

# UFOLOGY: THE INTELLECTUAL DEVELOPMENT AND SOCIAL CONTEXT OF THE STUDY OF UNIDENTIFIED FLYING OBJECTS

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## *The UFO Problem*

THIS paper is concerned with ufology. By ufology we mean the study of unidentified flying objects as elements in an independent theoretical-conceptual scheme. This is a roundabout way of referring to ufology as a 'science', necessitated by the fact that its status as a 'science' is questioned. Yet, ufology has developed as a distinct body of data studied by distinctly 'credentialled' investigators, some of them affiliated with organisations devoted to the study of UFOs. Ufology is also in the process of developing distinct theoretical schema appropriate to its data base. The task of this paper will be to explore ufology as a developing science, in comparison with and against the backdrop of conventional or normal science.

The essential problem in regard to unidentified flying objects has always been accountability. There are two general ways of accounting for them. The first is to define them as natural phenomena, thus including them within the bounds of normal science. Indeed, we may say that the definition of UFOs as natural phenomena follows from the acceptance of one or another of the theories of normal science. Those within this category include the debunkers and the hopefuls. The former are convinced that UFOs are 'nothing more than' stars, birds, swamp gas, hoaxes, or 'mass hysteria'.<sup>1</sup> The hopefuls are those who would argue, and hope to demonstrate, that UFOs are secret weapons, extra-terrestrial vehicles or something else subsumable under normal science.<sup>2</sup> Their task is to marshal the evidence. This task appears doomed to frustration by virtue of the non-receptiveness of establishment science.<sup>3</sup>

The second style of accountability has been the attempt to present UFOs as something beyond the confines of normal science. For twenty-five years or more this type of accounting has been mono-

polised by the cult groups and their leaders.<sup>4</sup> Accountability schemes have been notably idiosyncratic and hopelessly inaccessible to verification procedures of any kind. Such schemes have all fixated one basic fact, however, and that is the essentially experiential nature of UFOs. It is from this point that a second style of accountability emerges. Its proponents adopt what they call a 'macrocosmic approach'<sup>5</sup> and refer to what they do as either 'ufology' or 'paraufology'.

The experience of UFOs extends at least two centuries into the past.<sup>6</sup> Records go that far back with certainty. Equally certain is the fact that such experience occurs in dispersed groups of people, either publics or social networks. The phenomena consist of the reported reactions of the people involved to an event or series of events, first in small numbers, then increasing to a high point, finally decreasing again. If plotted on a graph, the horizontal axis of which is in time units and the vertical axis in numbers of people, the phenomena assume the shape of a curve or wave.<sup>7</sup> Such a wave may occur once or it may recur. If the wave, or one of the waves, is 'caught' at some point in its existence by the organisation of some of those who helped to constitute it, then it becomes an 'arrested' wave. At this point, traditional social science language may refer to a social movement.

The UFO as a category derives from, and specifically refers to, a series of waves following one another more or less continuously since 1947; it is also applied to a number of previous waves which were recognised and interpreted at their times of occurrence as observations of 'strange' or 'mysterious' aerial objects. Specifically recognised waves occurred in the late 1890s in the United States, 1909 and 1913 in Great Britain, near the end of World War II in Europe and the southwest Pacific, 1945 and 1946 in Scandinavia and 1947 to date around the world.<sup>8</sup> It is this last set of waves, publicly initiated by the famous Kenneth Arnold sighting, which was 'arrested' or organised. The organisation of devotees and interested people ensured the continued existence of the phenomena by ensuring continually generated data and by providing at least minimal resources for the study of such data. From this basis emerged ufology.

### *The UFO Experience and Emerging Ufology*

F. S. C. Northrop says that, 'Nature . . . as given by natural science, is partly known empirically by immediate intuition and the senses and partly known theoretically by the intellect and the imagination checked

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indirectly by experimental verification'.<sup>9</sup> He adds, however, that the 'immediately apprehended fact' which is intuited is 'independent of all concepts and theory'.<sup>10</sup> Facticity implies meaning and to endow that which is intuited or sensed with meaning is to bring to bear theoretical presuppositions and conceptualisations. As Hanson puts it, 'every perception involves an aetiology and a prognosis'.<sup>11</sup> As something is immediately apprehended there is a tendency either to ignore it or to integrate it into an already existent socially defined order of things.

Yet some experiences are too jarring. They are strange enough to resist integration and bold enough to defy being overlooked. The social basis of the extension of such phenomena has been referred to. At this point we must address the phenomena. Our perspective suggests that that which is experienced will either be ignored, integrated, or form the basis of a new socially constructed reality. We are studying ufology as part of one of these new realities. To do so will require an examination of the developing *theories* of ufology, in terms of those shared elements called 'ufology'. It also requires addressing the experience and with this we shall begin.

The category 'UFO' includes sightings of 'flying saucers' and other unknown aerial objects, as well as close encounters, physical effects (e.g., illness), and electromagnetic effects (e.g. interference with the operation of automobiles and other machinery). As Flammonde<sup>12</sup> points out in his history of the phenomena, these constitute the body of data to be accounted for. The category also includes abductions,<sup>13</sup> contactee stories, animal mutilations,<sup>14</sup> biblical phenomena,<sup>15</sup> occult phenomena,<sup>16</sup> strange disappearances,<sup>17</sup> including those in the so-called 'Bermuda' or 'Devil's' Triangle.<sup>18</sup> Even more marginally included are accounts of the Yeti, Sasquatch ('Big Foot') and other 'strange animal' sightings.<sup>19</sup>

What we have to deal with here is the UFO as experienced, the translation of these experiences (sightings) into reports and the categorisation of such reports by ufologists. What we begin with is the sighting report. Leaving out all the peripheral phenomena and focusing on unidentified *flying* objects we find reporter conceptualisations differing over time. Reports connected with the first major wave, 1896 to 1897, are phrased in terms of 'mystery airships'. Later waves up through the 1930s are characterised by reports of 'ghost airplanes'. Allied airmen near the end of World War II reported 'foo fighters'.

