. The initiatives in instrument observation undertaken by Project Starlight International (PSI) and the sophisticated analysis of photographs by the Ground Saucer Watch (GSW) experts are given. Thanks to the latter the hoax of the photographs in the "perfect case" of San Jose de Valderas was discovered. Varied information on the statistics elaborated by the Author and by Guasp on landing data, which are also compared with similar studies by Poher and Vallee, follows. Some features of globular lightning are presented, highlighting the behavioural differences between the lightning and phenomena reported as UFOs. The article closes with some interesting thoughts on scientific ufology, the need for quantitative data and some methods by which they may be realized.

The next paper, "Una herramienta para la ufologia cientifica: las tecnicas estadisticas" (A tool for Scientific Ufology: the Statistical Techniques), is by Jose-Tomas Ramirez y Barbero. The Author succinctly presents the basic notions of statistics and explains why it would be useful and a good idea to process the data statistically and which methods have so far been used in work on UFOs. We are shown what kinds of variables appear in various analyses (intervals, nominals or ordinals) the meaningful parameters which can be used in different cases (chi square,  $r$ ,  $\rho$ ,  $\tau$ ), the pertinent types of analysis (correlation analysis, multiple or simple regression, factorial analysis). Examples applied to UFO data are given. The paper ends with further remarks on the use of scientific analysis (including statistical methods) in treating problems of ufology.

The third paper "Nuevos aspectos tecnicos sobre el caso de Javier Bosque" (New Technical Aspects on the Case of Javier Bosque) is by Alberto Adell Sabates. It refers to what happened in 1972 at the Logrono Seminary, when a small UFO, ovoid in shape and not over half a meter in

size, left a signal recorded on a magnetic tape which was later analyzed. This paper presents some of the analyses which lead to the conclusion that if Javier Bosque had staged it would have had to use extremely sophisticated equipment. In fact the analysis shows the absence of parasite signals (which are always present in normal recording). These signals were also very strong. The analysis was separately carried out by a Spanish university professor and a Brazilian electronic expert. These analyses revealed them to be modulated impulses on a carrying frequency of 50 Hz. It is possible that synchronized signals of this sort could be used to obtain television images. Obviously the possibility of realizing a project which can give results like this is once again related to financial resources, inexistant at the moment. The scientific honesty of the Author is to be noted. Before writing up these Ponencias he carried out laboratory experiments which may permit us to interpret the "particular" features of the signal in a more usual way. The other experts might have interpreted the signal as they did since they were working on copies of the tape rather than on the original. The recording they were dealing with could therefore have varied slightly from the original, involontarily and for basically technical reasons.

The next paper is by Miguel Guasp, "Posibilidad e imposibilidad del paradigma procesal" (Possibility and Impossibility of the Processal Paradigm), and confirms some of the statements he made in his book "Teoria de Procesos de los OVNI". He then goes on to an analysis of the features of UFO apparitions in the various waves, periods of time and places. In keeping with his studies of elaboratable behaviour of UFOs, the Author gives us a more detailed presentation of the manifestation of different effects: he shows us how a world wide study of the hour in which they appear, the places where they are seen and the directions in which they move could be set up. He proposes the possible existence of functional dependency of the basic observation data (place, time, duration and

direction), comparing his data with those of other researchers. At the end of his paper he concludes that one of the most likely of the possible hypotheses is that the relationship between these basic facts is real and not casual.

And finally on to the last ponderous work, which I shall not however examine in detail. The title of the paper by David G. Lopez, Felix Ares de Blas and Angel Salaverria Garnacho is "Bases para una modelacion teorica del fenomeno OVNI" (Bases for the Theoretical Modelling of the UFO Phenomenon). This imposing work (it occupies almost half of the pages of these "Ponencias"), reviews various subjects which explain why theoretical models are constructed to describe the circumstantial problems, the "predictability" and "contradictability" features of the model itself, which make it possible to convalidate it or to reject it. Collateral information, often associated with UFO phenomena, is then presented, followed by through analysis of the Spanish observations over a 28 year long period. After examining the procedure for the codification of data, the distribution of the phenomena is taken into examination --depending on time, geographic location, magnetic anomalies and population density. In conclusion the experimental distribution of Type I cases (according to Vallee) are found to adhere fairly closely to a model in which a physical phenomenon that takes place in the atmosphere by chance is to be expected.

It should also be noted that these "Ponencias Tecnicas" are furnished with brief biographical notes on the Authors. As documentation and a tool for study they provide an interesting point of departure for further developments.

As is often the case when time is limited, there are a few mistakes here and there --references to figures or flow-charts-- but on the whole this is a work which should be carefully read by all those seriously interested in the subject of UFOs.

Richard F.Haines, editor

UFO Phenomena and the Behavioral Scientist

The Scarecrow Press, Inc.,

52 Liberty Street

P.O.Box 656

Metuchen, New Jersey 08840

1979

pp.450, plus xix pages

\$ 18.50

This timely, four-part book, provides the first link between behavioural sciences and UFO phenomena. Cultural factors, eyewitness factors, reporting factors, are the headings under which nine well-documented contributions are organized. For each section eminent and experienced workers were recruited in order to provide and blend, in just the right proportions, theory and data, anecdote and exposition.

Three thought-provoking papers are assembled in the fourth part of the volume where Leo Sprinkle, Michael Persinger and the Author himself cover selected UFO research data and theory with unusual clarity.

Richard Haines must have had to work hard to assemble the composite material into one consistent picture. Nevertheless his efforts have been fully recompensed: a readable introduction to a subject still in its infancy.

Although unambiguous physical evidence of UFO phenomena may not yet be available, a psychological component is by now an acknowledged fact due to the involvement of a percipient in the original experience. Why then have the human sciences not concerned themselves in the matter? And why have social scientists not been sufficiently attracted by this aspect?

UFO Phenomena and the Behavioral Scientist for the first time allows us to read without "unreasonable editorial policies" (overly long manuscripts are generally unpopular) a series of exhaustive papers by Ph.D.'s eager to speak out about what they think has never been said and done. Moreover it aims to bring fresh air into the asphyxiated world of those "self-proclaimed experts in UFOlogy" who "cared little for any subject except their own 'pet'".

Trustworthy investigators must come to understand that different perspectives and approaches should be used or added to the existing ones for the study. It means shrinking from the certainty of pedantry and accepting the challenge of creativity and uncertainty.

If one of Haines' purposes was to encourage other professionals in the scientific community unhesitatingly to study UFO phenomena, I frankly believe that his book offers us a broad range of stimuli.

Focusing on the reporters rather than UFO reports inspires the reader to think big: in terms of system, interactions between the witness and the physical and social environment as well.

Phillis Fox, a sociologist at California State College, Stanislaus, examines why people believe that at least some UFOs are extra-terrestrial spacecrafts. Three possible theoretical frames of explanation are put forward: psychological, socio-psychological and cultural. The latter appears to be the most reasonable answer to Dr. Fox who identifies five aspects in modern United States culture supporting her concept of "a collective attempt to understand ambiguous and problematical stimuli". It's worthwhile mentioning at least two of these aspects: the widespread lack of information about astronomy and perceptual psychology (which accounts for plenty of identified flying objects -IFOs) and the belief in the existence of intelligent life elsewhere in the universe.

The effect of science-fiction (SF) films on the Zeitgeist (i.e. the general intellectual, moral and cultural climate of an era) and -in turn- of the Zeitgeist upon UFO phenomena is then examined by Armando Simon, an experimental psychologist at the University of Southern Mississippi, Hattiesburg. He demonstrates how Vallee went wrong in denying any influence of SF movies on UFO sightings, at least under the numerical respect. But what ultimately is a film? A cause or an effect of the Zeitgeist or both? Can the film work as a behaviour catalyst (see the controversy on possible consequences of the film "Close Encounters of the Third Kind" by Steven Spielberg) -as elsewhere Simon has suggested- or rather is it a photograph of the Zeitgeist? These remain open questions which are still waiting for an answer.

Meanwhile the relationship between SF films and UFO phenomena should attract more attention than in the past. The rule of "taking everything for granted" must be amended in "granting this to be true".

It would lie outside the scope of this book review to discuss in details each single paper of UFO Phenomena and the Behavioral Scientist. Thus I shall confine my further comments to what I found the most valuable articles, though all papers collected in the volume are good food for the brain.

Ronald Westrum, a sociologist at Eastern Michigan University, Ypsilanti, emphasizes how the adjective "anomalous" can vary with the cultural background of the witnesses and the degree of their expectancy of seeing UFO phenomena (strongly affected by the stereotypical image of "what an UFO should look like").

Low-threshold and High-threshold UFO experiences are classified according to the "critical ability" (Cantril) of the observer.

In the Low ones the witness is cognitively prepared to see UFO phenomena. Therefore the threshold for perceiving them is lowered. The opposite occurs in the High ones where the witness critically matches her/his perceptions to her/his mental categories thus raising the threshold necessary for the acceptance of the event he/she perceives as a truly "anomalous" one. Some pertinent criticisms are made by Westrum on the Gallup poll of November 1973 in USA. We must be cautious about the rising rate of UFO observations, because "more people know what a UFO is supposed to look like" (page 102). If the threshold is really becoming lower, the best counter-measure to this dangerous trend, would appear to be more "critical ability": either on the part of the witness or of the investigator.

In Part three the article by Roger Shepard, a prominent research psychologist at Stanford University, puts into sharp focus the visual recognition procedures that could be applied for accurate identification of UFO shapes (a theme, this, where Dick Haines also had more than a little to say....).

Shepard can be regarded in that field as a true prophet while he said in 1968 (2): "We have, simply, failed to make anywhere near full use of the one recording and measuring instrument at our disposal; namely, our unwitting human witness".

Eleven years later, Shepard reconfirms his original point of view, recommending that investigators provide UFO phenomena witnesses with a set of systematically organized recognition arrays.

This advice recalls a similar one made by Penry (1), who supports the view that the most suitable way to remember a face is to treat it as a collection of features. That is what the police currently do with suspected criminals.

An elegantly "naturalistic" hypothesis on UFO phenomena

origins is then proposed by experimental psychologist Michael Persinger, Laurentian University, Sudbury, Ontario. A truly definitive review of his contribution would be beyond my competence, although I should like to quote it as an example of the "Haines philosophy".

I mean that probably very few UFOlogists would have considered speaking of UFO phenomena in Persinger terms, because it's taken for granted that "a natural explanation of UFO phenomena cannot exist or be postulated anymore". On the contrary, Persinger (and Haines) must be congratulated for having dared to present a theory which aims to "accomodate some (*italics mine, FI*) of the more intense and physical events sometimes associated with close UFO encounters" (page 430). Furthermore it is a theory which offers some deductive predictions according to the classic scientific method.

Basically the theory states that normal geophysical processes similar to those associated with earthquake lightning (EQL in acronym) are produced within very localized areas without immediate or major fracturing and related seismic activity. Within these areas intense electromagnetic forces (EM columns) are generated for short periods and they might be responsible for producing plasma environments for a short time. "One of the most likely mechanism of EQL would involve a piezoelectric effect whereby mechanical stress/pressure upon certain types of rock cristal generates large electric potentials but very small currents" (page 403).

All in all the collection of papers Richard Haines has put together, stands as a pioneer endeavour to come out of the stagnant despair of UFOlogy without embracing another "pet" hypothesis to explain UFO phenomena as a whole.

If science first of all means asking good questions rather than supplying pat answers, UFO Phenomena and the Behavioral Scientist superbly lies in the first category.

recommends it warmly to everyone interested in the subject.

Francesco Izzo

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# IN SHORT

## THE FUND FOR UFO RESEARCH

by

Dr. Bruce S. Maccabee, Chairman

Serious UFO investigators who have been active for many years are well aware that there is one prime ingredient which is necessary for good research, and which is not available in the field of ufology: money. Except for the government funded investigative agencies (Project Blue Book in the USA and GEPAN in France, for example, the knowledge we presently have about UFO reports has been generated by volunteer investigators working in their spare time. During the whole modern period of sightings (starting in 1947 in the USA, or 1946 in Europe) there have been very few people who have been able to devote their full time to UFO related work. Consequently, in the last 34-35 years, civilian UFO research has not advanced at the same pace as in other fields of research endeavor (such as space research, electronics research, etc.).

In an effort to remedy this situation, a group of scientists and researchers in the Washington, D.C. area (U.S.A.) decided in 1979 to try to start a civilian agency which could dispense funds for UFO related work. The money would come from donors who cannot themselves undertake all the various aspects of UFO research, but who are sufficiently interested to want to support those investigators who are capable of doing research. After several meetings, a set of by-laws and articles of incorporation were written, and the Fund for UFO Research (FUFOR) officially came into existence on August 1, 1979.

The structure of the Fund is as follows: there is an Executive Committee consisting of five members and five alternates, and there is a National Board, consisting of fifteen members, and which includes the Executive Committee. The Executive Committee handles the daily operations of the Fund. The National Board acts as a reviewing panel for proposals. The Fund is a non-profit agency and contributions to the Fund can be deducted on the USA Federal Income Tax form.

Aside from collecting money for use in UFO related work, the primary purpose of the Fund is to evaluate proposals and to provide monetary grants to the investigators who send satisfactory proposals. A proposal is evaluated by the Executive Committee and then by the other members of the National Board. If it is approved by 2/3 or more of the National Board, the proposal is accepted and grant funds are dispensed. However, the Executive Committee may request changes in the proposal if it feels that the proposal is not completely satisfactory. The final step in granting money for work is the signing of a contract between the investigator and the Fund. The contract states exactly the type of work which is going to be done by the investigator, the time period allowed for the completion of the work, the amount to be paid by the Fund, and any subsidiary requirements that may be necessary to complete the contract.

It is important to note that the Fund provides money for specific projects which last for specific periods of time. The Fund does not provide continuing expenses, such as might be required to support a UFO organization. Stated another way, the Fund was not set up to support existing or newly founded UFO organizations. By accepting this restriction the Fund assures prospective donors that money will be spent actual UFO related research or educational projects and will not be spent in supporting the day-to-day operations of UFO groups.

Because the Fund is a tax-free organization incorporated in the USA, it is difficult for us to fund researchers in

other countries may wish to organize their own comparable funding agencies. We welcome correspondence with any such groups in other countries.

#### REQUEST FOR INFORMATION

Dr. Richard F. Haines, a scientific consultant to the Center for UFO Studies and Advisor to UFO Phenomena is studying UFO sighting reports by pilots of commercial, military, and private aircraft while in flight. He would appreciate receiving any available information directly from readers for his scientific analyses. All correspondence will be kept confidential. Please send all information to him at:

325 Langton Avenue, Los Altos, Calif. 94022, USA

SOMETIMES A CHEQUE IS BETTER THAN THOUSANDS WORDS....

Looking back at five years of activity we can say to have coped two main difficulties: to find out high quality contributions and a constant financial support. Now the level of submitted papers seems to be improved whereas our budget is still insufficient to cover all expenses of the journal. Since July 1980 we have promoted a fund-raising campaign that is getting a good response from our readers. Here we want to thank everybody for the support which allows to nourish legitimate hopes for the immediate future of UPIAR.

And while we are trustfully continuing to wait for your contributions (which represent the best guarantee to maintain UPIAR standards at the highest levels) an unexpected award to UPIAR is just arrived from the authoritative Fund for UFO Research. Indeed no better reward can exist now to give us the necessary encouragement to go on.

## *Fund for UFO Research*

### *International Science Achievement Award*

presented to

Comitato Nazionale Indipendente

per lo

Studio Dei Fenomeni Aerei Anomali

*for their contribution to the scientific study of UFOs and in particular for the consistently high quality found in their publication ...*

*UFO Phenomena International Annual Review. (UPIAR)*

May 1981

For the Executive Committee

*Luigi Marinelli*  
Chairman

# Fund for UFO Research Inc.

Washington D.C.

P.O. Box 277

Mount Rainier, Maryland

20822

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April 9, 1981

Dear Sirs:

The Fund for UFO Research is pleased to announce that the first International Science Achievement Award will be presented to the editors and publisher of UPIAR in recognition of the establishment and continued publication of the only international refereed journal of Ufology.

Members of the Fund have noted with appreciation the consistently high quality of the papers presented and of the publication style. The editors and publisher of UPIAR are to be commended on their ~~success in~~ establishing the first and only "international annual review devoted to the scientific study of the UFO phenomena".

The award for the year 1981 will be in the amount of \$500.00 U.S. This award is made by the Fund as part of its effort to improve the quality of research and educational activities in the field of Ufology.

It is hoped that the award can be officially presented at the International Conference in London on or about May 24-25. A press release from the Fund will be made available to the newsmedia of the USA and Italy during the week previous to the presentation. We suggest a coordinated effort between the Fund and UPIAR to maximize the publicity attendant with this international award.

The Fund looks forward to a response from UPIAR as quickly as possible regarding the details of the award presentation. If there are any problems please contact the Fund immediately. If the award cannot be made at the London conference, the check for \$500.00 will be mailed directly to UPIAR. (Note: Dr. Maccabee will be at the London Conference to present the award, provided that a representative of UPIAR can also attend.)

THE EXECUTIVE COMMITTEE

It is well known that reviews dealing with established sciences have never been willing to accept contributions devoted to UFO phenomena. The arrival on the editorial market of SPECULATIONS IN SCIENCE AND TECHNOLOGY made people think of a probable opening towards topics of scientific "speculation".

On the contrary, on the advertising leaflet of that publication, it is clearly stated that:

No papers on extra-sensory perception  
or  
unidentified flying objects  
will be considered

A short correspondence exchange occurred between Dr. Honig (SPECULATIONS Editor-in-Chief) and F.Izzo. From it resulted that the review intends to offer space to speculations strictly confined to the actual scientific orthodoxy.

Everybody, of course, is free of following that approach. It is not our intention to limit somehow any editorial policies.

Nevertheless, we wondered why such a close-mindedness has

always been present, and to enlarge the debate, we thought to invite UPIAR editors and supporters to submit a contribution 'pro' or 'con' that attitude.

Contrarily to our expectations very few people got the real point of the controversy. The majority of them declined our invitation stating that "it is not useful to try to modify the editorial policy of SPECULATIONS IN SCIENCE AND TECHNOLOGY". In fact this was not our intention either. Some others emphasized that "everybody is free to have her/his own ideas". And we fully agree with this point. We simply dislike that the silence and ignorance surround that problem.

As a matter of fact we can present here the only significant contributions we received: the first from Alexander G. Keul (Ernst Berger) and the second from UCLA psychiatrist Ronald K. Siegel.

It goes without saying that we do not consider the argument as closed: on the contrary, we explicitly invite those who think to have "an opinion to express" to let us have their contributions for UPIAR future issues.

The problem we liked to discuss goes beyond the particular case of SPECULATIONS IN SCIENCE AND TECHNOLOGY: a lot of technical and popular journals are following that same policy. And not only them.

However, if we would analyze the matter more deeply, we could discover that such an editorial policy reflects a blatant lack of information on UFO phenomena. And, the more one gets information on the subject, the more he/she turns to a "positive" attitude towards it (Sturrock Report docet).

Serious UFO students cannot consider themselves out of those "silly" disputes: they should eventually "soil their hands" speaking out their ideas. To shut up does not help at all. We do not love Pontius Pilatus.

## A NOTE ON THE FLIGHT OF THE SST

In 1978, the journal *Speculation in Science and Technology* (SST) published its first issue devoted to "speculation papers in the physical, mathematical, biological, medical and engineering sciences." This declaration of purpose, in juxtaposition with the composition of the editorial board (representing academic departments in physics, mathematics, and engineering) defined the scope of both its editors' interests and talents. In addition, the reader information listed the technical abstracts and indexes in which articles published in SST would be cited, thus further clarifying the journal's intended content. The founding editors of SST undoubtedly chose their title because it accurately reflected these goals yet encouraged authors to submit some speculations on their papers. By selecting the word "speculations", the editors were in fact stating that the authors could reflect somewhat broadly, albeit with intellectual and scientific consideration, on their observations and empirical findings. To state matters simply, they could go beyond the constraints of the data in their discussion and conclusions. Such speculation is common in many scientific journals (e.g., journal in social sciences, psychology, anthropology, archeology, psychiatry) but it is indeed rare in the disciplines clearly represented by both SST's announced purpose and its editorial board. While journals such as *Psychological Review*, *Quarterly Journal of Crude Drug Research*, and even the *Journal of the Experimental Analysis of Behavior, Science*, and the *Journal of the American Medical Association* actively encourage authors to speculate on tightly controlled experimental results and indulge their imperialistic theoretical desires, the core journals in modern physics and allied fields practice more conservative adherence to orthodox scientific thinking.

The creation of journal like *Speculation in Science and Technology* was a bold venture away from such restraints,

an opportunity for those in science and in technology to leave the security of their data bases and soar in freedom and wonder and curiosity, to turn around from altered perspectives, to consider the meaning of the data anew. This was to be a vehicle by which scientists could leave their empirical cocoons and metamorphose into butterflies that in their flight seek out some larger understanding which over the ages has been the beauty, joy and success of the sciences. This was to be noble flight of speculation for previous earthbound scientists and engineers in their own fields. This was not for scientific or technological speculation on any field. In case someone missed the point, well-illustrated by the fact that over one-third of the published articles in SST were in modern physics, the editors asked that papers on ESP and UFOs not be submitted. That was their privilege as well as their duty to protect the editorial goals and desires, not to mention their authors who were perhaps somewhat apprehensive on the eve of their first flight.

The no ESP-UFO beacon broadcast by SST warned such ethereal craft to steer clear of the well-controlled (refereed) and highly supervised (edited) test flights. For they recognized the word "speculations" was itself a beacon, a light that would attract many such phenomena. But unless launched from their own data bases, the editorial flight controllers wanted no responsibility for guiding the paths of phenomenological craft that can be neither guided nor controlled. Such craft, like the moths and bugs that inhabit the darkest skies of night, inevitability swarm to these lights and beacons. And like their ethological counterparts, the fanciful UFOs and ghostriders of the nite would probably only destroy themselves in the searing penetrating flams that have been science's searchlight. Their continued mystique and romanticism are better protected elsewhere. And probably no one on the SST wanted to hit an itinerant ghost or UFO. Afterall, ghosts and UFOs have been flying around for years. It is time to give someone else a chance to do it-- someone who is at least alive and from this planet. I

welcome the maiden flight of the good ship SST with excitement and thanksgiving.

Ronald K. Siegel

University of California,  
Los Angeles  
U.S.A.

#### DOGS AND UFOs PROHIBITED ?

It was with interest that I read Honig's October 16 letter and Izzo's October 3, 1979, reply to ELSEVIER-SEQUOIA S.A. concerning the exclusion of papers on UFOs or ESP from the new magazine SPECULATIONS IN SCIENCE AND TECHNOLOGY. Honig remarked "UFO...has a set of emotional states which did not want to take on."

SPECULATIONS will possibly be a valuable aid for UFO research, but never help us in probing the core of the UFO problem which is of psychosocial/psychopathological nature. Honig's comment seems to reflect some feeling on his side that he and his journal are not competent in this social and medical sciences aspect. The paradox with UFO research -and with ESP, too- is that you need natural science techniques for your investigations, but you will not be able to solve the interdisciplinary problem with this know-how alone.

Therefore I suggest Honig should announce the existence of the interdisciplinary journal UFO PHENOMENA to his readers and pass on UFO papers to the proper address - to us.

A side aspect of the debate is the "set of emotional states" Honig does "not want to take on." Nor would I! That UFOs are still ranked among non-scientific subjects by conservative scientists is, to a large extent, a fault of amateurish "ufologists" who do not care to reflect the methodology of their "research". Having been removed myself from an astronomical institution for "unwanted activities" I know we are still labeled off along with amateurs.

The task of UFO PHENOMENA will be to draw a line between quackery for archaic thinkers and multidisciplinary UFO science, changing the public image of the subject.

Alexander G. Keul

## STATE OF ART

This year we have the great honour of publishing the point of view of Alexander G. Keul, an Austrian researcher also known under the pseudonym of Ernst Berger. After taking his Ph.D. in meteorology and astronomy at the University of Wien, Keul turned his attention to the field of human sciences.

Now he is working at the University of Salzburg in experimental psychology. He is one of the editors of UPIAR and accepted with immediate enthusiasm our invitation to write the State of Art for 1980. Here we want to thank him for his courtesy and invaluable continuing assistance in this matter.

We think that the provocative contribution we present here eventually achieves the fundamental purpose of speaking out.

Perhaps we really need to butcher once for all -as Keul likes to say- the holy cow of Ufology.

Science is a balanced ratio between theory and methods. The UFO phenomenon (which I believe exists) has now seen thirty years of abundant hypotheses but a serious lack of methodology.

To call it an unbalanced ratio would be a positive

understatement.

The existing methods have failed to carry us further in the testing of hypotheses. As Hendry (4) has put it: "After examining 1300 first-hand UFO reports ... I still can not confidently draw the distinction between a 'real' physical phenomenon and a complex misperception ...".

When the modern UFO problem developed, the few scientists willing to approach it faced a number of complications:

a. UFO reports are mostly singular events in time and space. The branches of science depending on repeating phenomena seem to be out of place here.

b. The phenomenon is of global nature with a low base rate of disparate daily reports but developing temporal and local peaks ("waves", "flaps") of high reporting rates. Both are difficult to follow. Delays in reporting as well as an unknown percentage of non-reported events complicate monitoring activities.

c. There is a "hard core" of physically documented events embedded in a mass of anecdotal reports where interviews remain the primary method of research.

d. Data gathering in the UFO field is research per exclusionem. The negative term "unidentified flying object" implies this.

e. UFO research per exclusionem is of interdisciplinary nature. To work on a reported light blob in the night alone requires knowledge in meteorology, astronomy, engineering, geography, physiology and psychology, to list major subjects only.

f. Lack of funds due to the conservatism of scientific authorities made the UFO field one for idealistic work. Idealists need an inner energy to move to such a dry field. Plain curiosity is one moving force. Unconscious needs and pressures are another.

Considering these points alone, one might wonder why the amount of wishful thinking, delusional phantasms and commercial nonsense in this field is not up to 100%. Chances for an amateur researcher to go undamaged through the epistemological jungle are close to zero, anyway.

Political and socio-cultural conditions created a climate resulting in an exceptional interest in and emotional responses to UFO reports. Mass media amplified the effect by feedback. The role played by State authorities and military circles was a mediocre one, to say the least.

Those were the sixties and seventies -dominated by a lack in basic definitions, discussions between scientists showing the ups and downs of a pre-scientific phase (10). The field was led by natural scientists and engineers who applied hard tools to (mostly) soft reports.

The "extra-terrestrial hypothesis" hovered over the searching minds as a unifying myth.

To speak out "UFOlogy is not a true science" was regarded as an heresy (6)!

In the late seventies researchers like Randles & Warrington (9), Schonherr (10) and Seargent (12) openly questioned the value of the "extraterrestrial hypothesis" for empirical studies.

The years 1979-1980 brought two major events: the books by Richard Haines (see also the Book Review Section). Observing UFOs (2) outlined the use of techniques from natural, medical sciences and engineering for in-depth investigation of UFO reports. UFO Phenomena and the Behavioral Scientist (3) gathered contributions from social scientists disclosing new perspectives of study: "...UFO investigators should be far more cautious than previously about accepting UFO reports from people about whom virtually nothing is known concerning their

credibility prior to the sighting".

Meanwhile the author (7), in his State-supported "Austrian Witness Project", tested a development of Walker's (13) witness screening methods. He found out that whereas US psychiatrists claimed to have found no UFOmania among their patients (11) an "UFO syndrome" with solid psychopathological structures often shapes the first reports in UFO cases from "Nocturnal Lights" (NL) to "Close Encounters of the First Kind" (CE1), according to Hynek classification. After looking out of the window together with the witness, UFO researchers turned their attention to the witness her/himself, the "true independent variable in the UFO problem" as defined by Izzo (6).

Experimental results on object drawings by UFO witnesses and non-witnesses by Haines (1) and UFO "abductions" reported by hypnotized non-witnesses after suggestive questioning as studied by Lawson (8) promise a drastic change of sacred values.

At this early stage I will venture the following prognosis for the eighties:

1. Empirical results from sociology, psychology and psychopathology of UFO phenomena witnesses will re-shape the field completely.
2. A new set of definitions will give us a more factual language.
3. Even veteran promoters of the "extra-terrestrial hypothesis" (ETH in acronym), facing the changing paradigm, will gradually have to realize that their hypothesis is a methodological obstacle rather than an advantage.
4. Through the application of finer analytical tools the number of inexplicable reports will drop to under 50% of

the 1980 figure.

5. Once we have a better picture of the UFO phenomenon we will discover whether UFO research and parapsychology have identical aims or not.

If we use Hynek's classical definition of the UFO as "reported perception of an object .... (that) remains unidentified after close scrutiny of all available evidence by persons who are technically capable of making a common sense identification ...." (5), the road of research gets its centre line:

Get a l l available evidence, not overlooking the brain of the witness and her/his social milieu, and consult people who are methodically capable of helping you.

Alexander G. Keul

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## SUBJECT INDEX

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# ABSTRACTS

## FRENCH LANGUAGE ABSTRACTS

UPIAR VOL. I NO. 1 (1976)

ESSAI SUR LA CORRELATION POSSIBLE ENTRE LA REPARTITION GEOGRAPHIQUE ET LES TRAJECTOIRES DES OVNI, SUR LA BASE DE LA VAGUE ESPAGNOLE DE 1968-1969

M. GUASP

### Résumé.

Une étude de la fréquence et de la répartition des directions de vol des OVNI au cours de la vague espagnole de 1968-1969 montre que, lorsque l'on considère les trois paramètres de la direction, de l'orientation et de la fréquence de chaque direction comme des vecteurs, la somme résultante de ces vecteurs indique précisément les centres d'information maximale sur les OVNI : celui des observations aériennes (nord-est de l'Espagne), lorsque l'on considère les directions dans lesquelles on voit les objets apparaître, et celui des cas de type I (sud-ouest de l'Espagne), lorsque l'on considère les directions dans lesquelles on voit les objets disparaître.

Certaines considérations qui s'ensuivent montrent que la ligne qui relie les deux centres d'information, nord-est et sud-ouest, semble jouer un rôle important dans la détermination de la localisation géographique des observations de la vague.

Traduit par Jacques Scornaux

## L'ACTIVITE OVNI : UN CONDITIONNEMENT A LA CONSCIENCE COSMIQUE ?

R.L. SPRINKLE

### Résumé

Le présent article décrit une approche possible de l'étude des rapports d'OVNI, à savoir un ensemble suggéré d'hypothèses qui pourrait expliquer les implications "physiques", "biologiques", "psycho-sociales" et "spirituelles" des phénomènes OVNI. Les rapports d'OVNI sont examinés à la lumière de l'hypothèse que l'expérience OVNI tend à accroître le niveau de conscience cosmique du témoin. La structure qui apparaît dans les rapports d'OVNI est également comparée aux déclarations des personnes qui affirment avoir été gratifiées de visions prophétiques des événements qui doivent se produire au cours des vingt-cinq prochaines années.

Traduit par Jacques Scornaux

## LES OVNI OBEISSENT-ILS A UNE DISTRIBUTION DE POISSON ?

E. BERGER

### Résumé

Le présent article introduit un nouveau concept dans l'étude des vagues d'OVNI. Peu de chose a été fait à partir des données abondantes sur les vagues du passé. La distribution de POISSON, qui est une distribution statistique relative aux événements rares et aléatoires comme les accidents ou les tremblements de terre, est décrite et appliquée aux données de l'auteur sur la vague de l'automne 1954 en Autriche. On montre qu'il n'y a pas de relation de type causal entre les 94 cas rapportés au cours de cette période de 12 semaines, et que ce n'est donc pas une "force agissante extérieure", mais l'effet d'une forte amplification journalistique sur la divulgation de nouveaux cas qui a probablement produit la structure de "vague". Comme le concept de la distribution de POISSON pourrait ébranler plusieurs autres structures de "vague" lors d'une étude approfondie, on examine les répercussions d'ordre général de ce résultat obtenu en Autriche ainsi que d'autres tests possibles de la validité du concept.

Traduit par Jacques Scornaux

UNE APPROCHE STATISTIQUE DES DONNEES DE BASE SUR  
LES OVNI EN VUE DE LA DEFINITION D'UN "FILTRE  
DE RECONNAISSANCE"

R. DORETTI et R. FARABONE

Résumé

Le présent article a pour objet d'exposer une nouvelle méthode statistique de traitement des données intéressant la recherche sur les OVNI. On montre essentiellement comment il est possible de rassembler des données se rapportant au même ensemble de phénomènes ou à des objets de type analogue à partir du vaste ensemble des rapports d'OVNI. On atteindra cet objectif par l'analyse des relations statistiques que présentent les différents ensembles de données sous des aspects quantitatifs et par l'analyse des coefficients de corrélation entre une observation et les autres. Après un exposé théorique, nous présenterons un exemple simple qui pourra montrer la façon de procéder en pratique à une telle recherche. Cet exemple se rapporte de toute manière à une situation réelle, même si l'ensemble de données n'est pas très étendu, mais c'est là un cas typique et fréquent. La conclusion la plus importante qui ressort de cet ensemble numérique est que le filtre permet en pratique de reconnaître le phénomène malgré l'imprécision et le caractère aléatoire des données rassemblées.

Traduit par Jacques Scornaux

UNE ANALYSE COMPARATIVE DE 62 CAS DE FAISCEAUX DE  
"LUMIERE SOLIDE"

J. HEERING

Résumé

Les témoins d'événements ufologiques ont mentionné à maintes reprises le fait que les objets anormaux qu'ils avaient observés émettaient un ou plusieurs faisceaux de lumière d'apparence solide à propagation lente (faisceaux de "lumière solide").