Swedes, in 1946, reported 'ghost rockets'. In the series of waves beginning in 1947 were to be found reports of 'flying saucers' and many similarly named flying objects.

All these reports offer us labels. These labels were of things familiar applied to things unfamiliar.<sup>20</sup> As Hynek tells us in reference to his interviews with UFO reporters :

"The experience had the "reality" of a tangible physical event, on a par with, for example, the perception of an automobile accident or of an elephant performing in a circus, except for one thing; whereas reporters have an adequate vocabulary to describe automobiles and elephants, they are almost always at an embarrassing loss for words to describe their UFO experience."<sup>21</sup>

A descriptive label 'both classic and original' was provided by one of Fowler's respondents :

"It was like two hamburger buns, one on top of the other, with a sandwiched piece of meat sticking out all around." Here was a genuinely honest attempt to describe an inexplicable but very real event within the context of the witness's common vocabulary and everyday experience."<sup>22</sup>

The suggestion here is that the UFO experience is uncommon, i.e., not an everyday life experience. Clark and Coleman go even further, suggesting that many UFO experiences are essentially altered states of consciousness. Of one case, for example, they ask (and answer) :

"Was Johannis's a "real" experience? A question like this is almost impossible to answer . . . because in the UFO myth "objective" and "subjective" elements are often indistinguishable. Perhaps significantly, however, Johannis relates that early in the experience he felt as if he were "dreaming".<sup>23</sup>

That the UFO experience is labelled, however objective or subjective, is clear. That the labelling represents the application of the familiar to the unfamiliar is also clear. What is not clear is, on the one hand, a consistency of labelling among reports in a wave and, on the other, diversity in labelling among waves.

It is with the development of specific problems that we find the development of a science and, in this regard, ufology is not an exception. The general problem in regard to UFOs is accountability. One of the first theoretical problems to emerge is in relation to the consistency, yet diversity, of reported experiences. Simply stated, the *nature* of UFOs seems to fit the historical time period in which they are sighted. This fact has been commented upon by several ufologists.<sup>24</sup> Related to this is the question: why don't they make themselves known to us? The ways of dealing with these questions correlate highly with different perspectives.

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There are three ways of dealing with these questions. Two of these ways treat the UFO phenomena as objective, one treats them as subjective phenomena. The over-all naturalist approach to this problem is to phrase it in terms of perception and misperception and correct or incorrect conceptualisation; the latter assessment is made on the basis of possible conceptual schemes known to the natural scientist rather than those available to the witness. One of the best accounts of this type is by Hartmann,<sup>25</sup> who analysed sighting reports of the re-entry of satellite debris. Of those who tend to define UFOs as objective phenomena, some see the different historical waves as representing essentially different phenomena, or at least see the phenomena of pre-1947 waves as inaccessible. These are generally the same people, debunkers or hopefuls, who tend towards defining UFOs as natural phenomena. Others who define UFOs as objective phenomena suggest the differences over time as due to operator intent. Stringfield, for example, suggests that :

‘Whatever the reason, or non-reason, for the UFO actions . . . recorded in the more than eighty thousand entries in Dr. David Saunders’ data bank, it appears that human kind is at the mercy of a vanguard who, seemingly selfish in purpose, continue to *reconnoiter Earth, in chill contempt*, to fulfil that purpose.’<sup>26</sup>

In reference to humanoid encounters he says :

‘Research records show again and again, when humanoids are near, so is an odor. Stranger than their odor is their diversity of size and features and behavior. Ted Bloecher and I have frequently discussed these factors. “They seem to be taunting us”, I said. “How else can you explain their mischief?” “. . . Or perhaps their demonstrations are staged,” offered Bloecher, “concocted for the benefit of the witness. Maybe they monitor our adrenalin . . .”’<sup>27</sup>

Salisbury<sup>28</sup> tells us that, ‘UFOs have specific characteristics that match the time and place of their sightings.’ He suggests that, ‘the UFOs seemed to be putting on a show, a display *aimed specifically at the witnesses*’.<sup>29</sup> The approach of Salisbury and Stringfield is a natural science approach of hopefuls. One of the more consistent subjective approaches is that of Clark and Coleman<sup>30</sup> and will be dealt with in the next section.

### *Theoretical Elements of Ufology*

Among the theoretical elements of ufology with which we shall deal are conceptualisation, scope and methodology. By conceptualisation, of course, we refer to the language of ufology. Although some

confusion and ambiguity exists in this regard it is, nonetheless, the area of most agreement among ufologists. By scope we refer to the breadth of phenomena covered by various perspectives in ufology. It is in this regard that we find the most diversity among ufologists as different definitions of scope come to define different and competing theories of UFO. By methodology we refer to those rules of procedure and evidence used by ufologists in guiding their work and determining the credibility of their data. Here we find the greatest collective emphasis among ufologists.

### *Conceptualisation*

We have, inevitably, used certain concepts of ufology already in this paper. An expanded discussion is necessary, however. We have first to note the distinction between a sighting and a report. According to one ufologist:

“A “sighting” is any observation of some unexplained aerial phenomenon. A “report” is the oral or written record of a sighting. A “case” refers to a report, plus other elements that are associated with it, such as information about the observer, an account of the investigation, references to the report, or conclusions drawn from the information gathered.”<sup>31</sup>

Such distinctions are simple, common, but necessary. We need only refer to a case in which the distinctions were not made to see why.