Une analyse comparative de 62 cas de ce type est présentée. On montre que les caractéristiques des faisceaux de "lumière solide" sont remarquablement constantes: luminosité uniforme; bords nettement définis; faible vitesse de propagation; forme conique ou cylindrique; et (parfois) propagation en ligne courbe.

On analyse les forces exercées par les faisceaux et différents types de lumière qu'ils émettent. Toutes les caractéristiques sont examinées du point de vue phénoménologique et physique. Une section distincte est consacrée aux diverses utilisations que les OVNI semblent donner à ces faisceaux.

En appendice, on donne un bref aperçu de la question étroitement apparentée des objets constitués de "lumière solide" et de la "lumière structurée".

Cet article est une version retravaillée des sections pertinentes des parties I, II et III de la référence(G).

Traduit par Jacques Scornaux

## CARACTERISTIQUES DU PHENOMENE OVNI EN AUTRICHE

E. BERGER

### Résumé

54 rapports sporadiques et 31 rapports correspondant à une vague locale (sur un total de 127 objets ou phénomènes), dont 56 ont fait l'objet d'une enquête personnelle de l'auteur sur les lieux, sont soumis à une comparaison statistique. Le premier ensemble de données se compose de cas répartis dans toute l'Autriche et rapportés par 89 observateurs sur une durée de 5 ans; le second se rapporte à la région de Traunstein en Basse Autriche et comprend 34 témoins locaux (dont 13 ont fait un rapport), les observations s'étendant sur trois ans. Les données présentent des similitudes en ce qui concerne le moment de la journée, la durée, le nombre d'objets, la forme, les dimensions et le mouvement du phénomène, mais d'autres caractéristiques observées manifestent des déviations. On en tire les caractéristiques du phénomène OVNI en Autriche, que l'on compare aux résultats des études statistiques de HANSEN (19), de POHER (22, 23) et de VALLEE (26).

Traduit par Jacques Scornaux

DESSINS D'OVNI PAR DES TEMOINS ET PAR DES NON-TEMOINS :  
ONT-ILS QUELQUE CHOSE EN COMMUN ?

R. HAINES

### Résumé

Le présent article décrit les résultats de deux études distinctes: (1) on a fait passer un "test" spécialement conçu de dessin d'OVNI à plusieurs groupes de témoins oculaires allégués d'OVNI et de non-témoins, et (2) on a passé en revue de façon relativement exhaustive les publications ufologiques qui contiennent des dessins d'OVNI tracés par des témoins oculaires. Ces études ont été réalisées en vue de déterminer si on pouvait ou non constater des différences entre les dessins des deux groupes du point de vue de caractéristiques telles que le rapport de la largeur à la hauteur de l'OVNI, le nombre et la nature des détails de sa surface, la présence ou l'absence d'autres détails de la scène (c'est-à-dire de l'environnement) et d'autres informations facilement quantifiables. Un second objectif tout aussi important était de permettre la mise au point d'une procédure d'essai pour la reconnaissance et l'identification de l'apparence des OVNI, qui a été décrite dans le premier numéro de

cette revue (volume 1, n° 1, 1976). On a constaté qu'il n'y avait, pour ce qui concerne les caractéristiques ci-dessus, aucune différence aisément discernable entre les dessins d'OVNI réalisés par les témoins oculaires et par les non-témoins. Bien que ce fait ne prouve pas que les deux groupes participants appartiennent au même échantillon de population, ni que tous les témoins d'OVNI pourraient reproduire simplement (par leurs dessins) l'image d'un stéréotype largement répandu dans la société au sujet de l'apparence que les OVNI sont supposés avoir, les faits pourraient être interprétés de cette manière. Une autre hypothèse que l'on peut avancer à partir de ces constatations est que presque tout le monde (les témoins comme les non-témoins) a vu un dessin, une photographie, un film, etc. d'un OVNI à l'un ou l'autre moment dans le passé (à la différence de l'observation d'un réel OVNI), ce qui pourrait rendre compte des similitudes entre les deux ensembles de dessins. L'article se termine par des illustrations des formes d'OVNI les plus courantes, avec les codes respectifs de description de la forme et des détails, établis d'après l'article publié précédemment (cité en référence ci-dessus).

Traduit par Jacques Scornaux

## LA SITUATION ACTUELLE DE LA RECHERCHE UFOLOGIQUE

L. SCHÖNHERR

### Résumé

Le présent article compare la situation actuelle de la recherche ufologique aux phases du développement et à la structuration d'une discipline scientifique en général. On évoque certains des problèmes que posent l'interprétation des rapports d'OVNI et la collecte de données à leur sujet. On accorde une attention particulière à la question de la désinformation (s'il nous faut supposer que le phénomène OVNI est une manifestation de quelque intelligence inconnue). On souligne la nécessité de disposer d'un thésaurus de l'ensemble des éléments descriptifs relatifs aux OVNI et on montre les principaux avantages d'une proposition de base de données "illimitée" qui soit lisible par machine. Enfin, l'article examine les significations possibles de la prédominance de l'hypothèse extraterrestre dans la recherche ufologique. Cette hypothèse constitue-t-elle un outil utilisable du point de vue méthodologique ou n'est-elle qu'une indication du fait que la recherche ufologique se trouve encore en partie à un stade pré-scientifique ?

Traduit par Jacques Scornaux

SUR LA CHANCE D'ÊTRE TÉMOIN DE PHÉNOMÈNES CÉLESTES  
OU AÉRIENS

E. J. BETINIS

Résumé

Les chances d'être témoin de phénomènes célestes ou aériens anormaux sont déterminées par l'examen du volume de ciel accessible principalement à l'observateur situé au sol, comparativement à l'ensemble de l'atmosphère de la terre jusqu'à une altitude de 15 km environ. On tient compte également de la fraction du temps passée à observer par 24 h et de la fraction des phénomènes survenant dans l'ensemble de l'atmosphère qui se déroule dans le volume de ciel accessible à l'observation. On accorde également quelque attention aux chances des pilotes d'aéronefs et des astronomes. Les résultats sont appliqués aux chances de détecter des météores et des phénomènes aériens anormaux. Les conclusions indiquent que la chance d'être témoin d'un phénomène anormal (OVNI) est extrêmement faible et même improbable. La réconciliation avec les données recueillies sur des rapports d'observation de phénomènes anormaux implique donc une "sélectivité". Une autre conclusion est que la présence d'un petit nombre d'anomalies en déplacement rapide pourrait rendre compte du nombre global de rapports de phénomènes aériens anormaux.

Traduit par Jacques Scornaux

## LUMIERES ANORMALES DANS LE CIEL DIURNE

B.S. MACCABEE

### Résumé

Plusieurs observateurs, dont l'un est un employé techniquement compétent d'une installation militaire, ont observé deux lumières très brillantes ou objets lumineux dans un clair ciel d'été au milieu de la journée. On a observé que les lumières demeuraient apparemment stationnaires et se rapprochaient ou s'éloignaient également selon différentes trajectoires. La durée de l'observation a été de 3 à 5 minutes. Malgré une enquête approfondie, les objets demeurent non identifiés.

Traduit par Jacques Scornaux

## POURSUITE DRAMATIQUE EN ESPAGNE

W. SMITH, M. GUASP, V.J. BALLESTER OLMOS

### Résumé

Une famille de cinq personnes, qui rentrait chez elle la nuit par des routes secondaires, a été suivie par une lumière brillante qui n'a pas cessé de poursuivre la voiture sur une distance de l'ordre de 40 km pendant près d'une heure.

A l'approche du village de Cheste (près de Valence, Espagne), l'OVNI, qui se trouvait à ce moment à courte distance, s'est placé au-dessus et vers l'avant de la voiture, et des bras en sont sortis. L'incident s'est terminé par l'arrivée d'un autre véhicule, qui se déplaçait en sens inverse sur cette route généralement déserte. L'un des témoins (âgé de 15 ans) a ressenti un grave malaise au cours de l'incident et sa santé a été altérée pendant quelque temps après. Une défaillance de la batterie de la voiture a été attribuée à l'incident, et il a fallu la remplacer le lendemain.

Traduit par Jacques Scornaux

E. BERGER

### Résumé

De très nombreuses observations d'OVNI ont été signalées en Autriche au cours de la période 1954/55, dont 99 sont demeurées non identifiées. Le noyau dur des données consiste en rapports de gendarmerie ou de police que les autorités autrichiennes ont rassemblés et qui ont été communiqués pour la première fois à E.BERGER en 1973. 28 exposés de cas, qui constituent la partie la plus intéressante des données, sont présentés en détail. Au moyen d'une analyse statistique complète, selon la même méthode que dans une étude antérieure de BERGER sur les caractéristiques des rapports autrichiens de 1972-77, on dégage les structures de la vague de 1954/55 et on les compare aux résultats de VALLEE, de BERGER et d'autres.

Traduit par Jacques Scornaux

## REFLEXIONS SUR LA NATURE DES HUMANOÏDES

J. SCORNAUX

### Résumé

La nature des humanoïdes observés par les témoins d'OVNI demeure très controversée. Leur existence en tant qu'êtres extraterrestres intelligents se heurte à une forte réticence de la part de l'esprit humain. On se trouve manifestement en présence d'un blocage mental provoqué par la peur, mais il y a aussi des arguments plus élaborés. La ressemblance entre l'homme et les humanoïdes est l'un de ceux-ci, mais la question de la ressemblance que d'autres êtres intelligents pourraient avoir avec nous demeure très ouverte parmi les biologistes. Nous ne pensons pas que l'imagination humaine puisse expliquer l'apparence des humanoïdes. En général, ils nous ressemblent à la fois trop et trop peu. Un argument contre la nature matérielle des humanoïdes est que leur morphologie est beaucoup trop variable d'un cas à un autre. Il y a plusieurs réponses possibles à cette objection. Mais un argument plus fondamental s'appuie sur les disparitions sur place des humanoïdes. Nous donnons quelques exemples de ce comportement, tant à l'air libre qu'en local clos. Nous proposons comme explication que ces cas seraient des projections d'images, créées soit par des ondes électromagnétiques, soit par quelque

moyen parapsychologique . Mais tous les ufonautes ne sont pas des images, ou peut-être une partie seulement de l'observation correspond-elle à une projection, car certains d'entre eux ont laissé des empreintes ou ont eu un contact physique avec les témoins. Nous donnons également quelques exemples de tels cas. Nous présentons plusieurs hypothèses sur la nature d'humanoïdes matériels et examinons le concept d'une hypothèse "rassurante". Nous proposons pour discussion l'hypothèse qu'une partie des humanoïdes pourraient être des êtres humains capturés par les êtres qui régissent le phénomène OVNI.

Traduit par Jacques Scornaux

#### UTILISATION DE LA TECHNIQUE DU PENDULE DANS L'ETUDE DES EXPERIENCES OVNI

R. L. SPRINKLE

##### Résumé

Le présent article a pour objet de fournir des renseignements sur une technique permettant de mettre au jour des souvenirs subconscients, de façon que les enquêteurs ufologiques puissent envisager une utilisation éventuelle de cette technique dans leurs investigations. La technique du pendule est décrite avec des références à son évolution historique et à son utilisation contemporaine. On présente des méthodes d'apprentissage de l'emploi de la technique du pendule, avec des illustrations destinées à guider le lecteur intéressé. On passe rapidement en revue les publications relatives aux méthodes d'enquête sur les expériences OVNI; l'accent est mis sur les rapports de rencontres rapprochées du troisième type (RR3), et notamment sur les rapports de "perte de temps" ou d'amnésie partielle qui peut se produire au cours d'observations d'OVNI. Les résultats de l'utilisation de la technique du pendule sont décrits pour deux cas d'OVNI : dans l'un, on a obtenu des renseignements préliminaires sur une possible expérience de "perte de temps" au cours d'une observation d'OVNI; dans l'autre, on a obtenu des renseignements préliminaires sur une possible expérience OVNI "cachée". Ces cas d'OVNI sont présentés en tant qu'exemples d'une investigation préliminaire d'expériences de RR3. Les enquêteurs sont encouragés à envisager, lorsqu'ils sont informés de cas de RR3, de prendre contact avec un consultant en hypnose afin d'aider les témoins d'OVNI à explorer et à évaluer les souvenirs subconscients qu'ils ont de leurs expériences OVNI.

Traduit par Jacques Scornaux

# HYPNOSE DE PERSONNES IMAGINAIREMENT ENLEVÉES PAR UN OVNI

A. H. LAWSON

## Résumé

Pour tenter d'évaluer objectivement les affirmations des personnes qui disent avoir été enlevées par un OVNI, on a induit par hypnose des enlèvements imaginaires dans un groupe de volontaires qui n'avaient pas de connaissances particulières sur les OVNI. On a posé à chaque sujet huit questions de situation qui recouvraient les principaux éléments d'un récit typique d'enlèvement.

Alors que les chercheurs s'attendaient à des dissemblances importantes, une comparaison pondérée de données relatives à quatre récits d'enlèvements imaginaires et à quatre récits d'enlèvements "réels" n'a mis en évidence aucune différence notable. En outre, des motifs complexes reproduisant des détails bien établis des rapports d'OVNI "réels" sont apparus dans les récits d'imagination des sujets "naïfs". On ne possède pas encore d'explication satisfaisante des motifs analogues et des autres similitudes entre les enlèvements imaginaires et "réels". Mais, ce qui est plus significatif, il existe des parallèles entre ces motifs et les "constantes d'images" ou les descriptions récurrentes de formes, de couleurs et de mouvements rapportées par les sujets d'expériences d'hallucinations induites par des drogues et par des personnes qui ont été en état de mort clinique, entre autres processus mentaux. On a donc des raisons d'accepter au moins certaines parties des récits des personnes qui ont été "réellement" enlevées comme le reflet exact de ce que leurs mécanismes sensoriels ont enregistré.

Toutefois, malgré les nombreuses ressemblances, il y a des différences cruciales, comme les effets physiques allégués et les témoins multiples, qui tendent à montrer que les enlèvements à bord d'OVNI sont distincts des expériences imaginaires et hallucinatoires. Compte tenu de ces différences, un modèle de l'enlèvement est proposé :

- les témoins perçoivent réellement des images, quelle qu'en soit la source, telles que des lumières brillantes et pulsantes, des formes à structure en grille se déplaçant de façon erratique dans le ciel, des tunnels éclairés, des figures humanoïdes, etc. Ces constantes de l'enlèvement se combinent à des informations provenant de l'imagination, de la mémoire et des données existantes sur les OVNI connus des témoins pour créer une rencontre "réelle" avec un OVNI. La réalité subjective de l'intense structure hallucinatoire convainc les témoins que l'en-semble de l'expérience représente un événement physiquement réel. Par la suite, ils peuvent rapporter la "vérité" telle qu'ils l'ont ressentie, même si ce qui s'est réellement passé demeure incertain.

Le modèle ci-dessus souligne la complexité du phénomène OVNI, puisque de nombreuses questions troublantes demeurent inexpliquées, et notamment le plus grand de tous les mystères, à savoir la nature du stimulus qui déclenche l'imagerie chez le témoin et suscite ainsi le scénario d'enlèvement.

Les préférences de l'auteur vont à une hypothèse dualiste pour rendre compte des OVNI. Mais si on se trouve devant une absence persistante d'évidences physiques non ambiguës, la présente étude permet de conclure que les OVNI sont, en termes psychologiques, indubitablement réels et que les recherches sur les OVNI dans des domaines non physiques sont par ailleurs prometteuses.

Traduit par Jacques Scornaux

DESSINS D'OVNI PAR DES TEMOINS ET PAR DES NON-TEMOINS :  
ONT-ILS QUELQUE CHOSE EN COMMUN ?

(Deuxième partie)

R.F.HAINES

### Résumé

L'auteur a précédemment constaté que l'on ne pouvait pas relever de différences aisément discernables entre des dessins de "ce à quoi ressemble un OVNI" réalisés par des personnes qui affirment en avoir vu un et par d'autres qui déclarent ne jamais en avoir vu (HAINES, 1977). Comme cette constatation pouvait résulter simplement de la taille relativement faible de l'échantillon (136 dessins valables), d'autres tests ont été réalisés. Les résultats d'ensemble de 458 nouveaux dessins valables sont présentés ici. On peut résumer les résultats en faisant ressortir que le groupe de ceux qui "ont vu" a dessiné (1) un pourcentage plus élevé de dessins valables, c'est-à-dire non fantaisistes, (2) un pourcentage plus élevé de formes d'OVNI faisant un certain angle par rapport aux bords de la feuille de dessin, (3) un pourcentage plus élevé de formes au nombre de deux ou plus sur la feuille, (4) un pourcentage plus faible de formes présentées de côté ou selon une vue isométrique et (5) un pourcentage plus faible de dessins symétriques. Le rapport moyen de la largeur à la hauteur ne présentait de différence entre les deux groupes participants ni pour le contour de l'OVNI ni pour le dôme de celui-ci (lorsqu'il en était dessiné un). Les autres mesures principales du contour et du dôme de l'OVNI n'étaient pas non plus dessinées différemment par les deux groupes. Enfin, ce qui est peut-être plus significatif, le groupe de ceux qui "ont vu" a dessiné un plus petit nombre de détails divers tels que des ouvertures (hublots ?), des insignes,

des lignes ondulées autour de l'objet, etc. Ces constatations sont comparées à celles qui se dégagent de l'étude précédente et sont examinées sous l'angle de l'incidence du point de vue de la perception que la rencontre avec un OVNI semble avoir sur le désir ou la capacité de reproduire une forme d'OVNI.

Traduit par Jacques Scornaux

## LES OVNI SONT-ILS DES PHENOMENES PSYCHIQUES ?

I. GRATTAN-GUINNESS

### Résumé

Les personnes qui étudient les phénomènes OVNI considèrent aujourd'hui pour la plupart leurs travaux comme une branche de la recherche psychique. Dans le présent article, j'étudie les relations et les analogies possibles entre les OVNI et les phénomènes psychiques.

Traduit par Jacques Scornaux

## UNE ENQUÊTE STATISTIQUE AUPRES DES OBSERVATOIRES ASTRONOMIQUES ITALIENS

M. PITTELLA

### Résumé

Cette enquête statistique a été réalisée en 1977 et en 1978 auprès des 14 plus importants observatoires astronomiques et astrophysiques d'Italie. Elle avait pour objet de tester l'opinion d'une composante importante de la communauté scientifique italienne au sujet de la question des OVNI et de déterminer si le personnel de certains observatoires avait directement observé des phénomènes de type OVNI. Ce test d'information ne nous a pas fourni de renseignements nouveaux et inattendus. Ce document met toutefois clairement en évidence le niveau médiocre d'information et de sensibilisation des milieux scientifiques au sujet de la question des OVNI.

Ce genre d'enquête, si elle était effectuée auprès d'autres cercles scientifiques et répétée régulièrement, pourrait constituer un moyen approprié pour évaluer de temps à autre l'évolution possible de l'opinion des hommes de science au sujet de la question des OVNI.

Traduit par Jacques Scornaux

## GERMAN LANGUAGE ABSTRACTS

UPIAR VOL. I NO. 1 (1976)

AUFSATZ ÜBER DIE MÖGLICHE KORRELATION ZWISCHEN DER  
GEOGRAFISCHEN VERTEILUNG UND DEN FLUGRICHTUNGEN VON UFOs  
AUFGRUND DER SPANISCHEN WELLE 1968 - 1969

M. Guasp

Eine Studie der Auftretshäufigkeit und Verteilung der Flugrichtungen von UFOs während der spanischen Welle 1968 - 1969 zeigt folgendes: Nimmt man die drei Parameter der Richtung, Bahn und Auftretshäufigkeit der Richtung als Vektoren an, zeigt die Resultierende der Vektorsumme präzise auf die Zentren der maximalen UFO-Information: jenes von Luftbeobachtungen (NE-Spanien), unter Berücksichtigung der Richtungen, aus denen die Objekte kamen; sowie jenes für Typ I-Fälle (SW-Spanien), unter Berücksichtigung der Richtungen, in die man sie verschwinden sah. Einige nachfolgende Betrachtungen zeigen, daß die Linie, welche beide Zentren der Information verbindet, NE - SW, eine wichtige Rolle in der Entwicklung der geographischen Lage der Beobachtungen in der Welle zu spielen scheint.

UFO - ACTIVITÄT: KOSMISCHES BEWUETSEINSTRAINING ?

R. Leo Sprinkle

Der Beitrag beschreibt einen möglichen Zugang zum Studium von UFO-Berichten: eine Reihe vorläufiger Hypothesen, welche die "physische", "biologische", "psychosoziale" und "spirituelle" Tragweite der UFO-Phänomene erklären könnte. UFO-Berichte werden im Licht der Hypothese untersucht, nach der die UFO-Erfahrung darauf zielt, das kosmische Bewußtsein der UFO-Zeugen zu erhöhen. Das sich ergebende Muster von UFO-Berichten wird mit der Sicht von Personen verglichen, die prophetische Visionen von Geschehnissen der nächsten 25 Jahre gehabt haben.

## SIND UFOS POISSON-VERTEILT ?

E. Berger (MUFON)

Der Bericht präsentiert ein neues Konzept zum Studium von "UFO-Wellen". Man hat früher wenig mit dem Überfluß an "Wave"-Daten getan. Die POISSON-Verteilung, eine statistische Verteilung für zufällige seltene Ereignisse wie Unfälle oder Erdbeben, wird erklärt und auf die Daten des Autors über die Herbst-"Welle" 1954 in Österreich angewandt. Es wird gezeigt, daß die 94 Fälle in der 12 Wochen-Periode nicht kausal verknüpft sind und daher keine "Triebkraft von außen", sondern ein starker publizistischer Aufschaukelungseffekt in Bezug auf neue Fallberichte wahrscheinlich zur "Wave"-Struktur geführt hat. Da das POISSON-Konzept auch andere "Wave"-Strukturen erschüttern könnte, werden allgemeine Auswirkungen und weitere Tests zur Gültigkeit des Ansatzes diskutiert.

## EIN STATISTISCHER ZUGANG ZU GRUNDLEGENDEN UFO-DATEN FÜR DIE EINFÜHRUNG EINES "ERKENNUNGSFILTERS"

R. Doretti, R. Farabone (CNIFAA)

Dieser Beitrag zielt darauf ab, eine neue statistische Methode zur Verarbeitung von interessanten Daten für die UFO-Forschung zu zeigen. Es wird hauptsächlich gezeigt, wie man Daten sammeln kann, welche sich auf die selbe Gruppe von Phänomenen oder ähnliche Objekte beziehen und außerhalb der breitgestreuten Gruppe von UFO-Berichten liegen. Dies wird durch die Analyse statistischer Beziehungen unterschiedlicher Datensätze unter quantitativen Aspekten mittels Korrelationskoeffizienten gezeigt. Nach einer theoretischen Erläuterung werden wir ein einfaches Beispiel präsentieren, das die Anwendung einer solchen Forschungsmethode in der Praxis zeigt. Dieses Beispiel nimmt auf eine reale Situation Bezug, auch wenn der Datensatz nicht groß ist, was aber eine typische und häufige Gegebenheit ist. Die wichtigste Folgerung, die man aus dem numerischen Set ziehen kann, der Filter, erlaubt tatsächlich, das Phänomen trotz Ungenauigkeit und Zufälligkeit der gesammelten Daten zu erkennen.

EINE VERGLEICHENDE ANALYSE VON 62 FÄLLEN "FESTER  
LICHTSTRAHLEN"

J. Heering

Zeugen von UFO-verwandten Ereignissen haben wiederholt darauf hingewiesen, daß von ihnen beobachtete anomale Objekte einen oder mehrere fest aussehende, sich langsam ausbreitende Lichtstrahlen ("festes Licht") aussandten. Eine vergleichende Analyse von 62 Fällen diesen Typs wird präsentiert. Es wird gezeigt, daß die Charakteristik der "festen Lichtstrahlen" bemerkenswert konstant bleibt: einförmige Helligkeit; scharf abgegrenzte Ecken; geringe Ausbreitungsgeschwindigkeit; konische oder zylindrische Form; und (manchmal) Ausbreitung entlang einer gekrümmten Bahn. Kräfte, die von den Strahlen ausgeübt werden sowie verschiedene Typen von ausgesandtem Licht werden analysiert. Alle Charakteristiken werden von einem phänomenologischen und einem physikalischen Blickwinkel aus diskutiert. Ein separater Teil ist jenen praktischen Anwendungen gewidmet, zu denen UFOs scheinbar diese Strahlen benützen. In einem Anhang wird eine kurze Übersicht über das sehr verwandte Gebiet "fester Leuchtobjekte" und "strukturiertes Licht" gegeben.

ÖSTERREICHISCHE UFO-STRUKTUREN

E. Berger

54 sporadische und 31 "local flap"-Berichte (zu insgesamt 127 Objekten / Phänomenen), 56 vom Autor an Ort und Stelle untersucht, werden statistisch verglichen. Der erste Datensatz besteht aus über Österreich verstreuten Fällen, die von 89 Beobachtern in 5 Jahren berichtet wurden; der zweite stammt aus der Gegend um Traunstein, Niederösterreich, von 34 lokalen Zeugen und 3 Jahren Beobachtungen. Die Daten zeigen in der Tageszeit, Dauer, Objektanzahl, Form, Größe und Bewegung des Phänomens Übereinstimmungen, weichen aber in anderen Charakteristiken voneinander ab. Österreichische UFO-Strukturen werden abgeleitet und mit den statistischen Resultaten von HANSEN, POHER und VALLEE verglichen.

IST DER LOCUS COERULEUS, EIN WICHTIGES ANATOMISCHES HIRN-  
ZENTRUM, AN DEN BIZARRSTEN ASPEKTEN VON UFO-BERICHTEN  
BETEILIGT ? DIE INDUZIERTE TRAUM-HYPOTHESE.

Cl. Rifat

Dieser Bericht beschäftigt sich mit einer Hypothese, die  
zuerst von GUERIN geäußert wurde und helfen könnte, den  
unheimlichen Inhalt von UFO-Berichten zu erklären, welche  
von Hynek "Nahe Begegnungen der 3.Art" genannt werden.  
Der Locus Coeruleus ist ein kleiner, aber anatomisch  
wichtiger Teil des Säugetierhirns: er induziert das, was  
wir "Träumen" nennen. Der Autor schlägt vor, daß sehr  
nahe UFOs, in denen sogenannte Insassen "gesehen" werden,  
mit der normalen Hirnfunktion im Wachzustand interferieren,  
indem sie auf den Locus Coeruleus wirken. Die wichtigste  
Erkenntnis dieser Art ist die, daß uns UFO-Berichte diesen  
Typs keinen Hinweis auf den wahren Stimulus geben, welcher  
den Bericht hervorgerufen hat; sie sagen uns nur, was sich  
die Person über die Natur der UFOs einbildet. Wenn wir jene  
rätselhaften Berichte unter diesem Aspekt betrachten,  
könnte daraus ein besseres Verständnis bizarrer Ereignisse  
im Verlauf der Begebenheiten erwachsen. Nahebegegnungen der  
3.Art sind LSD-artige Erlebnisse, in welchen die Person  
eine Mischung aus realer und ihrer unbewußten inneren Welt  
wahrnimmt.

UFO-ZEICHNUNGEN VON ZEUGEN UND NICHT-ZEUGEN:  
GIBT ES GEMEINSAMKEITEN ?

R. Haines

Dieser Bericht beschreibt das Resultat von 2 getrennten  
Versuchen: (1) Vorlage eines speziell entwickelten UFO-  
Zeichen"tests" bei mehreren Gruppen angeblicher UFO-Augen-  
zeugen und Nicht-Zeugen, und (2) eine relativ umfassende  
Zusammenschau der publizierten UFO-Literatur mit UFO-Zeich-  
nungen der Augenzeugen. Dies wurde unternommen, um festzu-  
stellen, ob zwischen den beiden Gruppen Differenzen bezüg-  
lich Breite:Höhe-Verhältnis, Anzahl und Art von Oberflächen-  
details, An- oder Abwesenheit anderer (Umgebungs)Details usw.  
zu finden sind oder nicht. Ein zweites, gleich wichtiges  
Ziel war die Entwicklung eines UFO-Erkennungs- und Identifi-

kations-Tests, der in der ersten Nummer dieses Journals erschien (Vol.1, No.1, 1976). Es zeigte sich, daß keine leicht erkennbaren Unterschiede zwischen den UFO-Zeichnungen von Zeugen und Nicht-Zeugen existieren. Während dies nicht als Beweis ausreicht, daß die beiden teilnehmenden Gruppen aus einer Population stammen oder daß alle UFO-Zeugen einfach (durch ihre Zeichnung) ein allgemeines soziales Stereotyp-Bild, wie UFOs auszusehen haben, reproduzieren, könnte man die Ergebnisse in dieser Weise interpretieren. Eine andere vorläufige Hypothese aufgrund der Daten wäre, daß fast jeder (Augenzeuge und Nicht-Augenzeuge) einmal eine Zeitung, ein Foto, einen Film etc. über ein UFO gesehen hat (zum Unterschied von einem tatsächlichen UFO-Beobachter), was die Ähnlichkeiten zwischen den zwei Sets von Zeichnungen erklären könnte. Der Bericht schließt mit Abbildungen der häufigsten UFO-Formen mit deren Form/Detail-Codes laut der (oben erwähnten) früher publizierten Arbeit.

#### DIE GEGENWÄRTIGE SITUATION DER UFO-FORSCHUNG

L. Schönherr

Dieser Bericht vergleicht die gegenwärtige Situation der UFO-Forschung mit Phasen in der Entwicklung der Struktur einer wissenschaftlichen Disziplin im allgemeinen. Einige Probleme der Dokumentation und der Interpretation von UFO-Strukturen werden berührt. Besondere Aufmerksamkeit wird der Frage der Desinformation geschenkt (wenn wir annehmen, daß das UFO-Phänomen Ausdruck einer unbekanntes Intelligenz ist). Die Notwendigkeit eines Thesaurus für alle UFO-bezogenen Qualitäten wird betont. Die Hauptnachteile einer vorgeschlagenen "unbegrenzten" maschinell lesbaren UFO-Datenbasis werden demonstriert. Abschließend stellt der Bericht die mögliche Bedeutung des Überwiegens der Extraterrestrischen Hypothese (ETH) im Rahmen der UFO-Forschung dar: Ist diese Hypothese ein methodisch brauchbares Werkzeug oder bedeutet sie, daß sich die UFO-Forschung teilweise noch in der vorwissenschaftlichen Phase befindet?

ÜBER DIE WAHRSCHEINLICHKEIT EREIGNISSE AM HIMMEL ODER IM  
LUFTRAUM BEOBACHTEN ZU KÖNNEN

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Eingelangt am 11. Oktober 1978

ZUSAMMENFASSUNG

Die Wahrscheinlichkeit für die Beobachtung eines Himmeler-  
eignisses oder eines anomalen Geschehens im Luftraum wird  
aus dem Verhältnis zwischen dem für einen Beobachter am Bo-  
den erfaßbaren Himmelausschnitt und dem gesamten Himmels-  
raum in einer Höhe von etwa 15 Kilometern abgeleitet. Der  
für die Beobachtungstätigkeit aufgewendete Zeitanteil wird  
mit dem Vierundzwanzigstundentag verglichen und der auf den  
Beobachtungszeitraum entfallende Anteil aus den Gesamter-  
eignissen berücksichtigt. Auf die Beobachtungschancen von  
Flugzeugpiloten und Astronomen wird ebenfalls eingegangen.  
Die Ergebnisse werden auf die Beobachtungswahrscheinlich-  
keit für Meteore und anomale atmosphärische Ereignisse ange-  
wandt. Es ergeben sich nachstehende Schlußfolgerungen:

- Die Chance, ein anomales Ereignis (UFO) zu beobachten,  
ist äußerst gering bzw. unwahrscheinlich.
- Zeugenberichte über anomale Ereignisse legen die Existenz  
einer Art von "Selektivität" nahe. Es ist nicht klar, ob  
diese Selektivität als eine Eigenschaft des Phänomens oder  
des Beobachters zu deuten ist.
- Das Vorhandensein einiger weniger, sich schnell bewogender  
Anomalien würde ausreichen, um den weltweiten Umfang von  
Berichten über anomale atmosphärische Erscheinungen zu er-  
klären.

## ANOMALE LICHTERSCHEINUNGEN AM TAGESHIMMEL

B. S. MACCABEE

10706 Meadowhill Rd., Silver Spring, MD 20901, USA

Eingelangt am 8. Mai 1977

### ZUSAMMENFASSUNG

Mehrere Personen, unter ihnen der technisch zuständige Angestellte einer militärischen Anlage, beobachteten am klaren, mittäglichen Sommerhimmel zwei sehr helle Lichter oder leuchtende Objekte. Die Lichter wurden sowohl stillstehend beobachtet, als auch bei ihrer Annäherung und Entfernung entlang verschiedener Flugbahnen. Die Beobachtung dauerte drei bis fünf Minuten. Trotz eingehender Untersuchung bleiben die Objekte nichtidentifiziert.

## DRAMATISCHE VERFOLGUNGSJAGD IN SPANIEN

W. SMITH<sup>1)</sup>, M. GUASP<sup>2)</sup>, V. J. BALLESTER OLMOS<sup>3)</sup>

Eingelangt am 18. März 1978

### ZUSAMMENFASSUNG

Eine aus fünf Personen bestehende Familie, die nachts in ihrem Wagen auf Nebenstraßen nach Hause zurückkehrte, wurde von einem hellen Licht verfolgt, das ihren Wagen über eine Distanz von 40 Kilometern nahezu eine Stunde lang jagte. Als sie sich der Ortschaft Cheste (in der Nähe von Valencia, Spanien) näherten, bewegte sich das UFO - nunmehr sehr nahe - nach vorn und über den Wagen wobei es eine Art Fahrwerk ausfuhr. Das Nahen eines anderen Fahrzeuges aus der Gegenrichtung auf der normalerweise einsamen Straße beendete den Zwischenfall.