The fact is that many UFO sightings are not reported. A Gallup public opinion poll released early in 1966 estimated that a total of 5,000,000 Americans have seen UFOs; 5 per cent of the sample who had heard of UFOs reported a sighting to the Gallup interviewer.<sup>32</sup> This compares to a total of 10,147 reports to the United States Air Force up to January 17, 1966.<sup>33</sup> This is substantiated by Hynek:

“Whenever I give a presentation to some group I frequently will ask them, well, how many of you have seen something in the skies you couldn’t explain; that is, a UFO . . . I have been surprised to find that 10 to 15 per cent . . . [indicate that they have]. Then I ask the second one, did you report it to the Air Force? And maybe one or two will say that they have.”<sup>34</sup>

Further verification of this fact is provided by an attitude survey done for the *Scientific Study of Unidentified Flying Objects*, which revealed that 87 per cent of those in the sample who had seen a UFO reported it only to family and friends.<sup>35</sup>

Failure to distinguish between a sighting and a report may obscure important differences between those who answer ‘yes’ to a questionnaire item and those who take the time, trouble and risk of offering

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a report to an official agency. Warren,<sup>36</sup> for example, overlooks this distinction. He utilised the Gallup poll data referred to above to test his hypothesis that UFO sightings are linked to status frustration and status deprivation. He found a positive relationship. His findings may hold in comparing sighters and non-sighters who responded to the poll. They may even say something about a society that generates such problems. But they constitute a social science debunking and moral put-down of those who *report* UFOs, as well as many of those studying the phenomena. The Gallup sample represented a cross section of the nation's population. Those who actually report sightings constitute a very select group, evidently differing from sighters in terms of occupation, status, education, etc. Findings in relation to the first group cannot be generalised to the second.

That there is some loose usage of the terms among ufologists is also evident when they are used to define other concepts. Bloecher,<sup>37</sup> for example, defines a 'wave' as, 'any sudden and pronounced increase of UFO sightings on a national scale, above what is ordinarily considered an average daily rate.' Flammonde<sup>38</sup> defines a 'concentration' as, 'an unusually high number of sightings in one location, or over a larger geographical area in a very short period of time.' That those authors refer to the temporal and spatial parameters of aggregated reports, rather than sightings, is obvious from their discussion. The basis of confusion here lies in the fact that, in any wave or concentration, different numbers of reports may be made to different agencies. For example, Hall,<sup>39</sup> representing the National Investigations Committee on Aerial Phenomena, lists twenty reports for 1947; the United States Air Force Project Blue Book release<sup>40</sup> lists 122; Bloecher<sup>41</sup> searched 142 newspapers in 93 cities of 49 states, 2 Canadian provinces and the District of Columbia and found 843 reports.<sup>42</sup>

The relationship of 'waves' and 'concentrations' to 'flaps' is apparent. A flap is the result of a wave-concentration. Bloecher<sup>43</sup> gives us the Air Force definition of flap as an 'advanced state of confusion'. Both Flammonde<sup>44</sup> and Stringfield<sup>45</sup> indicate the media generated nature of a 'flap'. According to Flammonde :

"The importance of knowing the difference between "concentration" and "flap" lies in the fact that often a single peculiar sighting or alleged landing may stir up the reporters, who rush off, write their stories, and create a "flap", while a considerable number of less sensational sightings may occur in a given region, creating a "concentration", but be almost ignored by the press."<sup>46</sup>

It is also apparent that there is an affinity between the concepts 'wave' and 'flap' depending upon the looseness or tightness of the conceptual distinction between 'sighting' and 'report'. And, despite some looseness as to what is actually subsumed by the concept 'unidentified flying object',<sup>47</sup> it is coming to be clear that, as Hynek puts it, 'We can define a flying saucer as an aerial phenomena [sic] or sighting that remains unexplained to the viewer at least long enough for him to write a report about it.'<sup>48</sup> This is the conceptual kernel of UFO research although many non-aerial phenomena may become part of a 'case' and, eventually, a theoretical development.

### *Scope*

The second theoretical element to be addressed is scope. The scope of ufology is determined by attempts to define boundaries and subject matter. Since boundary and subject matter varies by investigator, clearly ufology in general is of wide and diverse scope. Nonetheless, there are clearly emerging trends. First, there is what we might call a rigorous naturalist approach. Here, the emphasis is on unidentified flying objects in the strictest sense of that term (see Hynek's definition earlier) and on modern (i.e., post-1947) waves. Other material is included only to the extent of constructing a case for each report. This is ufology as practised by the naturalists. It is characterised by an approach emphasising elementary fact gathering and, in some cases, the propagation of a primary operating hypothesis (e.g., the ETH—Extra-terrestrial hypothesis). Its methodology is borrowed to a large extent from the established sciences.

A second approach differs from the first mainly by including historical experience (mystery airships, ghost rockets, foo fighters) as part of the UFO phenomena. In fact, this is an overlapping category, characterising, on the one hand, all but the most 'rigorous' of the objective and subjective naturalists, on the other hand, most macro-cosmic ufologists. The latter are most clearly recognisable by their inclusion into UFO phenomena of all the sorts of material referred to by the naturalists as peripheral or irrelevant.<sup>49</sup> Historically, of course, this was the position of Charles Fort.<sup>50</sup> The most consistent recent attempt at this approach is by Clark and Coleman and deserves further attention.