Eine der Zeuginnen (15 Jahre) wurde während des Zwischenfalles von heftiger Übelkeit befallen und war noch einige Zeit danach krank. Ein Schaden an der Autobatterie, die am nächsten Tag ausgetauscht werden mußte, wurde mit dem Vorfall in Verbindung gebracht.

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- (3) Ingeniero Técnico Industrial, Diplomado en programación IBM Anshrift: Guardia Civil No. 9, D-16, Valencia, Spanien.

1954/55 - DER ÖSTERREICHISCHE ANTEIL

E. BERGER

MUFON-Vertreter für Österreich

Nußdorferstraße 7, P. A. 1094, Wien, Österreich

Eingelangt am 24. Jänner 1978

#### ZUSAMMENFASSUNG

Im Zeitraum 1954/55 wurden in Österreich massenhaft UFO-Erlebnisse gemeldet, von denen 99 unidentifiziert geblieben sind. Der Kern des Materials besteht aus den vom Österreichischen Innenministerium gesammelten Gendarmerie- und Polizeiberichten die 1973 erstmals Ernst Berger zur Verfügung gestellt wurden. Der interessanteste Teil davon, bestehend aus 28 Fallstudien, wird hier ausführlich dargestellt. Mittels einer statistischen Analyse (sie entspricht methodisch einer früheren Studie von BERGER über die österreichischen Berichte aus den Jahren 1972 bis 1977) werden die Gesetzmäßigkeiten der Sichtungswelle von 1954/55 ermittelt und mit den Ergebnissen von VALLEE, BERGER und anderen verglichen.

BETRACHTUNGEN ÜBER DIE NATUR DER HUMANOIDEN

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Eingelangt am 21. Februar 1978

#### ZUSAMMENFASSUNG

Die Natur der Humanoiden, wie sie von UFO-Beobachtern beschrieben werden, ist immer noch umstritten. Die Annahme, daß es sich um außerirdische Wesen handelt, stößt verstandesmäßig auf erhebliche Zurückhaltung. Es gibt hier ohne Zweifel eine auf Furcht zurückzuführende geistige Sperre, aber auch kompliziertere Streitfragen. Eine davon ist die Ähnlichkeit zwischen dem Menschen und jenen Humanoiden, aber inwieweit andere intelligente Wesen uns Menschen ähneln könnten ist zwischen den Biologen noch keineswegs geklärt. Ich glaube nicht, daß das Aussehen der Humanoiden mit der menschlichen Phantasie erklärt werden kann. Im allgemeinen ähneln uns diese sowohl zu sehr, als auch zu wenig. Ein Einwand gegen den materiellen Charakter der Humanoiden besteht darin, daß ihre Morphologie von einem Fall zum anderen bei weitem zu stark variiert. Darauf sind verschiedene Entgegnungen möglich. Ein grundlegenderer Einwand beruht auf jenen Fällen, in denen solche Humanoiden vor den Augen des Beobachters Übergangslos bzw. an Ort und Stelle verschwunden sind. Ich gebe hier einige Beispiele für solche Vorfälle, die sich sowohl im Freien als auch in abgeschlossenen Räumen ereigneten. Als Erklärung schlage ich vor, daß es sich hierbei um Bilder handelt, deren Projektion entweder durch elektromagnetische Wellen oder auf parapsychische Weise zu-

standekommt. Aber nicht alle Ufonauten sind bloße Bilder oder vielleicht entspricht nur ein Teil der Beobachtung solchen Projektionen, denn einige Ufonauten haben Fußabdrücke hinterlassen oder hatten physischen Kontakt mit dem Zeugen. Auch von solchen Fällen gebe ich einige Beispiele.

Ich lege nun verschiedene Hypothesen über das Wesen materieller Humanoiden vor und diskutiere den Begriff einer sogenannten "Beruhigungshypothese". Weiters schlage ich die Hypothese, wonach ein Teil der Humanoiden menschliche Wesen sind, die sich in der Gefangenschaft der das UFO Phänomen kontrollierenden Seinsformen befinden, zur Diskussion vor.

#### DER EINSATZ DER PENDELTECHNIK BEI DER UNTERSUCHUNG VON UFO-ERLEBNISSEN

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Eingelangt am 12. Jänner 1978

#### ZUSAMMENFASSUNG

Zweck dieser Arbeit ist es, Informationen über eine Technik zur Aufdeckung unterbewußter Gedächtnisinhalte zur Verfügung zu stellen, damit dieses Verfahren gegebenenfalls bei UFO-Felduntersuchungen berücksichtigt werden kann. Die Pendeltechnik wird unter Hinweis auf deren historische Entwicklung und ihre zeitgenössischen Anwendungen beschrieben. Es werden Verfahren zur Erlernung der Pendeltechnik vorgestellt, einschließlich von Illustrationen die dem interessierten Leser als Leitfaden dienen können. Eine kurze Übersicht über die Literatur zur Felduntersuchung von UFO-Erlebnissen wird vorgelegt. Besonders berücksichtigt werden Berichte über Begegnungen der dritten Art (CE III) einschließlich von Berichten über "Zeitausfälle" oder partielle Amnesie, wie sie während UFO-Sichtungen auftreten können. Die Ergebnisse aus der Anwendung der Pendeltechnik werden an zwei UFO-Fällen dargestellt: In einem Fall wurden erste Kenntnisse über einen möglichen Zeitausfall während einer UFO-Sichtung, im zweiten über ein möglicherweise "verheimlichtes" UFO-Erlebnis gewonnen. Die UFO-Fälle werden als Beispiele für eine erste Untersuchung von CE-III-Erlebnissen vorgelegt. Wo die Felduntersuchung auf Hinweise für solche Erlebnisse stößt, sollte ein Hypnososachverständiger beigezogen werden, der dem UFO-Zeugen bei der Sondierung und Auswertung unterbewußter Erinnerungen behilflich sein kann.

# HYPNOTISCH INDUZIERTE, IMAGINÄRE UFO-ENTFÜHRUNGSERLEBNISSE

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Eingelangt am 18. Jänner 1979

## ZUSAMMENFASSUNG

Um zu einer objektiven Einschätzung der Behauptungen von Personen zu gelangen, die von UFOs "entführt" worden waren (UFO-"abductees"), wurden an einer Gruppe von Freiwilligen, die keine besonderen Kenntnisse über UFOs hatten, mittels Hypnose imaginäre UFO-Entführungserlebnisse hervorgerufen. Jeder Versuchsperson wurden acht situationsbezogene Fragen gestellt, welche die wichtigsten Komponenten typischer Entführungsberichte umfaßten.

Obwohl die Forscher größere Ungleichheiten erwarteten, hat ein gemittelter Vergleich zwischen den Daten aus je vier imaginären und vier "realen" Entführungserzählungen keine wesentlichen Unterschiede ergeben. Ebenso ist bei den Sitzungen mit den "naiven" Versuchspersonen ein umfangreiches Schema der gleichen Einzelheiten zum Vorschein gekommen, wie sie aus "realen" UFO-Berichten gut bekannt sind.

Bis jetzt gibt es noch keine befriedigende Erklärung für dieses Schema und andere Ähnlichkeiten zwischen imaginären und "realen" Entführungen. Noch bemerkenswerter ist, daß es zwischen obigem Schema und den aus anderen geistigen Vorgängen bekannten Abbildungskonstanten Parallelen gibt. So etwa die sich wiederholenden Beschreibungen von Formen, Farben und Bewegungen wie sie von den Versuchspersonen in Halluzinationsexperimenten mit Drogen geliefert werden und die Schilderungen sogenannter "Toter". Es ist daher begründet, wenigstens einige Teile der Berichte von "real" entführten Personen als genaue Wiedergabe dessen zu betrachten, was deren sensorischer Apparat registriert hat.

Trotz der vielen Ähnlichkeiten gibt es aber auch entscheidende Differenzen - wie die behaupteten physischen Wirkungen und die Fälle mit mehreren Zeugen - welche dafür sprechen, daß sich UFO-Entführungen von imaginären und halluzinatorischen Erlebnissen unterscheiden. Im Hinblick auf diese Unterschiede wird für Entführungserlebnisse folgendes Modell vorgeschlagen:

Die Zeugen nehmen tatsächlich Bilder wahr - aus welcher Quelle auch immer - wie etwa helle pulsierende Lichter, gitterartig strukturierte Formen, die sich ziellos am Himmel bewegen, erleuchtete Tunnels, humanoide Gestalten usw. Diese Konstanten des Entführungsmotivs werden mit

Daten aus der Phantasie und dem Gedächtnis des Zeugen sowie mit UFO-Daten, die ihm bereits bekannt sind vereinigt und erzeugen so eine "reale" UFO-Begegnung. Die subjektive Realität einer derart intensiven halluzinatorischen Struktur überzeugt die Berichterstatter davon, daß das gesamte Erlebnis ein physisch realer Vorgang ist. Infolgedessen kann es sein, daß sie die "Wahrheit" wiedergeben, wie sie diese erlebt haben obwohl die tatsächlichen Vorgänge unklar bleiben.

Das o. a. Modell wird der Kompliziertheit des UFO Phänomens gerecht, zumal viele rätselhafte Dinge noch ungeklärt sind einschließlich des größten Geheimnisses, nämlich der Natur jenes Reizes, der die Entstehung der Bilder im Zeugen einleitet und so den Ablauf des Entführungserlebnisses auslöst.

Der Verfasser neigt zu einer dualistischen UFO-Hypothese. Während aber eindeutige physikalische Beweise immer noch fehlen, kommt die vorliegende Studie zu dem Schluß, daß UFOs - im psychologischen Sinne - fraglos real sind und daß des weiteren eine nicht-physikalische UFO-Forschung erfolgversprechend ist.

UFO-ZEICHNUNGEN VON BEOBACHTERN UND NICHT-BEOBACHTERN:  
GIBT ES GEMEINSAMKEITEN ?  
(TEIL II)

R. F. HAINES

325 Langton Avenue, Los Altos, California 94022, USA

Eingelangt am 21. Jänner 1979

ZUSAMMENFASSUNG

Der Autor hat bereits früher festgestellt, daß in den UFO-Zeichnungen von Personen, die behaupten schon einmal ein UFO gesehen zu haben und jener, die noch keines sahen, keine auffälligen Unterschiede festzustellen sind (Haines 1977). Da sich diese Erkenntnis einfach aus dem relativ geringen Stichprobenumfang (136 gültige Zeichnungen) ergeben hätte, wurden weitere Tests durchgeführt. Die durchschnittlichen Ergebnisse der Auswertung weiterer 458 Zeichnungen werden hiermit vorgelegt. Sie können in der Aussage zusammengefaßt werden, daß die Gruppe jener, die schon einmal ein UFO gesehen hatten

- (1) einen höheren Prozentsatz an gültigen, d.h. nicht lächerlichen Zeichnungen
- (2) einen höheren Prozentsatz von UFO-Formen in einem Winkel

zum Rande des Zeichenblattes

- (3) einen höheren Prozentsatz von zwei oder mehr Formen auf einem Blatt
- (4) einen geringeren Prozentsatz von Formen in Seiteransicht oder in isometrischer Darstellung und
- (5) einen geringeren Prozentsatz von symmetrischen Zeichnungen lieferte.

Weder das mittlere Breiten/Höhenverhältnis des UFO-Umrisses noch dessen Domes (wenn gezeichnet) war bei den beiden Gruppen verschieden. Ebenso wurden auch die übrigen Abmessungen von UFO-Umriss und Dom in den beiden Gruppen nicht verschieden gezeichnet. Sehr bezeichnenderweise skizzierte schließlich die Gruppe jener die ein UFO gesehen hatten eine kleinere Anzahl verschiedener Details wie Öffnungen (Fenster?), Zeichen, Wellenlinien rund um den Umriss usw. Diese Ergebnisse werden mit jenen der früheren Studie verglichen und in Bezug auf den perceptuellen Einfluß diskutiert, den eine UFO-Begegnung auf die Bereitschaft und/oder die Fähigkeit, die UFO-Form zu reproduzieren, zu haben scheint.

EIN THEORETISCHES GERÜST ZUM PROBLEM DES FEHLENDEN KONTAKTES  
ZWISCHEN EINER FORTGESCHRITTENEN AUßERIRDISCHEN ZIVILISATION  
UND DER MENSCHHEIT:  
SYMBOLISCH-SEQUENTIELLE GEGENÜBER NICHTSYMBOLISCH, NICHTSE-  
QUENTIELLER KOMMUNIKATION

C. RIFAT

13 bis, Avenue Miramont, Geneve 1206, Suisse

Eingelangt am 29. August 1977

ZUSAMMENFASSUNG

Es wird ein allgemeines Begriffssystem präsentiert demzufolge eine fortgeschrittene außerirdische Intelligenz wahrscheinlich niemals an einer Kommunikation mit einer derart primitiven Spezies wie der unseren interessiert sein dürfte.

Nach Meinung des Autors stellt symbolische, sequentielle Sprache das primitivste Verständigungsmittel dar, das intelligenten Wesen benutzen können. Fortgeschrittene Intelligenzen würden sich besser einer nichtsymbolischen, nichtsequentiellen Sprache bedienen mittels derer pro Zeiteinheit eine größere Anzahl von Informationsbits mit geringerer Verfälschung übertragen werden könnte. Dadurch ließen sich die durch unklare symbolische Begriffe in der zwischenmenschlichen Kommunikation bestehenden Probleme, welche das Rauschen ungeheuer vergrößern nahezu eliminieren.

Das Interessanteste ist, daß wir uns sehr wohl in Gesellschaft einer irdischen Spezies befinden könnten, die bereits eine fortgeschrittenere Art der Kommunikation entwickelt hat: der Delphin!

## SIND UFOs PSYCHISCHE PHÄNOMENE ?

### I. GRATTAN-GUINNESS

34 Hillside Gardens, Barnet, Herts, EN5 2NJ, England

Eingelangt am 5. Februar 1979

#### ZUSAMMENFASSUNG

Die Erforscher der UFO-Phänomene betrachten heute ihre Arbeit vielfach als einen Zweig der psychischen Forschung. In der vorliegenden Studie untersuche ich die Möglichkeit von Querverbindungen und Ähnlichkeiten zwischen UFOs und psychischen Phänomenen.

Ich werde keine Zeit damit verlieren, die Tatsächlichkeit von UFO-Phänomenen zu beweisen, werde aber bei Gelegenheit auf Beispiele verweisen. Anstatt mich mit den Ansichten jener zu befassen, die meinen, alle diese Phänomene entweder als irgendwelche natürliche Vorgänge, oder als unseriöse Behauptungen der Zeugen erklären zu können, werde ich sie ignorieren. Für mich besteht bei diesen Phänomenen ein beweiskräftiger Rest, den man nicht auf diese Weise hinwegklären kann. Hier ist jedoch nicht der Platz, um auf Einzelheiten einzugehen. Wenn ich weiter unten Formulierungen wie "UFO-Sichtung" verwende, so beziehe ich mich damit nur auf ebendiesen beweiskräftigen Rest.

Die Beschreibung einzelner Fälle ist die Hauptaufgabe der Literatur, insbesondere der UFO-Zeitschriften. Zu den besten auf diesem Gebiet gehört die britische Flying Saucer Review. Soweit ich konkrete Fälle erwähne, beschränken sich meine Quellenhinweise auf sie +). Ebenso werde ich auf einige der besseren einschlägigen Bücher und Aufsätze hinweisen, speziell auf solche, in denen Fragen besprochen werden, mit denen ich mich hier befasse.

+ ) FLYING SAUCER REVIEW, FSR Publication Ltd., West Malling, Maidstone, Kent M19 6JZ, England

EINE STATISTISCHE ERHEBUNG UNTER DEN ASTRONOMISCHEN  
OBSERVATORIEN ITALIENS

M. PITTELLA

Centro Ufologico Nazionale  
Via Vignola 3, 20136 Milano, Italia

ZUSAMMENFASSUNG

Die vorliegende Meinungsumfrage wurde zwischen 1977 und 1978 bei den wichtigsten astronomischen und astrophysikalischen Observatorien Italiens durchgeführt. Sie hatte den Zweck, die Meinung eines wichtigen Teiles der italienischen Wissenschaftler zum Thema UFOs zu ermitteln und festzustellen, ob das Personal einiger Observatorien selbst schon UFOs gesehen hatte. Diese Untersuchung hat weder neue noch unerwartete Informationen geliefert. Sie belegt aber klar den mittelmäßigen Stand des Informationsniveaus und des Gespürs der Wissenschaft in Sachen UFOs.

Würden solche Umfragen auch unter anderen Zielgruppen innerhalb der Wissenschaft durchgeführt und regelmäßig wiederholt, so wäre dies ein zweckmäßiges Verfahren, um von Zeit zu Zeit allfällige Änderungen in der Meinung der Wissenschaften zur Frage der UFOs zu erfassen.