The work of Clark and Coleman<sup>51</sup> comprises most of the elements of ufology with which we have been dealing so far. Clark and Cole-

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man consider the 'central problem' of UFO to be, 'the absence of really conclusive evidence that the objects are what they appear to be—namely, spaceships from other planets'.<sup>52</sup> This 'central problem', however, is set within the context of modern sightings. In fact, the theory developed by Clark and Coleman is macrocosmic, as revealed in their table of contents and discussion. Their discussion of fairyland, voices from heaven, mystery airships and UFOs—couched in terms of magical, religious, and technological impulses and the 'mystery in the machine'—covers contactee reports, humanoid encounters and abductors, sightings of mystery animals ('Bigfoot'), visions and occult phenomena, and mysterious aerial objects across the centuries and in various cultures. Thus, it is clear that the theoretical problem is, for them, to find consistency amid diversity. To distinguish themselves from what we have called the naturalists they coin a label for what they are about: paraufology. They refer to paraufology as a way of 'understanding the incomprehensible'.<sup>53</sup>

Clark and Coleman discover similarities in stories of fairy contact, religious visions and contacts, encounters and abductions involving UFO operators. All, they claim, have dream elements.<sup>54</sup> The reporter of the experience talks in terms of feelings of floating; all report a kind of dream perception in which few details are visible, and there is a vague scenic description, as of a nebulous realm or area. Many report paralysis or immobility. There is time distortion.

"This all tends to suggest that UFO contacts, with their attendant "visits to other planets", arise out of the same mechanism [as fairy visions]; that is, they, too, are hallucinatory trance visions whose accompanying "objective" paranormal manifestations serve to reinforce the notion that these visions are of a real place with real inhabitants."<sup>55</sup>

The UFO experience, then, is essentially an altered state of consciousness, akin to dreams, trances, hypnagogic and hypnomic phenomena.<sup>56</sup>

This altered state of consciousness (the 'UFO experience'), according to Clark and Coleman, serves as a way of revealing basic and universal human needs and feelings. These unconscious needs and feelings are expressed through the altered states of consciousness as mythic elements or 'archetypes'. Clark and Coleman discuss some of these mythic elements, borrowing heavily from Jung. They speak, for example, of the element of roundness that continually reappears (e.g., the shape of the UFO), representing psychic wholeness, the ubiquitousness of the number three, the existence of 'hermaphroditic,

yet "strangely beautiful" beings', etc.<sup>57</sup> Although they devote a good deal of discussion to these archetypal elements, it seems that they could be eliminated from the theory without serious disjuncture.

Clark and Coleman have made an interesting case for the UFO experience as essentially an altered state of consciousness. They also argue that the 'impulses' listed in their table of contents—magic, and fairies, religion, technology and mysterious machinery—represent conscious rationalisations of the phenomena, each appropriate to its historical-cultural time and place. These rationalisations are conscious, collective attempts to define what Flammonde calls 'undefined sensory experience'.<sup>58</sup>

Yet in another sense it is clear that the Jungian archetypes *are* an essential aspect of the theory. Dropping such a discussion leaves a viable question: what *are* UFOs? Without the Jungian archetypes we are left with a discussion of the relationship of theory and experience; of the *rationalisation* of experience. Such a discussion would, in itself, be valuable by orienting our perspective to an examination of the interworking of sensory experience—phenomena—and collective attempts to structure and organise that experience. It orients us to the social practice of accounting and accountability. But it also leaves open a question as to the *cause* of the phenomena. What precipitates the experience? This allows several kinds of answers. Clark and Coleman provide one. The altered states of consciousness are internally generated by human needs. Clark and Coleman ask, 'Of what can we possibly be certain when liars, lunatics, dreamers, and honest sober citizens all appear to be talking in the same language?'<sup>59</sup> Their answer is:

'If at their core UFO events are subjective, products of unconscious needs, the UFO fact and fiction may be inseparable, for they draw on the same creative source; the human psyche and the archetypes of the collective unconscious.'<sup>60</sup>

Hence, the relationship among altered state of consciousness, archetype and rationalisation.

True to their task of theory-building, Clark and Coleman offer two 'laws' of 'paraufology'. They are:

1. 'The UFO mystery is primarily subjective and its content primarily symbolic.'<sup>61</sup>
2. "The "objective" manifestations are psychokinetically generated byproducts of those unconscious processes which shape a culture's vision of the other-world. Existing only temporarily, they are at best only quasiphysical.'<sup>62</sup>

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This 'otherworld' of which they speak, the symbolic representation of the unconscious, has its dark side as well as its bright side. Not all human needs and feelings, however universal, are deemed good, beneficial or altruistic. In this light they quote Peter Rogerson:

'This idea of the UFO and Fortean phenomena [unexplained physical and parapsychical events] as symbolic of the unconscious forces within ourselves allows us to understand some of the fervour behind the scepticism of government and science. The [U.S. Air Force] Project Bluebook and Condon Enquiry [the much-criticised University of Colorado government sponsored UFO study . . . which after two years and half a million dollars concluded that UFOs are not worth studying] can be seen as magical acts, ritual exorcism of the "terrors of the dark", and a magical reaffirmation of the boundaries of the "cultural universe".'<sup>63</sup>

In the process of building their own new science, paraufology, they critically bare a weakness of normal science, by exposing its operations as essentially human.

### *Methodology*

When we speak of methodology we refer to rules for the conduct of inquiry. We can analytically distinguish rules of procedure from rules of evidence. The former refers to ways of generating data, the latter to the evaluation of the data that are generated. The *general* rule of procedure is that only that which is obtained by proceeding according to specifiable rules can be accorded the status 'data'. The *general* rule of evidence is that only those data that meet certain criteria can be accorded the status 'good data', or 'credible data'.