## ITALIAN LANGUAGE ABSTRACTS

UPIAR VOL. I NO. 1 (1976)

SAGGIO SULLA POSSIBILE CORRELAZIONE TRA LA DISTRIBUZIONE GEOGRAFICA E LE DIREZIONI DEGLI UFOs BASATA SULL'ONDATA SPAGNOLA DEL 1968/1969.

Miguel Guasp

Uno studio sulla frequenza e la distribuzione delle direzioni di volo di UFOs durante l'ondata spagnola del 1968/69 mostra che, quando i tre parametri direzione, rotta e frequenza della stessa direzione sono considerati come vettori, la risultante di questi vettori indica esattamente i centri di massima informazione UFO: quello di osservazioni aeree (NE della Spagna), quando si considerino le direzioni in cui gli oggetti sono stati visti apparire, e quello dei casi di I tipo (SO della Spagna), quando si considerino le direzioni in cui sono stati visti scomparire.

Alcune ulteriori considerazioni mostrano che la linea che unisce entrambi i centri di informazione, NE-SO, sembra giocare un ruolo importante nello sviluppo della dislocazione geografica degli avvistamenti dell'ondata.

Traduzione di Massimo Pittella

ATTIVITA' UFO: CONDIZIONAMENTO DELLA COSCIENZA COSMICA? (1)

R.Lec Sprinkle

Questo lavoro descrive un possibile approccio allo studio dei rapporti UFO tramite un insieme di proposte di ipotesi che possono spiegare le implicazioni fisiche, biologiche, psicosociali e spirituali del fenomeno UFO. I rapporti di questo tipo vengono considerati alla luce dell'ipotesi di base che l'esperienza UFO tenda ad accrescere il livello di consapevolezza cosmica dei testimoni. Inoltre il modello dei rapporti che ne deriva, viene confrontato con le osservazioni di quelle persone che affermano di aver ottenuto visioni di eventi che dovranno accadere entro i prossimi venticinque anni.

Traduzione di Roberto Farabone

(1) Adattato dal lavoro HYPNOTIC AND PSYCHIC ASPECTS OF UFO RESEARCHES, che e' stato presentato al Center for UFO Studies Conferences, Chicago, Illinois; 5 Maggio 1976

GLI UFOs SEGUONO LA DISTRIBUZIONE DI POISSON?

Ernst Berger (MUFON)

Ricevuto il 26 Marzo 1977

Questo lavoro introduce un nuovo concetto nello studio delle ondate UFO. Poco e' stato fatto con gli abbondanti dati delle passate ondate. La distribuzione di Poisson, una distribuzione statistica per eventi rari e casuali, come incidenti o terremoti, e' spiegata ed applicata ai dati dell'Autore sull'ondata del 1954 in Austria. E' dimostrato che i 94 casi riportati nel periodo di 12 settimane non sono correlati in senso casuale e quindi non esiste alcuna "forza motrice esterna", ma un pesante effetto di amplificazione pubblicitaria sui rapporti di nuovi casi e' stata tale da aver prodotto la struttura di "ondata". Poiche' il concetto di Poisson puo' scuotere diverse altre strutture, una volta sottoposte ad un piu' attento esame, sono discussi gli effetti generali di questo risultato austriaco ed ulteriori possibili test sulla validita' del concetto.

Traduzione di Massimo Pittella

UN APPROCCIO STATISTICO ALLA BASE DI DATI UFO PER  
L'ISTITUZIONE DI UN "FILTRO DI RICONOSCIMENTO"

Roberto Doretta e Roberto Farabone (CNIFAA)

Cas.Post.(P.C.Box 10661) I 20100 Milano, Italia

Ricevuto il 23 Aprile 1977

Questo lavoro si propone di presentare un nuovo metodo statistico per la trattazione dei dati di interesse per la ricerca UFO.

In particolare si mostra come si possa pensare di estrarre dall'eterogeneo insieme di rapporti UFO, quelli ascrivibili ad uno stesso "gruppo-fenomeno", ovvero quelli ascrivibili ad "oggetti di tipo analogo". Cio' sara' ottenuto mediante l'analisi delle relazioni di tipo statistico che i vari gruppi di dati presentano, ed in particolare mediante l'analisi dei coefficienti di correlazione di ogni osservazione con ogni altra.

Alla trattazione teorica seguira' un semplice esempio tendente a chiarire la pratica di una ricerca di questo tipo. Questo sara' svolto come una applicazione, cui il metodo puo' essere validamente riferito, su un insieme di dati di numerosita' piuttosto limitata, ma che costituisce un caso abbastanza tipico e frequente nella prassi della ricerca.

La conclusione piu' importante risultera' immediatamente da questo caso numerico: il "filtro" permette un riconoscimento del tipo di fenomeno, indipendentemente dalle imprecisioni dei dati e dalla casualita' della loro raccolta.

Traduzione di Roberto Farabone e Roberto Doretta

UN'ANALISI COMPARATIVA DI 62 CASI DI RAGGI DI "LUCE SOLIDA".

Jan Heering

I testimoni di eventi legati agli UFOs, hanno riferito spesso che gli oggetti anomali da loro osservati, emettevano uno o piu' raggi di luce apparentemente solida e che si propagavano lentamente (raggi di 'luce solida').

Presentiamo un'analisi comparativa di 62 casi di questo tipo. Viene mostrato che le caratteristiche dei raggi di 'luce solida' sono notevolmente costanti: luminosita' uniforme, confini delimitati nettamente, bassa velocita' di propagazione, forma conica o cilindrica e (alle volte) una propagazione lungo un percorso curvo.

Vengono analizzate le forze esercitate dai raggi ed i diversi tipi di luce emessi da essi.

Tutte le caratteristiche sono discusse sia dal punto di vista fenomenologico che da quello fisico. E' inoltre presente una sezione dedicata ai diversi usi pratici a cui gli UFOs sembrano destinare questi raggi.

In un'appendice viene dato un breve elenco dei casi strettamente correlati alla 'luce solida' ed alla 'luce strutturata'.

Questo articolo e' una versione elaborata delle sezioni pertinenti che si trovano nel riferimento (G), parte I, II e III.

Traduzione di Roberto Farabone

## STRUTTURA DI BASE DEL FENOMENO UFO

Ernst Berger (MUFON)

Vengono confrontati statisticamente 54 rapporti sporadici e 31 rapporti di un flap locale (su un totale di 127 oggetti/fenomeni), 56 dei quali investigati personalmente dall'Autore nei luoghi originali. Il primo insieme di dati consiste di casi verificatisi in tutta l'Austria, riferiti da 89 osservatori durante 5 anni; il secondo riguarda la zona di Traunstein dell'Austria Meridionale con 34 osservatori locali (con 13 rapporti) e 3 anni di osservazioni. I dati sono somiglianti per quanto riguarda l'ora, la durata, il numero di oggetti, la forma, l'ampiezza ed il movimento del fenomeno, ma ci sono deviazioni per altre caratteristiche. La struttura del fenomeno UFO in Austria viene individuata e confrontata con i risultati di studi statistici di Hansen (19), Poher (22,23) e Vallee (26).

Traduzione di Rosalba Viano

IL LOCUS COERULEUS, UN IMPORTANTE CENTRO DEL CERVELLO, E' IMPLICATO NEI PIU' BIZZARRI ASPETTI DEI RAPPORTI UFO? L'IPOTESI DEL SOGNO INDOTTO

Claude Rifat

Questo scritto riguarda una ipotesi già proposta da Guerin (1), che può aiutare nella valutazione del contenuto bizzarro dei rapporti UFO definiti da Hynek (2) "Incontri Ravvicinati del Terzo Tipo".

Il Locus Coeruleus è una parte piccola, ma molto importante, del cervello dei mammiferi: indurrebbe il meccanismo di ciò che noi chiamiamo "sogno" (3). L'Autore suggerisce che gli UFOs visti a breve distanza, e nei quali vengono "visti" i cosiddetti occupanti, interferiscano con il normale funzionamento del cervello nello stato di veglia, attivando il Locus Coeruleus. La più importante conclusione di questo lavoro è che i rapporti UFO di quel tipo non ci forniscono alcuna informazione sul vero stimolo che ha fatto scaturire il rapporto; essi ci dicono solo quello che il soggetto immagina riguardo la natura di un UFO. Se consideriamo questi rapporti che ci rendono perplessi da questa posizione di vantaggio, può risultare una migliore comprensione degli eventi bizzarri associati a quegli eventi. Gli Incontri Ravvicinati del Terzo Tipo sono simili alle esperienze con LSD nelle quali un soggetto percepisce una mescolanza del mondo reale e del suo inconscio interno.

Traduzione di Rosalba Viano

## DISEGNI DI UFO DA PARTE DI TESTIMONI E NON TESTIMONI: C'E' QUALCOSA IN COMUNE?

Richard F. Haines

Questo scritto descrive i risultati di due sforzi distinti: (1) gestione di un "test" sui disegni di UFO preparato appositamente per molti gruppi di pretesi testimoni oculari di UFO e di non testimoni, e (2) un riesame relativamente completo della letteratura UFO pubblicata, contenente disegni di UFO eseguiti da testimoni oculari. Cic' e' stato fatto allo scopo di determinare se si possa trovare o no qualche differenza tra le descrizioni dei due gruppi in termini di caratteristiche come il rapporto larghezza/altezza dell'UFO, grandezza e tipo dei dettagli alla superficie, presenza o assenza di altri dettagli ambientali della situazione, ed altre informazioni facilmente quantificabili. Un secondo obiettivo, ugualmente importante, era quello di prendere in considerazione una Procedura di Test di Riconoscimento ed Identificazione delle Apparizioni di UFO che e' apparso nel primo volume di questa rivista (Vol.1,N.1,1976). Si e' trovato che non c'e' nessuna differenza facilmente discernibile tra i disegni di UFO dei testimoni oculari e quelli dei non testimoni in relazione alle caratteristiche sopra dette. Mentre tale evidenza non prova che i due gruppi di partecipanti vengano dallo stesso campione di popolazione, o che i testimoni UFO riportino semplicemente (per mezzo delle loro descrizioni) una immagine stereotipata comunemente diffusa tra la gente a proposito di quello a cui si suppone che gli UFO assomiglino, l'evidenza potrebbe essere interpretata in questo modo. Un altro tentativo di ipotesi sorto da queste scoperte, e' che quasi tutti (sia i testimoni oculari che i non testimoni) abbiano visto in passato qualche volta disegni, fotografie, film etc. (in contrapposizione, quindi, all'aver visto effettivamente un UFO), che potrebbe rendere conto delle somiglianze tra questi due gruppi di disegni. Il lavoro si conclude con le illustrazioni delle forme di UFO piu' comuni unitamente ai rispettivi codici di forma/dettaglio derivati dal lavoro gia' pubblicato in precedenza (referenza sopra detta).

Traduzione di Rosalba Viano

## LA SITUAZIONE ATTUALE DELLA RICERCA UFO

Luis Schonherr

Questo studio fa il confronto tra la situazione attuale della ricerca UFO e le fasi dello sviluppo e della struttura di una disciplina scientifica in generale. Si toccano alcuni dei problemi sia della documentazione che della interpretazione dei rapporti UFO. Una attenzione speciale e' riservata alla questione della privazione di informazione (se si deve fare l'ipotesi che il fenomeno UFO sia una manifestazione di qualche intelligenza sconosciuta). Si sottolinea la necessita' di una raccolta di tutte le caratteristiche UFO che vengono riferite e si descrivono i principali vantaggi di una proponibile macchina "illimitata" dalla quale sia leggibile la base dei dati UFO. Infine questo studio discute i possibili significati del prevalere dell'ipotesi extraterrestre (ETH) nella ricerca UFO: questa ipotesi costituisce uno strumento metodologicamente realizzabile o e' semplicemente un'indicazione che la ricerca UFO e' ancora parzialmente in una fase pre-scientifica?

Traduzione di Rosalba Viano

SULLA POSSIBILITA' DI OSSERVARE EVENTI CELESTI O AEREI

L.J.Betinis

Le probabilita' di osservare eventi aerei celesti o anomali si ottengono considerando prima di tutto il volume di cielo alla portata dell'osservatore a terra in rapporto all'intera atmosfera terrestre ad un'altezza di circa 15 chilometri.

Vengono anche considerate la frazione di tempo coperta dall'osservazione in rapporto ad un giorno di 24 ore e la frazione degli eventi in tutta l'atmosfera, che ha luogo nel volume di cielo visibile dall'osservatore.

Sono incluse anche alcune considerazioni sulle probabilita' d'osservazione dei piloti d'aereo e degli astronomi.

I risultati si riferiscono alle probabilita' di scorgere meteore ed eventi aerei anomali.

Le conclusioni indicano che la possibilita' di assistere ad un evento anomalo (UFO) e' estremamente bassa e del tutto improbabile. Di conseguenza una riconciliazione con i dati raccolti sui rapporti di chi assiste agli eventi anomali implica una "selettivita'". Un'ulteriore conclusione e' che la presenza di alcune anomalie in rapido movimento potrebbe spiegare l'intera gamma dei rapporti sui fenomeni aerei anomali.

Traduzione di Massimo Pittella

LUCI ANOMALE NEL CIELO DIURNO

Bruce S. Maccabee

Diversi osservatori, uno dei quali impiegato in una base militare e tecnicamente competente, osservarono due luci molto intense od oggetti luminosi in un terso cielo estivo. Le luci furono viste restare apparentemente stazionarie ed anche avvicinarsi ed allontanarsi lungo diverse traiettorie. La durata dell'osservazione fu compresa fra tre e cinque minuti. Nonostante un'approfondita indagine gli oggetti rimasero non identificati.

Traduzione di Roberto Farabone

## DRAMMATICO INSEGUIMENTO IN SPAGNA

W.Smith (1), M.Guasp (2), V-J.Ballester Olmos (3)

Una famiglia di cinque persone, tornando a casa di notte lungo delle strade secondarie, fu accompagnata da una luce intensa che seguì l'auto per circa 40 km. in circa 1 ora. Quando stavano raggiungendo il villaggio di Cheste (vicino a Valencia in Spagna), l'UFO, ora a breve distanza, si mosse verso l'auto e sopra di essa fece uscire delle "zampe". L'incidente venne interrotto dal sopraggiungere di un altro veicolo che si muoveva in direzione opposta sulla strada, solitamente deserta. Una delle testimoni (15 anni) stette molto male durante l'incidente e fu indisposta in seguito per un po' di tempo. Alcuni danni alla batteria furono attribuiti a questo incidente ed inoltre la batteria stessa dovette essere sostituita il giorno dopo.

Traduzione di Roberto Farabone

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## 1954/55 LA PARTE AUSTRIACA

Ernst Berger (MUFON)

Una gran massa di esperienze UFO e' stata riferita in Austria nel periodo 1954/55, di esse 99 sono rimaste non identificate. Il nocciolo del materiale consiste in rapporti da parte della Gendarmeria/Polizia raccolti dal governo austriaco e messi per la prima volta a disposizione di Ernst Berger nel 1973.

Vengono presentati dettagliatamente 28 casi: la parte piu' interessante del materiale. Mediante una completa analisi statistica, uguale per metodologia ad un precedente studio di Berger relativo al 1972/77, vengono ricavati i modelli delle strutture dei rapporti austriaci del flap del 1954/55 e sono confrontati con i risultati di Vallee, Berger ed altri.

Traduzione di Roberto Farabone

## CONSIDERAZIONI SULLA NATURA DEGLI UMANOIDI

Jacques Scornaux

La natura degli umanoidi riportata dai testimoni UFO rimane molto controversa. La loro esistenza come entita' extraterrestri intelligenti incontra molta reticenza da parte della mente umana. Esiste senz'altro un blocco mentale causato dalla paura, ma ci sono anche argomenti piu' elaborati. La rassomiglianza tra gli uomini e gli umanoidi e' uno di questi, ma il problema della rassomiglianza che altre entita' intelligenti possono avere con noi rimane aperto tra i biologi. Non penso che l'immaginazione umana possa spiegare l'apparizione di umanoidi. In generale essi ci somigliano sia troppo che troppo poco. Un argomento contro la natura materiale degli umanoidi e' che la loro morfologia e' troppo variabile da un caso all'altro. Sono possibili molte risposte a questa obiezione. Ma un argomento piu' fondamentale si basa sulla scomparsa istantanea o sul luogo, degli umanoidi. Forniro' ora alcuni esempi di tale comportamento, sia all'aria aperta che entro spazi limitati. Propongo la spiegazione che tali casi siano proiezioni di immagini, create o da onde elettromagnetiche o da qualche mezzo parapsicologico. Ma non tutti gli ufonauti sono immagini, o forse solo una parte dell'osservazione corrisponde ad una proiezione, perche' alcuni di essi lasciano orme od hanno avuto contatto fisico col testimone. Fornisco inoltre alcuni esempi di tali casi. Presento diverse ipotesi circa la natura degli umanoidi materiali e discuto il concetto di una ipotesi "rassicurante". Propongo inoltre, per una discussione, l'ipotesi che parte degli umanoidi possa consistere di esseri umani catturati dalle entita' che governano il fenomeno UFO.