'Methodologies' clearly differ. Those whom we have called the naturalists prefer to follow the canons of normal science. This results in an emphasis on methodology, with perhaps some hypothesis testing but little emphasis on theory building. The 'paraufologists' are more likely to adopt a 'macrocosmic' approach emphasising theory construction and de-emphasising methodology. It becomes, at times, difficult to determine rules of procedure and evidence. Nonetheless, there is a methodology implied by the macrocosmic approach. Clark and Coleman tell us, for instance, that:

'If at their core UFO events are subjective, products of unconscious needs, the UFO fact and fiction may be inseparable, for they draw on the same creative source; the human psyche and the archetypes of the collective unconscious.'<sup>64</sup>

Since the approach focuses on the *content* of UFO accounts as given, the procedural rule must be that *any story relating to UFOs con-*

*stitutes data.* Good data, we may assume, are those which have enough points of incredibility to allow comparison among apparently similar cases.

It seems at times that the overriding concern of the naturalists is with developing methods adequately to determine the nature of UFOs. The naturalists themselves provide a strong force for defining ufology as a science. Many have natural science credentials. By bringing themselves and their tools to the study of UFOs they strive to bring respectability to the phenomena. They attempt to do this through an emphasis on methodological rigour.

Among the naturalists we find the expected injunctions of clear definition;<sup>65</sup> preferable acceptance of first hand reports;<sup>66</sup> clear interview strategies;<sup>67</sup> and generally close investigation of each case using the available tools of the social and natural sciences. The author has personal experience in this regard from having heard an investigation reported by a member to the Chicago Area Subcommittee of the National Investigations Committee on Aerial Phenomena. The investigator used a questionnaire, as well as informal interview techniques, scouted and measured the terrain, calculated altitude by use of trigonometry, etc. Whatever else it was, the result was a well conducted investigation. Where appropriate, the naturalists use other techniques, such as photo analysis,<sup>68</sup> and laboratory forensic techniques.

We also find the naturalists prepared to be methodologically creative. The report of the Condon group on the unworthiness of UFOs for study occasioned such creativity. Both Saunders and Harkins and Hynek<sup>69</sup> proceed from a critique of the Condon group. Both claim that the Condon group violated a cardinal rule of procedure by failing to define the problem correctly. Saunders and Harkins note that:

“When the University of Colorado Project began, the ETI [Extra-Terrestrial Intelligence] Hypothesis did not look very promising. This was not because ETI couldn’t explain a lot of otherwise perplexing “facts”, but because it was not established at the more fundamental level that these “facts” were remarkable enough to require any explanation at all.”<sup>70</sup>

According to Hynek:

“The history of science has shown that it is the things that don’t fit, the apparent exceptions to the rule, that signal potential breakthroughs in our concept of the world about us. And it was these cases that should have been studied from many angles. The committee chose to consider only the problem of whether UFO reports . . . supported the

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hypothesis that the earth was being visited by extra-terrestrial intelligences (ETI). UFO=ETI was the defining question. It did not try to establish whether UFOs really constituted a problem for the scientist, whether physical or social. The question of whether puzzling reports of UFOs throughout the world might constitute "genuinely new empirical observations" was not considered.<sup>71</sup>

He adds that, 'The only hypothesis the committee could have productively tested was: *There exists a phenomenon, described by the content of UFO reports, which presently is not physically explainable.*'<sup>72</sup>

From this point Saunders and Harkins and Hynek take us to the construction of rules of evidence. The test of good data for Saunders and Harkins is their 'remarkability'.

'We may measure the remarkability of any sample of first-class (objective) statistical data about UFOs in order to see if the sample contains enough discrepancies to justify an effort at better explanation. If it doesn't, so be it! If it does, we may wish to say that we have discovered a fact—making careful note of just what the fact is and with what degree of remarkability it has been established . . . No matter what degree of remarkability is achieved, one analysis cannot yield more than one fact.'<sup>73</sup>

These 'remarkables' can then be used to construct hypotheses and theory.

Hynek<sup>74</sup> constructs an S-P diagram, where an index of Strangeness constitutes one axis and a rating of Probability constitutes the other axis. Each is scored one to ten.

'The Strangeness Rating is . . . a measure of how "odd-ball" a report is . . . More precisely, it can be taken as a measure of the number of information bits the report contains, each of which is difficult to explain in common-sense terms.'<sup>75</sup>

Probability refers to the degree of confidence one has as to 'whether the strange event occurred as stated'.<sup>76</sup> Probability has two components, report reliability and witness credibility. The first is 'measured' in terms of internal consistency, consistency among witness statements, as well as judgments of the degree of reporter conviction and 'how it all hangs together'.<sup>77</sup>

Witness credibility is not treated as explicitly, probably because the elements of witness credibility had been worked out by others long before. We can indicate these elements of witness credibility and reasonably assume agreement by Hynek. Richard Hall,<sup>78</sup> in his compendium of NICAP data, argues witness credibility in terms of occupational credentials. Pilots, scientists, engineers and others in

occupations demanding professional, scientific or technical expertise, good perception, and observational skills such as familiarity with the sky and/or flight technology are presumed to be good witnesses. To this are added citizens of good standing or 'reputation'. Robert L. Hall<sup>79</sup> suggests as elements of 'credible testimony' reputation in the community, lack of 'motive for prevarication or distortion', familiarity with UFO phenomena (and presumably attitude toward UFO), and several factors already considered as elements of report reliability. Once having determined S-P rating for each case, it is possible to separate the 'signal' from the 'noise'.<sup>80</sup> It is noteworthy that much of the work of the naturalists consists of programmatic statements rather than constructed theories. An exception lies in the work of Vallee, whose four books, as noted by Durant,<sup>81</sup> have proceeded from a naturalist to a macrocosmic perspective similar to that of Clark and Coleman.

### *The Social Context of Ufology*

Any attempt to explore ufology as a developing science must address the social context of that development. It is only then that we will understand the forces that conditioned ufology and those that delay its being fully accorded scientific status. There are three major elements to consider: the journalistic press, the United States Air Force, and the scientific community. It is fitting that we begin with the press, since it was the press that first took note of the phenomena and offered a conceptualisation of importance.

The UFO sighting and report that publicly initiated the modern series of UFO waves was by Kenneth Arnold in early 1947. According to Jacobs:

"The Arnold sighting [1947] was vital for modern UFO history in the United States. As a result of his description of the objects, the newspaper headline writers coined the term *flying saucer*, which rapidly spread around the world as the most popular phrase to describe UFOs. The phrase allowed people to place seemingly inexplicable observations in a new category. Witnesses scanning the sky could now report that they saw something identifiable: a flying saucer. Moreover, the term subtly connoted an artificially constructed piece of hardware; a saucer is not a natural object. Consequently when a witness said at that time that he saw a flying saucer, he implied by the use of the term itself that he had seen something strange and even otherworldly. The term also set a tone of ridicule for the phenomena. The idea of saucers flying on their own volition was absurd. The term allowed people to laugh at the very notion of an unusual object in the sky without having to confront the circumstances behind the event. Saucers do not fly. It was ludicrous for a

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witness, using the only phrase available to him, to say that he saw one. Therefore, he obviously did not see one. The term itself made the actual event seem invalid.<sup>82</sup>

This conceptualisation was set in the context of a journalistic 'theory' that 'flying saucers' constituted 'silly season' phenomena. For a scientist to engage the phenomena seriously was to risk damaging his professional reputation.

At the same time, the United States Air Force took an interest, based on the possibility that UFOs might constitute a threat to the nation.<sup>83</sup> The Air Force began investigating reports in 1947, and from 1948 to 1949 and 1951 to 1969 maintained special investigative projects.<sup>84</sup> There were two main perspectives represented in the Air Force in its early years of investigation, those who believed UFOs to be extra-terrestrial and those who believed them to be natural, terrestrial phenomena. The former group maintained a tenuous domination of the early effort. This tenuous domination ceased entirely with the deliberations and recommendations of the Robertson Panel in 1954.

The Robertson Panel, named after its chairman, consisted of a small group of eminent scientists convened by the United States Air Force and the Central Intelligence Agency to consider the UFO problem. Jacobs<sup>85</sup> refers to the Robertson Panel as 'the most influential government-sponsored, non-military UFO investigation of the 1950s.' It 'spent a total of twelve hours studying the UFO phenomenon'. The Robertson Panel was more concerned with public reaction towards UFO phenomena than with the nature of the phenomena themselves. This was quite in line both with the scientific establishment's definition of UFOs as 'mass hysteria', and with an earlier Cold War conditioned Air Force position that an 'enemy' could use the UFO phenomenon as a 'weapon' in psychological warfare by creating confusion and inducing 'panic' and 'mass hysteria'.<sup>86</sup> The result was the initiation of a long standing Air Force policy of ridicule and silence on the subject.

This policy was fore-shadowed by earlier Air Force treatment of the phenomena. As Larsen<sup>87</sup> documents, the United States Air Force issued a document labelled 'Project Sign', classified 'Secret', in 1949; at the same time, a substantially altered document labelled 'Project Saucer' was released to the press. The documents were different in substance and tone, and the latter utilised (apparently with success) the journalistically constructed concept of ridicule.

Flammonde<sup>88</sup> alleges the imposition, by the Air Force of a 'canopy of silence' over the media presentation of UFO material. He claims that, 'the periodical index . . . listed no material on the subject from October 1947 to January 9, 1950, although *Time* and the *Saturday Evening Post* did return to the puzzle at least once'.<sup>89</sup> In fact, there were listings for that time period in *The Reader's Guide To Periodical Literature* but under the headings 'Illusions and Hallucinations', 'Aeronautics', 'Airplanes', and 'Balloons—use in Research'. This does raise an important question, however, about the role of the media in relation to the UFO phenomenon. Jacobs<sup>90</sup> reports on the serious attention given to UFO phenomena in four major magazine articles in 1952 (one in *Life*, two in *Look*, one in *Time*) and on Air Force fears that such attention would increase the number of reports. He cites Ruppelt<sup>91</sup> to the effect that, upon examination of statistics, no such one way relationship could be found.

On the other hand, both Jacobs<sup>92</sup> and Flammonde<sup>93</sup> suggest a relationship between the Air Force position on UFOs and its policy of ridicule and silence and the amount of attention given the phenomena by the media. We offer a test of this by comparing the number of reports made yearly to Project Blue Book (the Air Force investigative project) from 1947 to 1969 to the number of listings in *The Reader's Guide to Periodical Literature* for the same period of time. This appears as Table 1. We find that the ratio of *Reader's Guide* listings to Blue Book reports fluctuates in the early years, reaching high points of .076 in 1950 and .053 in 1951 (i.e., 5.3 articles for each 100 reports). The ratio drops rather precipitously and remains low until 1966, when it begins climbing to a high in 1969 (the year of the Condon Report). In 1961, for example, the ratio was .000; there were *no* articles in major magazines despite the fact that 591 reports were made to Project Blue Book. The increasing ratio of magazine articles to reports from 1966 to 1969 reflects growing concern about sighting reports and increasingly serious presentations by the major magazines. It also parallels the period of study of UFOs done by the Condon group and funded by the Air Force. It appears that the 'canopy of silence' hypothesis has merit.