Traduzione di Rosalba Viano

L'USO DELLA TECNICA DEL PENDOLO NELLO STUDIO DELLE ESPERIENZE UFO

R.Leo Sprinkle

Lo scopo di questo scritto e' quello di fornire informazioni riguardo una tecnica per scoprire ricordi inconsci, cosi' che gli investigatori UFO possano considerare tale tecnica per un possibile utilizzo nelle indagini. Viene descritta la tecnica del pendolo, con riferimento allo sviluppo storico ed all'uso contemporaneo.

Vengono presentate alcune procedure per apprendere la tecnica del pendolo, - comprese delle illustrazioni per guidare il lettore interessato. Viene presentata una breve rassegna della letteratura riguardante l'investigazione sulle esperienze UFO; vengono sottolineati i rapporti sugli Incontri Ravvicinati del Terzo Tipo (CE III), compresi i rapporti relativi a "perdita del tempo", o amnesia parziale, che possono capitare durante gli avvistamenti UFO. I risultati dell'uso della tecnica del pendolo vengono descritti in due casi UFO: un caso ha fornito informazioni preliminari riguardo una possibile esperienza di "perdita del tempo" durante l'avvistamento UFO; il secondo caso ha fornito informazioni preliminari riguardo una esperienza UFO "nascosta". I casi UFO vengono presentati come esempi per una indagine preliminare delle esperienze CE III. Quando gli investigatori ottengono informazioni riguardo i casi di CE III, sono incoraggiati a considerare l'eventualita che un esperto in ipnosi assista il testimone UFO nell'esplorare e valutare i ricordi inconsci delle sue esperienze UFO.

Traduzione di Rosalba Viano

#### IPNOSI DI "RAPITI" IMMAGINARI DA UFO

Alvin H. Lawson

Nel tentativo di valutare obiettivamente le asserzioni di "rapiti" dagli UFO, sono stati indotti ipnoticamente dei rapimenti immaginari in un gruppo di volontari che non possedevano conoscenze significative sugli UFO. A ciascun soggetto sono state poste otto domande relative a situazioni che contenevano le piu' importanti componenti di un tipico rapporto di un rapimento.

Sebbene i ricercatori si aspettassero maggiori differenze, un confronto mediato dei dati da quattro racconti di rapimenti immaginari e quattro rapimenti "reali" non ha mostrato differenze sostanziali. Inoltre dei modelli che ripetono dettagli ben consolidati dei rapporti UFO "reali" sono emersi dalle sedute immaginarie di soggetti "ingenui". Sussiste finora una spiegazione non soddisfacente per i modelli ed altre somiglianze tra i rapimenti immaginari e "reali". Ma, in modo piu' significativo, ci sono dei paralleli tra questi modelli e le "immagini costanti" o tra le descrizioni ricorrenti di forme, colori, movimenti riportate dai soggetti durante esperimenti di allucinazioni indotte da droga e nei racconti cosiddetti di "morte", tra

gli altri processi mentali. Così c'è motivo di accettare almeno alcune parti delle storie dei rapiti "reali" come accurate riflessioni di ciò che i loro meccanismi sensoriali hanno riportato.

Tuttavia, nonostante le molte somiglianze, ci sono delle differenze cruciali -come gli effetti fisici che vengono descritti e testimonianze multiple- che indicano che i rapimenti UFO sono separati e distinti dalle esperienze immaginarie ed allucinatorie. Con queste distinzioni in mente, viene proposto un modello di rapimento:

I testimoni percepiscono realmente le immagini -da qualunque sorgente provengano- come luci luminose e pulsanti, forme a grata intrecciata che si muovono a caso nel cielo, tunnel illuminati, figure umanoidi etc. Queste costanti dei rapimenti sono combinate con i dati forniti dalla immaginazione, dalla memoria e dai dati esistenti sugli UFO conosciuti dai testimoni per creare un "reale" incontro UFO. La realtà soggettiva dell'intensa struttura allucinatoria convince i testimoni che l'intera esperienza è un evento fisicamente reale. Successivamente essi riportano la "verità" come essi l'hanno sperimentata, anche se gli avvenimenti effettivi restano non chiari.

La complessità del fenomeno UFO viene affermata dal modello sopra detto, dal momento che molte questioni che lasciano perplessi sono ancora inspiegate, compreso il più grande mistero di tutti, e cioè la natura dello stimolo che dà inizio all'immaginazione del testimone e fa così scattare la sequenza del rapimento.

Chi scrive preferisce un'ipotesi dualistica sugli UFO. Ma mentre esiste una continua assenza di evidenze fisiche non ambigue, questo studio conclude che gli UFO sono -in termini psicologici- indiscutibilmente reali, ed inoltre che è promettente la ricerca UFO non fisica.

Traduzione di Rosalba Viano

DISEGNI DI UFO DA PARTE DI TESTIMONI E NON TESTIMONI: C'E' QUALCOSA IN COMUNE? (II PARTE)

Richard F.Haines

Precedentemente l'Autore ha trovato che non si riscontravano differenze sensibili tra i disegni di "cosa poteva essere un UFO" eseguiti da persone che affermavano di averne visto uno rispetto a quelli eseguiti da persone che affermavano, al contrario, di non averne mai visti (Haines 1977). Poiche' questo fatto potrebbe risultare semplicemente dal campione relativamente piccolo (136 disegni validi), sono stati eseguiti altri test. In questo lavoro vengono presentati i risultati principali relativi ad altri 458 disegni validi. I risultati si possono compendiare nel fatto che il gruppo di quelli che "hanno" visto, hanno disegnato (1) una maggior percentuale di disegni validi, cioe' non ridicoli; (2) una maggior percentuale di forme di UFO a vari angoli in relazione al bordo del foglio su cui disegnavano; (3) una maggior percentuale di 2 o piu' forme sul foglio; (4) una minor percentuale di forme viste di lato o di aspetto isometrico; (5) una minor percentuale di disegni simmetrici. Ne' il valor medio del rapporto tra larghezza ed altezza degli UFO, ne' le cupole (se presenti) differivano tra i due gruppi di partecipanti. Inoltre la maggior parte degli altri profili di UFO e le misure delle cupole non venivano disegnate diversamente dai due gruppi. Infine, cosa forse piu' significativa, il gruppo di coloro che "hanno" visto disegno' un minor numero di particolari aggiuntivi, come aperture (finestrini?), marchi, linee ondulate attorno all'oggetto etc. Questi risultati vengono confrontati con quelli ottenuti nello studio precedente e discussi in termini dell'impatto percettivo che gli incontri con gli UFO sembrano avere sulla volonta' e/o l'abilita' di ognuno a riprodurre le forme degli UFO.

Traduzione di Roberto Farabone

UNA STRUTTURA TEORICA PER IL PROBLEMA DEL NON CONTATTO TRA  
CIVILTA' EXTRATERRESTRI EVOLUTE ED IL GENERE UMANO:  
COMUNICAZIONE SIMBOLICA SEQUENZIALE CONFRONTATA CON LA  
COMUNICAZIONE NON SIMBOLICA E NON SEQUENZIALE

Claude Rifat

Viene proposto un insieme generale di idee per suggerire che l'intelligenza extraterrestre potrebbe, probabilmente, non essere assolutamente interessata a comunicare con una specie primitiva come la nostra.

Secondo l'Autore, il linguaggio simbolico sequenziale e' il tipo piu' primitivo di linguaggio che degli esseri intelligenti possano usare. Le intelligenze evolute potrebbero comunicare meglio tramite un linguaggio non simbolico e non sequenziale, che e' in grado di contenere un maggior numero di bit di informazione per unita' di tempo con minor tasso di distorsione, eliminando in tal

modo il problema dei concetti simbolici che utilizziamo tutti i giorni, concetti la cui nebulosita' semantica e' cosi' grande da provocare un notevole rumore di fondo nella comunicazione umana.

Cio' che e' molto interessante e' il fatto che potremmo essere in presenza di una specie terrestre che si e' gia' evoluta verso un metodo di comunicazione piu' avanzato del nostro: il delfino!

Traduzione di Roberto Farabone

GLI UFO SONO FENOMENI PSICHICI?

Ivor Grattan-Guinness

Gli studiosi dei fenomeni UFO oggi giorno considerano per lo piu' il loro lavoro come una branca delle scienze psichiche. In questo lavoro esamino le possibili connessioni ed analogie tra gli UFO ed i fenomeni psichici.

Traduzione di Roberto Farabone

UN'INDAGINE STATISTICA TRA GLI OSSERVATORI ASTRONOMICI ITALIANI

Massimo Pittella

Questa indagine statistica e' stata condotta fra gli anni 1977 e 1978 relativamente ai 14 piu' importanti osservatori astronomici ed astrofisici in Italia. Essa ha lo scopo di sondare l'opinione di una parte importante della comunita' scientifica italiana sul fenomeno UFO e venire a conoscere se le persone di qualche osservatorio hanno visto direttamente qualche fenomeno UFO. Questo test informativo non ci fornisce notizie particolarmente nuove od inaspettate. Tuttavia e' un chiaro documento che dimostra lo stato di scarsa informazione e sensibilita' dell'ambiente scientifico sull'argomento UFO. Una tale indagine, se indirizzata anche ad altri circoli scientifici e ripetuta regolarmente, potrebbe costituire un utile metodo per verificare nel tempo la possibile evoluzione dell'opinione degli scienziati sull'argomento UFO.

Traduzione di Roberto Farabone

SPANISH LANGUAGE ABSTRACTS

UPIAR VOL. I NO. 1 (1976)

ENSAYO SOBRE LA POSIBLE CORRELACION ENTRE LA DISTRIBUCION GEOGRAFICA Y LAS DIRECCIONES DE VUELO DE LOS OVNIS BASADA EN LA OLEADA ESPAÑOLA DE 1968-1969

MIGUEL GUASP

Un estudio de la frecuencia y distribución de las distintas direcciones de vuelo de los OVNIS durante la oleada española de 1968-1969 muestra que, cuando los parámetros dirección, curso y frecuencia de dicha dirección se consideran vectores, la suma resultante de estos vectores indica precisamente los centros de máxima información OVNI: el de observaciones aéreas (Noreste de España), cuando se consideran las direcciones de aparición de los objetos y el de los casos de aterrizaje (Suroeste de España), cuando se consideran las direcciones de desaparición.

Algunas subsecuentes consideraciones muestran que la línea que une ambos centros de información, NE-SW, parece jugar un papel importante en el desarrollo de la localización geográfica de las observaciones de la oleada.

## ACTIVIDAD OVNI :¿CONDICIONAMIENTO DE LA CONCIENCIACION COSMICA?

R. LEO SPRINKLE

Este trabajo describe un posible enfoque para el estudio de los informes OVNI : un conjunto preliminar de hipótesis que pueden explicar las implicaciones "físicas", "biológicas", "psico-sociales" y "espirituales" de los fenómenos OVNI. Los informes OVNI son considerados a la luz de la hipótesis de que la experiencia OVNI tiende a aumentar el nivel de concienciación cósmica del testigo. Asimismo, el patrón que así emerge de los informes OVNI se compara con las opiniones de personas que manifiestan haber tenido visiones proféticas de sucesos a ocurrir en los próximos 25 años.

## ¿SE DISTRIBUYEN LOS OVNIS SEGUN LA LEY DE POISSON?

ERNST BERGER

Este trabajo introduce un nuevo concepto en el estudio de las oleadas OVNI. Poco se ha hecho con los abundantes datos de las oleadas del pasado. La distribución de Poisson, una distribución estadística para sucesos aleatorios e infrecuentes, tales como accidentes o terremotos, queda explicada, aplicándose a los datos de la oleada de finales de 1954 en Austria. Se muestra que los 94 casos denunciados en un período de 12 semanas no están relacionados en un sentido causal y, por consiguiente, ninguna "fuerza exterior", sino mas bien un fuerte efecto de amplificación publicista sobre los casos dados a la prensa es la fuente probable que haya producido la estructura de la "oleada". Como el concepto de Poisson puede tener efecto sobre otras estructuras de "oleada", si se examinan con detalle, se discuten los efectos generales de este resultado austriaco, así como posibles pruebas subsiguientes sobre la validez del concepto.

ENFOQUE ESTADISTICO A LOS DATOS BASICOS OVNI PARA EL DESARROLLO DE UN "FILTRO DE RECONOCIMIENTO"

ROBERTO DORETTI y ROBERTO FARABONE

Este trabajo pretende mostrar un nuevo método estadístico para procesar datos de interés en la investigación OVNI. Se muestra principalmente como se pueden extraer datos referentes al mismo conjunto de fenómenos u objetos de tipo similar, del grupo heterogéneo de informes OVNI. Todo esto se obtendrá a través del análisis de relaciones estadísticas de los diferentes conjuntos de datos, bajo aspectos cuantitativos a través del análisis de coeficientes de correlación entre una observación y las demás. Tras una explicación teórica presentaremos un fácil ejemplo que puede mostrar en la práctica la implantación de tal investigación. Este ejemplo se refiere a una situación real, aunque el conjunto de datos no es muy grande, pero es un caso frecuente y típico. La conclusión más importante que se deduce de este conjunto numérico, el filtro, permite de hecho reconocer al fenómeno más allá de la imprecisión y aleatoriedad de los datos recogidos.

**ANALISIS COMPARATIVO DE 62 CASOS DE RAYOS DE "LUZ SOLIDA"  
JAN HEERING**

Testigos de sucesos OVNI han mencionado repetidamente el hecho de que objetos anómalos observados por ellos emitían uno o varios haces de luz de apariencia sólida y de lenta propagación (rayos de "luz sólida"). Se presenta un análisis comparativo de 62 casos de este tipo. Se muestra que las características de los haces de "luz sólida" son notablemente constantes: luminosidad uniforme, bordes claramente definidos, baja velocidad de propagación, forma cónica o cilíndrica y, a veces, propagación a lo largo de un recorrido curvo.

**CONSTANTES OVNI EN AUSTRIA  
ERNST BERGER**

54 informes esporádicos y 31 de oleadas locales de un total de 127 fenómenos/objetos, 56 de ellos investigados personalmente en sus lugares originales por el autor, se comparan estadísticamente. El primer conjunto de datos consiste en casos sobre Austria informados por 89 observadores durante 5 años. El segundo proviene del área de Traunstein (baja Austria) con 34 testigos locales y 3 años de observaciones. Los datos son similares con respecto a la hora del día, duración, número de objetos, forma, tamaño y movimiento del fenómeno, pero otras características observadas muestran desviaciones. Las constantes OVNI en Austria se extraen y se comparan con los estudios estadísticos de Hansen, Poher y Vallée.

PROCEDIMIENTO DE RECONOCIMIENTO DE LA APARIENCIA E IDENTIFICACION DE LOS OVNIS  
RICHARD F. HAINES

Existen varias razones para obtener información fidedigna de un testigo relativa a la apariencia del objeto volante no identificado (OVNI) percibido. La primera es poder insertar su forma y detalles dentro de categorías definidas para que puedan hacerse correlaciones con otros detalles de la observación del mismo o de otros testigos. Tal categorización y clasificación puede ayudarnos a entender mejor los elementos comunes, el rango de las diferencias individuales en las formas percibidas y muchos detalles menores que podrían ser importantes. Si se usa una técnica menos rigurosa, tales detalles probablemente pasarían inadvertidos. La segunda razón es conocer más la verdadera naturaleza del fenómeno OVNI. Si existiera una relación fija entre la forma y/o detalles del fenómeno OVNI y su función o "verdadera" identidad, un método sistemático para categorizar tal información ayudaría a descubrirla. El procedimiento aquí descrito facilitará también la computarización de las características OVNI percibidas, que podría hacer posible valiosos análisis estadísticos.

Debido a que encaramos un fenómeno del que no sabemos casi nada, no debemos perder la oportunidad de recoger tanta información observacional como sea posible. Investigaciones de laboratorio han mostrado que, en la mayoría de las situaciones, el reconocimiento de detalles como la forma del perfil de un objeto, su orientación gravitacional y otros, se hace más fácil y más exactamente que tratar de recordar estos detalles dependiendo enteramente de la memoria. Aunque otros investigadores han sugerido ya el uso de similares procedimientos de reconocimiento de formas, nadie, sin embargo, ha desarrollado un método sistemático para hacerlo, incorporando los hallazgos resultantes de una revisión de dibujos OVNI de testigos oculares que permita tantas combinaciones de formas y detalles.

¿ESTA EL LOCUS COERULEUS, UN IMPORTANTE CENTRO ANATOMICO DEL CEREBRO, IMPLICADO EN LOS ASPECTOS MAS EXTRAÑOS DE LOS INFORMES OVNI? LA HIPOTESIS DEL SUEÑO INDUCIDO  
CLAUDE RIFAT

Este estudio se refiere a una hipótesis propuesta primeramente por Guérin y que podría permitir entender mejor el contenido extraño de los informes OVNI en los encuentros cercanos de III clase, tal como se han definido por Hynek. El Locus Coeruleus es una pequeña pero importante región del cerebro de los mamíferos : éste sería el mecanismo inductor de lo que conocemos por "sueño". El autor sugiere que los OVNIS vistos a corta distancia, en los cuales se observan los denominados "ocupantes", interfieren con el funcionamiento normal del cerebro en estado despierto actuando sobre el Locus Coeruleus. La conclusión más importante de este trabajo es que los informes OVNI de ese tipo no nos dan ninguna indicación sobre el verdadero estímulo que ha provocado el informe, éstos sólo nos dan las fantasías del sujeto sobre la naturaleza del OVNI. Si consideramos estos asombrosos informes desde este ventajoso punto de vista, podría resultar un mejor entendimiento de los sucesos extraños asociados con tales observaciones. Los encuentros cercanos de III clase son experiencias similares a las del LSD, en las que un sujeto percibe una mezcla del mundo real y de su propio mundo inconsciente.