Why then, has ufology not been fully accorded scientific status? We suggest that journalistic ridicule, then official silence and ridicule, fostered definitions of UFO phenomena as unsuitable for serious scientific study. The scientific establishment, in turn, supported the

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TABLE I

*Major Magazine Articles and UFO Reports*

Year	Magazine Articles	UFO Reports	Ratio of Articles to Reports
1947	5	122	.049
1948	0	156	.000
1949	3	186	.016
1950	16	210	.076
1951	9	169	.053
1952	35	1501	.023
1953	11	509	.021
1954	7	487	.014
1955	10	545	.018
1956	5	670	.007
1957	9	1006	.009
1958	3	627	.005
1959	5	390	.013
1960	3	557	.005
1961	0	591	.000
1962	1	474	.002
1963	2	399	.005
1964	0	562	.000
1965	3	886	.003
1966	44	1112	.039
1967	22	937	.023
1968	10	375	.027
1969	17	146	.116

Sources:

1. Reports to Project Blue Book in D. M. Jacobs: *The UFO Controversy in America*, Indiana University Press, Bloomington, 1975, p. 304.
2. Magazine articles as counted from *Reader's Guide to Periodical Literature*.

official policy. The Robertson Panel put its stamp of approval on official policy in 1954; the Condon Group, whose findings and methodology were approved by the National Academy of Sciences, did the same thing in 1969.<sup>94</sup> UFOs became intellectually excluded phenomena.

The intellectual exclusion of a topic from scientific study has profound implications. It reduces conceptualisation of the topic from the status of 'knowledge' to that of 'belief', 'ideology', or worse. It stigmatises those who would pursue study of the topic. It also means

that those who would pursue its study are likely to be excluded from the means of producing science. This means that data generation and collection will be difficult (the U.S. Air Force, e.g., for years refused to release information on UFO cases); there will be no basis for career construction, recognition and validation (the gates of academia have been largely closed to UFO researchers); and there will be a lack of material resources, i.e., money, equipment and organisation.<sup>95</sup>

It was under these conditions that private individuals began to combine interests and to develop research oriented organisations. The Aerial Phenomena Research Organization (APRO) began in the mid-west in 1952, Civilian Saucer Intelligence (CSI) began in New York in 1952, Civilian Research, Interplanetary Flying Objects (CRIFO) existed in Ohio from 1954 to 1957, and the National Investigations Committee on Aerial Phenomena (NICAP) began in Washington, D.C. in 1957. There were, and are, others. Stringfield<sup>96</sup> lists seven major UFO research groups, Flammonde<sup>97</sup> lists five in the United States and thirty-three in fifteen other countries, and Vallee<sup>98</sup> without clearly distinguishing research from other orientations, lists twenty-two 'current' and eight 'defunct' groups. These privately funded research groups provide an organisational basis for ufology.

Through most of the early years of their existence they not only served as data collection points but also battled for respectability. This was particularly true of NICAP, which maintained a many-years-long lobbying effort in Washington, D.C. In the period 1957 to 1969, 'NICAP had become a force as a public pressure and education group that no other UFO organisation could match. Its power and pressure were a major concern to the Air Force, and it had helped keep the UFO issue alive for the public and in Congress.'<sup>99</sup> The cardinal goal of these groups was the scientific analysis of UFO phenomena. Through the organisational base began to develop 'specialists', not only in ufology, but in various aspects of it. There are, for example, specialists in photo analysis, physical traces, electro-magnetic effects, encounters, the government role in UFO investigation, and UFO history, including specific 'flaps' (such as the 1890s airship). According to Jacobs:

'The new theory [sic] among UFO investigators was that individual scholars would have to study selected aspects of the phenomenon and come to independent conclusions. The shift was away from asking the "outside" community to consider the origins of UFOs and toward en-

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couraging the growing number of individual scientists interested in the subject to conduct their own internal investigations free from the encumbrances of the "scientific establishment".<sup>1</sup><sup>100</sup>

This came to be most strongly emphasised following the Condon report in 1969. In 1974 the first UFO research organisation was formed that was completely under the direction of scientists (i.e., 'naturalists'); it was called the Center for UFO studies, and directly collected data, as well as getting case information from NICAP, APRO and MUFON (Midwest UFO Network, formed in 1969).<sup>101</sup>

### *Summary*

Ufology is the study of unidentified flying objects. We have argued it to be a science in development, in terms of the coalescing of perspectives on UFOs. These perspectives have been identified as the naturalist and the macroscopic, distinguished in terms of theoretical scope, methodology and emphasis, but similar in problem and conceptualisation. We have also pointed to the essentially moral and power bases of modern science, government and popular thought as represented by the journalistic press and the effect of conceptual exclusion on ufology. Ufology is an intellectual product of social groupings *not* of the intellectual elite. Its social base lies outside the intelligentsia and its organisational arena. Nonetheless, UFO phenomena have been persistent enough and incredible enough to occasion the emergence of social ties among the curious and interested, and through their activities to result in the emergence of ufology.

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<sup>2</sup> R. H. Hall (ed.): *The UFO Evidence*, National Investigations Committee on Aerial Phenomena, Washington D.C., 1964; R. H. Hall, T. Bloecher and I. Davies: *UFOs: A New Look*, National Investigations Committee on Aerial Phenomena, Washington D.C., 1969; J. A. Hynek: *The UFO Experience: A Scientific Enquiry*, Henry Regnery, Chicago, 1972; G. Lore:

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<sup>3</sup> Condon: op. cit.

<sup>4</sup> See L. E. Catoe: *UFOs and Related Subjects: An Annotated Bibliography*, United States Government Printing Office, Washington D.C., 1969; P. Flammonde: *The Age of Flying Saucers*, Hawthorne, New York, 1971; D. M. Jacobs: *The UFO Controversy in America*, Indiana University Press, Bloomington, 1975.