DIBUJOS DE OVNIS POR TESTIGOS Y NO TESTIGOS : ¿HAY ALGO EN COMUN?

RICHARD F. HAINES

Se describen los resultados de dos trabajos diferentes :

(1) la administración de un "test" especialmente preparado para recoger dibujos de OVNIS de varios grupos de testigos oculares de OVNIS y de no testigos, y (2) una revisión relativamente completa de la literatura OVNI que contiene dibujos de OVNIS por testigos oculares. Esto se hizo para determinar si se hallaban o no diferencias entre los dibujos de los dos grupos, en términos de características tales como la razón entre la anchura y la altura, la cantidad y tipo de detalles de la superficie, presencia o ausencia de detalles del entorno y otras informaciones cuantificables. Un segundo e igualmente importante objetivo fue sentar las bases para desarrollar el Procedimiento de reconocimiento de la apariencia e identificación de los OVNIS (UPIAR, I, 1976, 39-53). Se encontró que no hay diferencias fácilmente discernibles entre los dibujos de OVNIS de testigos oculares y de no testigos sobre las características antes mencionadas. Aunque esta evidencia no prueba que los dos grupos

de participantes provienen de la misma muestra de población ni que todos los testigos OVNI pueden estar meramente re-tratando (a través de sus dibujos) una imagen estereotipada a nivel social de como se supone que son los OVNIS, la evidencia podría interpretarse de esta forma. Otra hipótesis deducida tentativamente de estos hallazgos es que casi todo el mundo (tanto testigos oculares como no testigos) ha visto un dibujo, una fotografía, una película, etc. de un OVNI alguna vez en el pasado (en contraposición con el avistamiento real de un OVNI), lo cual podría explicar las similitudes entre estos dos grupos de dibujos. El trabajo se cierra con ilustraciones de las formas de OVNIS más comunes, junto con sus respectivos códigos de forma y detalle, derivados del trabajo antes citado.

#### SITUACION ACTUAL DE LA INVESTIGACION OVNI LUIS SCHÖNHERR

Este trabajo compara la situación actual de la investigación OVNI con las fases del desarrollo y de la estructura de una disciplina científica en general. Algunos de los problemas de documentación y de interpretación de los informes OVNI quedan abarcados. Se da especial atención a la cuestión de la desinformación (si asumimos que el fenómeno OVNI es la manifestación de una inteligencia desconocida). La necesidad de un thesaurus para todos los parámetros relacionados con los OVNIS se pone de manifiesto. Asimismo, se demuestran las principales ventajas de una base "ilimitada" y automatizada de datos OVNI que se propone. Finalmente, este trabajo discute los posibles significados de la prevalencia de la hipótesis extraterrestre (HET) en la investigación OVNI : ¿constituye esta hipótesis una herramienta metodológicamente aceptable o es meramente una indicación de que la investigación OVNI está todavía parcialmente en una fase precientífica?

**SOBRE LA OPORTUNIDAD DE OBSERVAR SUCESOS CELESTES O AEREOS  
E.J. BETINIS**

La oportunidad de observar sucesos aéreos celestes o anómalos se deriva considerando el volumen de cielo disponible a un observador terrestre, comparado con toda la atmósfera a una altura de unos 15 Km. La fracción de tiempo pasada observando comparada con un día de 24 horas y la fracción de sucesos en toda la atmósfera que ocurren en el volumen de cielo disponible, se usan igualmente. Las oportunidades de los pilotos de aviones y de los astrónomos también son consideradas. Los resultados se aplican a la probabilidad de detectar meteoros y sucesos aéreos anómalos. Las conclusiones indican que la oportunidad de observar un suceso anómalo (OVNI) es extremadamente baja e incluso improbable. Así, la reconciliación con datos recogidos de informes de visualización de sucesos anómalos implica "selectividad". Una conclusión posterior es que la presencia de varias anomalías desplazándose velozmente podría explicar la escala global de los informes de fenómenos aéreos anómalos.

**LUCES ANOMALAS EN EL CIELO DIURNO**

**B.S. MACCABEE**

Varios observadores, uno de ellos un técnico empleado en una instalación militar, observaron dos luces muy brillantes u objetos luminosos al mediodía en un cielo claro de verano. Las luces se observaron aparentemente estacionarias y también acercarse y retroceder a lo largo de distintas trayectorias. La duración de la observación fue de 3 a 5 minutos. A pesar de una extensa investigación, los objetos permanecen sin identificar.

**DRAMÁTICA PERSECUCION EN ESPAÑA**

**W. SMITH, M. GUASP y V.J. BALLESTER OLMDS**

Una familia de 5 personas, que regresaban a su casa de noche por carreteras secundarias, fue seguida por una luz brillante que persiguió al coche persistentemente durante una distancia de alrededor de 40 Km., durante casi 1 hora. Cuando se aproximaban al pueblo de Cheste (Valencia), el OVNI, ahora a corta distancia, se movió delante y sobre el automóvil y extendió unas patas. El incidente terminó al acercarse otro vehículo que iba en dirección contraria, en aquella carretera generalmente desierta. Una de las testigos (de 15 años) se indispuso y tuvo vómitos durante el incidente y estuvo enferma durante algunos días después. Hubo daño en la batería del coche, la cual tuvo que ser cambiada al día siguiente.

## 1954-1955 : LA CASUISTICA EN AUSTRIA

E. BERGER

Un gran número de experiencias OVNI fueron denunciadas en Austria en el período 1954/55, 99 de las cuales han quedado inidentificadas. El núcleo del material consiste en informes de la policía recogidos por el gobierno austríaco y por primera vez entregados al autor en 1973. 28 relatos de casos, la parte más interesante del material, se presentan en detalle. Mediante un completo análisis estadístico, metódicamente igual a un estudio anterior del autor sobre los informes austríacos de 1972 a 1977, estructuras constantes de la oleada de 1954/55 son extraídas y comparadas con resultados de Vallée, Berger y otros.

## CONSIDERACIONES SOBRE LA NATURALEZA DE LOS HUMANOIDES

J. SCORNAUX

La naturaleza de los humanoides denunciados por los testigos de OVNI suscita gran controversia. Su existencia como seres inteligentes extraterrestres encuentra mucha reticencia en la mente humana. Hay indudablemente un bloqueo mental causado por el miedo, pero hay también argumentos más elaborados. La similitud entre el hombre y los humanoides es uno de éstos, pero la cuestión de la semejanza que otros seres inteligentes pueden tener con nosotros permanece abierta entre los biólogos. No creo que la imaginación humana pueda explicar la apariencia de los humanoides. En general, estos se asemejan a nosotros, a la vez, excesivamente y demasiado poco. Un argumento contra la naturaleza material de los humanoides es que su morfología es demasiado variable de un caso a otro. Varias respuestas son posibles a esta objeción. Pero un argumento más fundamental se basa en la desaparición instantánea o in situ de los humanoides. Doy varios ejemplos de este comportamiento, tanto al aire libre como en espacios cerrados. Propongo la explicación de que estos casos son la proyección de imágenes, creadas por ondas electromagnéticas o por medios parapsicológicos. Pero todos los humanoides no son imágenes, o quizás sólo una parte de la observación corresponde a una proyección, porque algunos de ellos dejan pisadas o tuvieron contacto físico con los testigos. Doy también varios ejemplos de tales casos. Presento varias hipótesis sobre la naturaleza de los humanoides materiales y discuto el concepto de una hipótesis tranquilizadora. Propongo para discusión la hipótesis de que parte de los humanoides pudieran ser seres humanos capturados por los seres que manejan el fenómeno OVNI.

## USO DE LA TECNICA DEL PENDULO EN LA INVESTIGACION DE EXPERIENCIAS OVNI

R.L. SPRINKLE

El propósito de este trabajo es facilitar información sobre una técnica para descubrir recuerdos subconscientes, de tal modo que los investigadores puedan considerar su uso en sus investigaciones. Se describe la técnica del péndulo, con referencias al desarrollo histórico y a su uso contemporáneo, incluyendo ilustraciones para guiar al lector interesado. Se presenta una breve revisión de la literatura de la investigación sobre el terreno de las experiencias OVNI; se pone énfasis en los informes de encuentros cercanos de III clase (ECIII), incluyendo informes de "pérdida de tiempo" o amnesia parcial, que puede ocurrir durante las observaciones OVNI. Se describen los resultados del uso de la técnica del péndulo en dos casos OVNI : en un caso se obtuvo información de una posible experiencia de "pérdida de tiempo" durante la observación OVNI ; en un segundo caso se obtuvo información preliminar sobre una posible "oculta" experiencia OVNI. Los casos OVNI se presentan como ejemplos de investigación preliminar de experiencias de ECIII. Cuando los investigadores "de campo" obtengan información sobre casos de ECIII, no deben olvidar disponer de un consultor en hipnosis para asistir al testigo OVNI en la exploración y evaluación de los recuerdos subconscientes de sus experiencias OVNI.

## HIPNOSIS DE "SECUESTRADOS" IMAGINARIOS POR OVNIS

A.H. LAWSON

En un intento de evaluar objetivamente los informes de "sequestrados" por OVNIS, se indujeron hipnóticamente raptos imaginarios en un grupo de voluntarios que no tenían un conocimiento significativo de los OVNIS. Ocho preguntas acerca de situaciones que comprenden los componentes principales de un relato típico de rapto fueron hechas a cada sujeto.

Aunque los investigadores esperaban diferencias importantes, una comparación media de los datos de cuatro narraciones de rapto "reales" y cuatro imaginarias no mostró diferencias sustanciales. Asimismo, patrones que proporcionaban detalles bien establecidos en los casos OVNI "reales" se observaron en las sesiones imaginarias con sujetos "ingentes".

Todavía no existe una explicación satisfactoria para los patrones y demás similitudes entre los raptos "reales" e imaginarios. Pero, lo que es más significativo, existen paralelismos entre estos patrones y las "imágenes constantes" o descripciones repetitivas de forma, color y movi-

miento informados por sujetos en experimentos de alucinaciones inducidas por drogas, así como en las narraciones llamadas "de la muerte", entre otros procesos mentales. Hay, así, razones para aceptar al menos algunas partes de los relatos de los raptados "reales" como reflejos exactos de lo que sus mecanismos sensoriales han detectado. Sin embargo, a pesar de las muchas similitudes, hay diferencias cruciales -tales como los supuestos efectos físicos y casos de testigos múltiples- que sugieren que los raptos OVNI son distintos e independientes de las experiencias imaginarias y alucinatorias. Teniendo estas distinciones en mente, se propone un modelo de raptos :

Los testigos perciben realmente imágenes -de la fuente que sea- tales como luces brillantes y pulsantes, formas de aspecto de celosía moviéndose aleatoriamente en el cielo, túneles iluminados, figuras humanoides, etc. Estas constantes de los raptos se combinan con datos de la imaginación, la memoria y con datos OVNI conocidos por los testigos para crear un encuentro OVNI "real". La realidad subjetiva de la intensa estructura alucinatoria convencen al testigo de que toda la experiencia es un suceso físicamente real. Subsecuentemente, pueden informar de la "verdad", tal como la han experimentado, aunque los hechos reales permanecen inciertos.

Las complejidades del fenómeno OVNI se confirman en el modelo anterior, ya que todavía hay muchas asombrosas facetas inexplicadas, incluyendo el misterio más grande de todos, la naturaleza del estímulo que inicia las imágenes en el testigo y que producen la secuencia del raptos.

El autor prefiere una hipótesis OVNI dual. Aunque hay una continuada ausencia de evidencia física clara, este estudio concluye que los OVNIS son -en términos psicológicos- incuestionablemente reales, y, además, que la investigación OVNI no física es prometedora.

DIBUJOS DE OVNIS POR TESTIGOS Y NO TESTIGOS : ¿HAY ALGO EN COMUN? (Parte II)

R.F. HAINES

Previamente (UPIAR, II, 1977, 123-151) el autor encontró que no podían hallarse diferencias fácilmente discernibles entre dibujos de "cómo es un OVNI" realizados por personas que dicen haber visto uno y de otros que afirman nunca haber visto uno. Como quiera que este hallazgo puede haberse debido simplemente al tamaño relativamente pequeño de la muestra (136 dibujos válidos), se administraron pruebas adicionales. Los resultados de otros 458 dibujos válidos se presentan aquí. Los resultados pueden

resumirse diciendo que el grupo de los que han visto OVNIS dibujó : (1) un porcentaje mayor de dibujos válidos y no burlescos, (2) un porcentaje mayor de formas OVNI en ángulo relativo al borde de la tarjeta de dibujo, (3) un porcentaje mayor de dos o más formas en la tarjeta, (4) un porcentaje menor de formas en perspectiva isométrica, y (5) un porcentaje menor de dibujos simétricos. Ni la razón media entre la anchura y la altura de la forma del perfil del OVNI ni de su cúpula (cuando se dibujó) diferían en los dos grupos participantes. Asimismo, las otras medidas del perfil del OVNI y de la cúpula (si se dibujaban) no se dibujaban diferentemente por cada grupo. Finalmente, y quizás lo que es más significativo, el grupo que ha visto OVNIS dibujó un número menor de detalles diversos como ventanas, marcas, líneas onduladas alrededor de la forma, etc. Estos hallazgos se comparan con los obtenidos en el estudio previo y se discuten en términos del impacto perceptual que el encuentro OVNI parece tener en la disposición y aptitud del testigo para reproducir una forma OVNI.

#### MARCO TEORICO PARA EL PROBLEMA DEL NO CONTACTO ENTRE UNA CIVILIZACION EXTRATERRESTRE AVANZADA Y LA HUMANIDAD : COMUNICACION SIMBOLICA SECUENCIAL VERSUS COMUNICACION NO SIMBOLICA Y NO SECUENCIAL.

##### C. RIFAT

Se propone un conjunto general de ideas para sugerir que una inteligencia extraterrestre podría no estar nunca interesada, probablemente, en comunicarse con una especie tan primitiva como la nuestra.

De acuerdo con el autor, el lenguaje secuencial simbólico es el tipo de lenguaje más primitivo que los seres inteligentes pueden usar. Las inteligencias avanzadas pueden comunicarse mejor a través de un lenguaje no simbólico y no secuencial, que puede transmitir muchos más bits de información por unidad de tiempo a un bajo costo de distorsión, eliminando así el problema de los nebulosos conceptos simbólicos que representan un importante factor de ruido en la comunicación humana. Lo que es más interesante es que bien podemos estar en presencia de una especie terrestre que ha desarrollado una forma de comunicación más avanzada : ¡el delfín!

## ¿SON LOS OVNIS FENOMENOS PSIQUICOS?

### I. GRATTAN-GUINNES

Los estudiosos de los fenómenos OVNI miran mayormente su trabajo hoy en día como una rama de la investigación psíquica. En este trabajo exploro las posibilidades de contactos y similitudes entre los fenómenos psíquicos y los OVNIS.

### ENCUESTA ESTADISTICA ENTRE OBSERVATORIOS ASTRONOMICOS ITALIANOS

#### M. PITTELLA

Este estudio estadístico fue realizado entre los años 1977 y 1978 entre los 14 observatorios astronómicos y astrofísicos más importantes de Italia. Tenía el propósito de conocer la opinión de una porción importante de la comunidad científica italiana sobre el tema OVNI y saber si el personal de algún observatorio había observado directamente algún fenómeno OVNI. Esta prueba no nos proporcionó información nueva o inesperada. Sin embargo, este es un documento que pone claramente de manifiesto el mediocre nivel de información y sensibilidad del entorno científico sobre la cuestión OVNI. Tal información, si se envía a otros círculos científicos y se repite regularmente, podría convertirse en una forma apropiada para medir, en diversos períodos, posibles cambios en la opinión científica sobre el tema OVNI.

Traducciones por Vicente-Juan Ballester Olmos

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I 20110 MILANO ITALY

UPIAR - UFO PHENOMENA - International Annual Review Supplemento a UPIAR Research in Progress Vol. I, N. 1 (1982) - Direttore Responsabile Renzo Cabassi - Registrazione del Tribunale di Bologna n. 4798 del 17 marzo 1980.

Abbonamento L. 28.000 (US \$ 20.00)

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Cooperativa Studi e Iniziative UPIAR s.r.l. - Cas. Post. 11221 - I 20110 MILANO ITALY

# UFO PHENOMENA

an international annual review devoted  
to the scientific study of ufo phenomena

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