<sup>5</sup> L. H. Stringfield: *Situation Red, the UFO Siege!*, Doubleday, New York, 1977, p. 40. cf. B. Steiger (ed.): *Project Blue Book*, Ballantine, New York, 1976, chapter 13.

<sup>6</sup> C. Fort: *The Books of Charles Fort*, Holt, New York, 1941, pp. 216-224, 257-280, 286-290, 507-521, etc.

<sup>7</sup> cf. R. L. Morrill: 'Waves of Spatial Diffusion', *Journal of Regional Science*, Vol. 8, 1968, pp. 1-18.

<sup>8</sup> J. Clark: 'A Contact Claim', *Flying Saucer Review*, Vol. 11, 1965, pp. 30-32; also, 'The Strange Case of the 1897 Airship', *Flying Saucer Review*, Vol. 12, 1966, pp. 10-17; and 'More on 1897', *Flying Saucer Review*, Vol. 13, 1967, pp. 22-23; Fort: op. cit., pp. 507-521; P. Flammonde: *UFOs Exist!*, Ballantine, New York, 1976; C. Grove: 'The Airship Wave of 1909', *Flying Saucer Review*, Vol. 16, 1970, pp. 9-11, and 'The Airship Wave of 1909—Pt. 2', *Flying Saucer Review*, Vol. 17, 1971, pp. 17-19; D. B. Hanlon: 'Texas Odyssey of 1897', *Flying Saucer Review*, Vol. 12, 1966, pp. 8-11, and 'The Airship . . . Fact and Fiction', *Flying Saucer Review*, Vol. 16, 1970, pp. 20-21; D. B. Hanlon and J. Vallee: 'Airships over Texas', *Flying Saucer Review*, Vol. 13, 1967, pp. 20-25; Mrs. Hinfelaar: 'The New Zealand "Flap" of 1909', *Flying Saucer Review*, Vol. 10, 1964, pp. 32-33; J. A. Keel: 'Mystery Aeroplanes of the 1930s, Part 2', *Flying Saucer Review*, Vol. 16, 1970a, pp. 9-14; J. Vallee: 'Ghost Rockets: A Moment of History', *Flying Saucer Review*, Vol. 10, 1964, pp. 30-32.

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<sup>10</sup> *ibid.*, p. 35.

<sup>11</sup> N. R. Hanson: *Patterns of Discovery*, Cambridge University Press, London, 1965, p. 21.

<sup>12</sup> Flammonde: op. cit., 1976.

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<sup>16</sup> J. Weldon and Z. Levitt: *UFOs: What on Earth is Happening?*, Bantam, New York, 1976.

<sup>17</sup> D. E. Keyhoe: *The Flying Saucer Conspiracy*, Holt, New York, 1955; B. Steiger: *Flying Saucers are Hostile*, Award Books, New York, 1967.

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- <sup>28</sup> Salisbury: op. cit., p. 221.
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- <sup>40</sup> Davidson: op. cit., c. 6.
- <sup>41</sup> Bloecher: op. cit.
- <sup>42</sup> Saunders and Harkins: op. cit., suggest, by the way, that reports also differ by the agency to which they are submitted.
- <sup>43</sup> Bloecher: op. cit., p. xiv.

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- <sup>46</sup> Flammonde: op. cit., 1976, p. 10.
- <sup>47</sup> cf. *ibid.*, chapter 2.
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- <sup>53</sup> *ibid.*, p. 225.
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- <sup>60</sup> *ibid.*, p. 201.
- <sup>61</sup> *ibid.*, p. 236.
- <sup>62</sup> *ibid.*, p. 242.
- <sup>63</sup> *ibid.*, p. 238.
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- <sup>70</sup> Saunders and Harkins: op. cit., p. 211.
- <sup>71</sup> Hynek: op. cit., p. 194.
- <sup>72</sup> *ibid.*, p. 201.
- <sup>73</sup> Saunders and Harkins: op. cit., p. 210.
- <sup>74</sup> Hynek: op. cit., chapter 4.

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- <sup>75</sup> *ibid.*, p. 24.
- <sup>76</sup> *ibid.*, p. 25.
- <sup>77</sup> *ibid.*
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- <sup>84</sup> Flammonde: *op. cit.*, 1976, p. 446.
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- <sup>86</sup> Evidently the Russian authorities adopted the same position towards UFOs in the Soviet Union—see I. Hobara and J. Weverbergh: *UFOs From Behind the Iron Curtain*, Bantam, New York, 1975, p. 33.
- <sup>87</sup> S. J. Larsen: 'Documentation: Evidence of Government Concern', in *Proceedings of 1971 Midwest UFO Conference*, the UFO Study Group of Greater St. Louis, 1971.
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- <sup>89</sup> *ibid.*, p. 249.
- <sup>90</sup> Jacobs: *op. cit.*, p. 74.
- <sup>91</sup> Ruppelt: *op. cit.*, 1956.
- <sup>92</sup> Jacobs: *op. cit.*
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- <sup>94</sup> *ibid.*, p. 413.
- <sup>95</sup> cf. R. Collins: *Conflict Sociology*, Academic Press, New York, 1975, chapter 9.
- <sup>96</sup> Stringfield: *op. cit.*, pp. 213-214.
- <sup>97</sup> Flammonde: *op. cit.*, 1976, pp. 448-454.
- <sup>98</sup> Vallee and Vallee: *op. cit.*, pp. 234-243.
- <sup>99</sup> Jacobs: *op. cit.*, p. 256.
- <sup>100</sup> *ibid.*, pp. 258-259.
- <sup>101</sup> Flammonde: *op. cit.*, 1976, pp. 448, 450; Jacobs: *op. cit.*, p. 283.